

**MCImetro/Bell Atlantic
INTERCONNECTION AGREEMENT 1997**

This MCImetro/Bell Atlantic Interconnection Agreement (the "Agreement"), effective on the date the Pennsylvania Public Utility Commission approves this Agreement, is entered into by and between MCImetro Access Transmission Services, Inc. ("MCIIm"), a Delaware corporation, and Bell Atlantic-Pennsylvania, Inc. ("Bell Atlantic" or "BA"), a Pennsylvania corporation, to establish the rates, terms and conditions for the purchase and provision of Local Interconnection, Local Resale, unbundled Network Elements and other services, all as set forth in this Agreement (individually referred to as the "service" or collectively as the "services") for the purpose of the purchasing Party's provision of Telephone Exchange Service, Exchange Access Service, and/or Telecommunications Services.

WHEREAS, on February 8, 1996, the Communications Act of 1934, 47 U.S.C. § 151, *et seq.*, (the "Act") was amended by the Telecommunications Act of 1996; and

WHEREAS, the Act places certain duties and obligations upon, and grants certain rights to, Telecommunications Carriers and Local Exchange Carriers; and

WHEREAS, the Parties are Telecommunications Carriers and Local Exchange Carriers; and

WHEREAS, the Act places certain duties and obligations upon, and grants certain rights to, Incumbent Local Exchange Carriers, and Bell Atlantic is an Incumbent Local Exchange Carrier; and

WHEREAS, the Parties wish to interconnect their local exchange networks for the provision of Telephone Exchange Service, for the transmission and termination of local calls, so that subscribers of each can receive local calls that originate on the other's network and place local calls that terminate on the other's network, and for use in the provision of Exchange Access Service ("Local Interconnection"); and

WHEREAS, MCIIm wishes to purchase Telecommunications Services for resale to others ("Local Resale" or "Services for Resale"), and Bell Atlantic is willing to provide such service; and

WHEREAS, MCIIm wishes to purchase on an unbundled basis Network Elements, and to use such services for the provision of Telecommunications Services to others, and Bell Atlantic is willing to provide such services on the terms set forth herein; and

WHEREAS, the Parties intend the rates, terms and conditions of this Agreement, and their performance of obligations thereunder, to comply with the Act, the Rules and Regulations of the Federal Communications Commission ("FCC"), and the orders, rules and regulations of the Pennsylvania Public Utility Commission (the "Commission");

NOW, THEREFORE, in consideration of the premises and the mutual covenants of this Agreement, and intending to be legally bound by this Agreement, the Parties hereby covenant and agree as follows:

PART A -- GENERAL TERMS AND CONDITIONS

Section 1. Scope of this Agreement

1.1 This Agreement, consisting of Parts A, B and C, specifies the rights and obligations of each Party with respect to the purchase and sale of Local Interconnection, Local Resale and Network Elements. This PART A sets forth the general terms and conditions governing this Agreement. Capitalized terms used in this Agreement shall have the meanings defined in PART B -- DEFINITIONS, or as otherwise elsewhere defined throughout this Agreement. PART C sets forth, among other things, descriptions of the services, pricing, technical and business requirements, and physical and network security requirements.

LIST OF ATTACHMENTS COMPRISING PART C:

- I. Price Schedule
- II. Local Resale
- III. Network Elements
- IV. Interconnection
- V. Collocation
- VI. Rights of Way
- VII. Number Portability
- VIII. Business Process Requirements
- IX. Security Requirements
- X. Performance Reporting

1.2 Bell Atlantic shall provide the services in any Technically Feasible Combination requested by MCIIm, pursuant to the terms of this Agreement and in accordance with the requirements of Applicable Law, or where appropriate, the Bona Fide Request ("BFR") process set forth in Section 25 (BFR Process for Further Unbundling) of Part A, except that Local Resale shall be provided pursuant to Attachment II. Neither Party shall discontinue or refuse to provide any service provided or required hereunder, except in accordance with the terms hereof, without the other Party's written agreement. Bell Atlantic shall not reconfigure, reengineer or otherwise redeploy its network in a manner which would impair MCIIm's ability to offer Telecommunications Services in the manner contemplated by this Agreement, the Act or the FCC's Rules and Regulations without providing notice of Network Changes in accordance with the Act and FCC Rules and Regulations.

1.3 The Parties acknowledge that some of the services, facilities and arrangements provided pursuant to this Agreement are or will be available under and subject to the terms of the federal or state Tariffs of the Party providing them. To the extent that a

Tariff of a Party applies to any service, facility or arrangement provided pursuant to this Agreement, the following shall apply:

1.3.1 The rates and charges set forth in Attachment I shall remain fixed for the term of this Agreement or until superseded by such rates (whether interim or permanent) as may be applied by the Commission, notwithstanding that either of such rates may be different from those set forth in any effective, pending or future Tariff of the providing Party, (including any changes or modifications to any such Tariff--or any new Tariff--filed after the Effective Date of this Agreement); provided, however, this Section 1.3.1 shall remain subject to Section 1.3.3.

1.3.2 This Agreement and any applicable Tariffs of either Party shall be construed whenever possible to avoid any conflict between them. The fact that a condition, term, right or obligation appears in the Agreement and not in a Tariff, or in a Tariff but not in the Agreement, shall not be interpreted as, or deemed grounds for finding, a conflict for the purposes of this Section 1.3.

1.3.3 Any change or modification to any Tariff (including any Tariff filed after the Effective Date hereof) filed by either Party that materially and adversely impacts the provision or receipt of services hereunder or which materially and adversely alters the terms hereof shall only be effective against the other Party to the extent permitted by: (i) that Party's written consent; or (ii) an affirmative order of the Commission. Each Party shall file any required Tariff revisions, modifications or amendments in order to comply with Applicable Law and to continue performance of this Agreement in a lawful manner.

1.4 Construction

1.4.1 For purposes of this Agreement, certain terms have been defined in Part B or elsewhere in this Agreement. These terms will have the meanings stated in this Agreement, which may differ from, or be in addition to, the normal definition of the defined word. A defined word intended to convey the meaning stated in this Agreement is capitalized when used. Other terms that are capitalized, and not defined in this Agreement, shall have the meaning stated in the Act.

1.4.2 Unless the context clearly indicates otherwise, any defined term which is defined or used in the singular shall include the plural, and any defined term which is defined or used in the plural shall include the singular.

1.4.3 The words "shall" and "will" are used interchangeably throughout this Agreement and the use of either indicates a mandatory requirement. The use of one or the other shall not mean a different degree of right or obligation for either Party.

1.4.4 Conflicts among terms in Parts A and B of this Agreement, the Attachments and the Exhibits thereto, and the Tariffs shall be resolved in accordance with the

following order of precedence, where the document identified in Subsection “(i)” shall have the highest precedence: (i) Parts A and B of this Agreement; (ii) the Attachments and the Exhibits thereto; and (iii) the Tariffs. The fact that a matter is addressed in one of these documents, but not in another, shall not constitute a conflict for purposes of this Section 1.4.4.

Section 2. Regulatory Approvals

2.1 The Parties shall promptly submit this Agreement, and any amendment or modification hereof, to the Commission for approval in accordance with Section 252 of the Act. Following such submission, the Parties shall submit the Agreement to any other applicable governmental entity for any requisite approvals. In the event any governmental authority or agency rejects any provision hereof, the Parties shall negotiate promptly and in good faith such revisions as may reasonably be required to achieve approval.

2.2 In the event the FCC or the Commission promulgates rules or regulations, or issues orders, or a court of competent jurisdiction issues orders, which make unlawful any provision of this Agreement, or which materially reduce or alter the services required by statute or regulations and embodied in this Agreement, then the Parties shall negotiate promptly and in good faith in order to amend the Agreement to substitute contract provisions which conform to such rules, regulations or orders. In the event the Parties cannot agree on an amendment within thirty (30) days after the date any such rules, regulations or orders become effective, then the Parties shall resolve their dispute under the applicable procedures set forth in Section 24 (Dispute Resolution Procedures) hereof.

2.3 The Parties intend that any services requested by either Party relating to the subject matter of this Agreement that are not offered hereunder will be incorporated into this Agreement by amendment upon agreement by the Parties.

2.4 In the event that any legally effective legislative, regulatory, judicial or other legal action materially affects any material terms of this Agreement, or the ability of MCI or Bell Atlantic to perform any material terms of this Agreement, MCI or Bell Atlantic may, on thirty (30) days written notice (delivered not later than thirty (30) days following the date on which such action has become legally binding or has otherwise become legally effective) require that such terms be renegotiated, and the Parties shall renegotiate in good faith such mutually acceptable new terms as may be required.

2.5 When this Agreement is filed with the Commission for approval, the Parties will request that the Commission: (a) approve the Agreement, and (b) refrain from taking any action to change, suspend or otherwise delay implementation of the Agreement.

2.6 Each Party shall be responsible for obtaining and keeping in effect all FCC, Commission, franchise authority and other governmental approvals, that may be required in connection with the performance of its respective obligations under this Agreement.

Section 3. Term of Agreement

3.1 This Agreement shall become effective as of the Effective Date stated above and, except as otherwise provided in this Agreement, shall remain in effect until August 31, 2000, and thereafter until terminated as provided in this Agreement. At least one hundred eighty (180) days before the term expires, either Party shall file with the Commission any request for an extension of that term, and shall on the same day provide notice to the other Party. At least one hundred fifty (150) days before the term expires, the other Party shall respond to the requested extension. If for any reason a new agreement has not been reached by the end of the three-year term, the existing interconnection agreement shall continue, month-to-month, under the same terms and conditions, subject to a true-up, until resolved by the Commission.

3.2 This Agreement shall be effective between the Parties as of the Effective Date, notwithstanding the pendency of proceedings challenging the Commission's approval of the Agreement.

3.3 Each Party recognizes that the services being provided under this Agreement at the time of its termination may need to be continued without interruption thereafter, and that upon such termination, either Party may itself provide or retain another vendor to provide comparable services. Each Party agrees to cooperate in an orderly and efficient transition to the other Party or another vendor such that the level and quality of the services are not degraded, and to exercise reasonable efforts to effect an orderly and efficient transition.

3.4 Unless a service is required to be offered by a Party under Applicable Law, either Party may terminate any service provided under this Agreement upon thirty (30) days prior written notice to the other Party unless a different notice period or different conditions are specified in this Agreement (including, but not limited to, in an applicable Tariff or Applicable Law) for termination of such service, in which event such specified period and/or conditions shall apply. Upon termination of its purchase of a service by the purchasing Party, the purchasing Party shall pay any applicable termination charges specified in this Agreement. Upon termination of a Local Resale service by Bell Atlantic, MCIIm shall be entitled to continue providing the terminated service to MCIIm's subscribers on a grandfathered basis to the same extent, and subject to the same terms and conditions, as would apply to such subscribers if they had been subscribers of Bell Atlantic for the terminated service at the time the service is terminated, and Bell Atlantic shall continue to provide such services to MCIIm on the same basis.

3.5 Following the expiration of this Agreement, this Agreement shall remain in effect as to any Expiring Service for the remainder of any contract period applicable to such Expiring Service at the time of the expiration of this Agreement. If an Expiring Service is terminated prior to the expiration of the contract period applicable to such Expiring Service, MCIIm shall pay any termination charge provided for in this Agreement, in an applicable Tariff, or in the contract applicable to the Expiring Service. Following expiration of the applicable contract period for an Expiring Service, the Expiring Service, until terminated, shall be subject to: (i) any effective agreement superseding this Agreement; or (ii) to the extent such Expiring Service is not covered by such superseding

agreement, applicable Tariffs. For the purposes of this Section 3.5, "Expiring Service" means: (a) any Local Resale service that, upon expiration of the term of this Agreement, is being provided under this Agreement and is subject to a remaining contract period greater than one (1) month; or (b) any Local Resale service: (i) for which an order has been submitted and accepted pursuant to this Agreement prior to the expiration of this Agreement but such service is not being provided at the expiration of this Agreement; and (ii) that is subject to an initial contract period which is greater than one (1) month.

Section 4. Charges and Payment

4.1 In consideration of the services provided under this Agreement, the purchasing Party shall pay the charges set forth in Attachment I. The billing and payment procedures for charges incurred by a purchasing Party hereunder are set forth in Attachment VIII.

Section 5. Assignment

5.1 Any assignment or delegation by either Party to any non-affiliated entity of any right, obligation or duty, or of any other interest hereunder, in whole or in part, without the prior written consent of the other Party shall be void (except the assignment of a right to moneys due or to become due). A Party assigning or delegating this Agreement or any right, obligation, duty or other interest hereunder to an Affiliate shall provide written notice to the other Party. All obligations and duties of any Party under this Agreement shall be binding on all successors in interest and assigns of such Party. No assignment or delegation hereof shall relieve the assignor of its obligations under this Agreement.

5.2 If any obligation of either Party is performed by a subcontractor or Affiliate, such Party shall remain fully responsible for the performance of this Agreement in accordance with its terms.

Section 6. Compliance with Laws

6.1 Each Party shall perform terms, conditions and operations under this Agreement in a manner that complies with all Applicable Law, including all regulations and judicial or regulatory decisions of all duly constituted governmental authorities of competent jurisdiction. Each Party shall be responsible for obtaining and keeping in effect all FCC, state regulatory commission, franchise authority and other regulatory approvals that may be required in connection with the performance of its obligations under this Agreement. Each Party shall reasonably cooperate with the other in obtaining and maintaining any approvals required by this Section. In the event the Act or FCC Rules and Regulations applicable to this Agreement are held invalid, this Agreement shall survive, and the Parties shall promptly renegotiate any provisions of this Agreement which, in the absence of such invalidated Act, Rule or Regulation, are insufficiently clear to be effectuated.

6.2 Except as otherwise specified in this Agreement, each Party shall be responsible for: (i) all costs and expenses it incurs in complying with its obligations under this Agreement; and (ii) the development, modification, technical installation and

maintenance of any systems or other infrastructure which it requires to comply with and to continue complying with its responsibilities and obligations under this Agreement.

Section 7. Governing Law

7.1 The validity of this Agreement, the construction and enforcement of its terms, and the interpretation of the rights and duties of the Parties, shall be governed by the Act and the laws of the Commonwealth of Pennsylvania, without regard to its conflicts of laws rules.

Section 8. Relationship of Parties

8.1 Each Party is an independent contractor, and has and hereby retains the right to exercise full control of and supervision over its own performance of its obligations under this Agreement.

8.2 Each Party retains full control over the employment, direction, compensation and discharge of all of its employees, agents and contractors assisting in the performance of its obligations under this Agreement. Each Party will be solely responsible for all matters relating to payment of its employees, agents and contractors, and payment of Social Security and other taxes in association with such employees, agents and contractors, and withholding and remittance of taxes from such employees, agents and contractors.

8.3 Nothing contained within this Agreement shall:

8.3.1 Make either Party the agent, servant or employee, of the other Party;

8.3.2 Grant either Party the authority to enter into a contract on behalf of, or otherwise legally bind, the other Party in any way;

8.3.3 Create a partnership, joint venture, or other similar relationship between the Parties; or

8.3.4 Grant to either Party a franchise, distributorship, or similar interest.

8.4 The relationship of the Parties under this Agreement is a non-exclusive relationship. Each Party shall have the right:

8.4.1 To provide services to be provided by it under this Agreement to persons other than the other Party; and

8.4.2 To purchase services which can be purchased by it under this Agreement from persons other than the other Party.

Section 9. No Third Party Beneficiaries

9.1 Except as may be specifically set forth in this Agreement, this Agreement does not provide and shall not be construed to provide any third parties (including, but not limited to, subscribers or subcontractors of a Party) with any right, remedy, claim, reimbursement, cause of action, or other privilege. The provisions of this Agreement are for the benefit of the Parties hereto and not for any other person, provided, however, that this shall not be construed to prevent either Party from providing its Telecommunications Services to any entities.

Section 10. Intellectual Property Rights

10.1 Any intellectual property which originates from or is developed by a Party shall remain in the exclusive ownership of that Party. Except for a limited license to use a Party's patents or copyrights to the extent necessary for the Parties to use any facilities or equipment (including software) or to receive any service solely as provided under this Agreement, no license in patent, copyright, trademark or trade secret, or other proprietary or intellectual property right now or hereafter owned, controlled or licensable by a Party, is granted to the other Party or shall be implied or arise by estoppel.

10.2 Bell Atlantic shall indemnify MCIIm with respect to MCIIm's use, pursuant to the terms of this Agreement, of intellectual property associated with any new Bell Atlantic network equipment or software acquisitions. Bell Atlantic warrants that it will not enter into any licensing agreements with respect to new Bell Atlantic network equipment or software acquisitions that contain provisions that would disqualify MCIIm from using or interconnecting with such network equipment or software pursuant to the terms of this agreement. Bell Atlantic also warrants that it has not and will not intentionally modify any existing licensing agreements for existing network equipment or software in order to disqualify MCIIm from using or interconnecting with such network equipment or software pursuant to the terms of this agreement. To the extent that the providers of equipment or software in Bell Atlantic's network provide Bell Atlantic with indemnities covering intellectual property liabilities and those indemnities allow a flow through of protection to third parties, Bell Atlantic shall flow those indemnity protections through to MCIIm. Bell Atlantic will inform MCIIm of any pending or threatened intellectual property claims relating to Bell Atlantic's network of which Bell Atlantic is aware and will update that notification periodically as needed, so that MCIIm receives maximum notice of any intellectual property risks it might want to address. Notwithstanding any part of this Section 10, MCIIm retains the right to pursue legal remedies against Bell Atlantic if Bell Atlantic is at fault in causing intellectual property liability to MCIIm.

10.2.1 For purposes of Section 10.2, Bell Atlantic's obligation to indemnify shall include the obligation to indemnify and hold MCIIm harmless from and against any loss, cost, expense or liability arising out of a claim that MCIIm's use, pursuant to the terms of this Agreement, of such new Bell Atlantic network equipment or software infringes the intellectual property rights of a third party. Moreover, should any such network equipment or software or any portion thereof provided by Bell Atlantic hereunder become, or, in Bell Atlantic's reasonable

opinion, be likely to become, the subject of a claim of infringement, or should MCIIm's use thereof be finally enjoined, Bell Atlantic shall, at its immediate expense and at its choice:

10.2.1.1 Procure for MCIIm the right to continue using such material; or

10.2.1.2 Replace or modify such material to make it non-infringing provided such replacement or modification is functionally equivalent.

10.3 Unless otherwise mutually agreed upon, neither Party shall publish or use the other Party's logo, trademark, or service mark in any product, service, advertisement, promotion, or any other publicity matter, except that nothing herein shall prohibit lawful comparative advertising or comparative marketing.

Section 11. Indemnification

11.1 Each Party agrees to release, indemnify, defend and hold harmless the other Party from and against all losses, claims, demands, damages, expenses, suits or other actions, or any liability whatsoever, including, but not limited to, costs and attorneys' fees (collectively, a "Loss") incurred by the indemnified Party to the extent that such Loss is: (a) suffered, made, instituted, or asserted by any other person, relating to personal injury to or death of any person, or for loss, damage to, or destruction of real and/or personal property, whether or not owned by others, incurred during the term of this Agreement and to the extent legally caused by the acts or omissions of the indemnifying Party, regardless of the form of action; or (b) suffered, made, instituted, or asserted by the indemnifying Party's own customer(s) against the indemnified Party arising out of the indemnified Party's provision of services to the indemnifying Party under this Agreement, except to the extent the Loss arises from a breach of this Agreement by the indemnified Party. Notwithstanding the foregoing indemnification, nothing in this Section 11 shall affect or limit any claims, remedies, or other actions the indemnifying Party may have against the indemnified Party under this Agreement, any other contract, or any applicable Tariff(s), regulations or laws.

11.2 MCIIm shall indemnify, defend and hold harmless Bell Atlantic, Bell Atlantic's Affiliates, and the directors, officers and employees of Bell Atlantic and Bell Atlantic's Affiliates, from and against any claim, demand, suit, action, judgment, liability, damage or loss (including reasonable costs, expenses and attorneys' fees on account thereof), that arises out of or results from: (i) MCIIm's negligent use or occupancy of a Bell Atlantic NID; (ii) wiring, facilities, equipment or other apparatus, negligently installed by MCIIm in or on a Bell Atlantic NID, or negligently connected by MCIIm to a Bell Atlantic NID; or (iii) the negligent acts or omissions of MCIIm, MCIIm's Affiliates, or the employees, agents or contractors of MCIIm or MCIIm's Affiliates, in connection with a Bell Atlantic NID. Where the NID is not used by Bell Atlantic or another Telecommunications Carrier (except MCIIm) to provide service to the premise, MCIIm shall have the burden, as between Bell Atlantic and MCIIm, to rebut the presumption that the claim, demand, suit, action, judgment, liability, damage or loss arises from wiring, facilities, equipment or other apparatus, negligently installed by MCIIm in or on a Bell Atlantic NID, or

negligently connected by MCIIm to a Bell Atlantic NID. For the purposes of this Section 11.2, references to “negligence” or “negligently” shall be read to also encompass acts of gross negligence and/or intentional misconduct.

11.3 The indemnification provided herein shall be conditioned upon:

11.3.1 The indemnified Party shall promptly notify the indemnifying Party of any action taken against the indemnified Party relating to the indemnification, provided that failure to notify the indemnifying Party shall not relieve it of any liability it might otherwise have under this Section 11 to the extent it was not materially prejudiced by such failure of notification.

11.3.2 The indemnifying Party shall have sole authority to defend any such action, including the selection of legal counsel, and the indemnified Party may engage separate legal counsel only at its sole cost and expense. In the event the indemnifying Party does not accept the defense of any such action, the indemnified Party shall have the right to employ counsel for its own defense at the expense of the indemnifying Party.

11.3.3 In no event shall the indemnifying Party settle or consent to any judgment pertaining to any such action without the prior written consent of the indemnified Party, which consent shall not be unreasonably withheld.

11.3.4 In any action for which indemnity is sought, the indemnified Party shall assert any and all provisions in applicable Tariffs that limit liability to third parties as a bar to any recovery by the third party claimant in excess of applicable limitations of liability.

11.3.5 The indemnified Party shall offer the indemnifying Party all reasonable cooperation and assistance in the defense of any such action.

Section 12. Limitation of Liability

12.1 Neither Party shall be liable to the other for any indirect, incidental, special or consequential damages arising out of or related to this Agreement or the provision of service hereunder. Notwithstanding the foregoing limitation, a Party's liability shall not be limited by the provisions of this Section 12 in the event of its willful or intentional misconduct, including gross negligence. Bell Atlantic shall be liable to MCIIm for lost revenues resulting from Bell Atlantic's breach of this Agreement only to the same extent that Bell Atlantic's Tariffs provide liability for Bell Atlantic end user subscribers' revenue losses. A Party's liability shall not be limited with respect to its indemnification obligations.

Section 13. Warranties

13.1 As more specifically set forth herein, each Party shall perform its obligations hereunder at Parity, as defined in Part B of this Agreement, which definition is intended to embody the performance provisions set forth in 47 U.S.C. § 251, and any implementing regulations thereunder, as those provisions may apply to the Party and obligation in question.

13.2 As more specifically set forth in Attachment II, Bell Atlantic shall provide Local Resale at Parity.

13.3 As more specifically set forth in Attachment III, Bell Atlantic shall provide Network Elements at Parity.

13.4 As more specifically set forth in Attachment IV, Bell Atlantic shall provide Interconnection at Parity and on a Non-Discriminatory Basis. MCI shall provide Interconnection on a Non-Discriminatory Basis.

13.5 As more specifically set forth in Attachment V, Bell Atlantic shall provide Collocation in accordance with the legally effective rules, regulations and orders of the FCC and the Commission.

13.6 As more specifically set forth in Attachment VI, Bell Atlantic shall provide Non-Discriminatory access to poles, ducts, conduits, and ROW owned or controlled by Bell Atlantic, in accordance with the requirements of section 224 of the Act and legally effective rules, regulations and orders of the FCC and the Commission.

13.7 As more specifically set forth in Attachment VII, Bell Atlantic and MCI shall provide Interim Number Portability and Number Portability in accordance with the legally effective rules, regulations and orders of the FCC and the Commission.

13.8 As more specifically set forth in Attachment VIII, Bell Atlantic and MCI shall meet Business Process Requirements.

13.9 As more specifically set forth in Attachment VIII, Bell Atlantic shall provide Non-Discriminatory access to telephone numbers for as long as Bell Atlantic remains the code administrator for the North American Numbering Plan.

13.10 As more specifically set forth in Attachment VIII, Bell Atlantic and MCI shall provide dialing parity in accordance with the legally effective rules, regulations and orders of the FCC and the Commission.

13.11 As more specifically set forth in Attachment IX, Bell Atlantic and MCI shall meet security requirements, to the extent applicable to the security requirement in question.

13.12 As more specifically set forth in Attachment X, Bell Atlantic shall provide performance reporting.

EXCEPT AS SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY WARRANTIES WITH RESPECT TO ITS SERVICES, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, IN FACT OR IN LAW. THE WARRANTIES SET FORTH IN THIS AGREEMENT ARE A PARTY'S EXCLUSIVE WARRANTIES WITH RESPECT TO ITS SERVICES AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL, IN FACT OR IN LAW. EACH PARTY DISCLAIMS ANY AND ALL OTHER WARRANTIES WITH RESPECT TO ITS SERVICES, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST INFRINGEMENT.

Section 14. Notices

14.1 Except as otherwise provided herein, or where context or services dictate that immediate notice be given, all notices or other communication hereunder shall be deemed to have been duly given when made in writing and delivered in person or deposited in the United States mail, certified mail, postage prepaid, return receipt requested and addressed as follows:

To MCIIm:	MCImetro Access Transmission Services, Inc. Attention: Vice President 1650 Tysons Boulevard McLean, VA 22102
Copy to:	General Counsel MCI Communications Corporation 1801 Pennsylvania Ave., N.W. Washington, DC 20006
To Bell Atlantic:	Bell Atlantic Network Services, Inc. Attention: Director, Interconnection Initiatives 1320 North Courthouse Road, 9th Floor Arlington, VA 22201
Copy to:	Legal Department Bell Atlantic Network Services, Inc. Attention: Counsel, Carrier Services 1320 North Courthouse Road, 8th Floor Arlington, VA 22201

If personal delivery is selected to give notice, a receipt of such delivery shall be obtained. The address to which notices or communications may be given to either Party may be changed by written notice given by such Party to the other pursuant to this Section 14.

Section 15. Technical References

15.1 The Parties agree that the Bell Atlantic technical references set forth in Appendix I to this Part A (Technical Reference Schedule) provide the current technical specifications for the services offered by Bell Atlantic under this Agreement. Bell Atlantic reserves the right with reasonable notification to revise its technical references for any reason including, but not limited to, laws or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to in the technical references. Notification of changes that are made to the underlying Bell Atlantic services will be made in conformance with the requirements of Section 251(c)(5), Notice of Changes, of the Act, and the FCC's Rules and Regulations. The Parties acknowledge that the general technical references set forth below contain certain generally accepted industry guidelines for particular interface and performance parameters for telecommunications equipment used by LECs in the United States. Such accepted technical references may be used by LECs to specify suitable equipment and facilities components for use in their respective networks, to assure interoperability between components that collectively comprise such networks, and to specify the interface characteristics and typical end-to-end performance of certain services.

15.2 The Parties acknowledge that they and their vendors and suppliers derive guidance from such technical references, and make reasonable efforts to conform to them. Requests for specific performance, functionality, or capabilities not applied in a Party's network should be handled using the BFR process set forth in Section 25 (BFR Process for Further Unbundling) of this Part A.

15.3 If one or more of the technical requirements set forth in Appendix I are in conflict, the Parties shall reasonably agree on which requirement shall apply.

15.4 The Parties agree that they each intend, to the extent technically feasible and commercially reasonable, to conform generally to industry standards applicable to the Parties set by the OBF, within a reasonable time after publication of final standards. With respect to OBF and other industry standards, the Parties agree that they will negotiate in good faith the applicability, technical feasibility and commercial reasonableness for implementation of such standards for services and arrangements under the Agreement.

Section 16. Remedies

16.1 The obligations of the Parties and the services offered under this Agreement may be unique. Accordingly, in addition to any other available rights or remedies, either Party may sue in equity for specific performance.

16.2 In the event either Party fails to switch a subscriber to the other Party's service as requested through a service request from the other Party, within any applicable intervals

set forth in this Agreement or required by Applicable Law, or erroneously switches the other Party's subscriber away from that Party, then such act (including the continued provision of Telecommunications Services to such subscriber by the Party erroneously switching or failing to switch) shall be deemed an improper change in subscriber carrier selection commencing with the time at which such Party erroneously failed to switch such subscriber, or erroneously switched such subscriber. If such an improper change in subscriber carrier selection should occur, the rights and obligations of the Parties shall be determined in accordance with the regulations pertaining to such conduct on the part of Interexchange Carriers as set forth in the FCC's Rules and Regulations, Part 64, Subpart K, as these may be amended from time to time. For the purpose of this Section, Bell Atlantic shall be deemed an Interexchange Carrier.

16.3 At such time as the FCC or other competent regulatory body adopts regulations implementing 47 U.S.C. Section 258 or otherwise adopt regulations applicable to illegal or improper changes in local service, then such regulations shall supersede those applicable to Interexchange Carriers for the purposes of this Section 16.

16.4 Unless otherwise specifically provided hereunder, all rights of termination, cancellation or other remedies prescribed in this Agreement, or otherwise available, are cumulative and are not intended to be exclusive of other remedies to which the injured Party may be entitled at law or equity.

Section 17. Waivers

17.1 A failure or delay of either Party (including any course of dealing or course of performance) to enforce any of the provisions of this Agreement, or any right or remedy available under this Agreement or at law or in equity, or to require performance of any of the provisions of this Agreement, or to exercise any option provided under this Agreement, shall in no way be construed to be a waiver of such provisions, rights, remedies or options.

17.2 Waiver by either Party of any default by the other Party shall not be deemed a waiver of any other default.

Section 18. Survival

18.1 Any liabilities or obligations of a Party for acts or omissions occurring prior to the expiration, cancellation or termination of this Agreement, any obligation of a Party under any provision for indemnification or defense (including, but not limited to, any of Sections 10, 11, 12, 23, 24, 28 and 29), Section 3, "Termination", Section 22, "Confidential Information", any provision for limitation of liability, and any obligation of a Party under any other provisions of this Agreement which, by their terms, are contemplated to survive (or to be performed after) expiration, cancellation or termination of this Agreement, shall survive the expiration, cancellation or termination of the Agreement, but solely to the minimum extent necessary to effectuate such provisions or complete such performance.

Section 19. Force Majeure

19.1 Except as otherwise specifically provided in this Agreement (including, by way of illustration, circumstances where a Party is required to implement disaster recovery plans to avoid delays or failure in performance and the implementation of such plans was designed to avoid the delay or failure in performance), neither Party shall be liable for any delay or failure in performance of any part of this Agreement by it caused by acts or failures to act of the United States of America or any state, district, territory, political subdivision, or other governmental entity, acts of God or a public enemy, strikes, labor slowdowns, or other labor disputes, but only to the extent that such strikes, labor slowdowns, or other labor disputes also affect the performing Party, fires, explosions, floods, embargoes, earthquakes, volcanic actions, unusually severe weather conditions, wars, civil disturbances, or other causes beyond the reasonable control of the Party claiming excusable delay or other failure to perform ("Force Majeure Condition"). In the event of any such excused delay in the performance of a Party's obligation(s) under this Agreement, the due date for the performance of the original obligation(s) shall be extended by a term equal to the time lost by reason of the delay. In the event of such delay, the delaying Party shall perform its obligations at a performance level no less than that which it uses for its own operations. In the event of such performance delay or failure by Bell Atlantic, Bell Atlantic agrees to resume performance at Parity and in a Non-Discriminatory manner.

19.2 If any Force Majeure Condition occurs, the Party whose performance fails or is delayed because of such Force Majeure Condition shall give prompt notice to the other Party, and upon cessation of such Force Majeure Condition, shall give like notice and commence performance hereunder as promptly as reasonably practicable.

19.3 Notwithstanding Section 19.1, no delay or other failure by a Party to perform shall be excused pursuant to this Section by the delay or failure of a Party's subcontractors, materialmen, or suppliers to provide products or services to the Party, unless such delay or failure is itself the product of a Force Majeure Condition, and such products or services cannot be obtained by the Party from other persons on commercially reasonable terms.

Section 20. Publicity

20.1 Neither Party shall produce, publish, or distribute any press release or other publicity referring to the other Party in connection with this Agreement, without the prior written approval of the other Party, which approval shall not be unreasonably withheld.

Section 21. Default and Termination

21.1 If a Party ("Breaching Party") materially breaches a material provision of this Agreement (other than an obligation to make payment of any amount billed under this Agreement), and such breach continues for more than thirty (30) days after written notice

thereof from the other Party (“Injured Party”), then, except as otherwise required by Applicable Law, the Injured Party shall have the right, upon notice to the Breaching Party, to terminate or suspend this Agreement and/or the provision of services.

21.2 If a purchasing Party fails to make a payment of any amount billed under this Agreement by the due date stated on the providing Party’s bill and such failure continues for more than thirty (30) days after written notice thereof from the providing Party, then, except as provided in Section 21.3 or as otherwise required by Applicable Law, the providing Party shall have the right, upon notice to the purchasing Party, to terminate or suspend this Agreement and/or the provision of services.

21.3 **Billing Disputes.**

21.3.1 If a billing dispute arises concerning any charges billed pursuant to this Agreement by a providing Party to a purchasing Party, payments withheld or paid pending settlement of the dispute shall be subject to interest at the rate set forth in Bell Atlantic’s interstate access tariff..

21.3.2 If the purchasing Party pays the bill in full by the payment due date and later initiates a billing dispute pursuant to Attachment VIII, Section 3.1.9, interest will apply as follows:

21.3.2.1 If the billing dispute is resolved in favor of the purchasing Party, the purchasing Party shall receive a credit from the providing Party. This credit will be an amount equal to the disputed amount, plus interest at the rate set forth in Bell Atlantic’s interstate access tariff. This amount will apply from the date of the purchasing Party’s payment through the date on which the purchasing Party receives payment of the disputed amount and accrued interest from the providing Party.

21.3.2.2 If the dispute is resolved in favor of the providing Party, neither a late payment charge nor an interest charge is applicable.

21.3.3 If the purchasing Party withholds payment on the bill (in full or in part) and initiates a billing dispute pursuant to Attachment VIII, Section 3.1.9, interest will apply as follows:

21.3.3.1 If the billing dispute is resolved in favor of the providing Party, the purchasing Party shall pay the providing Party a payment equal to the amount withheld by the purchasing Party, plus interest at the rate set forth in Bell Atlantic’s interstate access tariff. This amount will apply from the payment due date through the date on which the providing Party receives payment of the disputed amount and accrued interest from the purchasing Party.

21.3.3.2 If the dispute is resolved in favor of the purchasing Party, neither a late payment charge nor an interest charge is applicable.

21.4 Notwithstanding the foregoing, if a Party's material breach is for any failure to perform in accordance with this Agreement which materially and adversely affects the provision of service of the non-breaching Party's subscribers, the non-breaching Party shall give notice of the breach and the breaching Party shall cure such breach within ten (10) days or within a period of time equivalent to the applicable interval required by this Agreement, whichever is shorter, and if the breaching Party does not, the non-breaching Party may, as its sole option, terminate this Agreement, or any parts hereof. The non-breaching Party shall be entitled to pursue all available legal and equitable remedies for such breach.

21.5 MCIIm may terminate this Agreement in whole or in part at any time for any reason upon sixty (60) days prior written notice, except with respect to termination of any particular service(s), in which case, upon thirty (30) days prior written notice. MCIIm's sole liability for such termination shall be payment of amounts due for services provided up to the date of termination, unless otherwise provided for in this Agreement or in a Tariff providing a termination liability or minimum term for a service.

21.6 In the event of any termination under this Section 21 and, if applicable, pursuant to Section 3.3, Bell Atlantic agrees to provide for an uninterrupted transition of the services Bell Atlantic is providing to MCIIm at the time of termination to MCIIm or another vendor designated by MCIIm, and MCIIm agrees to provide for an uninterrupted transition of services MCIIm is providing to Bell Atlantic at the time of termination to Bell Atlantic or another vendor designated by Bell Atlantic.

21.7 Notwithstanding any termination hereof, the Parties shall continue to comply with their obligations under the Act to provide interconnection in accordance with Applicable Law.

Section 22. Confidentiality

22.1 For the purposes of this Section 22, "Confidential Information" means the following information disclosed by one Party ("Discloser") to the other Party ("Recipient") in connection with this Agreement:

22.1.1 All information disclosed by either Party to the other pursuant to Attachments I-X of this Agreement arising from the performance of this Agreement, including, but not limited to, books, records, documents and other information disclosed in an audit performed pursuant to this Agreement; and

22.1.2 Such other information as is identified as Confidential Information in accordance with Section 22.2.

22.2 All information which is to be treated as Confidential Information under Section 22.1.2 shall:

22.2.1 If in written, graphic, electromagnetic, or other tangible form, be marked as “Confidential Information”; and

22.2.2 If oral, (i) be identified by the Discloser at the time of disclosure to be “Confidential Information”, and (ii) be set forth in a written summary which identifies the information as “Confidential Information” and is delivered by the Discloser to the Recipient within ten (10) days after the oral disclosure.

22.2.3 Each Party shall have the right to correct an inadvertent failure to identify such oral information as Confidential Information by giving written notification within thirty (30) days after the information is disclosed. The Recipient shall, from that time forward, treat such information as Confidential Information.

22.3 In addition to any requirements imposed by law, including, but not limited to, 47 U.S.C. § 222, for a period of three (3) years from the receipt of Confidential Information from the Discloser, except as otherwise specified in this Agreement, the Recipient agrees:

22.3.1 To use the Confidential Information only for the purpose of performing under this Agreement, including, to the extent applicable, the planning and operation of the Recipient’s network; and

22.3.2 To use the same degree of care that it uses with similar confidential information of its own, to hold the Confidential Information in confidence and to disclose it to no one other than the directors, officers and employees of the Recipient and the Recipient’s Affiliates, having a need to know the Confidential Information for the purpose of performing under this Agreement.

22.4 A Recipient may disclose the Discloser’s Confidential Information to a third party agent or consultant, provided that prior to such disclosure the agent or consultant has executed a written agreement of non-disclosure and non-use comparable in scope to the terms of this Section 22.

22.5 The Recipient may make copies of Confidential Information only as reasonably necessary to perform its obligations and exercise its rights under this Agreement. All such copies shall bear the same copyright and proprietary rights notices as are contained on the original.

22.6 The Recipient shall return all Confidential Information defined in Section 22.1.2 in the format in which it was received from the Discloser, including any copies made by the Recipient, within thirty (30) days after a written request is delivered to the Recipient, and/or destroy all such Confidential Information, except for Confidential Information that the Recipient reasonably requires to perform its obligations under this Agreement. If the Recipient loses or makes an unauthorized disclosure of the Discloser’s Confidential

Information, it shall notify the Discloser immediately and use reasonable efforts to retrieve the lost or improperly disclosed information.

22.7 The requirements of this Section 22 shall not apply to Confidential Information:

22.7.1 Which was in the possession of the Recipient free of restriction prior to its receipt from the Discloser;

22.7.2 After it becomes publicly known or available through no breach of this Agreement by the Recipient, the Recipient's Affiliates, or the directors, officers, employees, agents, or contractors, of the Recipient or the Recipient's Affiliates;

22.7.3 After it is rightfully acquired by the Recipient free of restrictions on its disclosure;

22.7.4 Which is independently developed by personnel of the Recipient; or

22.7.5 To the extent the disclosure is required by law, or made to a court, or governmental agency for the purpose of enforcing its rights under this Agreement; provided the Discloser has been notified of an intended disclosure promptly after the Recipient becomes aware of a required disclosure or decides to make such a voluntary disclosure to enforce its rights, the Recipient undertakes reasonable, lawful measures to avoid disclosing the Confidential Information until the Discloser has had reasonable time to seek a protective order, and the Recipient complies with any protective order that covers the Confidential Information to be disclosed.

22.8 Each Party's obligations to safeguard Confidential Information disclosed prior to expiration, cancellation or termination of this Agreement shall survive such expiration, cancellation or termination.

22.9 Confidential Information shall remain the property of the Discloser, and the Discloser shall retain all of the Discloser's right, title and interest in any Confidential Information disclosed by the Discloser to the Recipient. Except as otherwise expressly provided elsewhere in this Agreement, no license is granted by this Agreement with respect to any Confidential Information (including, but not limited to, under any patent, trademark, or copyright), nor is any such license to be implied, solely by virtue of the disclosure of any Confidential Information.

22.10 Each Party agrees that the Discloser would be irreparably injured by a breach of this Section 22 by the Recipient, the Recipient's Affiliates, or the directors, officers, employees, agents or contractors of the Recipient or the Recipient's Affiliates, and that the Discloser shall be entitled to seek equitable relief, including injunctive relief and specific performance, in the event of any breach of the provisions of this Section 22. Such remedies shall not be deemed to be the exclusive remedies for a breach of this Section 22, but shall be in addition to any other remedies available at law or in equity.

22.11 The provisions of this Section 22 shall be in addition to and shall not limit, alter, define or contradict any provisions of Applicable Law, including, but not limited to, 47 U.S.C. § 222, and are not intended to constitute a waiver by a Party of any right with regard to protection of the confidentiality of information (whether or not defined as “Confidential Information” for purposes of this Agreement) of the Party or its customers provided by Applicable Law.

22.12 Without in any way limiting the foregoing provisions of Section 22, each Party shall comply with 47 U.S.C. § 222, any implementing rules, regulations, and orders thereunder, and other federal and state rules and regulations addressing Customer Proprietary Network Information (“CPNI”) and Carrier Information. A Party shall not access (including, but not limited to, through electronic interfaces and gateways provided under this Agreement), use or disclose CPNI or other customer information unless the Party has obtained any customer authorization required by Applicable Law for such access, use and/or disclosure. By accessing, using or disclosing CPNI or other customer information, a Party represents and warrants that the Party has obtained any customer authorization required by Applicable Law for such access, use or disclosure. A Party accessing, using or disclosing CPNI or other customer information shall upon request by the other Party provide proof of any customer authorization for such access, use or disclosure, required by Applicable Law (including, copies of any written authorization). Without limiting the foregoing provisions of this Section 22, where required by 47 U.S.C. § 222, or other provision of Applicable Law, a Party shall obtain a signed letter of authorization from the applicable end user in order to obtain CPNI or other customer information from the other Party.

22.13 Each Party (“Auditing Party”) shall have the right to audit the other Party (“Audited Party”), to ascertain whether the Audited Party is complying with the requirements of Applicable Law and this Agreement with regard to the Audited Party’s access to, and use and disclosure of, CPNI and other customer information, which is made available by the Auditing Party to the Audited Party under this Agreement. Any audit conducted under this Section 22.13 shall be conducted in accordance with Section 23, “Audits and Inspections”. Any information disclosed by the Audited Party to the Auditing Party or the Auditing Party’s employees, Agents or contractors, in an audit conducted under this Section 22.13 shall be considered to be Confidential Information under this Section 22.

22.14 To the extent permitted by Applicable Law, each Party (“Auditing Party”) shall have the right to monitor the access of the other Party (“Audited Party”) to CPNI and other customer information which is made available by the Auditing Party to the Audited Party under this Agreement, to ascertain whether the Audited Party is complying with the requirements of Applicable Law and this Agreement with regard to the Audited Party’s access to, and use and disclosure of, such CPNI and other customer information. To the extent permitted by Applicable Law, the foregoing right shall include, but not be limited to, the right to electronically monitor the Audited Party’s access to and use of CPNI and other customer information which is made available by the Auditing Party to the Audited

Party under this Agreement through electronic interfaces or gateways, to ascertain whether the Audited Party is complying with the requirements of Applicable Law and this Agreement with regard to the Audited Party's access to, and use and disclosure of, such CPNI and other customer information.

22.15 Nothing herein shall be construed as limiting the rights of either Party with respect to its own subscriber information under any Applicable Law, including without limitation Section 222 of the Act.

Section 23. Audits and Examinations

23.1 As applicable consistent with the provision of the relevant services or functions by a Party under this Agreement, each Party may audit the other Party's books, records and documents for the purpose of evaluating the accuracy of the other Party's bills and performance reports rendered under this Agreement. Such audits may be performed no more than a total of four (4) times in a calendar year nor more often than once every nine (9) months for a specific subject matter area; provided, that particular subject matter audits may be conducted more frequently (but no more frequently than once in each calendar quarter) if the immediately prior audit for such area found previously uncorrected net inaccuracies or errors in billing or performance reporting in favor of the audited Party having an aggregate value of at least five percent (5%) of the amounts payable by the auditing Party, or statistics reportable by the audited Party, relating to services provided by the audited Party during the period covered by the audit.

23.2 In addition to the audits described in Section 23.1, each Party may audit the other Party's books, records and documents for the purpose of evaluating compliance with CPNI where the audited Party has access to CPNI in the custody of the auditing Party pursuant to this Agreement. Such CPNI audits must be performed in a minimally disruptive fashion, and an audited Party may bring objections to the Commission, if the audits are unnecessarily intrusive and the Parties cannot resolve their disputes. Such CPNI audits may not be performed more frequently than annually; provided, however, that the frequency of CPNI audits may be increased to quarterly if violations of a Party's CPNI obligations exceeds five percent (5%) of the audit sample.

23.3 The auditing Party may employ other persons or firms for this purpose. Such audit shall take place at a time and place agreed on by the Parties; provided, that the auditing Party may require that the audit commence no later than sixty (60) days after the auditing Party has given notice of the audit to the other Party.

23.4 The audited Party shall promptly correct any error that is revealed in a billing audit, including back-billing of any underpayments and making a refund, in the form of a billing credit, of any over-payments. Such back-billing and refund shall appear on the audited Party's bill no later than the bill for the third full billing cycle after the Parties have agreed upon the accuracy of the audit results.

23.5 Each Party shall cooperate fully in any audits required hereunder, providing reasonable access to any and all employees, books, records and documents, reasonably necessary to assess the accuracy of the audited Party's bills or performance reports, or compliance with CPNI obligations, as appropriate.

23.6 Audits shall be performed at the auditing Party's expense, provided that there shall be no charge for reasonable access to the audited Party's employees, books, records and documents necessary to conduct the audits provided for hereunder.

23.7 Books, records, documents, and other information, disclosed by the audited Party to the auditing Party or the Auditing Party's employees, agents or contractors in an audit under this Section 23, shall be deemed to be Confidential Information under Section 22.

23.8 This Section 23 shall survive expiration or termination of this Agreement for a period of two (2) years after expiration or termination of this Agreement.

Section 24. Dispute Resolution Procedures

24.1 In the event the Commission retains continuing jurisdiction to implement and enforce the terms and conditions of this Agreement, the Parties agree that any dispute arising out of or relating to this Agreement that the Parties themselves cannot resolve, may be submitted to the Commission for resolution. The Parties agree to seek expedited resolution by the Commission, pursuant to applicable procedures established by the Commission. During the Commission proceeding, each Party shall continue to perform its obligations under this Agreement; provided, however that neither Party shall be required to act in any unlawful fashion. This provision shall not preclude the Parties from seeking relief available in any other forum.

24.2 The Parties acknowledge that the terms of this Agreement were established pursuant to an order of the Commission. Any and all of the terms of this Agreement may be altered or abrogated by a successful challenge to the Agreement (or to the order approving the Agreement) as permitted by Applicable Law. By signing this Agreement, the Parties do not waive the right to pursue such a challenge.

Section 25. Bona Fide Request Process for Further Unbundling

25.1 The Parties recognize that, because MCIIm plans to maintain a technologically advanced network, it is likely to seek further unbundling of Network Elements or the introduction of new Network Elements. Accordingly, MCIIm may request such new unbundled Network Elements or arrangements from time to time by submitting a request in writing ("Bona Fide Request" or "BFR"). Bell Atlantic shall promptly consider and analyze MCIIm's submission of a Bona Fide Request that Bell Atlantic provide: (a) a method of Interconnection or access to a Network Element not otherwise provided under this Agreement at the time of such Bona Fide Request; (b) a method of Interconnection or access to a Network Element that is different in quality to that which Bell Atlantic provides to itself, its Affiliates, or its subscribers at the time of such request; (c)

Collocation at a location other than a Bell Atlantic Central Office; and (d) such other arrangement, service, or Network Element for which a Bona Fide Request is required under this Agreement. Items (a) through (d) above may be referred to individually as a "BFR Item." The Bona Fide Request process set forth herein does not apply to those services requested pursuant to Report & Order and Notice of Proposed Rulemaking 91-141 (rel. October 19, 1992), Paragraph 259 and Footnote 603 or subsequent orders.

25.2 A Bona Fide Request shall be submitted in writing and shall contain information required to perform a preliminary analysis of the requested BFR Item. Such information will include a technical description of each BFR Item and reasonable estimates of the number or volume requested, the location(s) of each BFR Item, and the date(s) each BFR Item is desired. MCI shall submit each BFR via United States Postal Service or private courier, return receipt requested.

25.3 MCI may cancel a Bona Fide Request at any time, but shall pay Bell Atlantic's reasonable and demonstrable costs of processing and/or implementing the Bona Fide Request up to the date of cancellation; except MCI shall not be charged for preliminary analysis if costs do not exceed one hundred dollars (\$100). Bell Atlantic shall notify MCI if costs will exceed five thousand dollars (\$5,000). Bell Atlantic shall provide MCI with weekly status reports on the progress of its analysis and shall include the cost of such status reports in the costs of processing the BFR.

25.4 Within fifteen (15) business days after its receipt of a Bona Fide Request, Bell Atlantic shall provide to MCI a preliminary analysis of the BFR Item. The preliminary analysis shall respond in one of the following ways:

25.4.1 confirm that Bell Atlantic will offer the BFR Item and identify the date (no more than ninety (90) days after the date of the preliminary analysis) when Bell Atlantic will deliver a firm price proposal, including service description, pricing and an estimated schedule for availability ("Bona Fide Request Price Proposal");

25.4.2 provide a detailed explanation that such BFR Item is not technically feasible and/or that the BFR Item does not qualify as one that is required to be provided under the Act;

25.4.3 inform MCI that Bell Atlantic must do laboratory testing to determine whether the BFR Item is technically feasible;

25.4.4 inform MCI that Bell Atlantic must do field testing to determine whether the BFR Item is technically feasible;

25.4.5 inform MCI that it is necessary for the Parties to undertake a joint technical/operational field test in order to determine both technical feasibility and operational cost impacts of the BFR Item; or

25.4.6 request face-to-face meetings between technical representatives of both Parties to further explain the BFR Item. No later than five (5) business days following such meetings, Bell Atlantic will provide a preliminary analysis in one of the ways identified in Sections 25.4.1 through 25.4.5. Both Parties shall make reasonable efforts to schedule such meetings as expeditiously as possible.

25.5 Within ten (10) business days after receiving Bell Atlantic's preliminary analysis from Section 25.4.3, 25.4.4, or 25.4.5, MCI shall:

25.5.1 in the case of Sections 25.4.3 or 25.4.4, (i) negotiate a mutually agreeable, reasonably expeditious schedule for Bell Atlantic's testing, (ii) a mutually agreeable date (no more than ninety (90) days after the testing has shown the BFR Item is technically feasible) when Bell Atlantic will deliver a Bona Fide Request Price Proposal, and (iii) a mutually agreeable arrangement for sharing the testing costs; or

25.5.2 in the case of Section 25.4.5, (i) negotiate a mutually agreeable, reasonably expeditious schedule for joint technical/operational field testing, (ii) a mutually agreeable date (no more than 90 days after the testing has shown the BFR Item is technically feasible) when Bell Atlantic will deliver a Bona Fide Request Price Proposal, and a mutually agreeable arrangement for sharing the testing costs.

25.6 In handling a Bona Fide Request pursuant to Section 25.4, Bell Atlantic shall, to the extent possible, utilize information from previously developed Bona Fide Requests in order to shorten its response times. MCI may take advantage of previously canceled BFR work performed by Bell Atlantic on the same BFR Item or a substantially similar BFR Item, to the extent applicable.

25.7 Within ten (10) business days after receiving Bell Atlantic's preliminary analysis from Section 25.4.1, MCI shall:

25.7.1 accept Bell Atlantic's date to deliver a Bona Fide Request Price Proposal;

25.7.2 negotiate as expeditiously as possible a different date for Bell Atlantic to deliver a Bona Fide Request Price Proposal; or

25.7.3 cancel the Bona Fide Request.

25.8 Unless the Parties otherwise agree, a BFR Item shall be priced in accordance with Section 252(d)(1) of the Act and any applicable FCC or Commission rules, regulations, or orders. Consistent with Applicable Law, the price for each BFR Item shall include the reasonable and demonstrable costs incurred by Bell Atlantic in responding to the BFR, to the extent that Bell Atlantic has not previously been reimbursed for such costs.

25.9 Within ninety (90) days after its receipt of the Bona Fide Request Price Proposal, MCIIm must either place an order for such BFR Item pursuant to the Bona Fide Request Price Proposal or, if it believes such Bona Fide Request Price Proposal is inconsistent with the requirements of the Act, seek arbitration by the Commission, including the use of any available expedited procedures. If, within ninety (90) days after its receipt of the Bona Fide Request Price Proposal, MCIIm fails to confirm an order for such BFR Item or seek arbitration by the Commission, Bell Atlantic may treat the Bona Fide Request as canceled by MCIIm. If within ninety (90) days after issuance of a Commission order finding that a Bona Fide Request Price Proposal is consistent with the requirements of the Act, MCIIm fails to place an order for such BFR Item, Bell Atlantic may treat the Bona Fide Request as canceled by MCIIm.

25.10 If a Party to a Bona Fide Request believes that the other Party is not requesting, or negotiating, or processing the Bona Fide Request in good faith, or disputes a determination, or price or cost quote, or is failing to act in accordance with Section 251 of the Act, such Party may seek mediation or arbitration by the Commission, including the use of any available expedited procedures, after giving the other Party written notice at least ten (10) days in advance.

Section 26. Branding

26.1 In all cases in which a Party has control over handling of services provided to customers of the other Party using services procured under this Agreement, the Party so handling such services shall brand them at the points of subscriber contact as set forth in Attachment VIII.

26.2 When Bell Atlantic technicians (including Bell Atlantic contractor technicians) have contact with a customer during a premise visit on behalf of MCIIm, the Bell Atlantic technicians shall identify themselves as Bell Atlantic employees (or Bell Atlantic contractor employees) performing services on behalf of MCIIm. When a Bell Atlantic technician leaves a status card during a premise visit on behalf of MCIIm, the card will be a standard card used for other local service providers' customers, will be in substantially the form set forth in Exhibit A of this Part A, and will include the name and telephone number of each local service provider that elects to be listed on the card and agrees to compensate Bell Atlantic for that provider's share of Bell Atlantic's cost of printing and distributing the card. The Bell Atlantic technicians shall not leave any promotional or marketing literature for or otherwise market Bell Atlantic Telecommunications Services to the MCIIm customer during a premise visit on behalf of MCIIm, but may provide a telephone number for Bell Atlantic's customer service or sales department, in response to customer query about Bell Atlantic services.

26.3 This Section 26 shall not confer on either Party any rights to the service marks, trademarks and trade names owned by or used in connection with services by the other Party or its Affiliates, except as expressly permitted by this Section 26.

Section 27. Taxes

27.1 With respect to any purchase of services under this Agreement, if any Federal, state or local government tax, fee, duty, surcharge (including, but not limited to, any 911, telecommunications relay service, or universal service fund surcharge), or other tax-like charge (a "Tax") is required or permitted by Applicable Law to be collected from a Purchasing Party by the Providing Party, then: (i) the Providing Party shall bill the Purchasing Party for such Tax; (ii) the Purchasing Party shall timely remit such Tax to the Providing Party; and (iii) the Providing Party shall remit such collected Tax to the applicable taxing authority.

27.2 With respect to any purchase of services under this Agreement, if any Tax is imposed by Applicable Law on the receipts of the Providing Party, which Applicable Law permits the Providing Party to exclude certain receipts received from sales of services for resale by the Purchasing Party, such exclusion being based solely on the fact that the Purchasing Party is also subject to a tax based upon receipts ("Receipts Tax"), then the Purchasing Party (i) shall provide the Providing Party with notice in writing in accordance with Section 27.7 of its intent to pay the Receipts Tax, and (ii) shall timely pay the Receipts Tax to the applicable taxing authority.

27.3 With respect to any purchase of services under this Agreement, that are resold by the Purchasing Party to a subscriber of the Purchasing Party, if any Tax is imposed by Applicable Law on the subscriber of the Purchasing Party in connection with its purchase of the resold Offered Services which the Purchasing Party is required to impose and/or collect from the subscriber, then the Purchasing Party (i) shall impose and/or collect such Tax from the subscriber, and (ii) shall timely remit such Tax to the applicable taxing authority.

27.3.1 If the Providing Party has not received an exemption certificate from the Purchasing Party and fails to collect any Tax as required by Section 27.1, then, as between the Providing Party and the Purchasing Party, (i) the Purchasing Party shall remain liable for such uncollected Tax, and (ii) the Providing Party shall be liable for any interest and/or penalty assessed on the uncollected Tax by the applicable taxing authority.

27.3.2 If the Providing Party properly bills the Purchasing Party for any Tax but the Purchasing Party fails to remit the Tax to the Providing Party as required by Section 27.1, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for such uncollected Tax and any interest and/or penalty assessed on the uncollected Tax by the applicable taxing authority. The Providing Party shall give timely notice to the Purchasing Party if any proposed assessment of Taxes, interest or penalties by the applicable taxing authority so as to afford the Purchasing Party an opportunity to cure any defect or inadequacy with its exemption certificate before assessment of any additional Taxes, interest or penalties is made by the taxing authority.

27.3.3 If the Providing Party does not collect a Tax because the Purchasing Party has provided the Providing Party with an exemption certificate which is later found to be inadequate by the applicable taxing authority, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for such uncollected Tax and any interest and/or penalty assessed on the uncollected Tax by the applicable taxing authority.

27.3.4 Except as provided in Section 27.3.5, if the Purchasing Party fails to pay the Receipts Tax as required by Section 27.2, then, as between the Providing Party and the Purchasing Party, (i) the Providing Party shall be liable for any Tax imposed on the Providing Party's receipts, and (b) the Purchasing Party shall be liable for any Tax imposed on the Purchasing Party's receipts and any interest and/or penalty assessed by the applicable taxing authority on either the Purchasing Party or the Providing Party with respect to the Tax on the Providing Party's receipts.

27.3.5 If any discount or portion of a discount in price provided to the Purchasing Party under this Agreement (including, but not limited to, the discount provided for in Attachment I) represents Tax savings to the Providing Party which it was assumed the Providing Party would receive, because it was anticipated that receipts from sales of services (that would otherwise be subject to a Tax on such receipts) could be excluded from such Tax under Applicable Law, because the services would be sold to a Telecommunications Services provider, and the Providing Party is, in fact, required by Applicable Law to pay such Tax on receipts from sales of services to the Purchasing Party, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for any such Tax and any interest and/or penalty assessed by the applicable taxing authority on either the Purchasing Party or the Providing Party with respect to the Tax on the Providing Party's receipts.

27.3.6 With respect to any Tax imposed on subscribers of the Purchasing Party that the Purchasing Party is required to collect, as between the Providing Party and the Purchasing Party, the Purchasing Party shall remain liable for such Tax and any interest and/or penalty assessed on such Tax by the applicable taxing authority.

27.4 If either Party is audited by a taxing authority, the other Party agrees to reasonably cooperate with the Party being audited in order to respond to any audit inquiries in a proper and timely manner so that the audit and/or any resulting controversy may be resolved expeditiously.

27.5 If Applicable Law clearly exempts a purchase of services under this Agreement from a Tax, and if such Applicable Law also provides an exemption procedure, such as an exemption certificate requirement, then, if the Purchasing Party complies with such procedure, the Providing Party shall not collect such Tax during the effective period of

the exemption. Such exemption shall be effective upon receipt of the exemption certificate or affidavit in accordance with Section 27.7.

27.6 If Applicable Law appears to exempt a purchase of services under this Agreement from a Tax, but does not also provide an exemption procedure, then the Providing Party shall not collect such Tax if the Purchasing Party (i) furnishes the Providing Party with a letter signed by an officer of the Purchasing Party requesting an exemption and citing the provision in the Applicable Law which appears to allow such exemption, and (ii) supplies the Providing Party with an indemnification agreement, reasonably acceptable to the Providing Party, which holds the Providing Party harmless on an after-tax basis with respect to forbearing to collect such Tax.

27.7 All notices, affidavits, exemption certificates or other communications required or permitted to be given by either Party to the other under this Section 27, shall be made in writing and shall be delivered personally or sent by prepaid overnight express service, and sent to the addresses stated in Section 14 and to the following:

To Bell Atlantic: Tax Administration
Bell Atlantic Network Services, Inc.
1717 Arch Street, 30th Floor
Philadelphia, PA 19103

To MCIIm: MCI Carrier Group
MCI Telecommunications Corporation
1133 19th Street, NW
Washington, DC 20036

Either Party may from time-to-time designate another address or addressee by giving notice in accordance with the terms of this Section 27.7. Any notice or other communication shall be deemed to be given when received.

Section 28. Responsibility for Environmental Contamination

28.1 MCIIm shall in no event be liable to Bell Atlantic for any costs whatsoever resulting from a violation of a federal, state or local environmental law by Bell Atlantic, its contractors or agents arising out of this Agreement (a "Bell Atlantic Environmental Violation"). Bell Atlantic shall, at MCIIm's request, indemnify, defend, and hold harmless MCIIm, each of its officers, directors and employees from and against any losses, damages, claims, demands, suits, liabilities, fines, penalties and expenses (including reasonable attorneys fees) that are caused by a Bell Atlantic Environmental Violation.

28.2 Bell Atlantic shall in no event be liable to MCIIm for any costs whatsoever resulting from a violation of a federal, state or local environmental law by MCIIm, its contractors or agents arising out of this Agreement (an "MCIIm Environmental Violation"). MCIIm shall, at Bell Atlantic's request, indemnify, defend, and hold harmless Bell Atlantic, each

of its officers, directors and employees from and against any losses, damages, claims, demands, suits, liabilities, fines, penalties and expenses (including reasonable attorneys fees) that are caused by an MCIIm Environmental Violation.

28.3 In the event any suspect materials within Bell Atlantic-owned, operated or leased facilities are identified to be asbestos-containing, MCIIm will ensure that to the extent any activities which it undertakes in the facility disturb such suspect materials, such MCIIm activities will be in accordance with applicable local, state and federal environmental and health and safety statutes and regulations. Except for abatement activities undertaken by MCIIm or equipment placement activities that result in the generation or placement of asbestos containing material, MCIIm shall not have any responsibility for managing, nor be the owner of, not have any liability for, or in connection with, any asbestos containing material at Bell Atlantic-owned, operated or leased facilities. Bell Atlantic agrees to immediately notify MCIIm if Bell Atlantic undertakes any asbestos control or asbestos abatement activities that potentially could affect MCIIm equipment or operations, including, but not limited to, contamination of equipment.

Section 29. Facilities

29.1 A providing Party or its suppliers shall retain all right, title and interest in, and ownership of, all facilities, equipment, software, and wiring, used to provide the providing Party's services. During the period in which services are provided, the providing Party shall have access at all reasonable times to the purchasing Party's and the purchasing Party's customers' locations for the purpose of installing, maintaining, repairing, and inspecting all facilities, equipment, software, and wiring, used to provide the services. At the conclusion of the period in which services are provided, the providing Party shall have access at the purchasing Party's and the purchasing Party's customers' locations at all reasonable times to remove all facilities, equipment, software, and wiring used to provide the services. The purchasing Party shall, at the purchasing Party's expense, obtain any rights and authorizations necessary for such access.

29.2 Except as otherwise stated in this Agreement or agreed to in writing by a providing Party, a providing Party shall not be responsible for the installation, maintenance, repair or inspection, of facilities, equipment, software, or wiring furnished by the purchasing Party or the purchasing Party's customers for use with the providing Party's services.

Section 30. Option to Obtain Services Under Other Agreements

30.1 In accordance with the requirements of 47 U.S.C. § 252(i), each Party shall, upon written request by the other Party, make available to the requesting Party any interconnection, service, or network element provided under an agreement with a third party, and which is approved by the Commission pursuant to 47 U.S.C. § 252, upon the same terms and conditions (including prices) provided in the agreement with the third party. This Agreement shall thereafter be amended to incorporate the terms and conditions (including prices) from the third party agreement applicable to the interconnection, service, or network element that the requesting Party has elected to

purchase pursuant to the terms and conditions of the third party agreement. The amended rates, terms and conditions from the third party agreement shall be effective upon: (i) amendment by the Parties, or (ii) sixty (60) days after the date of written request, whichever is earlier.

30.2 To the extent the exercise of the foregoing option requires a rearrangement of facilities by the providing Party, the requesting Party shall be liable for the non-recurring charges associated therewith, as well as for any termination charges, if any, associated with the termination of existing facilities or services.

Section 31. Other Services

31.1 This Agreement applies only to “services” as defined in this Agreement. To the extent that services subscribed to under this Agreement by a purchasing Party are interconnected to or used with other services, facilities, equipment, software, or wiring, provided by the providing Party or by other persons, such other services, facilities, equipment, software, or wiring, shall not be construed to be provided under this Agreement. Any providing Party services, facilities, equipment, software, or wiring, to be used by the purchasing Party which are not subscribed to by the purchasing Party under this Agreement must be subscribed to by the purchasing Party separately, pursuant to other written agreements (including, but not limited to, applicable providing Party Tariffs).

31.2 Without in any way limiting Section 31.1, the Parties agree that this Agreement does not apply to the following Bell Atlantic services and products: Bell Atlantic Answer Call, Bell Atlantic Answer Call Plus, Bell Atlantic Basic Mailbox, Bell Atlantic Voice Mail, and other Bell Atlantic voice mail and voice messaging services; Bell Atlantic Optional Wire Maintenance Plan, Bell Atlantic Guardian Enhanced Maintenance Service, Bell Atlantic Sentry I Enhanced Maintenance Service, Bell Atlantic Sentry II Enhanced Maintenance Service, Bell Atlantic Sentry III Enhanced Maintenance Service, and other inside wire maintenance services; customer premises equipment; Telephone Directory advertisements (except as stated in Attachment VIII); and any service that incorporates the payphone station equipment.

31.3 Without in any way limiting Section 31.1 or Section 31.2, the Parties also agree that this Agreement does not apply to the installation, maintenance, repair, inspection, or use of any facilities, equipment, software, or wiring, located on the purchasing Party’s side of the Network Rate Demarcation Point applicable to the purchasing Party and does not grant to the purchasing Party a right to installation, maintenance, repair, inspection, or use, of any such facilities, equipment, software, or wiring. Installation, maintenance, repair, inspection, or use of facilities, equipment, software, or wiring, located on the purchasing Party’s side of the Network Rate Demarcation Point applicable to the purchasing Party must be contracted for by the purchasing Party separately, pursuant to other written agreements, at rates stated in such other written agreements.

Section 32. Provision and Use of Services

32.1 A Party may fulfill its obligations under this Agreement itself or may cause an Affiliate of the Party to take the action necessary to fulfill the Party's obligations; provided that a Party's use of an Affiliate to perform this Agreement shall not release the Party from any liability or duty to fulfill its obligations under this Agreement.

32.2 Except as otherwise expressly stated in this Agreement, each Party, at its own expense, shall be responsible for obtaining from governmental authorities, property owners, other Telecommunications Carriers, and any other persons or entities, all rights and privileges (including, but not limited to, Rights of Way, space and power), which are necessary for the Party to provide its services pursuant to this Agreement.

32.3 Except as otherwise provided in this Agreement, this Agreement does not prevent a purchasing Party from using the services provided by a providing Party pursuant to this Agreement in connection with other technically compatible services provided by the providing Party pursuant to this Agreement or with any services provided by the purchasing Party or a third party, provided, however, that unless otherwise provided herein, interconnection services, call transport and termination services, and unbundled Network Elements shall be available under the terms and conditions (including prices) set forth in this Agreement and shall be used by the purchasing Party solely for purposes consistent with obligations set forth in the Act and any rules, regulations or orders thereunder.

Section 33. Selection of IntraLATA Telecommunications Service Provider

33.1 The Parties agree to apply the principles and procedures set forth in Sections 64.1100 and 64.1150 of the FCC Rules, 47 C.F.R. §§ 64.1100 and 64.1150, to the process for end user selection of an IntraLATA Telecommunications Service provider; provided that if the FCC or the Commission adopts rules governing the process for end user selection of an IntraLATA Telecommunications Service provider, the Parties shall apply such rules rather than the principles and procedures set forth in §§ 64.1100 and 64.1150.

33.2 In the event a Party ("Requesting Party") which requests the other Party to change an end user's Telecommunications Service (including, but not limited to, an end user's selection of an IntraLATA Telecommunications Service provider): (a) fails to provide documentary evidence of the end user's IntraLATA Telecommunications Service provider selection upon request; or (b) requests changes in the end user's Telecommunications Service without having obtained authorization for such change from the end user pursuant to the principles and procedures set forth in Sections 64.1100 and 64.1150 or other applicable FCC or Commission rules, the Requesting Party shall indemnify, defend and hold harmless the other Party for any resulting Claims. In addition, the Requesting Party shall be liable to the other Party for all charges that would be applicable to the end user for the initial change in the end user's Telecommunications Service and any charges for restoring the end user's Telecommunications Service to its end user authorized condition, including to the appropriate IntraLATA Telecommunications Service provider.

33.3 A Providing Party shall not require the Purchasing Party to produce a letter of authorization, disconnect order, or other writing, from the Purchasing Party's subscriber as a pre-condition to processing an Order from the Purchasing Party.

Section 34. Service Standards

34.1 Bell Atlantic shall provide service to MCIIm at a level of performance that Bell Atlantic is required by Applicable Law (including 47 U.S.C. § 251) to meet in providing service to MCIIm.

34.2 Bell Atlantic shall offer premium service (services provided at a higher level than that required by Section 34.1) to MCIIm, if MCIIm requests premium service in accordance with Section 25 and MCIIm compensates Bell Atlantic for the incremental cost of providing such premium service.

34.3 Upon MCIIm's request, Bell Atlantic shall provide to MCIIm reports on all material measures of service Parity. MCIIm may request a report on all measures that are reasonably related to establishing the Parity level and whether MCIIm is receiving services at Parity. Such reports shall indicate for each material measure the service and performance level provided by Bell Atlantic to itself, its Affiliates, MCIIm, and other CLECs. The reports required by this Section 34 are identified in Attachment X of this Agreement.

34.4 To the extent Bell Atlantic through its Tariffs provides credits for substandard performance, Bell Atlantic shall provide MCIIm such credits for substandard performance of services provided under this Agreement.

34.5 Pursuant to Section 23 of this Part A, MCIIm shall have the right, at its expense, to conduct reasonable audits or other verifications of information and reports provided by Bell Atlantic under this Section 34.

Section 35. Subcontracting

35.1 If any obligation under this Agreement is performed through a subcontractor, the subcontracting Party shall remain fully responsible for the performance of this Agreement in accordance with its terms, including any obligations it performs through the subcontractor. The subcontracting Party shall be solely responsible for payments due its subcontractors. No subcontractor shall be deemed a third party beneficiary for any purposes under this Agreement.

Section 36. Amendments and Modifications

36.1 No provision of this Agreement shall be deemed waived, amended or modified by either Party unless such a waiver, amendment or modification is in writing, dated, and signed by both Parties.

Section 37. Severability

37.1 If any term, condition or provision of this Agreement is held to be invalid or unenforceable for any reason, such invalidity or unenforceability shall not invalidate the entire Agreement (unless such construction would be unreasonable), and the Agreement shall be construed as if it did not contain the invalid or unenforceable provision or provisions, and the rights and obligations of each Party construed and enforced accordingly.

Section 38. Headings Not Controlling

38.1 The headings of Articles and Sections of this Agreement are for convenience of reference only, and shall in no way define, modify or restrict the meaning or interpretation of the terms or provisions of this Agreement.

Section 39. Entire Agreement

39.1 This Agreement constitutes the entire agreement between the Parties on the subject matter hereof, and supersedes any prior or contemporaneous agreement, understanding, or representation on the subject matter hereof. Except as otherwise provided in this Agreement, the terms in this Agreement may not be waived or modified except by a written document which is signed by the Parties.

Section 40. Counterparts

40.1 This Agreement may be executed in any number of counterparts, each of which shall be deemed an original; but such counterparts shall together constitute one and the same instrument.

Section 41. Successors and Assigns

41.1 This Agreement shall be binding upon, and inure to the benefit of, the Parties hereto and their respective successors and permitted assigns.

Section 42. Good Faith Performance

42.1 In the performance of their obligations under this Agreement, the Parties shall cooperate fully and act in good faith and consistently with the intent of the Act. Where notice, approval or similar action by a Party is permitted or required by any provision of this Agreement (including, without limitation, the obligation of the Parties to further negotiate the resolution of new or open issues under this Agreement), such action shall not be unreasonably delayed, withheld or conditioned.

Section 43. Joint Work Product

43.1 This Agreement is the joint work product of the representatives of the Parties. For convenience, this Agreement has been drafted in final form by one of the Parties. Accordingly, in the event of ambiguities, no inferences shall be drawn against either Party solely on the basis of authorship of this Agreement.

IN WITNESS WHEREOF, each of the Parties has caused this Agreement to be executed by its duly authorized representatives.

MCImetro Access Transmission Services, Inc.

Bell Atlantic-Pennsylvania, Inc.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPENDIX I

TECHNICAL REFERENCE SCHEDULE

Bell Atlantic Technical References

- TR72565, Issue 1, 1996, Bell Atlantic Technical Reference - Basic Unbundled Loop Services - Technical Specifications (as set forth in Exhibit A, Attachment III).
- TR72570, Issue 1, 1996, Bell Atlantic Technical Reference - Analog Unbundled Loop Services with Customer Specified Signaling - Technical Specifications (as set forth in Exhibit B, Attachment III).
- TR72575, Issue 1, 1996, Bell Atlantic Technical Reference - Digital Unbundled Loop Services - Technical Specifications (as set forth in Exhibit C, Attachment III).
- TR72580, Issue 1, 1997, Bell Atlantic Technical Reference - Analog Unbundled Port Services - Technical Specifications (as set forth in Exhibit F, Attachment III).
- TR72585, Issue 1, 1997, Bell Atlantic Technical Reference - Digital Unbundled Port Services - Technical Specifications (as set forth in Exhibit G, Attachment III).
- BA905, Bell Atlantic Supplement Common Channel Signaling Network Interface Specification.

Local Loop

- ANSI/IEEE 743-1995, Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice Frequency Circuits.
- ANSI T1.102-1993, American National Standard for Telecommunication - Digital Hierarchy - Electrical Interfaces.
- ANSI T1.401-1993, American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling.
- ANSI T1.403-1995, Network to Customer Installation - DS1 Metallic Interface.
- ANSI T1.405-1996, Network-to-Customer Installation Interfaces - Direct-Inward-Dialing Analog Voice Grade Switched Access Using Loop Reverse-Battery Signaling.
- ANSI T1.601-1992, American National Standard for Telecommunications - ISDN - Basic Access Interface for Use on Metallic Loops for Application at the Network Side of NT, Layer 1 Specification.
- Bellcore TR-NWT-000057, Functional Criteria for Digital Loop Carrier Systems, Issue 2, January 1993.

Local Switching

- Bellcore FR-64-LATA, LATA Switching Systems Generic Requirements (“LSSGR”), 1996 Edition, Issue 1, January 1996.
- Bellcore TR-NWT-000008, Digital Interface Between the SLC®96 Digital Loop Carrier System and a Local Digital Switch, Issue 2, August 1987; and Revision 1, September 1993; and Bulletin 1, October 1994.
- Bellcore GR-303-CORE, Integrated Digital Loop Carrier System Generic Requirements, Objectives, and Interface, Issue 1, September 1995; and Revision 2, December 1996.
- Bellcore TR-NWT-000393, Generic Requirements for ISDN Basic Access Digital Subscriber Lines, Issue 2, January 1991.

Tandem Switching and Operator Services

- Bellcore TR-TSY-000540, LSSGR: Tandem Supplement, Section 20, Issue 2, July 1987; and Revision 1, December 1988; and Revision 2, June 1990.
- Bellcore GR-1149-CORE, OSSGR Section 10: System Interfaces, Issue 1, October 1995.
- Bellcore GR-1158-CORE, OSSGR Section 22.3: Line Information Database, Issue 2, October 1995.

SS7

- ANSI T1.110-1992, American National Standard Telecommunications - Signaling System Number 7 (“SS7”) - General Information.
- ANSI T1.111-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Message Transfer Part (“MTP”).
- ANSI T1.111A-1994, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Message Transfer Part (“MTP”) Supplement.
- ANSI T1.112-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Signaling Connection Control Part (“SCCP”).
- ANSI T1.113-1995, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Integrated Services Digital Network (“ISDN”) User Part.
- ANSI T1.114-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Transaction Capabilities Application Part (“TCAP”).
- ANSI T1.115-1990, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Monitoring and Measurements for Networks.
- ANSI T1.116-1990, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Operations, Maintenance and Administration Part (“OMAP”).
- ANSI T1.118-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Intermediate Signaling Network Identification (“ISNI”).

- Bellcore GR-246-CORE, Bell Communications Research Specification of Signaling System Number 7, Issue 1, December 1994; and Revision 1, December 1995; and Revision 2, December 1996.
- Bellcore GR-317-CORE, Switching System generic requirements for Call Control Using the Integrated Services Digital Network User Part (“ISDNUP”), Bellcore, February, 1994
- Bellcore GR-394-CORE, Switching System generic requirements for Interexchange Carrier Interconnection Using the Integrated Services Digital Network User Part (“ISDNUP”), Bellcore, February, 1994
- Bellcore GR-905-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Network Interconnection, Message Transfer Part (“MTP”), and Integrated Services Digital Network User Part (“ISDNUP”), Issue 2, December 1996.
- Bellcore GR-954-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Line Information Database (“LIDB”) Services, Issue 1, June 1994; and Revision 1, October 1995.
- Bellcore GR-1428-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Toll-Free Service, Issue 2, May 1995.
- Bellcore GR-1429-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Call Management Services, Issue 1, August 1994.
- Bellcore GR-1432-CORE, CCS Network Interface Specification (“CCSNIS”) Supporting Signaling Connection Control Part (“SCCP”) and Transaction Capabilities Application Part (“TCAP”), March 1994.
- Bellcore SR-TSV-002275, BOC Notes on the LEC Networks, Issue 2, April 1994.

AIN

- Bellcore GR-1280-CORE, Advanced Intelligent Network (“AIN”) Service Control Point (“SCP”) Generic Requirements, Issue 1, August 1993.
- Bellcore TR-NWT-001284, Advanced Intelligent Network (“AIN”) 0.1 Switching System Generic Requirements, Issue 1, August 1992, and Bulletin 1, March 1993.
- Bellcore GR-1298-CORE, AINGR: Switching System, Issue 3, July 1996, and Revision 1, November 1996.
- Bellcore GR-1299-CORE, AINGR: Switch Service Control Point (“SCP”) Adjunct Interface, Issue 3, July 1996, and revision 1, November 1996.
- Bellcore GR-2863-CORE, CCS Network Interface Specification Supporting Advanced Intelligent Network (“AIN”), Issue 2, December 1995.
- Bellcore GR-2902-CORE, CCS Network Interface Specification (“CCSNIS”) Supporting Toll-Free Service Using AIN, Issue 1, May 1995.

Dedicated and Shared Transport

- ANSI T1.101-1994, American National Standard for Telecommunications - Synchronization Interface Standard Performance and Availability.
- ANSI T1.102-1993, American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces.
- ANSI T1.105-1995, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Basic Description including Multiplex Structure, Rates and Formats.
- ANSI T1.105.01-1995, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Automatic Protection Switching.
- ANSI T1.105.02-1995, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Payload Mappings.
- ANSI T1.105.03-1994, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Jitter at Network Interfaces.
- ANSI T1.105.03a-1995, American National Standard for Telecommunications - Synchronous Optical Network ("SONET"): Jitter at Network Interfaces - DS1 Supplement.
- ANSI T1.105.04-1995, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Data Communication Channel Protocols and Architectures.
- ANSI T1.105.05-1994, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Tandem Connection.
- ANSI T1.105.06-1996, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Physical Layer Specifications.
- ANSI T1.106-1988, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (Single Mode).
- ANSI T1.107-1988, American National Standard for Telecommunications - Digital Hierarchy - Formats Specifications.
- ANSI T1.107a-1990, American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications (DS3 Format Applications).
- ANSI T1.107b-1991, American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications.
- ANSI T1.117-1991, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications ("SONET") (Single Mode - Short Reach).
- ANSI T1.119-1994, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Operations, Administration, Maintenance, and Provisioning ("OAM&P") Communications.
- ANSI T1.119.01-1995, American National Standard for Telecommunications - Synchronous Optical Network ("SONET") - Operations, Administration, Maintenance, and Provisioning ("OAM&P") Communications Protection Switching Fragment.
- ANSI T1.231-1993, American National Standard for Telecommunications - Digital Hierarchy - Layer 1 In-Service Digital Transmission performance monitoring.

- ANSI T1.404-1994, Network-to-Customer Installation - DS3 Metallic Interface Specification.
- Bellcore GR-253-CORE, Synchronous Optical Network (“SONET”): Common Generic Criteria, Issue 2, December 1995.
- Bellcore GR-334-CORE, Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994.
- Bellcore GR-342-CORE, High-Capacity Digital Special Access Service-Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995.
- Bellcore GR-499-CORE, Transport Systems Generic Requirements (“TSGR”): Common Requirements, Issue 1, December 1995.
- Bellcore TR-NWT-000776, Network Interface Description for ISDN-1 Customer Access, Issue 2, February 1993.
- Bellcore GR-820-CORE, OTGR Section 5.1: Generic Transmission Surveillance, Issue 1, November 1994.

Network Interface Device

- Bellcore GR-49-CORE, Generic Requirements for Outdoor Telephone Network Interface Devices, Issue 1, December 1994.
- Bellcore TA-TSY-000120, Customer Premises or Network Ground Wire, Issue 1, March 1986.
- Bellcore TR-NWT-000239, Generic Requirements for Indoor Telephone Network Interfaces, Issue 2, December 1993.
- Bellcore TR-NWT-000937, Generic Requirements for Building Entrance Terminals, Issue 1, January 1993.

Collocation

- ANSI/NFPA-1996, National Electrical Code (“NEC”), and any standard imposed by the appropriate governing authority having jurisdiction.
- ANSI C2-1997, National Electrical Safety Code.
- Bellcore GR-63-CORE, Network Equipment-Building System (“NEBS”) Requirements: Physical Protection, Issue 1, October 1995.
- Bellcore TR-EOP-000151, Generic Requirements for 24-, 48-, 130- and 140- Volt Central Office Power Plant Rectifiers, Issue 1, May 1985.
- Bellcore TR-NWT-000154, General Requirements for 24-, 48-, 130-, and 140- Volt Central Office Power Plant Control and Distribution Equipment, Issue 2, January 1992.
- Bellcore TR-NWT-000295, Isolated Ground Planes: Definition and Application to Telephone Central Offices, Issue 2, July 1992.
- Bellcore TR-NWT-000840, Supplier Support Generic Requirements (“SSGR”), (A Module of LSSGR, FR-NWT-000064), Issue 1, December 1991.
- Bellcore GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 1, November 1996.

Bellcore TR-NWT-001275 Central Office Environment Installations/Removal Generic Requirements, Issue 1, January 1993.

PART B -- DEFINITIONS

“911 Service” or “911” means a universal telephone number which gives the public direct access to the Public Safety Answering Point (PSAP). Basic 911 service collects 911 calls from one or more local exchange switches that serve a geographic area. The calls are then sent to the correct authority designated to receive such calls.

“Access Service Request” (ASR) means the industry standard forms and supporting documentation used for ordering Access Services. The ASR may be used to order trunking and facilities between MCI and Bell Atlantic for local interconnection.

“Access Services” refers to interstate and intrastate switched access and private line transport services.

“Act” means the Communications Act of 1934, as amended.

“Adjunct Equipment” is peripheral equipment housing a database that interfaces with a switch and provides the switch with call processing instructions.

“Advanced Intelligent Network” (AIN) is a network functionality that permits specific conditions to be programmed into a switch which, when met, directs the switch to suspend call processing and to receive special instructions for further call handling in order to enable carriers to offer advanced features and services.

“Affiliate” is an entity that directly or indirectly owns or controls, is owned or controlled by, or is under common ownership or control with, another entity. In this paragraph, “own” means to own an equity interest (or equivalent) of more than ten percent (10%), and “control” means the right to control the business decisions, management and policy of another entity.

“Applicable Law” means all applicable laws and government regulations and orders, including, but not limited to, the regulations and orders of the Federal Communications Commission and the Commission.

“Automated Message Accounting” (AMA) means the structure inherent in switch technology that initially records telecommunication message information. AMA format is contained in the Automated Message Accounting document, published by Bellcore as GR-1100-CORE, which defines the industry standard for message recording.

“Automatic Location Identification” (ALI) is a proprietary database developed for E911 systems that provides for a visual display of the caller’s telephone number, address and the names of the emergency response agencies that are responsible for that address. MCI will provide ALI record information in National Emergency Number Association (NENA) Version #2 format. The ALI also shows an Interim Number Portability (INP) number, if applicable.

“Automatic Location Identification/Data Management System” (ALI/DMS) means the emergency service (E911/911) database containing subscriber location information (including name, address, telephone number, and sometimes special information from the local service provider) used to determine to which PSAP to route the call.

“Automatic Number Identification” (ANI) is a feature that identifies and displays the number of a telephone that originates a call.

“Automatic Route Selection” (ARS) is a CENTREX service feature that provides for automatic selection of the least expensive or most appropriate toll transmission facility for each call based on criteria programmed into the system.

“Bell Atlantic” means Bell Atlantic - Pennsylvania, Inc.

“Bona Fide Request” shall have the meaning set forth in Part A, Section 25.

“CAP” means a competitive access provider.

“CLEC” means a competitive local exchange carrier.

“Calling Party Number” (CPN) is a CCS parameter which refers to the number transmitted through the network identifying the calling party.

“Carrier Access Billing System” (CABS) is defined in a document prepared under the direction of the Billing Committee of the OBF. The Carrier Access Billing System document is published by Bellcore in Volumes 1, 1A, 2, 3, 3A, 4 and 5 as Special Reports SR-OPT-001868, SR-OPT-0011869, SR-OPT-001871, SR-OPT-001872, SR-OPT-001873, SR-OPT-001874, and SR-OPT-001875, respectively, and contains the recommended guidelines for the billing of access and other connectivity services.

“Central Office” or “Central Office Switch” means a switching entity within the public switched network, including, but not limited to, End Office Switches and Tandem Office Switches. Central Office Switches may be employed as combination End Office/Tandem Office Switches (Combination Class 5/Class 4).

“CENTREX” means a Telecommunications Service that uses Central Office switching equipment for call routing to handle direct dialing of calls, and to provide numerous private branch exchange-like features.

“Charge Number” is a CCS parameter which refers to the number transmitted through the network identifying the billing number of the calling party.

“CLASS” (Bellcore Service Mark) -- Set of call-management service features that utilize the capability to forward a calling party’s number between end offices as part of call setup. Features include automatic callback, automatic recall, caller ID, call trace, and distinctive ringing.

“Collocation” means the right of MCIIm to place equipment as specified in Attachment V in Bell Atlantic’s Central Offices, or other Bell Atlantic locations pursuant to a Bona Fide Request. MCIIm equipment may be placed via either a physical or virtual collocation arrangement. With physical collocation, MCIIm obtains dedicated space to place and maintain its equipment. With virtual collocation, Bell Atlantic will install and maintain equipment that MCIIm provides to Bell Atlantic.

“Combinations” means provision by Bell Atlantic of two or more connected Network Elements ordered by MCIIm to provide its Telecommunication Services in a geographic area or to a specific subscriber and that are placed on the same order by MCIIm.

“Commission” means the Pennsylvania Public Utility Commission.

“Common Channel Signaling” (CCS) means a method of digitally transmitting call set-up and network control data over a digital signaling network fully separate from the public switched telephone network that carries the actual call.

“Common Transport” is as defined in Attachment III, Section 9.

“Conduit” means a tube or protected pathway that may be used to house communication or electrical cables. Conduit may be underground or above ground (for example, inside buildings) and may contain one or more inner ducts.

“Confidential Information” has the meaning set forth in Section 22 (Confidentiality) of Part A.

“Control Office” is an exchange carrier center or office designated as its company’s single point of contact for the provisioning and maintenance of its portion of local interconnection arrangements.

“Dedicated Transport” is as defined in Attachment III, Section 10.

“Directory Assistance” (DA) or “Directory Assistance Services” provides Directory Listings to callers. Directory Assistance Services may include the option to complete the call at the caller’s direction.

“Directory Assistance Database” refers to the database containing subscriber records that is used by Bell Atlantic in its provision of live or automated operator-assisted directory assistance including 411, 555-1212, NPA-555-1212.

“Directory Listings” (DL) refers to subscriber information, including name, address and phone numbers, that is published in any media, including traditional white/yellow page directories, specialty directories, CD ROM, and other electronic formats.

“Discloser” means that Party which has disclosed Confidential Information to the other Party.

“Effective Date” is the date indicated in Part A on which the Agreement shall become effective.

“End Office Switch” or “End Office” is a Central Office Switch (Class 5) used to connect subscriber station loops for the purpose of connecting to each other and to trunks.

“Enhanced 911 Service” (E911) means a telephone communication service which will automatically route a call dialed “911” to a designated PSAP attendant and will provide to the attendant the calling party’s telephone number and, when possible, the address from which the call is being placed and the emergency response agencies responsible for the location from which the call was dialed.

“Exchange Access” means the offering of access to Telephone Exchange Services or facilities for the purpose of the origination or termination of telephone toll services.

“Exchange Message Record System” (EMR) means the system used among ILECs for exchanging telecommunications message information for billable, non-billable, sample, settlement and study data. EMR format is contained in BR-010-200-010 CRIS Exchange Message Record, published by Bellcore and which defines the industry standard for exchange message records.

“FOC” means firm order confirmation.

“ITC” means an independent telephone company.

“Including” means “including, but not limited to.”

“Interconnection Point” (IP) is as defined in Attachment IV.

“Interim Number Portability” (INP) is an interim service arrangement whereby subscribers who change local service providers may retain existing telephone numbers without impairment of quality, reliability, or convenience when remaining at their current location or changing their location within the geographic area served by the initial carrier’s serving End Office Switch. INP is provided by the means identified in Attachment VII, Section 2.

“Interexchange Carrier” (IXC) means a provider of interexchange Telecommunications Services.

“Line Information Database” (LIDB) is a SCP database that provides for such functions as calling card validation for telephone line number cards issued by ILECs and other entities and validation for collect and billed-to-third services.

“Line Status Verification/Verification and Call Interrupt” (LSV/VCI) means an operator-to-operator call in which the originating operator, on behalf of an end user, inquires as to the busy status of, or requests an interruption of, a call on a Telephone Exchange Service.

“Local Interconnection” is the interconnection of the networks of the Parties for the exchange of Local Traffic and other traffic, in accordance with the requirements of 47 U.S.C. Section 251, and other Applicable Law.

“Local Resale” is as defined in Attachment II.

“Local Switching” is as defined in Attachment III, Section 7.

“Local Traffic” means traffic that is originated by an end user subscriber of one Party on that Party’s network and terminates to an end user subscriber of the other Party on that other Party’s network within a given local calling area, or expanded area service (“EAS”) area, as defined in Bell Atlantic’s Tariffs, or, if the Commission has defined local calling areas applicable to all Local Exchange Carriers, then as so defined by the Commission.

“MCIIm” means MCIImetro Access Transmission Services, Inc.

“Master Street Address Guide” (MSAG) is a database defining the geographic area of an E911 service. It includes an alphabetical list of the street names, high-low house number ranges, community names, and emergency service numbers provided by the counties or their agents to Bell Atlantic.

“Multiple Exchange Carrier Access Billing” (MECAB) refers to the document prepared by the Billing Committee of the OBF, which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS). The MECAB document, published by Bellcore as Special Report SR-BDS-000983, contains the recommended guidelines for the billing of an access service provided by two or more LECs (including a LEC and a CLEC), or by one LEC in two or more states within a single LATA.

“Multiple Exchange Carriers Ordering and Design” (MECOD) refers to the guidelines for Access Services - Industry Support Interface, a document developed by the Ordering/Provisioning Committee under the auspices of the OBF, which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS). The MECOD document, published by Bellcore as Special Report SR STS-002643, establishes recommended guidelines for processing orders for access service which is to be provided by two or more LECs (including a LEC and a CLEC). It is published by Bellcore as SRBDS 00983.

“National Emergency Number Association” (NENA) is an association with a mission to foster the technological advancement, availability and implementation of 911 nationwide.

“Network Element” means a facility or equipment used in the provision of a Telecommunications Service, including features, functions and capabilities that are provided by means of such facility or equipment.

“Network Interface Device” (NID) is as defined in Attachment III, Section 5.

“Network Rate Demarcation Point” shall have the same meaning as “demarcation point” in 47 C.F.R. § 68.3.

“Non-Discriminatory” or “Non-Discriminatory Basis” means that the Party shall perform the obligation or provide the service in question on a non-discriminatory basis for all other Telecommunications Carriers as defined in Section 202(a) of the Act, and/or Section 251 of the Act as applicable.

“North American Numbering Plan” (NANP) means the system or method of telephone numbering employed in the United States, Canada, and certain Caribbean countries. It denotes the three digit Numbering Plan Area code and a seven digit telephone number made up of a three digit Central Office code plus a four digit station number.

“Number Portability” (NP) is a long-term service arrangement whereby users of Telecommunications Services may retain, at the same location, existing Telecommunications numbers without impairment of quality, reliability, or convenience when switching from one Telecommunications Carrier to another.

“Numbering Plan Area” (NPA) (sometimes referred to as an area code) is the three digit indicator which is designated by the first three digits of each 10-digit telephone number within the NANP. Each NPA contains 800 possible NXX Codes. There are two general categories of NPA, “Geographic NPAs” and “Non-Geographic NPAs.” A “Geographic NPA” is associated with a defined geographic area, and all telephone numbers bearing such NPA are associated with services provided within that Geographic area. A “Non-Geographic NPA,” also known as a “Service Access Code (SAC Code)” is typically associated with a specialized telecommunications service which may be provided across multiple geographic NPA areas; 500, 800, 900, 700, and 888 are examples of Non-Geographic NPAs.

“NXX” or “NXX Code” is the three digit switch entity indicator which is defined by the fourth, fifth and sixth digits of a 10-digit telephone number within the NANP.

“OCN” means operating company number.

“Operator Services” provides (1) operator handling for call completion (*e.g.*, collect calls); (2) operator or automated assistance for billing after the subscriber has dialed the called number (*e.g.*, credit card calls); and (3) special services (*e.g.*, LSV/VCI, Emergency Agency Call).

“Operator Systems” is the Network Element that provides operator and automated call handling with billing, special services, subscriber telephone listings, and optional call completion services.

“Ordering and Billing Forum” (OBF) means the entity which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS).

“Parity” means the following: (i) with respect to a performance requirement for interconnection, that Bell Atlantic will provide interconnection at a level of quality that is equal to that which it provides itself, a subsidiary, an Affiliate, or any other party; (ii) with respect to Local Resale, Bell Atlantic must provide services for resale that are equal in quality, subject to the same conditions, and provided with the same provisioning time intervals that Bell Atlantic provides

these services to others, including end users; (iii) with respect to a performance requirement for the provision of a Network Element, that the quality of a Network Element, as well as the quality of the access to such Network Element be the same in quality that Bell Atlantic provides for all Telecommunications Carriers requesting access to that Network Element, and to the extent technically feasible, the quality of a Network Element, as well as the quality of the access to such Network Element, be at least equal in quality to that which Bell Atlantic provides to itself; and (iv) with respect to operational support systems (OSS), Bell Atlantic shall furnish Non-Discriminatory access to OSS functions, and provide access to OSS via electronic interfaces equivalent to that electronic access that Bell Atlantic provides to itself, its Affiliates and its subscribers.

“Party” means a party to this Agreement, either Bell Atlantic or MCIIm.

“Percent Interstate Usage” (PIU) is a calculation which represents the ratio of the interstate toll minutes to the sum of interstate and intrastate toll minutes between exchange carriers sent over Local Interconnection Trunks.

“Percent Local Usage” (PLU) is a calculation which represents the ratio of the Local Traffic minutes to the sum of Local Traffic and intrastate toll minutes between exchange carriers sent over Local Interconnection Trunks. Directory Assistance, LSV/VCI, 900, 976, transiting calls from other carriers and switched access calls are not included in the calculation of PLU.

“Point of Interconnection” (POI) is as defined in Attachment IV.

“Proprietary Information” shall have the same meaning as Confidential Information.

“Public Safety Answering Point” (PSAP) is the public safety communications center where 911 calls placed by the public for a specific geographic area will be answered.

“RAO” means revenue accounting office.

“Rate Center” means the geographic point and corresponding geographic area which are associated with one or more particular NPA-NXX codes which have been assigned to Bell Atlantic (or MCIIm) for its provision of Telephone Exchange Service. The “Rate Center point” is the finite geographic point identified by a specific V&H coordinate, which is used to measure distance-sensitive end user traffic to/from the particular NPA-NXX designations associated with the specific Rate Center. The “Rate Center area” is the exclusive geographic area identified as the area within which Bell Atlantic (or MCIIm) will provide Telephone Exchange Services bearing the particular NPA-NXX designations associated with the specific Rate Center. The Rate Center point must be located within the Rate Center area.

“Recipient” means that Party to this Agreement (a) to which Confidential Information has been disclosed by the other Party or (b) who has obtained Confidential Information in the course of providing services under this Agreement.

“Reciprocal Compensation” refers to a reciprocal compensation arrangement between two carriers in which each of the two carriers receives compensation from the other carrier for the

transport and termination on each carrier's network facilities of Local Traffic that originates on the network facilities of the other carrier.

"Remote Switching Module" (RSM) is a switch with the limited capability of switching calls that can be completed between two (2) customers who are each served by unbundled local loops that are provided through the same RSM, *i.e.*, line-to-line switching. A call between a customer who is served by the RSM and a customer who is not served by the RSM must be sent to the host switch.

"Reseller" is a category of local exchange service providers who obtain dial tone and associated Telecommunications Services from another provider through the purchase wholesale priced services for resale to their end user subscribers.

"Right of Way" (ROW) means the right to use the land or other property of another party to place poles, conduits, cables, other structures and equipment, or to provide passage to access such structures and equipment. A ROW may run under, on, or above public or private property (including air space above public or private property) and may include the right to use discrete space in buildings, building complexes or other locations, but does not include inside wire space or structures past the network demarcation point.

"STP" means signaling transfer point.

"Selective Routing" is a service which automatically routes an E911 call to the PSAP that has jurisdictional responsibility for the service address of the telephone that dialed 911, irrespective of telephone company exchange or Wire Center boundaries.

"Service Area Concept" (SAC) is the box where Bell Atlantic cross-connects the Loop Feeder and the Loop Distribution.

"Service Control Point" (SCP) is as defined in Attachment III, Section 13.

"Small Exchange Carrier Access Billing" (SECAB) means the document prepared by the Billing Committee of the OBF. The Small Exchange Carrier Access Billing document, published by Bellcore as Special Report SR OPT-001856, contains the recommended guidelines for the billing of access and other connectivity services.

"Specialized Routing" is as defined in Attachment III, Section 7.2.2.

"Specialized Routing Node" is device that, based on the incoming ANI and the called number, will determine the proper routing for the call and either switch the call to the appropriate Bell Atlantic Operator Services platform or to a designated Point of Interconnection in the originating LATA.

"State" means the Commonwealth of Pennsylvania.

"Switch" -- See Central Office Switch.

“Tandem Office Switches” are Class 4 switches, which are used to connect and switch trunk circuits between and among End Office switches and other tandems.

“Tandem Switching” is as defined in Attachment III, Section 14.

“Tariff” means any generally available schedule of terms, conditions, prices and fees by which Bell Atlantic or MCIIm offers Telecommunication Services for sale to individuals, including subscriber agreements, special offerings and the like.

“Technically Feasible” is as defined in the FCC Interconnection Order. Interconnection, access to unbundled Network Elements, Collocation, and other methods of achieving interconnection or access to unbundled Network Elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a Telecommunications Carrier for such interconnection, access, or methods. A determination of technical feasibility does not include consideration of economic, accounting, billing, space, or site concerns, except that space and site concerns may be considered in circumstances where there is no possibility of expanding the space available. The fact that an ILEC must modify its facilities or equipment to respond to such request does not determine whether satisfying such request is technically feasible. An ILEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts.

“Telecommunications” means the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.

“Telecommunications Carrier” means any provider of Telecommunications Services, except that such term does not include aggregators of Telecommunications Services (as defined in Section 226 of the Act). A Telecommunications Carrier shall be treated as a common carrier only to the extent that it is engaged in providing Telecommunications Services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage. This definition includes Commercial Mobile Radio Service providers, IXCs and, to the extent they are acting as Telecommunications Carriers, companies that provide both Telecommunications and information services. Private mobile radio service providers are Telecommunications Carriers to the extent they provide domestic or international Telecommunications for a fee directly to the public.

“Telecommunications Service” means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.

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“Telephone Exchange Service” means (a) service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (b) comparable service

provided through a system of Switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a Telecommunications Service.

“Unbundled Local Loop” (ULL) is as defined in Attachment III, Section 4.

“Voluntary Federal Subscriber Financial Assistance Programs” are Telecommunications Services provided to low-income subscribers, pursuant to requirements established by the appropriate state regulatory body.

“Wire Center” denotes a building or space within a building which serves as an aggregation point on a given carrier’s network, where transmission facilities and circuits are connected or switched. Wire Center can also denote a building in which one or more Central Offices, used for the provision of Telephone Exchange Services and exchange Access Services, are located. However, for purposes of collocation service, Wire Center shall mean those points eligible for such connections as specified in the FCC Docket No. 91-141, and rules adopted pursuant thereto.

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ATTACHMENT I
PRICE SCHEDULE

Section 1. General Principles

1.1 Subject to Part A, Section 2, all rates and discounts provided under this Agreement shall remain in effect for the term of this Agreement unless modified by order of the FCC or Commission as the case may be, unless otherwise provided herein. The rates and discounts set by the Commission are permanent rates; however, such rates are not set in perpetuity and may be subject to re-examination and investigation by the Commission pursuant to its Final Opinion and Order in the MFS - Phase III Proceeding. To the extent that the rates set forth in Table 1 below reference existing Bell Atlantic or MCIIm Tariffs, those rates shall follow the referenced Tariffs for the term of the Agreement. The rates or discounts set forth in Table 1 below may be subject to change and shall be replaced on a prospective basis (unless otherwise ordered by the FCC, the Commission, or the reviewing court(s)) by such revised rates or discounts as may be ordered approved, or permitted to go into effect by the FCC, the Commission, or a court of applicable jurisdiction, as the case may be. Such new rates or discounts shall be effective immediately upon the legal effectiveness of the court, FCC, or Commission order requiring such new rates or discounts. Within ten (10) days after the legal effectiveness of the court, FCC, or Commission order establishing such new rates or discounts and regardless of any intention by any entity to further challenge such order, the Parties shall sign a document revising Table 1 and setting forth such new rates or discounts, which revised Table 1 the Parties shall update as necessary in accordance with the terms of this Section.

1.2 Rates for Exchange Access Services purchased by either Party for use in the provision of toll service to end user customers are not affected by this Agreement.

1.3 Unless otherwise agreed, MCIIm shall pay only the rates set forth in Table 1 for the services it purchases under this Agreement. Bell Atlantic shall pay for all of the development, modification, technical installation and maintenance of any systems or other infrastructure which it requires to provide the services set forth in this Agreement and priced in Table 1, and shall recover all such costs through the rates set forth in Table 1. Rates for services not yet identified in Table 1, but subsequently developed pursuant to the Bona Fide Request process or services identified in Table 1, but modified by regulatory requirements, shall be added as revisions to Table 1 when agreed between the Parties.

Section 2. Network Elements and Call Transport and Termination

2.1 On the Effective Date, the rates and discounts listed in Table 1 below, including those for: (i) Network Elements; and (ii) call transport and/or termination for Local Traffic purchased for the provision of Telephone Exchange Service or Exchange Access Service, are permanent rates, except as specifically noted herein or in Table 1. These rates may be changed as set forth in Section 1 of this Attachment I.

Section 3. Local Service Resale

3.1 The rates that MCIIm shall pay to Bell Atlantic for Local Resale shall be an amount equal to Tariff rates for each retail Telecommunications Service subject to wholesale pricing, as reduced by the applicable percentage discount set forth in Table 1, if such services are tariffed by Bell Atlantic for sale to subscribers who are not "Telecommunications Carriers" under the Act. If Bell Atlantic revises such tariffed rates during the term of this Agreement, the applicable percentage discount shall be applied to the revised tariffed rates. Unless otherwise specifically agreed between the Parties, no discount shall apply to Bell Atlantic Telecommunications Services that are tariffed by Bell Atlantic for sale to subscribers who are "Telecommunications Carriers" under the Act, which shall be available for resale, or to any Bell Atlantic services other than Telecommunications Services that it may, in its sole discretion, choose to offer for resale.

Section 4. Interconnection and Reciprocal Compensation

4.1 MCIIm may choose to deliver both Local Traffic and toll traffic over the same trunk group(s), pursuant to the provisions of Attachment IV. In the event MCIIm chooses to deliver both types of traffic over the same traffic exchange trunks, and desires application of the local call transport and termination rates, it will provide Percent Local Usage ("PLU") information to Bell Atlantic as set forth in Attachment IV. In the event MCIIm includes both interstate and intrastate toll traffic over the same trunk, it will provide Percent Interstate Usage ("PIU") to Bell Atlantic as set forth in Attachment IV. Bell Atlantic shall have the same options, and to the extent it avails itself of them, the same obligation, to provide PIU and PLU information to MCIIm. To the extent feasible, PLU and PIU information shall be based on the actual end-to-end jurisdictional nature of each call sent over the trunk. If actual PLU and PIU information cannot reasonably be determined, then the reporting Party shall estimate PLU and PIU, and, upon demand, explain the basis for the estimate. The basis for the PLU and PIU are subject to audits in accordance with the provisions of Part A.

4.2 Reciprocal Compensation for the exchange of Local Traffic is set forth in Table 1 of this Attachment and shall be assessed on a per minute-of-use basis for the transport and termination of such traffic.

4.3 MCIIm may choose to establish trunking to any given End Office for calls to numbers served out of that End Office, when there is sufficient traffic to route calls directly to such End Office. If MCIIm leases non-shared trunks from Bell Atlantic, MCIIm will pay

the transport charges for dedicated transport. For shared trunks the charges will be shared by both Parties in proportion to their respective use of the shared trunk facility.

4.4 When the Bell Atlantic Interconnection Point is at a Bell Atlantic Tandem Office Switch, MCI shall pay Bell Atlantic the rates for Tandem Switching, a transport rate and a termination rate as set forth in Table 1. When the Bell Atlantic Interconnection Point is at the Bell Atlantic End Office, for calls terminating to Bell Atlantic subscribers served out of the End Office to which the traffic is delivered, MCI shall pay Bell Atlantic call termination compensation based on End Office termination only.

4.5 Bell Atlantic will pay MCI a termination rate for termination of traffic at an MCI switch based upon the average rate paid by MCI to Bell Atlantic during the prior calendar quarter for the termination of all calls (including both switching and transport).

4.6 Compensation for the termination of toll traffic and the origination of 800 traffic between the interconnecting Parties shall be based on the applicable exchange access charges in accordance with FCC Rules and Regulations.

4.7 Where a toll call is completed through one Party's INP arrangement (e.g., remote call forwarding, flexible DID, etc.) to the second Party's subscriber, the second Party shall be entitled to access charges applicable to the functions performed by the second Party in accordance with FCC Rules and Regulations and as set forth in Attachment VIII, Section 3. Until such time as such access traffic can be measured directly, this access charge pass-through shall be based upon reasonable estimates of the proportion of traffic subject to such pass-through.

4.8 MCI shall pay a transit rate as set forth in Table 1 of this Attachment when MCI uses a Bell Atlantic Tandem Office to terminate a call to a third party Telecommunications Carrier. Bell Atlantic shall pay MCI an equivalent transit rate when Bell Atlantic uses an MCI Tandem Office (or functional equivalent) to terminate a call to a third party Telecommunications Carrier.

4.9 Each Party shall exercise all reasonable efforts to enter into reciprocal local traffic exchange arrangements (either via written agreement or mutual tariffs) with any wireless carrier, ITC, or other LEC or CLEC to which it sends, or from which it receives, local traffic that transits Bell Atlantic facilities over traffic exchange trunks. If Party A fails to enter into such an arrangement as quickly as commercially reasonable in a LATA and to provide written notification of such agreement, including the relevant rates therein, to Party B, but continues to utilize Party B's transit service for the exchange of local traffic with such wireless carrier, ITC, or other LEC or CLEC, Party A shall, in addition to paying the rate set forth in this Attachment I for said transit service, pay Party B any charges or costs such terminating third party carrier imposes or levies on Party B for the delivery or termination of such traffic, including any switched access charges, plus all reasonable expenses incurred by Party B in delivering or terminating such traffic and/or resulting from Party A's failure to secure said reciprocal local traffic exchange arrangement. The Parties will, upon request, provide each other with all reasonable

cooperation and assistance in obtaining such arrangements. The Parties agree to work cooperatively in appropriate industry fora to promote the adoption of reasonable industry guidelines relating to transit traffic.

Section 5. Network Elements

The charges that MCI shall pay to Bell Atlantic for Network Elements are set forth in Table 1 of this Attachment I.

TABLE 1
BELL ATLANTIC-PENNSYLVANIA, INC. AND MCIIm
DETAILED SCHEDULE OF ITEMIZED CHARGES¹

A. Bell Atlantic Services, Facilities, and Arrangements:

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
1.a.	Entrance facilities, and transport per Section 4, as appropriate, for Interconnection at Bell Atlantic End Office, Tandem Office, Serving Wire Center, or other Point of Interconnection Channel Termination	DS-1: Initial Facility: \$668.37 Service Order: \$1.05 Add'l Facility (if purchased at the time of Initial Facility order): \$331.87 DS-3: Initial Facility: \$668.37 Service Order: \$1.05 Add'l Facility (if purchased at the time of Initial Facility order): \$331.87	DS-1: \$180.59/facility/month DS-3: \$1059.65/facility/month

¹ Unless a citation is provided to a generally applicable BA tariff, all listed rates and services available only to MCIIm when purchasing these services for use in the provision of Telephone Exchange Service, and apply only to Local Traffic and local ancillary traffic, such as LSV/VCI, Directory Assistance, 911/E911, and Operator Services IntraLATA Call Completion. BA rates and services for use by MCIIm in the carriage of Toll Traffic shall be subject to BA's tariffs for Exchange Access service. Adherence to these limitations is subject to a reasonable periodic audit by BA.

As applied to wholesale discount rates, unbundled Network Elements or call transport and/or termination of Local Traffic purchased for the provision of Telephone Exchange Service or Exchange Access, the rates and charges set forth in Table 1 shall apply until such time as they are replaced by new rates as may be approved or allowed into effect by the Commission from time to time pursuant to the FCC Regulations, subject to a stay or other order issued by any court of competent jurisdiction. At such time(s) as such new rates have been approved or allowed into effect by the Commission, the Parties shall amend Table 1 to reflect the new approved rates.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
1.f.	Operator Services (call completion) Interconnection	Per 7.c. below	
2.a. ²	Poles	Application and Engineering Survey Fee: Actual Full Cost Recovery	Annual Fee: Per BA-PA Tariff 303 Section C Illustrative: Vertical Attachment \$3.98/attachment/year
2.b.	Duct/Innerduct	Application and Engineering Survey Fee: Actual Full Cost Recovery	Annual Fee: As per BA-PA Tariff 303 Section C Illustrative: Per Duct run: \$5.45/foot/year per innerduct: \$3.25/foot/year
2.c.	Conduits	Application and Engineering Survey Fee: Actual Full Cost Recovery	Annual Fee: As per BA-PA Tariff 303 Section C Illustrative: Conduit: \$5.45/foot/year
2.d.	Right of Way	Application and Engineering Survey Fee: Right of Way (determined on a case-by-case basis)	Annual Fee: Right of Way (determined on a case-by-case basis as mutually agreed by the Parties)
3.a.	Local loop transmission Unbundled Local Loop Element and cross-connect to Basic Links ³		

² The rates set forth in 2.a, 2.b, 2.c, and 2.d of this Table are subject to revision by the FCC and/or the Commission in accordance with Section 224 of the Act.

³ Installation charges not applicable when MCI orders both loop and port elements together where BA does not perform an installation function.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	2 Wire Analog Loops (POTS Loops) and 2-Wire Customer-Specified Signaling	<p>Line Install, if premises visit not required: Initial loop: \$2.97 Each additional loop: \$2.97</p> <p>Service Order: \$1.05</p> <p>Line Install, if premises visit required: Initial loop: \$66.85 Each additional loop: \$22.59</p> <p>Disconnect: \$1.32/loop</p> <p>Coordinated Cut-Over (only applicable for 2-Wire Customer-Specified Signaling) If premises visit not required: \$3.24/order If premises visit required: \$12.10/order</p> <p>CSS Design (only applicable for 2-Wire Customer-Specified Signaling): \$40.93/order</p>	<p>Density Cell:⁴ 1 - \$11.52/loop/month 2 - \$12.71/loop/month 3 - \$16.12/loop/month 4 - \$23.11/loop/month</p>
	4-Wire Customer-Specified Signaling	<p>Line Install, if premises visit not required: Initial loop: \$2.97 Each additional loop: \$2.97</p> <p>Service Order: \$1.05</p> <p>Install, if premises visit required: Initial loop: \$66.85 Each additional loop: \$22.59</p> <p>Disconnect: \$1.32/loop</p> <p>Coordinate Cut-Over If premises visit not required: \$3.24/order If premises visit required: \$12.10/order</p> <p>CSS Design: \$40.93/order</p>	<p>Density Cell: 1 - \$22.40/month 2 - \$26.36/month 3 - \$33.03/month 4 - \$45.47/month</p>

⁴ References to Density Cells in 3.a. as per BA-PA Tariffs 1, Section 12A.4, 180A Paragraphs B.4 & B.5, and Paragraph E.2 of Tariffs 182, 182A, 185B, and 185C.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	ISDN Loops	Line Install, if premises visit not required: Initial loop: \$12.91 Each additional loop: \$12.91 Service Order: \$1.05 Line Install, if premises visit required: Initial loop: \$76.78 Each additional loop: \$32.52 Disconnect: \$1.32/loop	Density Cell: 1 - \$13.16/month 2 - \$14.35/month 3 - \$17.75/month 4 - \$24.74/month
	DS-1 Loops	Line Install, if premises visit not required: Initial loop: \$2.97 Each additional loop: \$2.97 Service Order: \$1.05 Line Install, if premises visit required: Initial loop: \$66.85 Each additional loop: \$22.59 Disconnect: \$1.32/loop Coordinate Cut-Over If premises visit not required: \$3.24/order If premises visit required: \$12.10/order CSS Design: \$40.93/order	Density Cell: 1 - \$132.51/month 2 - \$139.37/month 3 - \$168.59/month 4 - \$252.46/month
	2-Wire ADSL Loops ⁵	TBD	TBD
	2-Wire and 4-wire HDSL Loops ⁶	TBD	TBD

⁵ These rates are subject to approval by the Commission.

⁶ These rates are subject to approval by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	Collocation Cross-Connect System		
	Voice Grade Loop Cross-Connect	Physical DS0: CO side to equipment: Not Applicable Virtual DS1 w/EDSX ⁷ : Initial Line Install: \$544.36 Service Order: \$1.05 Add'l Line Install: \$210.46 Virtual DS1 w/CFA: Initial Line Install: \$544.36 Service Order: \$1.05 Add'l Line Install: \$210.46 Virtual DS0 w/RFT: Not Applicable	Physical DS0: CO side to equipment: \$0.41/month Virtual DS1 w/EDSX: \$60.21/month Virtual DS1 w/CFA: \$44.08/month Virtual DS0 w/RFT: \$1.20/month
	Other Cross-Connect	Physical DS3: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71 Physical DS1: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71 Virtual DS3: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71 Virtual DS1: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71	Physical DS3: \$84.27/month Physical DS1: \$15.72/month Virtual DS3: \$88.81/month Virtual DS1: \$16.12/month

⁷ A Virtual DS1 element with EDSX consists of one (1) DS1 plus twenty-four (24) DS0 with an IDLC.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	Digital Cross-Connect System	Service Establishment: \$1890.82 Database Modification: \$148.68/modification request Reconfiguration by BA Personnel: \$31.98/programming charge/30-minute increment DS0 Cross-Connect: \$26.17/port DS1 Cross-Connect: \$32.71/port	Not Applicable Not Applicable Not Applicable DS0 Cross-Connect: \$20.54/port/month DS1 Cross-Connect: \$71.92/port/month
3.b.	Special Construction Charges	As applicable per Bell Atlantic-BA-PA PUC 1 sec. 9	
3.c.1.	Service Technician Charges (Maintenance Service Charges) (service technician work on unbundled loops outside of the central office)	Service Call-Dispatch and 15 min. labor: \$26.24/premise visit Labor: \$12.10/15-minute increment after first quarter hour Service Order: \$1.05	Not Applicable
3.c.2.	Central Office Technician Charges	Labor: \$10.42/15-minute increment or fraction thereof Service Order: \$1.05	Not Applicable
4.a.	Unbundled Dedicated Transport DS-1	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$37.66/facility/month \$0.66/facility/mile/month
4.b.	Unbundled Dedicated Transport DS-3	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$526.72/facility/month \$18.66/facility/mile/month
4.c.	Unbundled Dedicated Transport Voice Grade/DS-0	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$10.37/facility/month \$0.03/facility/mile/month

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
4.d.	Unbundled Dedicated Transport DDS	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$10.74/facility/month \$0.04/facility/mile/month
4.e.	Mid-Span Meet Arrangements	On a case-by-case basis in accordance with Attachment IV.	
4.f.	Common or Shared Transport Tandem Switching Transport Fixed Transport per mile	Not Applicable Not Applicable Not Applicable	\$0.000836/mou \$0.000152/mou \$0.000004/mile/mou
5.a.	Local switching Unbundled Ports POTS/PBX/CENTREX ISDN PRI ISDN BRI Public/Semi-Public DID	Installation: \$2.97/port Service Order: \$1.05/port ⁸ Disconnect: \$1.32/port Installation: \$113.36/port Service Order: \$1.05/port ⁹ Disconnect: \$1.32/port Installation: \$2.97/port Service Order: \$1.05/port ¹⁰ Disconnect: \$1.32/port Installation: \$2.97/port Service Order: \$1.05/port ¹¹ Disconnect: \$1.32/port Installation: \$692.07/port Service Order: \$1.05/port ¹² Disconnect: \$1.32/port	\$2.67/port/month \$135.13/port/month \$10.28/port/month \$3.52/port/month \$5.98/port/month

⁸ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
5.b.	Local switching Unbundled Switching	Not Applicable	Originating (with Vertical Features): \$0.011067/mou Terminating (with Vertical Features): \$0.006143/mou
5.c.	Tandem Switching	Not Applicable	\$0.0008360/mou, plus tandem switched transport as needed
6.	Network Interface Device	Not Applicable	\$0.68/NID/month ¹³
7.a.	911 service (data entry; database maintenance)	No charge	
7.b.	Directory Assistance Data Direct Access: Service Establishment:	\$32,135.28/link ¹⁴ \$15,206.81/customer ¹⁵	\$.0342/query Not Applicable

⁹ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹⁰ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹¹ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹² Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹³ Not applicable when MCI order a loop element.

¹⁴ This rate is an interim rate until a permanent rate is established by the Commission.

¹⁵ This rate is an interim rate until a permanent rate is established by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
7.c.	Directory Assistance Services/Operator Services		
	Directory Assistance Service	Not Applicable	\$0.3664/call
	Directory Transport ¹⁶ Tandem Switching	Not Applicable	\$0.000730/call
	Tandem Switched Transport	Not Applicable	\$0.000132/call and \$0.000003/mile/call
	Operator Services Live	Not Applicable	\$0.0128/operator work second
	Automated ¹⁷	Not Applicable	\$0.00158/automated work second
	Branding ¹⁸	\$1,358.62/branding message	Not Applicable
	Carrier-to-Carrier LSV/VCI Requests	Not Applicable	\$0.01280/operator work second
8.a.	White Pages and Yellow Pages directory listings ¹⁹	Not Applicable	Not Applicable
8.b.	Books & delivery (annual home area directories only)	No charge for normal numbers of books delivered to end users; bulk deliveries to MCIIm per separate arrangement	

¹⁶ These rates are interim rates until permanent rates are established by the Commission.

¹⁷ This rate is an interim rate until a permanent rate is established by the Commission.

¹⁸ This rate is an interim rate until a permanent rate is established by the Commission.

¹⁹ These listings refer to primary listings on initial UNE order or resale order. For each residence telephone number, two (2) listings in the White Page directory are provided. For each business telephone number listed (except numbers of CENTREX or CENTREX-like services or indialing service station lines) one (1) listing is provided in the White Page Directory and one (1) listing in the Yellow Page directory of the type provided to BA-PA end user business customers for which no specific charge applies.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
8.c.	Additional listings, changes to listings, non-listed, non-published	<p>Per tariff [Bell Atlantic-BA-PA PUC 1 sec. 5.B] less wholesale discount</p> <p>Illustrative (non-discounted rates):</p> <p>Additional listing: \$12.00 residence; \$15.00 (1st), \$9.00 (additional) business</p> <p>Change to listing: \$12.00 residence; \$15.00 (1st), \$9.00 (additional) business</p> <p>Non-list: \$15.00 residence or business</p> <p>Non-published: \$15.00 residence or business</p>	<p>Per tariff [Bell Atlantic-BA-PA PUC 1 sec. 5.B] less wholesale discount</p> <p>Illustrative (non-discounted rates):</p> <p>\$1.25/mo residence \$2.05/mo business</p> <p>\$1.25/mo residence or business \$1.75/mo residence or business</p>
9.	Access to telephone numbers (NXX codes issued per ICCF Code Administration Guidelines)	No Charge	
10.a.	<p>SS7 Interconnection</p> <p>STP Port - Termination:</p> <p>STP Port – Access:²⁰</p>	<p>\$94.15/port</p> <p>Service Order: \$1.05/order</p> <p>Initial Facility: \$274.06/facility Add'l Facility: \$24.01/facility</p>	<p>\$640.02/port/month</p> <p>\$0.47/mile/month</p>
10.b.	<p>LIDB Interconnection</p> <p>LIDB Point Codes²¹</p> <p>Calling Card</p> <p>Billed Number Screening</p> <p>Storage of MCIIm's Data in LIDB Database²²</p>	<p>\$85.84/point code</p> <p>Not Applicable</p> <p>Not Applicable</p> <p>\$1,469.92/service establishment</p>	<p>Not Applicable</p> <p>\$0.015542/query</p> <p>\$0.015542/query</p> <p>Not Applicable</p>

²⁰ These rates are interim rates until permanent rates are established by the Commission.

²¹ This rate is an interim rate until a permanent rate is established by the Commission.

²² This rate is an interim rate until a permanent rate is established by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
10.c.	800/888 data base Interconnection	Not Applicable	Basic Query: \$0.000835/query Vertical Query: \$0.000343/query
11.a.	Interim Number Portability	"Track and True-up" - Once the Commission establishes a rate and cost recovery method, there will be a retroactive true-up with interest charges at the appropriate Commission-determined rate.	
11.b.	Pass-through of access charges under INP arrangement	In accordance with Attachment VIII, Section 3.1.5	
12.	Local Dialing Parity	No Charge	
13.a.	Reciprocal call termination Local traffic delivered to Bell Atlantic Interconnection Point	Not Applicable	Termination at BA Tandem: \$0.002902/mou Termination at End Office: \$0.001864/mou
13.b.	Access charges for termination of intrastate and interstate toll traffic	Per Bell Atlantic's interstate and intrastate access tariffs (charged in conjunction with Local Traffic, using PLU and PIU, as appropriate)	
14.a.	Local Resale ²³	Percentage discount from price in retail Tariff ²⁴	
14.b.	Resale of retail Telecommunications Services where MCIIm does not use Bell Atlantic's Operator Services	20.69%	
14.c.	Resale of retail Telecommunications Services where MCIIm uses Bell Atlantic's Operator Services	18.43%	
14.d.	Pennsylvania Gross Receipts Tax discount	Equal to Pennsylvania Gross Receipts Tax (currently 5%) in addition to 14.b or 14.c above	
15.a.	Access to Pre-Ordering OSS	Not Applicable	\$0.22/query

²³ The wholesale discounts for the resale of retail telecommunications services excludes Telecommunications Services designed primarily for wholesale, such as switched and special Exchange Access service, and, subject to Attachment II of the Agreement, the following additional arrangements that are not subject to resale: limited duration (90 days or less) promotional offerings, public coin telephone service, and technical and market trials. Taxes shall be collected and remitted by the reseller and BA in accordance with legal requirements and as agreed between the Parties. Surcharges (e.g., 911, telecommunications relay service, universal service fund) shall be collected by the reseller and either remitted to the recipient agency or NECA, or passed through to BA for remittance to the recipient agency or NECA, as appropriate and agreed between the Parties. End user common line charges shall be collected by the reseller and remitted to BA.

²⁴ Pending establishment of mechanized billing procedures adapted to resale, BA will apply the wholesale discount for resale as a "bottom-of-the-bill" discount rate and will utilize a "true-up" process to correct possible inadvertent application of the wholesale discount to the exclusions identified herein and to reflect other adjustments as the Companies agree.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
15.b.	Access to Ordering OSS	Not Applicable	\$3.34/transaction
15.c.	Access to Provisioning OSS	Not Applicable	No Charge - Included in Ordering
15.d.	Access to Maintenance & Repair OSS	Not Applicable	ECG Access: \$0.22/query EB/OSI Access: \$1.16/trouble ticket
15.e.1.	Access to Billing OSS; CD-ROM	Not Applicable	\$246.59/CD-ROM
15.e.2.	Access to Billing OSS; Daily Usage File Existing Message Recording Existing Message Recording	Not Applicable	\$0.000258/message
15.e.3.	Access to Billing OSS; Daily Usage File Delivery Data Tape Network Data Mover CMDS	\$61.39/programming hour Not Applicable \$61.39/programming hour	\$17.18/tape \$0.000094/message \$0.000094/message
15.e.4.	Access to Billing OSS; Daily Usage File Transport ²⁵ 9.6 kb Communications Port 56 kb Communications Port 256 kb Communications Port T1 Communications Port Line Installation Port Set-up Network Control Programming Coding	Installation: \$7,437.36/port Installation: \$30,778.91/port Installation: \$51,236.88/port Installation: \$182,827.99/port \$61.39/programming hour/port \$9.85/port \$61.39/programming hour/port	\$10.24/port/month \$28.29/port/month \$28.29/port/month \$359.31/port/month Not Applicable Not Applicable Not Applicable
16.	Customized Routing To MCIIm Platform To Bell Atlantic Platform for Re-Branding ²⁶ Customized Routing Transport	\$3.84/line \$3.84/line See sections 1 & 4 of Table 1 above.	\$0.142360/line/month \$0.08330/call See sections 1 & 4 of Table 1 above.

²⁵ Not applicable to MCIIm if Network Data Mover connectivity has previously been established, and existing facilities are adequate to support transmission of Daily Usage File Data. If additional facilities are required to support transmission of Daily Usage File data, rates TBD.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
17.	AIN Service Creation		
	Developmental Charges Service Establishment:	\$884.08	Not Applicable
	Service Creation Access Port:	Not Applicable	\$123.86/port/month
	Service Creation Usage Remote Access:	Not Applicable	\$1328.47/day
	On-Premise:	Not Applicable	\$1328.47/day
	Certification and Testing	Not Applicable	\$76.99/hour
	Help Desk Support	Not Applicable	\$81.48/hour
	Service Charges Subscription Charges:	Not Applicable	\$5.44/month
	Database Queries Network Query:	Not Applicable	\$0.0007/query
	MCIIm Network Query:	Not Applicable	\$0.0007/query
	MCIIm Switch Query:	Not Applicable	\$0.0007/query
	Trigger Charges Line-Based:	Not Applicable	\$0.0010/query
	Office-Based	Not Applicable	\$0.0010/query
	Utilization Element:	Not Applicable	\$0.0003/query
	Service Activation Charge Network Service Activation:	\$8.37/service activated/line	Not Applicable
	MCIIm Network Service Activation:	\$8.37/service activated/line	Not Applicable
	MCIIm Switch Service Activation:	\$8.37/service activated/line	Not Applicable
	Service Modification DTMF Update:	Not Applicable	\$0.1080/occurrence
	Switch-Based Announcement:	Not Applicable	\$0.005/announcement

²⁶ These rates are interim rates until permanent rates are established by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
18.	Rebundling of Unbundled Services	Pre-existing BA-PA end user: applicable port service order charge (see Section 5 above) Other end users: applicable service order charge for port and installation charges for loop and port (see Sections 3 and 5 above)	See Sections 3 and 5 above
19.	Network Element Recombination Service ²⁷	TBD	TBD

²⁷ These rates are subject to approval by the Commission.

B. MCIIm Services, Facilities, and Arrangements:

	<u>MCIIm Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
1.a	Interim Number Portability through co-carrier call forwarding	“Track and True-up” - Once the Commission establishes a rate and cost recovery method, there will be a retroactive true-up with interest charges at the appropriate Commission-determined rate.	
1.b	Pass-through of access charges under INP arrangement	In accordance with Attachment VIII, Section 3.1.5.	
2.	Local Dialing Parity	No charge	
3.a	Reciprocal call termination Local Traffic delivered to MCIIm Interconnection Point	Not Applicable	Average rate paid by BA to MCIIm in the previous calendar quarter ²⁸
3.b	Access charges for termination of intrastate and interstate Toll Traffic	Per MCIIm’s interstate and intrastate access Tariffs (charged in conjunction with Local Traffic, using PLU and PIU, as appropriate)	
4.a	Trunk Side transport for Local Interconnection DS-1 trunks	Same rates as set forth in 4.a of Part A. of this Table 1 as may be amended from time to time pursuant to footnote 1 above	
4.b	Trunk Side transport for Local Interconnection DS-3 trunks	Same rates as set forth in 4.b of Part A. of this Table 1 as may be amended from time to time pursuant to footnote 1 above	
5.	All other MCIIm services available to Bell Atlantic	Available at MCIIm’s tariffed or otherwise generally available rates or as agreed to by the Parties.	

²⁸ MCIIm’s rates for the termination of BA’s Local Traffic shall be recalculated once each year on each anniversary of the Effective Date (the “Rate Determination Date”). The methodology for recalculating the rates is as follows:

Access Tandem Minutes = Total minutes of use of Local Traffic delivered by MCIIm to the BA Access Tandem for most recent billed quarter.

End Office Minutes = Total minutes of use Local Traffic delivered by MCIIm directly to the terminating BA End Office for most recent billed quarter.

Total Minutes = Total minutes of use of Local Traffic delivered by MCIIm to BA for most recent billed quarter.

MCIIm Charge at the MCIIm-IP =

$$\frac{(\text{Access Tandem Minutes} \times \text{BA Tandem Termination Rate } (\$0.002902)) + (\text{End Office Minutes} \times \text{BA End Office Termination Rate } (\$0.001864))}{\text{Total Minutes}}$$

For the first year after the Effective Date, the MCIIm charge shall be calculated based on the traffic data of the quarter immediately preceding such Effective Date, or if no such traffic exists, on the proportion of local call termination trunks to BA End Offices and to BA Access Tandems.

	<u>MCIIm Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
6.	Entrance facilities, and transport, as appropriate, for Local Interconnection at MCIIm End Office/Tandem Office, Serving Wire Center, or other Point of Interconnection	Same rates as set forth in 1.a. of Part A of this Table 1 as may be amended from time to time pursuant to footnote 1 above)	

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LOCAL RESALE**

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ATTACHMENT II

LOCAL RESALE

Section 1. Telecommunications Services Provided for Resale

1.1 In accordance with and subject to the requirements of Applicable Law, Bell Atlantic shall make available to MCIIm for resale any Telecommunications Service that Bell Atlantic currently provides or may offer hereafter, including the service functions described in Section 3 below. Such Telecommunications Services and service functions are collectively referred to as "Local Resale."

1.2 To the extent that this Attachment describes services which Bell Atlantic shall make available to MCIIm for resale pursuant to this Agreement, this list of services is neither all inclusive nor exclusive. All Telecommunications Services which are to be offered for resale are subject to the terms herein.

1.3 Bell Atlantic shall make all of its Telecommunications Services available for resale to MCIIm on terms and conditions that are reasonable and Non-Discriminatory.

1.4 Bell Atlantic will provide services to MCIIm for resale that are equal in quality, subject to the same conditions, and provided within the same provisioning time intervals that Bell Atlantic provides itself, including end users. To the extent applicable, Bell Atlantic shall also conform to the specific requirements of Attachment VIII.

1.5 The specific business process requirements and systems interface requirements are set forth in Attachment VIII.

1.6 Notwithstanding any other provision of this Attachment II, Bell Atlantic shall be entitled to change its Telecommunications Services offerings, subject to the notice provisions of Attachment VIII, Section 1.

1.7 MCIIm acknowledges that it has a duty under Section 251(b)(1) of the Act not to prohibit, and not to impose unreasonable and discriminatory conditions or limitations on the resale of its Telecommunications Services. MCIIm will develop its services with the knowledge that when they are available, Bell Atlantic may request negotiations with MCIIm for the resale of such services. MCIIm will negotiate in good faith the terms and conditions necessary for Bell Atlantic to purchase such services for resale from MCIIm.

Section 2. General Terms and Conditions for Resale

2.1 **Pricing.** The prices regarding Local Resale are set forth in Attachment I of this Agreement.

2.2 **Restrictions on Resale**

2.2.1 Local Resale services may be purchased by MCIIm under this Agreement solely for the purpose of resale by MCIIm. Local services to be purchased for other purposes (including, but not limited to, MCIIm's own use) must be purchased pursuant to separate written agreements, including, but not limited to, applicable Tariffs of Bell Atlantic. MCIIm may purchase Local Resale services under this Agreement for resale to its Affiliates if MCIIm resells such services as a Telecommunications Carrier pursuant to terms and conditions that comply with all applicable Commission rules, including non-discrimination rules.

2.2.2 MCIIm shall not resell Bell Atlantic's residential Local Resale services to customers who are ineligible to subscribe to such Local Resale services from Bell Atlantic.

2.2.3 MCIIm shall not resell Lifeline or any other means-tested service offerings to customers not eligible to subscribe to such service offerings from Bell Atlantic.

2.2.4 MCIIm shall not resell grandfathered Local Resale services to customers who are ineligible to subscribe to such Local Resale services from Bell Atlantic.

2.2.5 The Parties agree to negotiate the applicability of any category-to-category restriction on the resale of Bell Atlantic's Local Resale services that may be offered by Bell Atlantic in the future. If the Parties are unable to reach agreement, the Parties will submit the dispute to the Commission under the dispute resolution procedures of Part A, Section 24 (Dispute Resolution Procedures), and Bell Atlantic shall bear the burden of proving that the category-to-category restriction is reasonable and nondiscriminatory.

2.3 Requirements for Specific Services

2.3.1 CENTREX Requirements

2.3.1.1 MCIIm may purchase CENTREX features (including system management, call forwarding, digital facility termination and ARS), in accordance with applicable Tariffs.

2.3.1.2 All service levels and features of CENTREX service provided by Bell Atlantic for resale by MCIIm shall conform to Bell Atlantic's prevailing service requirements and be at Parity with the service and features provided to its end user customers.

2.3.1.3 MCIIm may aggregate multiple MCIIm subscribers on dedicated access facilities. Any aggregation of multiple location subscribers may have the effect of changing the retail CENTREX service offered under applicable Tariff, in which case MCIIm must purchase the appropriate tariffed service or, if such changed service is not available under Tariff,

the Parties shall attempt to negotiate a separate agreement for such service.

2.3.2 Federal and State Programs

When a Bell Atlantic subscriber eligible for the Voluntary Federal Subscriber Financial Assistance Program or other similar state programs, including Life Line and Link-Up services, chooses to obtain Local Resale from MCIIm, MCIIm shall be responsible for obtaining the necessary information for its records regarding such subscriber's eligibility.

2.3.3 Grandfathered Services. Bell Atlantic shall offer for resale to MCIIm all grandfathered services eligible for resale hereunder. For purposes of this Agreement, a grandfathered service is a service that Bell Atlantic offers to continue for existing retail subscribers of that service, but not to new subscribers.

2.3.4 N11 Service. Bell Atlantic agrees to offer for resale to MCIIm any N11 Telecommunications Service it offers under Tariff.

2.3.5 Contract Service Arrangements, Special Arrangements, and Promotions. Bell Atlantic shall offer for resale Telecommunications Services, including but not limited to contract service arrangements, special arrangements, and promotions, as required by Applicable Law.

2.3.6 Inside Wire Maintenance Service. [RESERVED]

2.3.7 Voice Mail Service

2.3.7.1 [RESERVED]

2.3.7.2 Bell Atlantic shall make available SMDI-E (Station Message Desk Interface-Enhanced) features where available, or SMDI (Station Message Desk Interface) features where SMDI-E is not available. Bell Atlantic shall make available the MWI (Message Waiting Indicator), stutter dialtone, and message waiting light feature capabilities. Bell Atlantic shall make available CF-B/DA (Call Forward on Busy/Don't Answer), CF/B (Call Forward on Busy), and CF/DA (Call Forward/Don't Answer) feature capabilities allowing for voice mail services.

2.3.8 Hospitality Service

2.3.8.1 Bell Atlantic shall provide all blocking, screening, and all other applicable functions available for hospitality (*e.g.*, hospitals, hotels and the like) lines, pursuant to Tariff.

2.3.9 Telephone Line Number Calling Cards. Bell Atlantic shall maintain customer information for MCIIm customers who subscribe to resold Bell Atlantic

Local Service residential or business dial tone lines in Bell Atlantic's Line Information Database ("LIDB") in the same manner that it maintains information in LIDB on its own similarly situated end user customers. Bell Atlantic shall update and maintain, on the same schedule that it uses for its own similarly situated end user customers, the MCIIm customer information in LIDB.

Section 3. Service Functions

3.1 When Bell Atlantic converts one of its subscribers to MCIIm's service, Bell Atlantic shall inform MCIIm, to the extent such information is available through Bell Atlantic's electronic interfaces for CLECs, whether such subscriber is currently participating in any program of reduced or exempt charges, including those for the indigent, the handicapped, governmental bodies and public institutions.

3.2 Each Party will work cooperatively with the other Party with respect to practices and procedures for handling of law enforcement and service annoyance calls.

3.3 The Parties will cooperate in the development of an industry standard of "700" number test lines.

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ATTACHMENT III

NETWORK ELEMENTS

Section 1. Introduction

1.1 Bell Atlantic shall provide unbundled Network Elements in accordance with this Agreement and Applicable Law. The price for each Network Element is set forth in Attachment I of this Agreement. Except as otherwise set forth in this Attachment, MCIIm may order Network Elements as of the Effective Date. The obligations set forth in this Attachment III shall apply to such Network Elements: (i) available when this Agreement becomes effective; (ii) that subsequently become available; and (iii) in all cases to those features, functions, Combinations, and capabilities, the provision of which is Technically Feasible at such time as they are incorporated in unbundled Network Elements offered by Bell Atlantic.

Section 2. Unbundled Network Elements

2.1 Bell Atlantic shall offer Network Elements to MCIIm on an unbundled basis on rates, terms and conditions that are just, reasonable, and Non-Discriminatory in accordance with the terms and conditions of this Agreement.

2.2 Bell Atlantic shall permit MCIIm to connect MCIIm's facilities or facilities provided to MCIIm by third-parties with each of Bell Atlantic's unbundled Network Elements at those generic points within Bell Atlantic's network, designated within this Agreement or as a result of the Bona Fide Request ("BFR") process.

2.3 MCIIm may use one or more Network Elements to provide features, functions, or, capabilities that such Network Element(s) provide as of the date hereof in Bell Atlantic's network, or as may otherwise be agreed upon through the BFR process.

2.3.1 MCIIm may, at its option, select methods of access to unbundled elements, as described in this Agreement, or as may otherwise be agreed upon through the BFR process.

2.4 Bell Atlantic shall offer each Network Element individually and in Combinations (where Technically Feasible), solely in order to permit MCIIm to provide Telecommunications Services to its subscribers.

2.5 For each Network Element, Bell Atlantic shall provide connectivity at a point which is agreeable to both Parties. However, where Bell Atlantic provides combined Network Elements at MCIIm's request, no connectivity point between the Parties shall exist between such contiguous Network Elements.

2.6 This Attachment describes the initial set of Network Elements which MCIIm and Bell Atlantic have identified as of the Effective Date of this Agreement:

Loop
 Network Interface Device
 Local Switching
 Operator Systems
 Common Transport
 Dedicated Transport
 Signaling Link Transport
 Signaling Transfer Points
 Service Control Points/Databases
 Tandem Switching
 Directory Assistance

2.6.1 MCIIm and Bell Atlantic agree that the Network Elements identified in this Attachment may prove not to be all possible Network Elements.

2.6.2 MCIIm may identify additional or revised Network Elements as necessary to provide Telecommunications Services to its subscribers, to improve network or service efficiencies or to accommodate changing technologies, subscriber demand, or other requirements.

2.6.2.1 MCIIm will request any such Network Elements in accordance with the BFR process described in Section 25 (BFR Process for Further Unbundling) of Part A. Additionally, if Bell Atlantic provides any Network Element that is not identified in this Agreement to another CLEC pursuant to an approved Interconnection Agreement, Bell Atlantic shall make available the same Network Element to MCIIm under the same terms, and conditions, as required by 47 U.S.C. Section 252(i).

Section 3. Technical Standards and Technical Specifications for Network Elements

3.1 Each Network Element shall be furnished at the service levels included in this Agreement and in accordance with the performance standards required in this Agreement.

3.2 Each Network Element provided by Bell Atlantic to MCIIm, unless identified differently in this Agreement, shall be provided at Parity and in a Non-Discriminatory manner in the areas of: quality of design, performance, features, functions, capabilities and other characteristics, including but not limited to levels and types of redundant equipment and facilities for power, diversity and security, that Bell Atlantic provides to itself (where applicable and Technically Feasible), Bell Atlantic's own subscribers (where applicable and Technically Feasible), to a Bell Atlantic Affiliate, or to any other entity, as set forth in the FCC Rules and Regulations, as the same may be amended from time to time.

3.2.1 Bell Atlantic shall provide to MCIIm, upon reasonable request, reasonably available engineering, design, performance and other network data sufficient for MCIIm to determine that the requirements of this Section 3 are being met. In the event that such data indicates that the requirements of this Section 3 are not being met, the Parties shall in good faith endeavor to address the issue at the network

operations supervisor level, and if necessary, employ the escalation procedure of Section 15.1.2.

3.2.2 Bell Atlantic agrees to work cooperatively with MCIIm to ensure that the Network Elements that are provided pursuant to this Agreement will meet MCIIm's reasonable needs in providing services to its subscribers.

3.3 Unless otherwise requested by MCIIm, each Network Element and the connections between Network Elements provided by Bell Atlantic to MCIIm shall be made available to MCIIm at Parity and in a Non-Discriminatory manner at the points identified in this Agreement, or additional points made available through the BFR process.

Section 4. Loop

4.1 Definition:

4.1.1 Unbundled Local Loop ("ULL") means a transmission path that extends from the vertical side of a main distribution frame, DSX-panel, or functionally comparable piece of equipment in the subscriber's serving End Office to the Network Rate Demarcation Point (or Network Interface Device ("NID") if installed) in or at a subscriber's premises. The actual loop transmission facilities used to provide a ULL may utilize any of several technologies.

4.1.2 Subject to Part A, Section 29 (Facilities), Bell Atlantic shall allow MCIIm access to the following ULLs (in addition to those ULLs available under applicable Tariffs) including without limitation unbundled from Local Switching and local transport in accordance with the terms and conditions set forth in this Section 4.

4.1.2.1 2-wire analog voice grade ULL or analog 2W provides an effective 2-wire channel with 2-wire interfaces at each end that is suitable for the transport of analog voice grade (nominal 300 to 3000 Hz) signals and loop-start signaling. The service is more fully described at Exhibit A of this Attachment III.

4.1.2.2 4-wire analog voice grade ULL or analog 4W provides an effective 4-wire channel with 4-wire interfaces at each end that is suitable for the transport of analog voice grade (nominal 300 to 3000 Hz) signals. The service will operate with one of the following signaling types that may be specified when the service is ordered: loop-start, ground-start, loop-reverse-battery, duplex, and no signaling. The service is more fully described in Exhibit B of this Attachment III.

4.1.2.3 2-wire ISDN digital grade ULL or BRI ISDN provides a channel with 2-wire interfaces at each end that is suitable for the transport of 160

kbps digital services using the ISDN 2B1Q line code. The service is more fully described in Exhibit C of this Attachment III.

4.1.2.4 4-wire DS-1 compatible ULL provides a channel with 4-wire interfaces at each end. Each 4-wire channel is suitable for the transport of 1.544 mbps digital signals simultaneously in both directions using PCM line code. DS-1 compatible ULLs will be available where existing copper facilities can meet the specifications. The service is more fully described in Exhibit C of this Attachment III.

4.1.2.5 ULLs will be offered on the terms and conditions specified herein and on such other terms in applicable Tariffs that are not inconsistent with the terms and conditions set forth herein.

4.1.3 If Bell Atlantic uses integrated digital loop carrier (“DLC”) systems to provide the local loop, Bell Atlantic will make alternate arrangements if available, meeting the requirements of this Section 4, to permit MCIIm to order an existing contiguous ULL with the same provisioning intervals at no additional cost to MCIIm. These arrangements may, at Bell Atlantic’s option, include the following: provide MCIIm with copper facilities or universal DLC that are acceptable to MCIIm. Additional arrangements, such as deployment of Virtual Remote Terminals, or allowing MCIIm to purchase the entire DLC, are subject to the BFR procedures of Section 25 of Part A of this Agreement.

4.2 Loop Components

MCIIm may, at its option, raise the issue of subloop unbundling (other than NID unbundling, which is addressed in Section 5 of this Attachment III) either through the BFR procedure set forth in Section 25 of Part A of this Agreement, or by cooperating with Bell Atlantic in the design and implementation of a subloop unbundling technical and operational trial. Loop components may include, but are not limited to, the following:

4.2.1 Loop Concentrator/Multiplexer

4.2.2 Loop Feeder

4.2.3 Loop Distribution

Section 5. Network Interface Device

5.1 Definition:

5.1.1 “Network Interface Device” or “NID” means the Bell Atlantic provided interface terminating Bell Atlantic’s Telecommunications network on the

property where the subscriber's service is delivered at a point determined by Bell Atlantic. The NID contains a FCC Part 68 registered jack from which inside wire may be connected to Bell Atlantic's network.

5.1.2 Bell Atlantic shall permit MCIIm to connect MCIIm's loop to the inside wiring of a subscriber's premises through Bell Atlantic's NID in the manner set forth in Section 5.2 herein.

5.2 Access to Network Interface Device

5.2.1 Due to the wide variety of NIDs utilized by Bell Atlantic (based on subscriber size and environmental considerations), MCIIm may access the subscriber's inside wire by any of the following means:

5.2.1.1 Bell Atlantic shall allow MCIIm to connect its loops directly to Bell Atlantic's multi-line residential NID enclosures that have additional space and are not used by Bell Atlantic or any other Telecommunications Carrier to provide service to the premise. MCIIm agrees to install compatible protectors and test jacks, to maintain the protection system and equipment and to indemnify Bell Atlantic pursuant to Part A of this Agreement.

5.2.1.2 In all other cases, MCIIm must establish the connection to Bell Atlantic's NID through an adjoining NID deployed by MCIIm.

5.2.1.2.1 Where an adequate length of inside wire is present and environmental conditions permit, and with the subscriber authorization required by this Agreement and Applicable Law, either Party may remove the inside wire from the other Party's NID and connect that wire to that Party's own NID; or

5.2.1.2.2 Enter the subscriber access chamber or "side" of "dual chamber" NID enclosures for the purpose of extending a connectorized or spliced jumper wire from the inside wire through a suitable "punch-out" hole of such NID enclosures; or

5.2.1.2.3 Request Bell Atlantic to make other rearrangements to the inside wire terminations or terminal enclosure on a time and materials cost basis to be charged to the requesting Party (*i.e.*, MCIIm, its agent, the building owner or the subscriber). Such charges will be billed to the requesting Party.

5.2.1.3 In no case shall MCIIm remove or disconnect Bell Atlantic's loop facilities from Bell Atlantic's NIDs, enclosures, or protectors.

5.2.1.4 In no case shall MCIIm remove or disconnect ground wires from Bell Atlantic's NIDs, enclosures, or protectors.

5.2.1.5 In no case shall MCIIm remove or disconnect NID modules, protectors, or terminals from Bell Atlantic's NID enclosures.

5.2.1.6 Maintenance and control of premises wiring (inside wire) is the responsibility of the subscriber. Any conflicts between service providers for access to the subscriber inside wire must be resolved by the subscriber.

5.2.1.7 Due to the wide variety of NID enclosures and outside plant environments, Bell Atlantic will work with MCIIm to develop specific procedures to establish the most effective means of implementing this Section 5.2.

5.3 Technical Requirements

5.3.1 The NID shall provide an accessible point of connection for the subscriber-owned inside wiring, for Bell Atlantic's facilities, for the distribution media and/or cross connect to MCIIm's NID, and shall maintain a connection to ground.

5.3.2 The NID shall be capable of transferring electrical analog or digital signals between the subscriber's inside wiring and the distribution media and/or cross connect to MCIIm's NID, consistent with the NID's function at the Effective Date of this Agreement.

5.3.3 Where a Bell Atlantic NID exists, it is provided in its "as is" condition. MCIIm may request Bell Atlantic do additional work to the NID in accordance with Section 5.2.1.2.3.

5.4 Interface Requirements

5.4.1 Where an existing Bell Atlantic NID is installed, the NID shall be the interface to subscribers' premises wiring for the existing loop technology at that premises.

Section 6. Distribution

MCIIm may, at its option, raise the issue of distribution unbundling through the BFR procedure set forth in Section 25 of Part A of this Agreement.

Section 7. Local Switching

7.1 Definition:

7.1.1 Local Switching is the Network Element that provides MCIIm the ability to use switching functionality in a Bell Atlantic end office switch, including all vertical services and/or features that Bell Atlantic already provides, or provides in the future pursuant to the BFR process set forth in Part A, Section 25, out of that switch. MCIIm may request modifications to the switching functionality,

including the vertical services and/or features, available in a Bell Atlantic end office switch pursuant to the BFR process set forth in Part A, Section 25. Local Switching will be provisioned with a port element, which provides line or trunk side access to Local Switching.

7.1.2 Port element or port means a line card (or equivalent) and associated peripheral equipment on an end office switch which serves as the interconnection between individual loops or individual subscriber trunks and the switching components of an end office switch and the associated switching functionality in that end office switch. Each port is typically associated with one (or more) telephone number(s) which serves as the subscriber's network address. The port element is part of the provision of Local Switching.

7.1.3 Local Switching includes line side and trunk side facilities plus the features, functions, and capabilities of the switch, as set forth in Section 7.1.1. It consists of the line-side port (including connection between a loop termination and a switch line card, telephone number assignment, one primary Directory Listing, presubscription, and access to 911, Operator Services, basic intercept, and Directory Assistance), line and line group features (including appropriate vertical features and line blocking options), usage (including the connection of lines to lines, lines to trunks, trunks to lines, and trunks to trunks), and trunk features (including the connection between the trunk termination and a trunk card). Components of Local Switching, to the extent that they are separately charged, shall be charged at the rates set forth in Attachment I.

7.1.4 Bell Atlantic shall offer, as an optional chargeable feature, daily usage tapes that include the "to and from" number, start time, and stop time, by line port, for all recorded local, access, and toll usage. MCI may request activation or deactivation of features on a per port basis at any time, and shall compensate Bell Atlantic for the non-recurring charges associated with processing the order.

7.2. Technical Requirements

7.2.1 Bell Atlantic shall route calls to the appropriate trunk or lines for call origination or termination.

7.2.2 Where Technically Feasible, Bell Atlantic will offer Specialized Routing for Local Switching lines and for lines provided to MCI under Local Resale. Bell Atlantic's initial deployment of Specialized Routing will route Directory Assistance and Operator Services calls (*i.e.*, 411, 555-1212, 0-, 0+local) to: (i) Bell Atlantic provided platforms; (ii) MCI designated platforms; or (iii) third-party platforms. Due to the constraints of the various switches in place in the Bell Atlantic service region, Bell Atlantic will implement a hybrid network solution for Specialized Routing. The hybrid solution encompasses three different technologies: Bell Atlantic's Common Channel Signaling Network/Advanced Intelligent Network (CCSN/AIN) and, for those

office and call types not supported by AIN, Specialized Routing Nodes and/or line class codes. The Combinations of switch types, call types, and technology solutions currently available are identified in Exhibit D of this Attachment III. Exhibit D is subject to modification upon reasonable prior notification to MCIIm. The following terms and conditions apply to Specialized Routing service:

7.2.2.1 If MCIIm elects the wholesale discount for Local Resale which does not include Bell Atlantic Directory Assistance and Operator Services, MCIIm must request Specialized Routing for all End Offices where they elect to resell Bell Atlantic retail Telecommunications Services using this wholesale discount.

7.2.2.2 Specialized Routing will be activated for all MCIIm Local Resale and Local Switching end user lines and for all applicable call types (*i.e.*, 411, 555-1212, 0-, 0+local) in a requested End Office.

7.2.2.3 MCIIm is responsible for establishing the necessary transport to carry the rerouted calls to its Operator Services platform(s). Trunks will be required for traffic rerouted from the originating End Office and for traffic rerouted from the Specialized Routing Node. Bell Atlantic-supplied Dedicated Transport is available for use with Specialized Routing, where facilities are available, in which case rates and charges for such transport will apply in addition to the rates and charges for Specialized Routing.

7.2.2.4 If the necessary trunks are not in place once a subscriber has been converted to MCIIm's local service, then the end user customer will receive a re-order tone.

7.2.2.5 Traffic rerouted via the Specialized Routing Nodes will be handed-off to MCIIm at a Point of Interconnection in the originating LATA.

7.2.2.6 Implementation of Specialized Routing will begin in the requested End Offices in the State no later than ninety (90) days after the beginning of the implementation interval, and will be finished for all requested End Offices in a State within one hundred eighty (180) days after the beginning of the implementation interval. The implementation interval for Specialized Routing will begin upon receipt by Bell Atlantic of a list of the End Offices from which MCIIm wishes to purchase Specialized Routing service.

7.2.2.7 Certain classes of service and/or line types are not supported by AIN-based Specialized Routing. These exceptions, identified in Exhibit E of this Attachment III, will be addressed by Bell Atlantic on a case-by-

case BFR basis at MCI's request. Additional charges will apply for the development and implementation of the network solution(s) used to address these exceptions. Exhibit E of this Attachment III is subject to modification upon reasonable prior notification to MCI.

7.2.2.8 Due to the use of AIN technology for Specialized Routing, some existing and future AIN-based services may not work with Local Resale lines that employ Specialized Routing. Exhibit E of this Attachment III lists AIN services that are currently known to conflict with Specialized Routing.

- 7.2.3 Bell Atlantic shall provide standard recorded announcements at Parity.
- 7.2.4 Where requested by MCI, Bell Atlantic will attempt to change a subscriber from Bell Atlantic's services to MCI's services without loss of feature availability and functionality. However, dependent on the technical arrangements MCI chooses to use to provide their end user services, some feature interaction conflicts and resulting loss of feature availability and functionality may result.
- 7.2.5 For unbundled Bell Atlantic switching in Combination with an unbundled Bell Atlantic loop, Bell Atlantic shall perform routine testing (e.g., mechanized loop tests ("MLT")) at Parity upon receipt of a trouble report from MCI.
- 7.2.6 Bell Atlantic shall repair, restore and maintain Bell Atlantic provided equipment that has produced trouble conditions, at Parity and in a Non-Discriminatory manner, to minimize recurrence of trouble conditions in MCI's use of Local Switching.
- 7.2.7 Bell Atlantic shall control congestion points such as mass calling events, and network routing abnormalities, using capabilities such as automatic call gapping, automatic congestion control, and network routing overflow at Parity and in a Non-Discriminatory manner.
- 7.2.8 Bell Atlantic shall record billable events, involving usage of the element, and send the appropriate recording data to MCI as outlined in Attachment VIII.
- 7.2.9 Unbundled switching will include 911 access on the same basis as such access is provided in Bell Atlantic's network.
- 7.2.10 Bell Atlantic shall provide switching service point ("SSP") capabilities and signaling software to interconnect the signaling links destined to Bell Atlantic STPs at Parity. In the event that Local Switching is provided out of a switch without SS7 capability, and Bell Atlantic unbundled Common Transport is purchased for use with Bell

Atlantic's unbundled switching, Bell Atlantic's Tandem Office Switches shall provide this capability at Parity.

- 7.2.11 Bell Atlantic shall provide interfaces to Adjunct Equipment, which interfaces are identified in this Agreement, at Parity. Bell Atlantic shall provide interfaces to any other Adjunct Equipment at Parity pursuant to the BFR process.
- 7.2.12 From time to time MCI may request that Bell Atlantic provide unique reports of reasonable performance data regarding a subscriber line, traffic characteristics, or other reasonable elements. To the extent that such reports exceed that which Bell Atlantic provides itself or its subscribers, MCI shall pay reasonable charges for such reports.
- 7.2.13 Bell Atlantic shall assign each MCI subscriber line an unbundled switching class of service. MCI may request and Bell Atlantic will provide call blocking options (e.g., 900, 976) at Parity.

7.3 Interface Requirements:

- 7.3.1 Bell Atlantic shall provide the following unbundled switching interfaces:

Analog Basic (POTS) - line side, loop start or ground start signaling
 Analog CENTREX - line side, loop start or ground start signaling
 Analog PBX - line side, loop start or ground start signaling

Analog DID - trunk side, loop reverse-battery signaling, associated with a PBX
 DS1 (DID) - trunk side, associated with a PBX
 DS1 (IOF) - trunk side, associated with dedicated unbundled transport

These services will be more fully described in Exhibits F and G of this Attachment III. Additional interfaces may be developed in accordance with the BFR process set forth in Section 25 of Part A of this Agreement.

- 7.3.2 Bell Atlantic shall offer access to the following at Parity:

7.3.2.1 SS7 signaling or multi-frequency trunking;

7.3.2.2 Interface to MCI or Bell Atlantic Operator Services systems through the use of Specialized Routing, as appropriate;

7.3.2.3 Interface to MCI or Bell Atlantic Directory Assistance Services through the use of Specialized Routing, as appropriate; and

7.3.2.4 Access to other third-party carriers.

7.4 Integrated Services Digital Network ("ISDN")

Implementation of the first customer application of unbundled ISDN switching will require technical and operational coordination and testing by MCI and Bell Atlantic to ensure that the requirements set forth in this section can be met. Should any of these requirements prove technically infeasible, the Parties shall cooperate to determine the requirements applicable to the unbundled service.

7.4.1 Technical Requirements — ISDN

7.4.1.1 Bell Atlantic shall offer data switching providing ISDN that, at a minimum:

7.4.1.1.1 Provides integrated packet handling capabilities at Parity;

7.4.1.1.2 Allows for full 2B+D channel functionality for BRI at Parity; and

7.4.1.1.3 Allows for full 23B+D channel functionality for PRI at Parity.

7.4.1.1.4 Each B channel shall allow for voice, 64 Kbps CSD, and PSD of 128 logical channels at minimum speeds of 19 Kbps throughput of each logical channel up to the total capacity of the B channel.

7.4.1.1.5 Each B channel shall provide capabilities for alternate voice and data on a per call basis.

7.4.1.1.6 The BRI D channel shall allow for call associated signaling, non-call associated signaling and PSD of 16 logical channels at minimum speeds of 9.6 Kbps throughput of each logical channel up to the total capacity of the D channel.

7.4.1.1.7 The PRI D channel shall allow for call associated signaling.

7.4.2 Interface Requirements — ISDN

7.4.2.1 Bell Atlantic shall provide the BRI U interface using 2-wire copper loops in accordance with TR-NWT-000393, January 1991, *Generic Requirements for ISDN Basic Access Digital Subscriber Lines*.

7.4.2.2 Bell Atlantic shall provide the BRI interface using digital subscriber loops adhering to Bellcore TR-NWT-303 specifications to interconnect DLCs.

7.4.2.3 Bell Atlantic shall offer PSD interfaces adhering to the X.25, X.75 and X.75' ANSI and Bellcore requirements.

7.4.2.4 Bell Atlantic shall offer PSD trunk interfaces operating at 56 kbps.

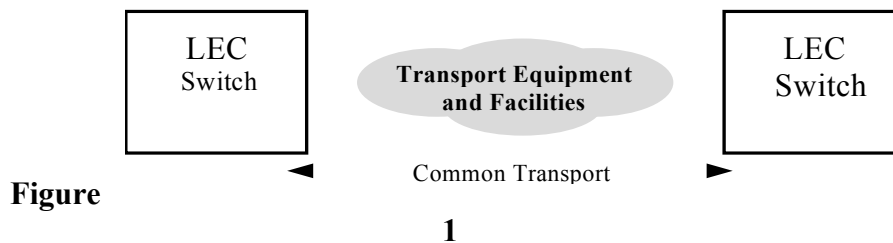
Section 8. Operator Systems

See Attachment VIII, Section 6.1.2 Directory Assistance Service and 6.1.3 Operator Service.

Section 9. Common Transport

9.1 Definition:

9.1.1 Common Transport consists of interoffice transmission paths between Bell Atlantic Network Elements (illustrated in Figure 1) shared by carriers. Common Transport consists of Bell Atlantic inter-office transport facilities and is distinct and separate from Local Switching. Common Transport routes the call between two Bell Atlantic switches using the existing route(s) that are used by the Bell Atlantic network for Bell Atlantic's end users.



Figure

1

9.2 Technical Requirements

9.2.1 Bell Atlantic shall be responsible for the engineering, provisioning, and maintenance of the underlying equipment and facilities that are used to provide Common Transport.

Section 10. Dedicated Transport

10.1 Definition:

10.1.1 Dedicated Transport is an interoffice transmission path of a fixed capacity between MCI designated locations to which MCI is granted exclusive use. Such locations may include Bell Atlantic Central Offices, other Telecommunication Carrier locations, subscriber premises, or other mutually agreed locations. Dedicated Transport is depicted below in Figure 2.

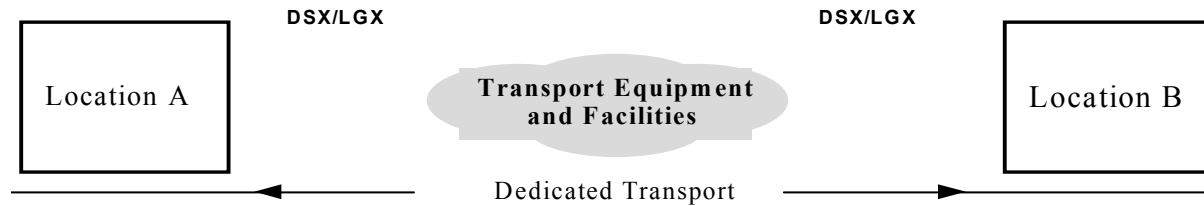


Figure 2

10.1.2 Bell Atlantic shall offer Dedicated Transport as a circuit (e.g., DS0 (voice grade), DS1, STS1 (when available) and DS3) dedicated to MCI.

10.1.3 When Dedicated Transport is provided as a circuit, it will have available (as appropriate):

10.1.3.1 Optional multiplexing functionality;

10.1.3.2 Grooming functionality in accordance with Section 10.3 herein; and,

10.1.3.3 Redundant equipment and facilities necessary to support protection and restoration at Parity and in a Non-Discriminatory manner.

10.2 Technical Requirements

This Section sets forth technical requirements for all Dedicated Transport.

10.2.1 Dedicated Transport shall provide physical diversity at Parity.

10.2.2 MCI may request that Bell Atlantic provide additional physical diversity. Bell Atlantic will provide such physical diversity where it is available, at Bell Atlantic's prevailing additional charge, if any. If physical diversity is not reasonably available in response to MCI's request, then MCI may order such additional physical diversity by submitting a request for special construction.

10.2.3 Dedicated Transport shall include DSX terminations at one or both ends, as applicable, in Bell Atlantic's Central Office location.

10.2.4 Bell Atlantic shall offer DCS and multiplexing, both together with and separately from Dedicated Transport.

10.3 Digital Cross Connect System ("DCS")

10.3.1 Definition:

10.3.1.1 DCS is a device which provides electronic cross-connection of digital signal level 0 ("DS0") or higher transmission bit rate digital

channels within physical interface facilities. Types of DCSs include but are not limited to DCS 1/0s, where the nomenclature 1/0 denotes interfaces typically at the DS1 rate or greater with cross-connection typically at the DS0 rate.

10.3.2 DCS Technical Requirements

10.3.2.1 DCS shall provide cross connection of the channels designated by MCIIm, either through service orders or by using Bell Atlantic's Intellimux capabilities.

10.3.2.2 Bell Atlantic shall continue to administer and maintain DCS, including updates to the control software to current available releases, at Parity.

10.3.2.3 Bell Atlantic shall provide various types of Digital Cross Connect Systems including:

10.3.2.3.1 DS0 cross connects (typically termed DCS 1/0).

10.3.2.3.2 Additional DCS types shall be requested in accordance with the BFR process set forth in Section 25 of Part A of this Agreement.

10.3.2.4 Through Bell Atlantic's Intellimux service capabilities, Bell Atlantic shall provide immediate and continuous configuration and reconfiguration of the channels between the physical interfaces (*i.e.*, Bell Atlantic shall establish the processes to implement cross connects on demand, or permit MCIIm control of such configurations and reconfigurations).

10.3.2.5 Through Bell Atlantic's Intellimux service capabilities, Bell Atlantic shall provide scheduled configuration and reconfiguration of the channels between the physical interfaces (*i.e.*, Bell Atlantic shall establish the processes to implement cross connects on the schedule designated by MCIIm, or permit MCIIm to control such configurations and reconfigurations).

10.3.2.6 DCS shall continuously monitor protected circuit packs and redundant common equipment at Parity.

10.3.2.7 DCS shall automatically switch to a protection circuit pack on detection of a failure or degradation of normal operation at Parity.

10.3.2.8 The equipment used to provide DCS shall be equipped with a redundant power supply or a battery back-up at Parity.

10.3.2.9 Bell Atlantic shall make available for DCSs handling MCIIm services spare facilities and equipment at Parity, necessary for provisioning repairs.

10.3.2.10 Through Bell Atlantic's Intellimux service capabilities, at MCIIm's option, Bell Atlantic shall provide MCIIm currently available performance monitoring and alarm data.

10.3.2.11 At MCIIm's option, Bell Atlantic shall provide MCIIm with the ability to initiate tests on DCS equipment. This will require MCIIm to provide additional facilities from the DCS, back to MCIIm's test center. The DCS can then be used to connect MCIIm's test center ports to other MCIIm circuits.

10.3.2.12 Where available, DCS shall provide multipoint bridging of multiple channels to other DCSs. MCIIm may designate multipoint bridging to be one-way broadcast from a single master to multiple tributaries, or two-way broadcast between a single master and multiple tributaries.

10.3.2.13 DCS shall multiplex lower speed channels onto a higher speed interface and demultiplex higher speed channels onto lower speed interfaces as designated by MCIIm.

Section 11. Signaling Link Transport

11.1 Definition:

- 11.1.1 Bell Atlantic's CCS Access Service ("CCSAS") allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path. The transport portion of CCSAS is provided via a discreetly rated dedicated 56 kbps out of band signaling connection between the carrier's Signaling Point of Interconnection ("SPOI") and Bell Atlantic's STP.
- 11.1.2 Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps. The connection to Bell Atlantic's STP pair can be made from either the carrier's signaling point ("SP"), which requires a minimum of two 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.
- 11.1.3 STP locations are set forth in National Exchange Carrier Association ("NECA") Tariff F.C.C. No. 4. Carriers ordering CCSAS are subject to the technical requirements specified in Bell Atlantic Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9). Testing and

certification reference documentation shall be pursuant to Bell Atlantic Tariff F.C.C. No. 1, Section 6.4.3 (A).

- 11.1.4 Each Party shall provide the other Party with access to databases and associated signaling necessary for call routing and completion by providing SS7 CCS interconnection in accordance with existing Tariffs, and interconnection and access to toll free databases, LIDB, and any other necessary databases in accordance with existing Tariffs and/or agreements with other unaffiliated carriers. Alternatively, either Party may secure CCS Interconnection from a commercial SS7 hub provider, and in that case the other Party will permit the purchasing Party to access the same databases as would have been accessible if the purchasing Party had connected via SS7 CCS directly to the other Party's CCS network.
- 11.1.5 Bell Atlantic shall permit MCIIm to access Bell Atlantic's LIDB to validate calling card numbers and requests for bill-to-third-party or collect billing. Bell Atlantic shall provide LIDB access at Parity and in a Non-Discriminatory manner by a SS7 formatted data query before call completion to determine the validity of the billing method requested by the caller. LIDB will respond with a SS7 formatted confirmation of validity or denial of the requested billing option.
- 11.1.6 The Parties will provide CCS Signaling to one another, where and as available, in conjunction with all local traffic, toll traffic, meet point billing traffic, and transit traffic. The Parties will cooperate on the exchange of TCAP messages to facilitate interoperability of CCS-based features between their respective networks, including all CLASS features and functions, to the extent each Party offers such features and functions to its subscribers. All CCS signaling parameters will be provided upon request (where available), including called party number, Calling Party Number, originating line information, calling party category, and Charge Number. All privacy indicators will be honored. The Parties will follow all relevant OBF adopted standards pertaining to CIC/OZZ codes. Where CCS Signaling is not available, in-band multi-frequency ("MF") wink start signaling will be provided. Any such MF arrangement will require a separate local trunk circuit between the Parties' respective Switches. In such an arrangement, each Party will output the full ten-digit telephone number of the called party to the other party with appropriate call set-up and ANI where available, at Parity.
- 11.1.7 The following publications describe the practices, procedures and specifications generally utilized by Bell Atlantic for signaling purposes and is listed herein to assist the Parties in meeting their respective interconnection responsibilities related to signaling:

11.1.7.1 Bellcore GR-905-CORE, Issue 1, March 1995, and subsequent issues and revisions;

11.1.7.2 Bell Atlantic Supplement Common Channel Signaling Network Interface Specification, Bell Atlantic-905, December 1990; Issue, Supplement 1, June 1992; Supplement 2, August 1992; Supplement 3, January 1993; and

11.1.7.3 Bell Atlantic AIN SMS Network Disclosure (Date: December 1996, on Bell Atlantic World Wide Web site).

11.1.8 Each Party shall charge the other Party mutual and reciprocal rates for CCS Signaling as follows: Bell Atlantic shall charge MCI in accordance with Attachment I hereto and applicable Tariffs; MCI shall charge Bell Atlantic rates equal to the rates Bell Atlantic charges MCI, unless MCI's Tariffs for CCS signaling provide for lower generally available rates, in which case MCI shall charge Bell Atlantic such lower rates.

11.1.9 MCI must meet interconnection certification testing requirements of the SS7 network before interconnection is permitted, and also before changes occur within the MCI SS7 network.

Section 12. Signaling Transfer Points ("STPs")

12.1 Definition:

12.1.1 Bell Atlantic's CCSAS allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path. The discretely rated network termination point where this interconnection takes place is called the Bell Atlantic STP port termination. Figure 3 depicts STPs.

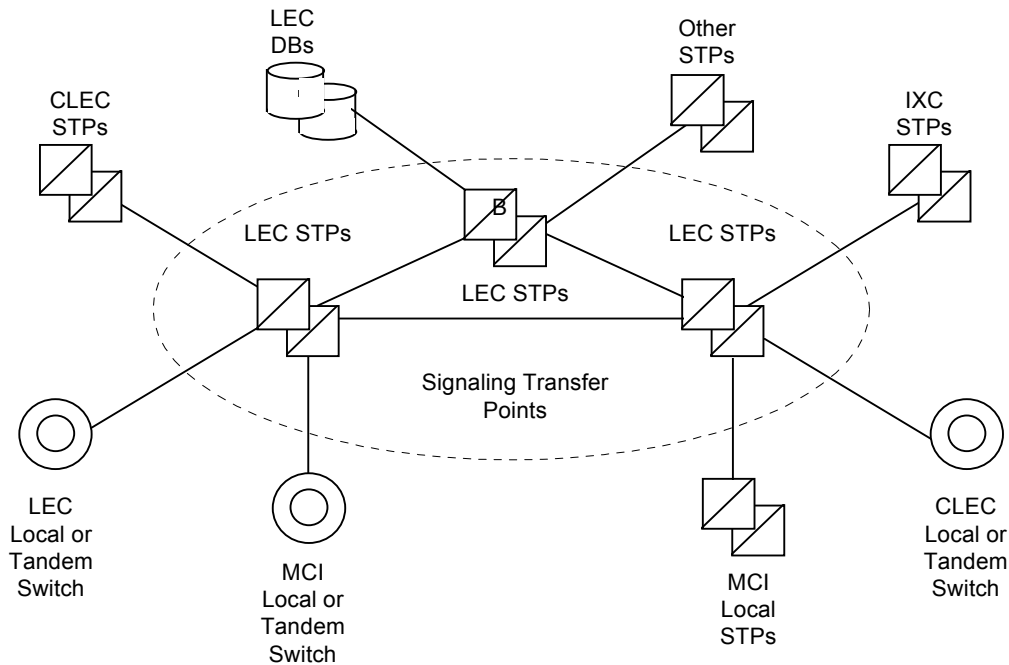


Figure 3

- 12.1.2 Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps. The connection to Bell Atlantic's STP pair can be made from either the carrier's STP, which requires a minimum of two (2) 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.
- 12.1.3 STP locations are set forth in National Exchange Carrier Association ("NECA") Tariff F.C.C. No. 4. Carriers ordering CCSAS are subject to the technical requirements specified in Bell Atlantic Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9). See Bell Atlantic Tariff F.C.C. No. 1, Section 6.4.3 (A) for testing and certification reference documentation).

12.2 Technical Requirements

- 12.2.1 STPs shall provide access to all other Network Elements connected to the Bell Atlantic network. These include:
- 12.2.1.1 Bell Atlantic Local Switching or Tandem Switching;
 - 12.2.1.2 Bell Atlantic Service Control Points/databases;
 - 12.2.1.3 Third-party local or Tandem Switching systems; and

12.2.1.4 Third-party-provided STPs.

- 12.2.2 The connectivity provided by STPs shall fully support the functions of all other Network Elements connected to the Bell Atlantic SS7 network. This explicitly includes the use of the Bell Atlantic SS7 network to convey messages which neither originate nor terminate at a signaling end point directly connected to the Bell Atlantic SS7 network (*i.e.*, transit messages). When the Bell Atlantic SS7 network is used to convey transit messages, there shall be no alteration of the integrated services digital network user part ("ISDNUP") or Transaction Capabilities Application Part ("TCAP") user data that constitutes the content of the message.
- 12.2.3 If a Bell Atlantic Tandem Switch routes calling traffic, based on dialed or translated digits, on SS7 trunks between an MCI local Switch and third-party local Switch, Bell Atlantic's SS7 network shall convey the TCAP messages that are necessary to provide call management features (automatic callback, automatic recall, and screening list editing) between the MCI local STPs and the STPs that provide connectivity with the third-party local Switch, even if the third-party local Switch is not directly connected to Bell Atlantic's STPs, providing that the third-party Switch is located in the same LATA.
- 12.2.4 In cases where the destination signaling point is a Bell Atlantic local or Tandem Switching system or database, or is an MCI or third-party local or Tandem Switching system directly connected to Bell Atlantic's SS7 network, Bell Atlantic STPs shall perform final GTT of messages to the destination and SCCP Subsystem Management of the destination. In all other cases, STPs shall perform intermediate GTT of messages to a gateway pair of STPs in an SS7 network connected with the Bell Atlantic SS7 network, and shall not perform SCCP subsystem management of the destination.

12.3 Interface Requirements

- 12.3.1 Bell Atlantic shall provide the following STPs options to connect MCI or MCI-designated Local Switching systems or STPs to the Bell Atlantic SS7 network:

12.3.1.1 An A-link interface from MCI Local Switching systems; and,

- 12.3.2 Each type of interface shall be provided by one or more sets (layers) of signaling links, as follows:

12.3.2.1 An A-link layer shall consist of two links, as depicted in Figure 4.

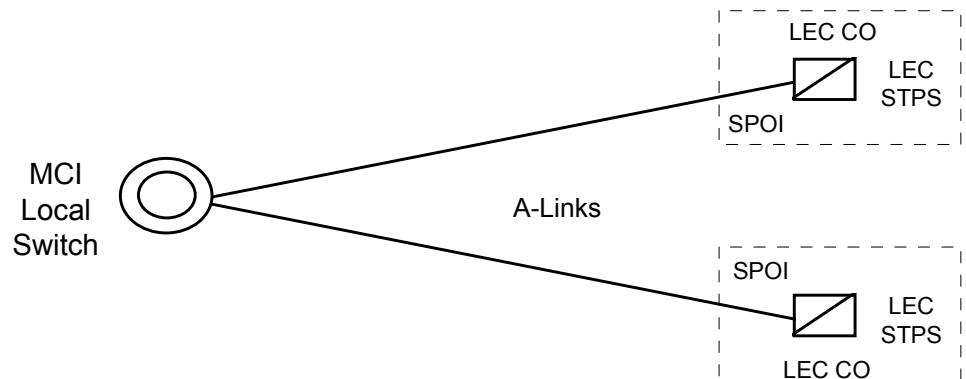


Figure 4. A-Link Interface

12.3.3 The Signaling Point of Interconnection ("SPOI") for each link shall be located at a cross-connect element, such as a DSX-1, in the Central Office where the Bell Atlantic STP is located. There shall be a DS1 or higher rate transport interface at each of the SPOIs. Each signaling link shall appear as a DS0 channel within the DS1 or higher rate interface.

12.4 Message Screening

12.4.1 Bell Atlantic shall set message screening parameters so as to accept messages from MCI local or tandem switching systems destined to any signaling point in the Bell Atlantic SS7 network with which the MCI switching system has a legitimate signaling relation.

12.4.2 Bell Atlantic shall set message screening parameters so as to accept messages from MCI local or tandem switching systems destined to any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCI switching system has a legitimate signaling relation.

12.4.3 Bell Atlantic shall set message screening parameters so as to accept messages destined to an MCI local or tandem switching system from any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCI switching system has a legitimate signaling relation.

12.4.4 Bell Atlantic shall set message screening parameters so as to accept and send messages destined to an MCI SCP from any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCI SCP has a legitimate signaling relation, provided

Bell Atlantic receives proper notification and agreement from the owner of such other networks.

12.5 STP Requirements

12.5.1 Bell Atlantic shall provide MTP and SCCP protocol interfaces in accordance with sections relevant to the MTP or SCCP in the following specifications:

12.5.1.1 Bellcore GR-905-CORE, Issue 1, March 1, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Network Interconnection, Message Transfer Part (“MTP”), and Integrated Services Digital Network User Part (“ISDNUP”); and

Section 13. Call Related Databases and AIN

13.1 Definition:

13.1.1 “Call Related Databases” are the Network Elements that provide the functionality for storage of, and access to, information required to route and complete a particular call. Call Related Databases include, but are not limited to: LIDB, Toll Free Number Database, and AIN databases.

13.1.2 A Service Control Point (“SCP”) is a specific type of database Network Element deployed in a Signaling System 7 (“SS7”) network that executes service application logic in response to SS7 queries sent to it by a switching system also connected to the SS7 network.

13.2 Technical Requirements for Call Related Databases

Requirements for Call Related Databases within this section address storage of information, access to information (*e.g.*, signaling protocols, response times), and administration of information (*e.g.*, provisioning, administration, and maintenance). All Call Related Databases shall be provided to MCI in accordance with the following requirements, except where such a requirement is superseded by specific requirements set forth in Subsections 13.3 through 13.5:

13.2.1 Bell Atlantic shall provide physical interconnection to SCPs through the SS7 network and protocols, as specified in Section 12 of this Attachment, with TCAP as the application layer protocol.

13.2.2 Bell Atlantic shall provide physical interconnection to databases via existing interfaces and industry standard interfaces and protocols (*e.g.*, 56 Kb TCP/IP).

- 13.2.3 The reliability of interconnection options shall be consistent with requirements for diversity and survivability as specified in Section 12 of this Attachment (which applies to both SS7 and non-SS7 interfaces).
- 13.2.4 Call Related Database functionality shall be available at Parity. If, based on information available through the process set forth in Section 3, MCIIm believes the functionality is inadequate to meet its needs, it may initiate a BFR.
- 13.2.5 Bell Atlantic shall complete database transactions (*i.e.*, add, modify, delete) for MCIIm subscriber records stored in Bell Atlantic databases at Parity.
- 13.2.6 Bell Atlantic shall provide database maintenance consistent with the maintenance requirements as specified in this Agreement (*e.g.*, notification of Bell Atlantic network affecting events, testing).
- 13.2.7 Bell Atlantic shall provide billing and recording information to track database usage consistent with connectivity billing and recording requirements for Call Related Databases as specified in this Agreement (*e.g.*, recorded message format and content, timeliness of feed, data format and transmission medium).
- 13.2.8 Bell Atlantic shall provide Call Related Databases in accordance with the physical security requirements specified in this Agreement.
- 13.2.9 Bell Atlantic shall provide Call Related Databases in accordance with the logical security requirements specified in this Agreement.

13.3 Line Information Database (“LIDB”)

This Subsection 13.3 defines and sets forth additional requirements for the Line Information Database. This Subsection 13.3 supplements the requirements of Subsection 13.2 and 13.5.

13.3.1 Definition:

LIDB is a transaction-oriented database accessible through CCS networks. It contains records associated with subscriber line numbers and special billing numbers (in accordance with the requirements in the technical reference in GR-1158-CORE OSSGR, Section 22.3). LIDB accepts queries from other Network Elements, or MCIIm’s network, and provides appropriate responses. The query originator need not be the owner of LIDB data. LIDB queries include functions such as screening billed numbers that provides the ability to accept collect or third number billing calls and validation of

telephone line number based non-proprietary calling cards. The interface for the LIDB functionality is the interface between the Bell Atlantic CCS network and other CCS networks. LIDB also interfaces to administrative systems. The administrative system interface provides Bell Atlantic work centers with an interface to LIDB for functions such as provisioning, auditing of data, access to LIDB measurements and reports.

13.3.2 Technical Requirements

13.3.2.1 Prior to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number record, (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) whether ported or not, for which the NPA-NXX or NXX-0/1XX group is supported by that LIDB.

13.3.2.2 Prior to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) record, whether ported or not, and NPA-NXX and NXX-0/1XX Group Records, belonging to an NPA-NXX or NXX-0/1 XX assigned to MCIIm.

13.3.2.3 Subsequent to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) record, whether ported or not, regardless of the number's NPA-NXX or NXX-0/1XX.

13.3.2.4 Bell Atlantic shall perform the following LIDB functions (*i.e.*, processing of the following query types as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3) for MCIIm's subscriber records in LIDB:

13.3.2.4.1 Billed number screening (provides information such as whether the billed number may accept collect or third number billing calls); and

13.3.2.4.2 Calling card validation.

13.3.2.5 Bell Atlantic shall process MCIIm's subscriber records in LIDB at least at Parity with Bell Atlantic subscriber records, with respect to other LIDB functions (as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3). Bell Atlantic shall indicate to MCIIm what

additional functions (if any) are performed by LIDB in Bell Atlantic's network.

13.3.2.6 Within two (2) weeks after a request by MCIIm, Bell Atlantic shall provide MCIIm with a list of the subscriber data items which MCIIm would have to provide in order to support billed number screening and calling card validation. The list shall indicate which data items are essential to LIDB function, and which are required only to support certain services. For each data item, the list shall show the data formats, the acceptable values of the data item and the meaning of those values.

13.3.2.7 Bell Atlantic shall provide LIDB systems with rates of operating deficiencies at Parity. If, based on information available through the process set forth in Section 3, MCIIm believes that the rate of deficiencies is inadequate to meet its needs, it may initiate a BFR.

13.3.2.8 Bell Atlantic shall provide MCIIm with the capability to provision (*e.g.*, to add, update, and delete) NPA-NXX and NXX-0/IXX group records, and line number and special billing number records, associated with MCIIm subscribers, directly into Bell Atlantic's LIDB provisioning process.

13.3.2.9 As directed by MCIIm or the new local service provider, in the event that end user subscribers change their local service provider, Bell Atlantic shall maintain subscriber data (for line numbers, card numbers, and for any other types of data maintained in LIDB), as mutually agreed by the Parties, so that such subscribers shall not experience any interruption of service, except for any interruption associated with a LIDB-only service order transaction at Parity.

13.3.2.10 All additions and updates of MCIIm data to the LIDB shall be solely at the direction of MCIIm. Bell Atlantic will process orders from other CLECs or from Bell Atlantic for subscribers that choose to migrate from MCIIm to another provider.

13.3.2.11 Bell Atlantic shall provide priority updates to LIDB for MCIIm data upon MCIIm's request (*e.g.*, to support fraud protection) at Parity.

13.3.2.12 Bell Atlantic shall accept queries to LIDB associated with MCIIm subscriber records, and shall return responses in accordance with the requirements of this Section 13.

13.4 Toll Free Number Database

The "Toll Free Number Database" is an SCP that provides functionality necessary for toll free (*e.g.*, 800 and 888) number services by providing routing information and additional

features during call set-up in response to queries from SSPs. This Subsection 13.4 supplements the requirements of Subsection 13.2 and 13.5. Bell Atlantic shall provide the Toll Free Number Database in accordance with the following:

13.4.1 Technical Requirements

13.4.1.1 Bell Atlantic shall make the Bell Atlantic Toll Free Number Database available for MCIIm to query, from MCIIm's designated switch including Local Switching, with a toll-free number and originating information.

13.4.1.2 The Toll Free Number Database shall return carrier identification and, where applicable, the queried toll free number, translated numbers and instructions as it would in response to a query from a Bell Atlantic switch.

13.4.2 Interface Requirements

The signaling interface between the MCIIm or other local switch and the Toll Free Number Database shall use the TCAP protocol as specified in Part A, Section 15 (Technical References), together with the signaling network interface as specified in Part A, Section 15 (Technical References).

13.5 Advanced Intelligent Network ("AIN") Access, Service Creation Environment and Service Management System ("SCE/SMS") Advanced Intelligent Network Access

13.5.1 Bell Atlantic shall provide access to any and all Bell Atlantic service applications resident in Bell Atlantic's SCP. Such access may be from MCIIm's switch or Bell Atlantic's unbundled local switch.

13.5.2 SCE/SMS AIN access shall provide MCIIm the ability to create service applications in the Bell Atlantic SCE and deploy those applications via the Bell Atlantic SMS to the Bell Atlantic SCP. This interconnection arrangement shall provide MCIIm access to the Bell Atlantic development environment in a manner at least at Parity with Bell Atlantic's ability to deliver its own AIN-based services. SCE/SMS AIN Access is the creation and provisioning of AIN services in the Bell Atlantic network. See Figure 5 below.

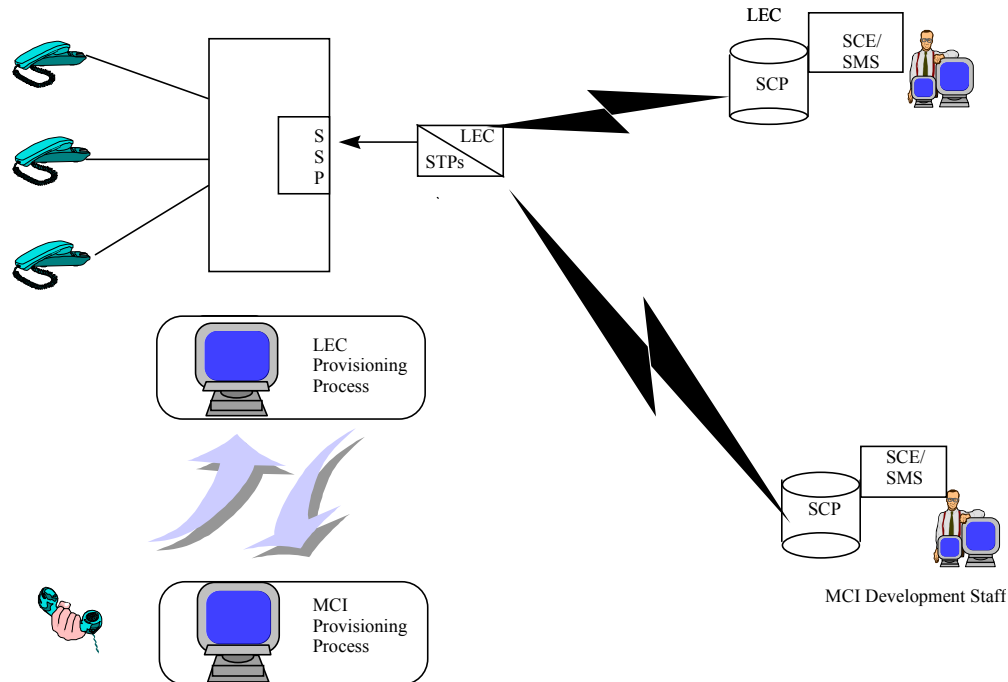


Figure 5

- 13.5.3 Bell Atlantic shall make SCE hardware, software, testing and technical support (e.g., help desk, system administrator) resources available to MCI. Scheduling of SCE resources shall allow MCI at least equal priority to Bell Atlantic.
- 13.5.4 The Bell Atlantic SCE/SMS shall allow for multi-user access. Source code (i.e., AIN service applications and process flow design developed by an MCI service designer/creator to provide AIN based services) management and other logical security functions will be provided.
- 13.5.5 Bell Atlantic shall provide reasonable protection to MCI service logic and data from unauthorized access, execution or other types of compromise.
- 13.5.6 Bell Atlantic or a designated vendor shall provide for service creation training, documentation, and technical support of MCI development staff at Parity with that provided to Bell Atlantic's own development staff. Training sessions shall be "suitcased" to MCI facilities or delivered at Bell Atlantic facilities at MCI's cost, at MCI's discretion, subject to vendor's requirements.
- 13.5.7 When MCI selects SCE/SMS AIN access, Bell Atlantic shall provide for a secure, controlled access environment on-site as well as via remote data connections (i.e., ISDN circuit switched data).

- 13.5.8 When MCIIm selects SCE/SMS AIN access, Bell Atlantic shall allow MCIIm to transfer data forms and/or tables to the Bell Atlantic SCP via the Bell Atlantic SMS (e.g., service customization and subscriber subscription) in a manner consistent with how Bell Atlantic provides that capability to itself.
- 13.5.9 When MCIIm selects SCE/SMS AIN access for providing services on MCIIm's network, the Parties will work cooperatively to resolve technical and provisioning issues.

Section 14. Tandem Switching

14.1 Definition:

- 14.1.1 Tandem Switching includes trunk-connect facilities, the basic switching function of connecting trunks to trunks, and the functions that are centralized in tandem switches. Tandem Switching creates a temporary transmission path between interoffice trunks that are interconnected at a Bell Atlantic access tandem switch for the purpose of routing a call or calls.

14.2 Technical Requirements

14.2.1 Tandem Switching shall provide:

14.2.1.1 Signaling to establish a tandem connection;

14.2.1.2 Screening and routing at Parity;

14.2.1.3 To the extent Technically Feasible and at Parity, Tandem Switching shall provide recording of billable events;

14.2.1.4 Tandem Switching shall provide AIN triggers supporting AIN features at Parity with its provision of such triggers for Bell Atlantic subscribers;

14.2.1.5 Bell Atlantic's Tandem Switching shall provide access to toll free and Number Portability databases in the same manner as it provides such access to itself and its Bell Atlantic subscribers;

14.2.1.6 Tandem Switching shall provide all trunk interconnections, where available, in Bell Atlantic's access tandems; and

14.2.1.7 Tandem Switching shall accept connections (including the necessary signaling and trunking interconnections) between end offices, IXCs, ITCs, CAPs and CLEC switches that subtend/interconnect at the same tandem.

- 14.2.2 Tandem Switching shall provide local tandeming functionality between two End Offices that subtend/interconnect at the same tandem, including two offices belonging to different CLECs (e.g., between an MCI end office and the end office of another CLEC).
- 14.2.3 Tandem Switching shall preserve CLASS/LASS features and Caller ID as traffic is processed on SS7 trunk groups at Parity. Additional signaling information and requirements are provided in Section 12.
- 14.2.4 Bell Atlantic shall perform routine testing and fault isolation on the underlying switch that is providing Tandem Switching and all its interconnections at Parity with its performance of such testing for its own subscriber services. When commonly available, the results of the testing shall be made immediately available to MCI.
- 14.2.5 Tandem Switching shall control congestion using capabilities such as automatic congestion control and network routing overflow. Congestion control provided or imposed on MCI traffic shall be at Parity with controls being provided or imposed on Bell Atlantic traffic for itself and its subscribers.
- 14.2.6 Tandem Switching shall route calls to Bell Atlantic or MCI endpoints or platforms for which Tandem Switching is provided. For Tandem Switching with unbundled Common Transport, call routing including overflow is accomplished as Bell Atlantic's network normally routes the calls. For Tandem Switching with unbundled Dedicated Transport, specific routing may be requested through the BFR process.
- 14.2.7 Tandem Switching shall process originating toll-free traffic received from an MCI local switch.
- 14.2.8 In support of AIN triggers and features, Tandem Switching shall provide SSP capabilities at Parity with Bell Atlantic's provision of these capabilities for its own subscribers under the same circumstances when these capabilities are not available from Local Switching.
- 14.2.9 The Local Switching and Tandem Switching functions may be combined in an office. If this is done, both Local Switching and Tandem Switching shall provide all of the functionality required of each of those Network Elements in this Agreement.

14.3 Interface Requirements

- 14.3.1 Tandem Switching shall interconnect, with direct trunks, to all carriers with which Bell Atlantic interconnects.

14.3.1.1 Transit traffic that is originated by an ITC or wireless carrier shall be settled in accordance with the terms of an appropriate IntraLATA Telecommunications Services Settlement Agreement between the Parties substantially in the form appended hereto as Exhibit H. Meet-Point Billing compensation arrangements as described in Section 3 of Attachment VIII shall be utilized for compensation for the joint handling of toll traffic.

14.3.1.2 Bell Atlantic expects that most networks involved in transit traffic will deliver each call to each involved network with CCS and the appropriate TCAP message to facilitate full interoperability of those services supported by Bell Atlantic and billing functions. In all cases, each Party shall follow the Exchange Message Record ("EMR") standard and exchange records between the Parties and with the terminating carrier to facilitate the billing process to the originating network.

14.3.1.3 Transit traffic to and from MCIIm shall be routed over the traffic exchange trunks.

14.3.2 Bell Atlantic shall provide signaling necessary to provide Tandem Switching with feature functionality impacts and effects at Parity.

Section 15. Additional Requirements

This Section 15 of Attachment III sets forth the additional requirements for Network Elements which Bell Atlantic agrees to offer to MCIIm under this Agreement.

15.1 Cooperative Testing

15.1.1 Definition:

"Cooperative Testing" means that both Bell Atlantic and MCIIm shall cooperate with reasonable requests from the other to (i) ensure that the Network Elements and ancillary functions and additional requirements being provided to MCIIm by Bell Atlantic are in compliance with the requirements of this Agreement, (ii) test the overall functionality of various Network Elements and ancillary functions provided by Bell Atlantic to MCIIm in Combination with each other or in Combination with other equipment and facilities provided by MCIIm or third-parties, (iii) test the overall functionality of services provided by third-parties involving or combining Network Elements provided by Bell Atlantic and services provided by MCIIm, and (iv) ensure that billing data can be provided to MCIIm and Bell Atlantic.

15.1.2 Requirements

Within forty-five (45) days after the Effective Date of this Agreement, MCI and Bell Atlantic will agree upon a process to resolve technical issues relating to interconnection of MCI's network to Bell Atlantic's network and Network Elements and ancillary functions. The agreed upon process shall include procedures for escalating disputes and unresolved issues up through higher levels of each Party's management. If MCI and Bell Atlantic do not reach agreement on such a process within forty-five (45) days, any issues that have not been resolved by the Parties with respect to such process shall be submitted to the procedures set forth in Part A, Section 24 (Dispute Resolution Procedures) of this Agreement unless both Parties agree to extend the time to reach agreement on such issues.

15.1.2.1 Where mutually agreed (*e.g.*, POT bays in the common area associated with physical Collocation), Bell Atlantic shall provide MCI access for testing MCI facilities at interfaces between a Bell Atlantic Network Element, or at interfaces between a Bell Atlantic Combination, and MCI equipment or facilities. This access shall be available seven (7) days per week, twenty-four (24) hours per day.

15.1.2.2 When mutually agreed, Bell Atlantic shall temporarily provision MCI designated Local Switching features (*e.g.*, customized routing) for testing. MCI and Bell Atlantic shall mutually agree on the procedures to be established between Bell Atlantic and MCI to expedite such provisioning processes for feature testing.

15.1.2.3 Upon reasonable request, Bell Atlantic and MCI shall provide technical staff to meet with each other to provide required support for Cooperative Testing.

15.1.2.4 Dedicated Transport and ULL may experience alarm conditions due to in-progress tests. When an entire Bell Atlantic facility is dedicated to MCI services, Bell Atlantic shall not remove such facility from service without obtaining MCI's prior approval.

15.1.2.5 Bell Atlantic shall provide to MCI electronic access to 105 type responders, 100-type test lines, or 102-type test lines associated with any circuits under test.

15.1.2.6 MCI and Bell Atlantic shall endeavor to complete Cooperative Testing as stated in Attachment VIII.

15.1.2.7 MCI may accept or reject the Network Element ordered by MCI if, upon completion of cooperative acceptance testing, the tested Network Element does not meet the requirements stated in applicable

technical references included in Appendix 1 (Technical Reference Schedule) of Part A.

15.2 Protection, Restoration, and Disaster Recovery

15.2.1 Scope

This Section refers specifically to requirements on the use of redundant network equipment and facilities for protection, restoration, and disaster recovery.

15.2.2 Requirements

15.2.2.1 Bell Atlantic shall provide protection, restoration, and disaster recovery capabilities at Parity with those capabilities provided for their own services, facilities and equipment (*e.g.*, equivalent circuit pack protection ratios, facility protection ratios).

15.2.2.2 Bell Atlantic shall provide Network Elements equal priority in protection, restoration, and disaster recovery as provided to their own services, facilities and equipment.

15.2.2.3 Bell Atlantic shall provide Network Elements equal priority in the use of spare equipment and facilities as provided to their own services, facilities and equipment.

15.2.2.4 Bell Atlantic shall restore Network Elements which are specific to MCI end user subscribers on a priority basis as MCI may designate at Parity.

15.3 Synchronization

15.3.1 Definition:

“Synchronization” is the function which keeps all digital equipment in a communications network operating at the same average frequency. With respect to digital transmission, information is coded into discrete pulses. When these pulses are transmitted through a digital communications network, all synchronous Network Elements are traceable to a stable and accurate timing source. Network synchronization is accomplished by timing all synchronous Network Elements in the network to a stratum 1 source so that transmission from these network points have the same average line rate.

15.3.2 Technical Requirements

The following requirements are applicable to the case where Bell Atlantic provides synchronization services to equipment that MCIIm owns and operates within a Bell Atlantic location. In addition, these requirements apply to synchronous equipment that is owned by Bell Atlantic and is used to provide a Network Element to MCIIm. Synchronization services by Bell Atlantic shall be subject to rates and charges to be determined.

15.3.2.1 The synchronization of clocks within digital networks is divided into two parts: intra-building and inter-building. Within a building, a single clock is designated as the building integrated timing supply ("BITS"), which provides all of the DS1 and DS0 synchronization references required by other clocks in such building. This is referred to as intra-building synchronization. The BITS receives synchronization references from remotely located BITS. Synchronization of BITS between buildings is referred to as inter-building synchronization.

15.3.2.2 To implement a network synchronization plan, clocks within digital networks are divided into four stratum levels. All clocks in strata 2, 3, and 4 are synchronized to a stratum 1 clock, that is, they are traceable to a stratum 1 clock. A traceable reference is a reference that can be traced back through some number of clocks to a stratum 1 source. Clocks in different strata are distinguished by their free running accuracy or by their stability during trouble conditions such as the loss of all synchronization references.

15.3.2.2.1 **Intra-Building**

15.3.2.2.1.1 Within a building, there may be different kinds of equipment that require synchronization at the DS1 and DS0 rates. Synchronization at the DS1 rate is accomplished by the frequency synchronizing presence of buffer stores at various DS1 transmission interfaces. Synchronization at the DS0 rate is accomplished by using a composite clock signal that phase synchronizes the clocks. Equipment requiring DS0 synchronization frequently does not have adequate buffer storage to accommodate the phase variations among different equipment. Control of phase variations to an acceptable level is accomplished by externally timing all interconnecting DS0 circuits to a single clock source and by limiting the interconnection of DS0 equipment to less than 1,500 cable feet. Therefore, a BITS shall provide DS1 and composite clock signals when the appropriate composite signal is a 64-kHz 5/8th duty cycle, return to zero with a bipolar violation every eighth pulse ("B8RZ").

15.3.2.2.2 Inter-Building

15.3.2.2.2.1 Bell Atlantic shall provide inter-building synchronization at the DS1 rate, and the BITS shall accept the primary and secondary synchronization links from BITS in other buildings. From hierarchical considerations, the BITS shall be the highest stratum clock within the building and Bell Atlantic shall provide operations capabilities (this includes, but is not limited to: synchronization reference provisioning; synchronization reference status inquiries; timing mode status inquiries; and alarm conditions).

15.3.3 Synchronization Distribution Requirements

15.3.3.1 Central Office BITS shall contain redundant clocks meeting or exceeding the requirements for a stratum 3 enhanced clock as specified in ANSI T1.101-1994 and Bellcore *GR-1244 Clocks for the Synchronized Network: Common Genetic Criteria*.

15.3.3.2 Central Office BITS shall be powered by primary and backup power sources.

15.3.3.3 If both reference inputs to the BITS are interrupted or in a degraded mode (meaning off frequency greater than twice the minimum accuracy of the BITS, loss of frame, excessive bit errors, or in alarm indication signal), then the stratum clock in the BITS shall provide the necessary bridge in timing to allow the network to operate without a frame repetition or deletion (slip free) with better performance than 1 frame repetition or deletion (slip) per week.

15.3.3.4 DS1s multiplexed into a SONET synchronous payload envelope within an STS-n (where n is defined in ANSI T1.105-1995) signal shall not be used as reference facilities for network synchronization.

15.3.3.5 The total number of Network Elements cascaded from the stratum 1 source shall be minimized.

15.3.3.6 A Network Element shall receive the synchronization reference signal only from another Network Element that contains a clock of equivalent or superior quality (stratum level).

15.3.3.7 Bell Atlantic shall select for synchronization those facilities shown to have the greatest degree of availability (absence of outages).

15.3.3.8 Where possible, all primary and secondary synchronization facilities shall be physically diverse (this means the maximum feasible physical separation of synchronization equipment and cabling).

15.3.3.9 No timing loops shall be formed in any combination of primary and secondary facilities.

15.3.3.10 An operations support system ("OSS") shall continuously monitor the BITS for synchronization related failures or degradation.

15.3.3.11 An OSS shall continuously monitor all equipment transporting synchronization facilities for synchronization related failures or degradation.

15.3.3.12 For non-SONET equipment, Bell Atlantic shall provide synchronization facilities which, at a minimum, comply with the standards set forth in ANSI T1.101-1994.

15.3.3.13 All equipment approved for deployment in Bell Atlantic's network shall meet Bellcore GR-253 and GR-1244 requirements.

Section 16. Basic 911 and E911

See Attachment VIII, Section 6.1.1.

Section 17. Directory Assistance Data

See Attachment VIII, Section 6.1.6, and Section 6.2.

EXHIBIT A

TR 72565
Issue 2, December 1996

Bell Atlantic Technical Reference

**Basic Unbundled Loop Services
Technical Specifications**

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Printed in U.S.A.

July 2, 1997

ATTACHMENT III

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR-72565
Issue 2, December 1996**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of Basic Unbundled Loop Services. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

Bell Atlantic reserves the right to revise this technical reference for any reason including, but not limited to, changes in tariffs, laws, or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to herein. Liability for difficulties arising from technical limitations or changes herein is disclaimed.

Bell Atlantic reserves the right not to offer any or all of these services and to withdraw any or all of them at any future time. In addition, the services described herein are based on available facilities and equipment and may not be universally available.

With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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EXHIBIT A

Bell Atlantic Network Services, Inc.
Technical Reference

TR 72565
Issue 2, December 1996

Bell Atlantic
Basic Unbundled Loop Services
Technical Specifications

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1. General

1.01 This document provides the technical specifications for the Basic Unbundled Loop Services (BULS) offered by Bell Atlantic in the co-carrier section of local exchange tariffs.

1.02 This technical reference has been reissued to provide a revised leakage specification and to provide interface code information. In addition, several editorial changes have been made.

1.03 BULS enable Other Telephone Companies (OTC) collocated in a Bell Atlantic (BA) Central Office (CO) to connect to analog subscriber loops to provide loop-start switched access services to end-user locations.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the BULS loop. In the future, Bell Atlantic may offer transport services for analog unbundled loops, however such transport will not be available for BULS. In instances where an OTC desires transport for a loop-start analog unbundled loop, the OTC must order Analog Unbundled Loop Service with Customer Specified Signaling (AULSCSS) and specify loop-start signaling. The technical specifications for AULSCSS may be found in BA TR72570.

2. Service Description

A. General

2.01 The description, terms and conditions, rates, regulations, and Universal Service Order Codes (USOCs) for Basic Unbundled Loop Services are contained in applicable tariffs or contracts.

2.02 Basic Unbundled Loop Services (BULS) provide the customer with a voice grade transmission channel suitable for loop-start signaling and the transport of analog voice grade signals. The channel is between the Central Office Distributing Frame (CODF) termination of OTC equipment in a BA Central Office (CO) and the Rate Demarcation Point (RDP) at an end-user customer location.

2.03 BULS is provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

B. Physical Characteristics

2.04 The interface at the CODF termination is 2-wire and the interface at the RDP is 2-wire. At each interface one conductor is called tip and the other conductor is called ring. A typical BULS configuration is shown in Figure 2-1.

RDP

OTC-POT

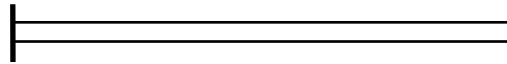


Figure 2-1: Typical BULS configuration

2.05 The transmission channel between the BULS 2-wire interfaces is effective 2-wire. An effective 2-wire channel may be entirely 2-wire or it may contain a 4-wire facility portion (such as a Digital Loop Carrier) with a 2-wire metallic extension to the end-users RDP. The transmission channel is suitable for the transport of analog voice grade signals between approximately 300 and 3000 Hz.

2.06 BULS may be provided using a variety of loop transmission technologies, including but not limited to, metallic cable, metallic cable based digital loop carrier, and fiber optic digital loop carrier systems.

2.07 When digital loop carrier (DLC) is used to provide BULS, the DLC will provide loop-start signaling at the RDP that meets the network requirements in ANSI T1.401-1993 [1].

C. Service Elements

2.08 BULS ordinarily consists of two elements:

(1) the CODF wire and tie cable(s) between the CODF termination of the collocated OTC equipment and the CODF termination of a subscriber loop; and,

(2) a subscriber loop facility between the CODF and the end-user customer's RDP. The loop is either:

(a) a metallic facility consisting of cable and wire between the CODF and the RDP; or,

(b) a universal DLC channel with loop start (LS) signaling capability. The DLC channel consists of:

- CO cabling between the CODF and a DLC Central Office Terminal (COT) equipped with a LS open-end channel unit;

- a fiber or metallic facility from the DLC COT to the DLC Remote Terminal (RT) equipped with a LS closed-end channel unit; and,

- cable and wire between the DLC RT and the RDP.

D. Compatibility Considerations

2.09 BULS utilizes subscriber loop facilities that have been designed for Plain Ordinary (analog) Telephone Service (POTS). In most cases, BULS should be suitable for loop-start single line residential service and loop-start single line business service. POTS qualified loops may not be suitable for data or other special services however.

2.10 Bell Atlantic does not guarantee that BULS will be suitable for analog data (e.g., V.32, V.32bis, V.34, etc.). If a customer is able to send and receive data, Bell Atlantic will not guarantee a data rate.

2.11 Special services such as Centrex, Foreign Exchange, Secretarial, and Wide Area Telephone Service lines may have service requirements that are more stringent than POTS. If such services are provided using BULS and electronic transmission and signaling enhancement equipment is required to meet the more stringent requirements, the OTC will be responsible for providing such enhancement equipment.

2.12 Bell Atlantic will work with the OTC to resolve facility problems should the BULS loop facility require enhancement equipment to support loop-start POTS voice service.

3. Element Specifications

A. General

3.01 Two elements are always used with Basic Unbundled Loop Services. They are: CODF wire and tie cable(s), and subscriber loop facilities. A third element, electronic transmission and signaling enhancement equipment, is sometimes used with BULS. The following sections contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of co-located OTC equipment to the CODF termination of metallic subscriber loops, DLC COTs, and electronic transmission and signaling enhancement equipment.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 1500 feet.

3.04 The direct-current resistance between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

3.05 The 1kHz loss measured on the CODF wiring and tie cables when measured between 900 ohm impedances should be .5 dB or less.

3.06 The C-message noise measured on the CODF wiring and tie cables shall be 20 dBnC or less.

C. Subscriber Loop Facilities

3.07 Subscriber loop facilities consist of feeder and distribution plant between the CODF and the end-user customer's RDP. Feeder plant uses a variety of transmission technologies, including but not limited to, twisted-pair metallic cables, twisted-pair metallic cable based digital loop carrier, and fiber optic based digital loop carrier. Distribution plant usually consists of multipair metallic cables. Additional information about subscriber loops may be found in Bellcore SR-TSV-002275 [2] and appendix A of this document.

3.08 A twisted-pair metallic loop facility consists entirely of metallic cable and wire between the CODF and the end-user customer's RDP. Most metallic loops consist of multipair cables, laid out on aerial, underground, or buried routes to suit the needs of a particular community. The metallic loop facility may be loaded or non-loaded. It may also have bridged-tap. Loaded bridged-tap and bridged tap between load coils are not permitted.

3.09 A universal DLC facility consists of CO cabling between the CODF and a DLC COT, OSP fiber or metallic cable facilities from the DLC COT to the DLC RT, and cable and wire between the DLC RT and the end-user customer's RDP. Some DLC may not support enhanced services such as distinctive ringing, forward disconnect, caller ID, etc.

3.10 Subscriber loop facilities have been designed on a global basis primarily to accommodate POTS and guarantee that loop transmission loss is statistically distributed and that no single loop exceeds the signaling range of the CO.

3.11 Prior to 1980, loops were designed using one of the following design plans: Resistance Design (RD), Long Route Design (LRD), or Unigauge Design (UD). From 1980 to 1986, the Modified Resistance Design (MRD), Modified Long Route Design (MLRD), and Concentrated Range Extension with Gain (CREG) plans were applied on a going-forward basis (i.e., retroactive redesign was not implemented). In 1986, the Revised Resistance Design (RRD) plan was applied on a going-forward basis. Appendix A provides a summary of the various loop design plans.

3.12 Most metallic loop facilities (98%) were designed using the RD, MRD, or RRD design rules. The RRD design rules currently in use limit the loop resistance to the design range of the CO switch (1300 or 1500 ohms) or 1500 ohms whichever is less. The 1 kHz loss of RRD loops is 8.5 dB or less.

3.13 A small number of loops have been designed using the LRD, MLRD, UD, and CREG design plans. These loops are long (15+kft) and have high resistance (up to 2800 or 3600 ohms) and high loss (up to 13 dB without gain). Such loops require electronic transmission and signaling range enhancement equipment to accommodate POTS. The LRD and MLRD design plans use Range Extension with Gain (REG) equipment that is either dedicated to each loop or hard-wired to the BA CO line equipment. In the latter case, the hard-wired REG is not available for use with BULS.

3.14 The REG equipment used with CREG designed loops is implemented behind a stage of switching concentration in the associated CO switch. This permits REG equipment to be shared

with other loops working out of the same CO switch. For this reason, the REG associated with CREG designed loops is not available for use with BULS. Bell Atlantic will work with the OTC to explore available options when an LRD, MLRD, or CREG designed loop requires enhancement to support BULS.

3.15 The direct-current resistance of a metallic loop facility measured between the CODF and the RDP shall be 1520 ohms or less if the facility was designed using RD, MRD, or RRD rules. The resistance will be 2500 ohms or less if the facility was designed using UD rules, 2800 ohms or less if the facility was designed using CREG or MLRD rules, and 3600 ohms or less if the facility was designed using LRD rules.

3.16 The 1kHz loss of a metallic loop facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8.5 dB or less if the loop was designed using RD, MRD, or RRD rules. The loss will be 10 dB or less if the loop was designed using LRD or MLRD rules, and 13 dB or less if the loop was designed using UD or CREG rules.

3.17 The C-message noise measured on a metallic subscriber loop at the RDP shall be less than 30 dBrnC.

3.18 The leakage resistance between the tip conductor and ground and the ring conductor and ground shall each be greater than 100 K ohms.

3.19 The longitudinal noise or power influence (PI) measured per IEEE Std 743-1984 [3] on the metallic portion of a loop should be less than 90 dBrnC.

3.20 The longitudinal balance of a metallic subscriber loop is defined as the longitudinal noise (in dBrnC) minus the C-message noise (in dBrnC). The longitudinal balance shall be >50 dB.

3.21 DLC facilities shall provide a battery feed to the RDP. When the RDP is terminated by a direct-current resistance of 430 ohms or less, the loop current shall be 20 mA or greater.

3.22 The 1kHz loss of a DLC facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8 dB or less.

3.23 The C-message noise measured on a DLC facility shall be 23 dBrnC or less.

3.24 The C-Notched noise measured on a DLC facility shall be 36 dBrnC or less with a -13 dBm0 1004 Hz holding tone.

3.25 The impulse noise measured on a DLC facility shall be no more than 15 counts in 15 minutes with a threshold of 59 dBrnC.

3.26 Subscriber loop facilities shall meet all applicable design specifications. (See appendix A)

3.27 The echo return loss and singing return loss of a subscriber loop facility measured with a 900 ohm + 2.16 uf reference at the CODF and a 600 ohm + 2.16 uf termination at the RDP shall be equal to or greater than 5.5 dB and 2.5 dB respectively.

D. Transmission and Signaling (T&S) Enhancement Equipment

3.28 Transmission and signaling (T&S) enhancement equipment is sometimes used with BULS. Several different types of T&S equipment can be used. Examples are: transmission repeaters; loop signaling repeaters; and signaling battery boost equipment.

3.29 T&S equipment is often used with BULS loops designed to LRD, MLRD, UD, and CREG rules. Such devices are often called Range Extenders with Gain (REGs).

3.30 The impedance of T&S equipment shall be a nominal 900 ohms when used in the CO and a nominal 600 ohms when used at or near the RDP.

3.31 T&S equipment shall provide 20 mA or more of loop current when the RDP is terminated by a direct-current resistance of 430 ohms or less.

3.32 The C-message noise measured on T&S equipment shall be 20 dBmC or less.

3.33 The C-Notched noise measured on T&S equipment shall be 36 dBmC or less with a -13 dBm0 1004 Hz holding tone.

4. Service Specifications

4.01 The overall end-to-end BULS service is from the CODF termination of the OTC equipment to the end-user customer's RDP. The compatible BULS Network Channel Interface (NCI) code combination is shown in Figure 4-1.

Figure 4-1: Compatible BULS NCI Code Combinations

EU-POT	OTC-POT
02LS2	02QC3.OOD

4.02 Parameters are tested at the RDP in response to trouble reports or when additional testing is purchased.

4.03 Acceptance Limits (AL) and Immediate Action Limits (IAL) are shown in Figure 4-2 for loops designed to RD, MRD, and RRD rules. The resistance and loss parameters of loops designed to LRD, MLRD, UD, and CREG rules are in Appendix A.

Figure 4-2: BULS Acceptance Limits (AL) and Immediate Action Limits (IAL)

PARAMETER	AL	IAL
1004 Hz Loss	< 8.5 dB	> 10.0 dB

Resistance	< 1520 ohms	> 1520 ohms
Leakage	> 100 kilohms	< 100 kilohms
C-Message Noise	< 30 dBmC	> 30 dBmC
Power Influence	< 90 dB	> 90 dB
Loop Current (DLC only)	> 20 mA	< 20 mA

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Co-located OTC equipment used for interconnection with BULS shall meet all of the applicable generic equipment requirements in Bellcore GR-63-CORE [4] and Bellcore GR-1089-CORE [5].

5.02 Co-located OTC equipment used for interconnection with BULS shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Requirements that are not specified in this document, contractual technical requirements, or other applicable documents, shall meet the manufacturer's requirements consistent with industry standards.

5.03 The open circuit tip-to-ring dc voltage that collocated OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Co-located OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

5.05 Co-located OTC equipment shall not deliver more than 150 mA of loop current to any load via BA VF cable.

5.06 The noise limits for BULS require collocated OTC equipment to have a longitudinal balance of >60 dB.

5.07 The loss and noise limits for BULS require collocated OTC equipment to have a nominal impedance of 900 ohms.

5.08 The applied power level of any transmitted signal on BULS averaged over 3 seconds shall not exceed -13 dBm0.

5.09 Loops may be exposed to electrical surges from lightning and commercial power system disturbances. Despite protective devices on the CODF, some of these disturbances are likely to reach OTC equipment. OTC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

5.10 The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. This device has an upper 3c limiting voltage of 1000 volts peak under surge conditions and 600 volts rms

(800 peak) at 60 Hz. OTC equipment connected to BULS loops protected by carbon blocks may be subjected to voltages up to these levels. Unexposed COs may not have primary protection, and OTC equipment not coordinating with carbon blocks may need protection in these locations.

5.11 If the subscriber loop facility is exposed to commercial ac power, the CO protector may also include 350 mA heat coils for limiting the current that is permitted to flow to CO equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

B. OTC Equipment CO Cabling Requirements

5.12 The voice grade CO cabling used to terminate OTC equipment on the CODF shall use twisted-pair conductors.

5.13 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.14 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [6] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.15 All CO cabling between OTC equipment and the CODF shall be equipped with connectors at each end. The type of connectors shall be specified by the BA CO Engineer.

5.16 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

5.17 The C-message noise measured on the CO cabling between the OTC equipment and the CODF shall be 20 dBrnC or less.

6. References

A. Definitions

Basic Unbundled Loop Services (BULS)

A basic unbundled loop service is a service that provides a basic untreated or unconditioned loop-start channel between the Bell Atlantic central office distributing frame termination of collocated equipment belonging to an OTC and the rate demarcation point at a customer location.

Battery Boost

A series aiding battery source that extends the signaling range of current sensing equipment.

Bridged tap

Any branch section of a cable pair, or any extension of a cable pair beyond the point where it is used, in which no direct current flows when customer equipment is connected and used.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and end-user annoyance to tones as a function of frequency.

C-Notched Noise

The C-message frequency-weighted noise on a channel with a holding tone that is removed at the measuring end through a notch (very narrow band) filter.

Channel

An electrical, or photonic communications path between two or more points of transmission.

Closed End

The end of a switched access service that receives ringing and dial tone and transmits address signals.

dBm

A unit for expression of power level in decibels relative to one milliwatt.

dBm0

Power level referred to, or measured at, a zero transmission level point (0TLP).

dBm

A unit used to express noise power relative to one picowatt (-90 dBm).

dBmC

Noise power measured with C-message weighting expressed in dBm.

dBmC0

Noise power in dBmC referred to, or measured at, a zero transmission level point (0TLP).

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Facilities

Any cable, poles, conduit, microwave, or carrier equipment, central office distributing frames, central office switching equipment, computers (both hardware and software), business machines, etc., utilized to provide the services offered by a telephone company.

Impulse Noise

Any momentary occurrence of noise on a channel that significantly exceeds the normal noise peaks. Impulse noise is analyzed by counting the number of occurrences that exceed a threshold.

Leakage

The resistance between the conductors of an insulated metallic pair or the resistance between each conductor of an insulated metallic pair and ground.

Loop

A transmission channel between a end-user customer location and a BA CO that is used as a transmission channel for telephone company services.

Loop-start (LS) Signaling

A type of switched access line signaling in which the network provides a battery source. To initiate a call, customer premises equipment will provide a loop closure that causes dc loop current to flow which the network will detect.

Open End

The end of a switched access service that transmits ringing and dial tone and receives address signaling.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Plain Ordinary Telephone Service (POTS)

The basic single line switched access service offered by local exchange carriers to residential and business customers. POTS uses loop-start signaling.

Power Influence (PI)

The power of a longitudinal signal induced in a metallic loop by an electromagnetic field emanating from a conductor or conductors of a power system. PI is also called longitudinal noise or noise-to-ground.

Rate Demarcation Point (RDP)

The point at which Bell Atlantic network access recurring charges and responsibility stop and beyond which customer responsibility begins. The RDP is the point of demarcation and/or interconnection between a Bell Atlantic subscriber loop facility and end-user premises cabling or terminal equipment. Bell Atlantic facilities at, or constituting, the rate demarcation point shall consist of wire or a jack conforming to Subpart F of Part 68 of FCC rules.

Signaling Repeater

Loop enhancement equipment that detects and regenerates signaling states.

Transmission Repeater

Loop enhancement equipment that amplifies and equalizes voice frequency signals.

Unbundled Business Loop Service

The product name for a basic unbundled loop service offered in BA-MD.

Unbundled Loop

A transmission channel between a end-user customer location and a LEC CO that is not a part of, or connected to, other LEC services.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ANSI	American National Standards Institute
BA	Bell Atlantic
BULS	Basic Unbundled Loop Service
CO	Central Office
CODF	Central Office Distributing Frame
COT	Central Office Terminal
CREG	Concentrated Range Extension with Gain
DLC	Digital Loop Carrier
EU	End User
EU-POT	End User Point Of Termination
FCC	Federal Communications Commission
IEEE	International Electrical and Electronic Engineers
LRD	Long Route Design
LS	Loop-Start
MLRD	Modified Long Route Design
MRD	Modified Resistance Design
NEC	National Electric Code
OTC	Other Telephone Company
OTC-POT	Other Telephone Company Point Of Termination
PI	Power Influence
POTS	Plain Ordinary Telephone Service
RD	Resistance Design
RDP	Rate Demarcation Point
REG	Range Extender with Gain
RRD	Revised Resistance Design
RT	Remote Terminal
T&S	Transmission and Signaling
UD	Unigauge Design
UL	Underwriter's Laboratory
USDL	United States Department of Labor

VF Voice Frequency
VG Voice Grade

7. Bibliography

- 1- ANSI T1.401-1993, American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling.
- 2- Special Report SR-TSV-002275, Issue 2, BOC Notes on the LEC Networks - 1990. Bellcore; 1991.
- 3- IEEE Std 743-1984, IEEE Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice frequency Circuits.
- 4- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 2, (Bellcore, October 1995).
- 5- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 2 (Bellcore, November 1994).
- 6- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

Appendix A: Loop Design Rules

- 1- Resistance Design (RD): (96% of loops designed prior to 1980)
 - 0 - 1300 ohms, 8.5 dB max
 - Max BT on NL cable = 6 kft
 - POTS = No loading to 18 kft, H88 loading beyond 18 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Max end section plus BT = 15 kft
 - No loaded BT, No BT between load coils.

- 2- Long Route Design (LRD): (3% of loops designed prior to 1980)
 - 1301 - 3600 ohms, 10 dB max
 - Applicable > 18 kft, full H88 loading
 - Gain required for loops over 1600 ohms
 - Max end section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 3- Uniguage Design (UD): (1% of loops designed prior to 1980)
 - 0 - 2500 ohms, 13 dB max
 - No loading to 24 kft, partial H88 loading beyond 24 kft
 - Gain applied to loops > 15 kft
 - Max BT on NL cable = 6 kft
 - End section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 4- Modified Resistance Design (MRD): (1980 - 1986)
 - 0 - 1500 ohms, 8.5 dB max
 - Max BT on NL cable = 6 kft
 - Total NL cable plus BT = 15 kft
 - POTS = No loading to 15 kft, full H88 loading beyond 15 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 5- Modified Long Route Design (MLRD): (1980 - 1986)
 - 1501 - 2000 ohms = Res Zone 18
 - 2001 - 2800 ohms = Res Zone 28
 - RZ 18 = Range Extension plus 3 dB of gain, 10 dB max
 - RZ 28 = Range Extension plus 6 dB of gain, 10 dB max
 - Full H88 loading
 - End section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 6- Concentrated Range Extension with Gain (CREG): (1980 - 1986, 1A & 2A ESS Only)
 - 0 - 2800 ohms, 13 dB max
 - No loading to 15 kft, full H88 loading beyond 15 kft
 - Range extension with gain (REG) required for all loops over 1500 ohms
 - REG provided behind a stage of switching concentration
 - Total NL cable plus BT = 15 kft max
 - Max NL cable BT = 6 kft
 - Loaded end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 7- Revised Resistance Design: (after 1986)
 - 0 - 18 kft = 1300 ohms max
 - 18 - 24 kft = 1500 ohms max (CO permitting)
 - No loading to 18 kft, full H88 loading between 18 - 24 kft
 - Max NL cable plus BT = 18 kft
 - Max BT on NL cable = 6 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

EXHIBIT B

72570
Issue 1, December 1996

Bell Atlantic Technical Reference

**Analog Unbundled Loop Service with
Customer Specified Signaling
Technical Specifications**

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**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR-72570
Issue 1, December 1996**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of Analog Unbundled Loop Service with Customer Specified Signaling. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

Bell Atlantic reserves the right to revise this technical reference for any reason including, but not limited to, changes in tariffs, laws, or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to herein. Liability for difficulties arising from technical limitations or changes herein is disclaimed.

Bell Atlantic reserves the right not to offer any or all of these services and to withdraw any or all of them at any future time. In addition, the services described herein are based on available facilities and equipment and may not be universally available.

With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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1. General

1.01 This technical reference provides the technical specifications associated with the Analog Unbundled Loop Service with Customer Specified Signaling that is offered by Bell Atlantic. The service may not be universally available.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Analog Unbundled Loop Services with Customer Specified Signaling (AULSCSS) enable Other Telephone Companies (OTC) collocated in a Bell Atlantic Central Office (CO) to connect to analog subscriber loops to provide switched access services to end-user locations. AULSCSS provides a 2-wire or 4-wire channel that is suitable for the transport of analog services that use various types of signaling.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the AULSCSS service. In the future, Bell Atlantic may offer transport services for AULSCSS. In that case, the technical specifications associated with the transport service should be consulted.

2. Service Description

A. General

2.01 The description, terms, conditions, rates, regulations, and Universal Service Order Codes (USOCs) for AULSCSS are contained in applicable tariffs or contracts.

2.02 AULSCSS provides the customer with a voice grade transmission channel between the Central Office Distributing Frame (CODF) termination of OTC equipment in a Bell Atlantic CO and the Rate Demarcation Point (RDP) at an end-user customer location.

2.03 AULSCSS channels are suitable for the transport of analog voice grade signals between 300 and 3000 Hz.

2.04 A 2-Wire AULSCSS channel will support either loop-start, ground-start, loop reverse-battery, or customer-provided inband signaling. A 4-wire AULSCSS channel will support either loop-start, ground-start, loop reverse-battery, customer-provided inband, or duplex signaling.

2.05 AULSCSS is provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

B. Physical Characteristics

2.06 AULSCSS channels can be effective 2-wire or 4-wire. When the OTC or RDP interface is 2-wire, one conductor is called tip and the other conductor is called ring. When the OTC or RDP interface is 4-wire the conductors of the OTC or End-User transmit pair are called tip and ring and the conductors of the OTC or End-User receive pair are called tip 1 and ring 1.

2.07 An effective 2-wire AULSCSS channel has 2-wire interfaces at both the OTC POT and the RDP. In addition, an effective 2-wire AULSCSS channel consists entirely of 2-wire facilities or a combination of 2-wire and 4-wire facilities. A typical 2-wire AULSCSS configuration is shown in Figure 2-1.

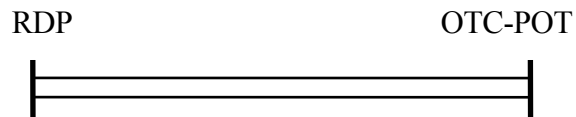


Figure 2-1: Typical 2-Wire AULSCSS configuration

2.08 A 4-wire AULSCSS channel has 4-wire interfaces at both the OTC POT and the RDP. In addition, the 4-wire AULSCSS channel consists entirely of 4-wire facilities with no 2-wire segments. A typical 4-wire AULSCSS configuration is shown in Figure 2-2.

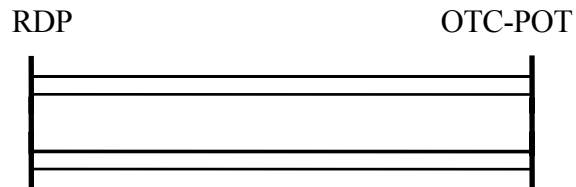


Figure 2-2: Typical 4-Wire AULSCSS configuration

2.09 AULSCSS channels may be provided using a variety of subscriber loop transmission technologies, including but not limited to, metallic cable, metallic cable based digital loop carrier, and fiber optic digital loop carrier systems.

C. Service Elements

2.10 AULSCSS ordinarily consists of two elements:

- (1) the CODF wire and tie cable(s),
- (2) a subscriber loop facility between the CODF and the end-user customer's RDP. The loop facility is either;

(a) a metallic facility consisting of cable and wire between the CODF and the RDP;
or,

(b) a DLC facility channel with loop start (LS), ground start (GS), loop reverse battery (RV), or duplex (DX) signaling capability, or transmission-only (TO) capability for customer inband signaling applications, that consists of,

- CO cabling between the CODF and a DLC COT that is equipped with an LS, GS, RV, DX, or TO channel unit,
- a fiber or metallic facility from the DLC COT to the DLC RT that is equipped with an LS, GS, RV, DX, or TO channel unit, and,
- cable and wire between the DLC RT and the RDP.

D. Compatibility Considerations

2.11 Electronic transmission and signaling (T&S) enhancement equipment is not ordinarily used with AULSCSS. Examples of T&S are:

- (a) a transmission repeater, or
- (b) a transmission repeater with a signaling repeater, or
- (c) a transmission repeater with signaling battery boost equipment.

2.12 If the OTC needs T&S equipment with AULSCSS to accommodate an OTC service, the OTC will be responsible for providing any such T&S equipment.

3. Service Element Design Criteria

A. General

3.01 Two elements are always used with AULSCSS. They are: CODF wire and tie cable(s), and subscriber loop facilities. The sections which follow contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of OTC equipment to the CODF termination of metallic subscriber loops, DLC COTs, and electronic transmission and signaling enhancement equipment.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 1500 feet.

3.04 The direct-current resistance between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 125 ohms. This is equal to 1500 or less feet of 26 gauge cable.

3.05 The 1kHz loss between the CODF termination of the OTC equipment and the CODF termination of a subscriber loop in the same CO, when measured between 900 ohm impedances, should be less than .85 dB.

3.06 The C-message noise measured on the wiring and tie cables between the CODF termination of the OTC equipment and the CODF termination of a subscriber loop in the same CO shall be 20 dBrnC or less.

C. Subscriber Loop Facilities

3.07 Subscriber loop facilities consist of feeder and distribution plant between the CODF and the end-user customer's RDP. Feeder plant uses a variety of transmission technologies, including but not limited to, twisted-pair metallic cables, twisted-pair metallic cable based digital loop carrier, and fiber optic based digital loop carrier. Distribution plant usually consists of multipair metallic cables. Additional information about subscriber loops may be found in Bellcore SR-TSV-002275 [1].

3.08 A twisted-pair metallic loop facility consists entirely of metallic cable and wire between the CODF and the end-user customer's RDP. Most metallic loops consist of multipair cables, laid out on aerial, underground, or buried routes to suit the needs of a particular community. The metallic loop facility may be loaded or non-loaded. It may also have bridged-tap. Loaded bridged-tap and bridged tap between load coils are not permitted.

3.10 A universal DLC facility consists of CO cabling between the CODF and a DLC COT, OSP fiber or metallic cable facilities from the DLC COT to the DLC RT, and cable and wire between the DLC RT and the end-user customer's RDP. Some universal DLC will not support enhanced services such as distinctive ringing, forward disconnect, caller ID, etc.

3.11 Subscriber loop facilities have been designed on a global basis primarily to accommodate POTS and guarantee that loop transmission loss is statistically distributed and that no single loop exceeds the signaling range of the CO.

3.12 Prior to 1980, loops were designed using one of the following design plans: Resistance Design (RD), Long Route Design (LRD), or Unigauge Design (UD). From 1980 to 1986, the Modified Resistance Design (MRD), Modified Long Route Design (MLRD), and Concentrated Range Extension with Gain (CREG) plans were applied on a going-forward basis (i.e., retroactive redesign was not implemented). In 1986, the Revised Resistance Design (RRD) plan was applied on a going-forward basis. Appendix A provides a summary of the various loop design plans.

3.13 Most metallic loop facilities (98%) were designed using the RD, MRD, or RRD design rules. The RRD design rules currently in use limit the loop resistance to the design range of the CO switch or 1500 ohms whichever is less. CO switches have a range of either 1300 or 1500 ohms. The 1 kHz loss of RRD loops is 8.5 dB or less.

3.14 A small number of loops have been designed using the LRD, MLRD, UD, and CREG design plans. These loops are long (15+kft) and have high resistance (up to 2800 or 3600 ohms) and high loss (up to 13 dB without gain). Such loops require electronic transmission and signaling range enhancement equipment to accommodate AULSCSS. The LRD and MLRD design plans use Range Extension with Gain (REG) equipment that is either dedicated to each loop or hard-wired to the BA CO line equipment. In the latter case, the hard-wired REG is not available for use on AULSCSS.

3.15 The REG equipment used with CREG designed loops is implemented behind a stage of switching concentration in the associated CO switch. This permits REG equipment to be shared with other loops working out of the same CO switch. For this reason, the REG associated with CREG designed loops is not available for use on AULSCSS.

3.16 Bell Atlantic will work with the OTC to explore available options when an LRD, MLRD, or CREG designed loop requires enhancement to support AULSCSS.

3.17 The direct-current resistance of a metallic loop facility measured between the CODF and the RDP shall be 1520 ohms or less if the facility was designed using RD, MRD, or RRD rules. The resistance will be less than 2500 ohms if the facility was designed using UD rules, less than 2800 ohms if the facility was designed using CREG or MLRD rules, and less than 3600 ohms if the facility was designed using LRD rules.

3.18 The 1kHz loss of a metallic loop facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8.0 dB or less if the loop was designed using RD, MRD, or RRD rules. The loss will be 10 dB or less if the loop was designed using LRD or MLRD rules, and 13 dB or less if the loop was designed using UD or CREG rules.

3.19 The C-message noise measured on a metallic subscriber loop at the RDP shall be less than 30 dBmC.

3.20 The leakage resistance between the tip conductor and ground, the ring conductor and ground, and tip and ring conductors of a loop should each be greater than 100 K ohms.

3.21 The Power Influence (PI) measured per IEEE Std 743-1984 [2] on the metallic portion of a loop should be less than 90 dBmC.

3.22 For LS and GS signaling, the DLC facilities provide a battery feed to the RDP. When the RDP is terminated by a direct-current resistance of 430 ohms or less, the loop current supplied by the DLC in such cases shall be 20 mA or greater.

3.23 The 1kHz loss of a DLC facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8 dB or less.

3.24 The C-message noise measured on a DLC facility shall be 23 dBmC or less.

3.25 The C-Notched noise measured on a DLC facility shall be 36 dBmC or less with a -13 dBm0 1004 Hz holding tone.

3.26 The impulse noise measured on a DLC facility shall be no more than 15 counts in 15 minutes with a threshold of 59 dBmC.

3.27 The echo return loss and singing return loss of a subscriber loop facility measured with a 900 ohm + 2.16 uf reference at the CODF and a 600 ohm + 2.16 uf termination at the RDP shall be equal to or greater than 5.5 dB and 2.5 dB respectively.

3.28 Subscriber loop facilities shall meet all applicable design specifications. (See appendix A)

4. Service Specifications

A. General

4.01 The overall end-to-end AULSCSS service is from the CODF appearance of the collocated OTC equipment to the end-user customer's RDP. AULSCSS service will use the TXNU service code.

B. Performance

4.02 Loss and C-Message noise will be measured during acceptance testing of new services at turn-up. Services that reuse existing working loops are only tested for continuity at turn-up.

4.03 Other parameters are tested in response to trouble reports or when additional testing is purchased.

4.04 The acceptance limits and immediate action limits in Table 4-1 apply to AULSCSS channels.

4.05 When a AULSCSS channel is provided using DLC, the transmission performance of the channel is evaluated by measuring performance parameters on the overall end-to-end service.

Table 4-1
Acceptance Limits (AL) and Immediate Action Limits (IAL)
for AULSCSS channels

PARAMETER	AL	IAL
Loss	< 8.5 dB	> 10.0 dB
Resistance	< 1520 ohms	> 1520 ohms
Three-Tone Slope*	-1.5 to +5.5 dB	-2.0 to +6.5 dB
C-Message Noise	< 30 dBrnC0	> 30 dBrnC0
C-Notched Noise	< 36 dBrnC0	> 36 dBrnC0
Leakage	> 100 kohms	< 100 kohms
Echo Return Loss	> 5.5 dB	< 5.5 dB
Singing Return Loss	> 2.5 dB	< 2.5 dB
Power Influence	< 90 dB	> 90 dB
LS/GS Loop Current (DLC)	> 20 mA	< 20 mA

* Minus (-) means less loss and plus (+) means more loss.

C. Available Signaling

4.06 The following 2-wire signaling capability is available where facilities and equipment permit:

- No signaling (includes inband signaling furnished by the OTC).
- Loop-start closed-end at end-user RDP and loop-start open-end at the OTC-POT.
- Loop-start open-end at end-user RDP and loop-start closed-end at the OTC-POT.
- Ground-start closed-end at end-user RDP and ground-start open-end at the OTC-POT.
- Ground-start open-end at end-user RDP and ground-start closed-end at the OTC-POT.
- Loop reverse-battery terminating at the end-user RDP and loop reverse-battery originating at the OTC-POT.
- Loop reverse-battery originating at the end-user RDP and loop reverse-battery terminating at the OTC-POT.

4.07 The following 4-wire signaling capability is available where facilities and equipment permit:

- No signaling (includes inband signaling furnished by the OTC).
- Loop-start closed-end at end-user RDP and loop-start open-end at the OTC-POT.
- Loop-start open-end at end-user RDP and loop-start closed-end at the OTC-POT.
- Ground-start closed-end at end-user RDP and ground-start open-end at the OTC-POT.
- Ground-start open-end at end-user RDP and ground-start closed-end at the OTC-POT.
- Loop reverse-battery terminating at the end-user RDP and loop reverse-battery originating at the OTC-POT. This signaling capability is not available on a 4-wire basis when the loop facility includes DLC.
- Loop reverse-battery originating at the end-user RDP and loop reverse-battery terminating at the OTC-POT. This signaling capability is not available on a 4-wire basis when the loop facility includes DLC.

- Duplex (DX) signaling at EU-POT and OTC-POT.

4.08 The signaling associated with 4-wire interfaces can be derived from the associated simplex leads. BA provides the standard simplex sense for all 4-wire interfaces, that is, the B-lead or Ring conductor can be derived from the OTC and EU receive pair and the A-lead or Tip conductor can be derived from the OTC and EU transmit pair.

4.09 AULSCSS Network Channel (NC) codes and Network Channel Interface (NCI) codes are shown in the following figures: Figure 4-2 shows NC codes; Figure 4-3 shows OTC-POT NCI codes; and Figure 4-4 shows compatible NCI code combinations. Additional information concerning NC/NCI codes may be found in Bellcore SR-ST5-000307 [3].

Figure 4-2: AULSCSS NC Codes

NC Code	Character 3	Character 4
LX	-	-

Figure 4-3: AULSCSS OTC-POT NCI Codes

NCI Code	Description
02QC3.OOB	2-Wire Ground-start signaling - Open End
02QC3.OOC	2-Wire Ground-start signaling - Closed End
02QC3.OOD	2-Wire Loop-start signaling - Open End
02QC3.OOE	2-Wire Loop-start signaling - Closed End
02QC3.OOF	2-Wire Transmission Only - No Signaling
02QC3.RVO	2-Wire Reverse-Battery - OTC Originating
02QC3.RVT	2-Wire Reverse-Battery - OTC Terminating
04QC2.DXO	4-Wire Duplex Signaling
04QC2.OOB	4-Wire Ground-start signaling - Open End
04QC2.OOC	4-Wire Ground-start signaling - Closed End
04QC2.OOD	4-Wire Loop-start signaling - Open End
04QC2.OOE	4-Wire Loop-start signaling - Closed End
04QC2.OOF	4-Wire Transmission Only - No Signaling
04QC2.RVO	4-Wire Reverse-Battery - OTC Originating
04QC2.RVT	4-Wire Reverse-Battery - OTC Terminating

Figure 4-4: Compatible AULSCSS NCI Code Combinations

EU-POT	OTC-POT
02GO2	02QC3.OOC
02GS2	02QC3.OOB
02LO2	02QC3.OOE
02LS2	02QC3.OOD
02NO2	02QC3.OOF
02RV2.T	02QC3.RVO
02RV2.O	02QC3.RVT
04GO2	04QC2.OOC
04GS2	04QC2.OOB
04LO2	04QC2.OOE
04LS2	04QC2.OOD
04NO2	04QC2.OOF
04RV2.T*	04QC2.RVO
04RV2.O*	04QC2.RVT
04DX2	04QC2.DXO

* 04RV2.T and 04RV2.O are not available when DLC facilities are used.

D. Available Options

4.09 No options are available for AULSCSS channels.

E. Compatible TLP Ranges

4.10 Compatible TLP ranges are shown in Figures 4-5 and 4-6.

Figure 4-5: Compatible TLP Ranges at the EU-POT and OTC-POT for 2-Wire AULSCSS Channels

Specified Protocol Code	EU/OTC Transmit TLP	EU/OTC Receive TLP
GO, GS, LO, LS, NO, RV	0	0 to -8.5 #

In general, the receive TLP is a function of the cable loss.

Figure 4-6: Compatible TLP Ranges at the EU-POT and OTC-POT for 4-Wire AULSCSS Channels

Specified Protocol Code	EU/OTC Transmit TLP	EU/OTC Receive TLP
DX, GO, GS, LO, LS, NO, RV	0	0 to -8.5 #

In general, the receive TLP is a function of the cable loss.

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Several different types of OTC equipment can connect to AULSCSS. The equipment can be collocated in a BA CO or located at the end-user premises. Examples are: transport equipment; transmission repeaters; transmission repeaters with loop signaling repeaters; transmission repeaters with signaling battery boost equipment; and special service channel units.

5.02 Co-located OTC equipment used for interconnection with AULSCSS shall meet all applicable requirements including those in this document as well as applicable generic equipment requirements in Bellcore documents GR-63-CORE [4] and GR-1089-CORE [5].

5.03 Co-located OTC equipment shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Where requirements are not specified in this document, contractual technical requirements or other applicable documents, the manufacturer's requirements consistent with industry standards shall be met.

5.04 The open circuit tip-to-ring dc voltage that OTC equipment applies to BA cabling shall be less than 80 Vdc.

5.05 OTC equipment shall not deliver more than 2.5 watts of power to any load via BA cable.

5.06 OTC equipment shall not deliver more than 150 mA of loop current to any load via BA cable.

5.07 The noise limits for AULSCSS are predicated on the OTC equipment having a longitudinal balance of > 60 dB.

5.08 The impedance of OTC equipment shall be a nominal 900 ohms when collocated in a BA CO and a nominal 600 ohms when used on the end-user premises at or near the RDP.

5.09 The applied power level of any signal transmitted on AULSCSS averaged over 3 seconds shall not exceed -13 dBm0.

5.10 AULSCSS loops may be exposed to electrical surges from lightening and commercial power system disturbances. Despite protective devices on the CODF, some of these disturbances are likely to reach OTC equipment. OTC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

5.11 The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. This device has an upper 3c limiting voltage of 1000 volts peak under surge conditions and 600 volts rms (800 peak) at 60 Hz. OTC equipment connected to AULSCSS subscriber loop facilities protected by carbon blocks may be subjected to voltages up to these levels. Unexposed COs may not have

primary protection, and OTC equipment not coordinating with carbon blocks may need protection in these locations.

5.12 If the AULSCSS subscriber loop facility is exposed to commercial ac power, the CO protector may also include 350 mA heat coils for limiting the current that is permitted to flow to CO equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

B. OTC CO Cabling Requirements

5.13 The voice grade CO cabling used to terminate collocated OTC equipment on the CODF shall use twisted-pair conductors.

5.14 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.14 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [6] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.15 All CO cabling between OTC equipment and the CODF shall be connected as specified by the BA CO Engineer.

5.16 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

5.17 The C-message noise measured on the CO cabling between the OTC equipment and the CODF shall be 20 dBmC or less.

6. References

A. Definitions

Acceptance Limit (AL)

The maximum value of, or deviation, that is allowed at service turnup or IC acceptance.

Analog Unbundled Loop Service with Customer Specified Signaling (AULSCSS)

A service that provides an analog facility between a BA CO and a customer location that is capable of supporting signaling specified, at the time the service is ordered, by the customer.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and end-user annoyance to tones as a function of frequency.

C-Notched Noise

The C-message frequency-weighted noise on a channel with a holding tone that is removed at the measuring end through a notch (very narrow band) filter.

Channel

An electrical, or photonic communications path between two or more points of transmission.

Closed End

The end of a switched access service that receives ringing and dial tone and transmits address signals.

dBm

A unit used to express power level in decibels relative to one milliwatt.

dBm0

A unit used to express power level referred to, or measured at, a zero transmission level point (0TLP).

dB_{rn}

A unit used to express noise power relative to one picowatt (-90 dBm).

dB_{rnC}

A unit used to express noise power relative to one picowatt measured with C-message weighting.

dB_{rnC0}

A unit used to express noise power in dB_{rnC} referred to, or measured at, a zero transmission level point (0TLP).

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Duplex Signaling

A type of dc signaling that employs symmetrical and balanced signaling equipment at each end of the loop. One simplex conductor of the 4-wire loop is used for signaling and the other simplex conductor is used for ground potential compensation.

Echo Return Loss (ERL)

A frequency-weighted measure of return loss over the middle of the voiceband (approximately 560 to 1965 Hz), where talker echo is most annoying. (See Table 9 of IEEE Std. 743-1984)

End User (EU)

The term "end user" denotes any customer of a telecommunications service that is not a carrier, except that a carrier shall be deemed to be an "end user" to the extent that such a carrier uses a telecommunications service for administrative purposes, without making such a service available to others, directly, or indirectly.

End-User Point Of Termination (EU-POT)

The rate demarcation point (RDP) on an end user's premises at which Bell Atlantic's responsibility for the provision of the services described in this document ends.

Facilities

Any cable, poles, conduit, microwave, or carrier equipment, central office distributing frames, central office switching equipment, computers (both hardware and software), business machines, etc., utilized to provide the services offered by a telephone company.

Immediate Action Limit (IAL)

The bound of acceptable performance and the threshold beyond which BA will accept a customer's trouble report and take immediate corrective action.

Impulse Noise

Any momentary occurrence of noise on a channel that significantly exceeds the normal noise peaks. Impulse noise is analyzed by counting the number of occurrences that exceed a threshold.

Leakage

The resistance between the conductors of an insulated metallic pair or the resistance between each conductor of an insulated metallic pair and ground.

Loop Reverse-Battery Signaling

A type of switched access line dc signaling that uses loop-open and loop-closure signals to indicate on-hook and off-hook signals in one direction and normal battery polarity and reverse battery polarity to indicate on-hook and off-hook signals in the other direction. The end of the service that generates loop open and loop closure signals is called the originating end and the other end which generates the normal battery polarity and reverse battery polarity signals is called the terminating end.

Loop-start (LS) Signaling

A type of switched access line signaling in which the network provides a battery source. To initiate a call, customer premises equipment will provide a loop closure that causes dc loop current to flow which the network will detect.

Open End

The end of a switched access service that transmits ringing and dial tone and receives address signaling.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Plain Ordinary Telephone Service (POTS)

The basic single line switched access service offered by local exchange carriers to residential and business customers. POTS uses loop-start signaling.

Power Influence (PI)

The power of a longitudinal signal induced in a metallic OSP facility by an electromagnetic field emanating from a conductor or conductors of a power system. PI is also called longitudinal noise or noise-to-ground.

Protocol Code

In general, a component of the Network Channel Interface (NCI) code that identifies the basic electrical function of the interface. For AULSCSS, the protocol codes (i.e., DX, GO, GS, LO, LS, NO and RV) identify the type of signaling if any.

Rate Demarcation Point (RDP)

The point at which Bell Atlantic network access recurring charges and responsibility stop and beyond which customer responsibility begins. The RDP is the point of demarcation and/or interconnection between a Bell Atlantic subscriber loop facility and end-user premises cabling or terminal equipment. Bell Atlantic facilities at, or constituting, the rate demarcation point shall consist of wire or a jack conforming to Subpart F of Part 68 of FCC rules.

Return Loss (RL)

A measure of the similarity between the two impedances at a junction. The higher the return loss, the higher the similarity. It is the ratio (in decibels) of the power incident upon the junction to the power reflected from the junction. If the two impedances at the junction are Z_1 and Z_2 , then:

$$\text{return loss} = 20 \log \frac{|Z_1 + Z_2|}{|Z_1 - Z_2|} \text{dB}$$

Signal-to-Noise Ratio (S/N Ratio)

The ratio of the signal power to the noise power at a given point in a given system (usually expressed in decibels).

Singing Return Loss (SRL)

The frequency-weighted measure of return loss at the edges of the voiceband (SRL Low, 260 to 500 Hz and SRL High, 2200 to 3400 Hz), where singing (instability) problems are most likely to occur.

Signaling Repeater

Loop enhancement equipment that detects and regenerates signaling states.

Three-Tone Slope

The loss at 404 Hz and 2804 Hz relative to the loss at 1004 Hz.

Transmission Level Point (TLP)

A point in a transmission system at which the ratio, usually expressed in decibels, of the power of a test signal at that point to the power of the test signal at a reference point, is specified.

Transmission Repeater

Loop enhancement equipment that amplifies and equalizes voice grade signals.

Unbundled Loop

A transmission channel between a end-user customer location and a LEC CO that is not a part of, or connected to, other LEC services.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ANSI	American National Standards Institute
AULSCSS	Analog Unbundled Loop Service with Customer Specified Signaling
BA	Bell Atlantic
CO	Central Office
CODF	Central Office Distributing Frame
COT	Central Office Terminal
CREG	Concentrated Range Extension with Gain
DLC	Digital Loop Carrier
GS	Ground-Start
LRB	Loop Reverse-Battery
LRD	Long Route Design
LS	Loop-Start
MLRD	Modified Long Route Design
MRD	Modified Resistance Design
OTC	Other Telephone Company
PI	Power Influence
POTS	Plain Ordinary (analog) Telephone Service
RD	Resistance Design

RDP	Rate Demarcation Point
REG	Range Extender with Gain
RRD	Revised Resistance Design
RT	Remote Terminal
TO	Transmission Only
T&S	Transmission and Signaling
UD	Unigauge Design
VF	Voice Frequency
VG	Voice Grade

7. Bibliography

1- Special Report SR-TSV-002275, Issue 2, *BOC Notes on the LEC Networks*, Bellcore, April 1994.

2- IEEE Std 743-1984, *IEEE Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice Frequency Circuits*.

3- Special Report SR-STS-000307, Issue 3, *Industry Support Interface (ISI): NC/NCI Code Dictionary*, Bellcore, January 1992.

4- Generic Requirements GR-63-CORE, *Network Equipment-Building System (NEBS) Requirements: Physical Protection*, Issue 1, (Bellcore, October 1995).

5- Generic Requirements GR-1089-CORE, *Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment*, issue 1 (Bellcore, November 1994).

6- Technical Reference FR-NWT-000064, *LATA Switching Systems Generic Requirements (LSSGR)*, (Bellcore, 1994).

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

Appendix A: Historical Loop Design Rules

- 1- Resistance Design (RD): (96% of loops designed prior to 1980)
 - 0 - 1300 ohms
 - Max BT on NL cable = 6 kft
 - POTS = No loading to 18 kft, H88 loading beyond 18 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Max end section plus BT = 15 kft
 - No loaded BT, No BT between load coils.

- 2- Long Route Design (LRD): (3% of loops designed prior to 1980)
 - 1301 - 3600 ohms
 - Applicable > 18 kft, full H88 loading
 - Gain required for loops over 1600 ohms
 - Max end section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 3- Unigauged Design (UD): (1% of loops designed prior to 1980)
 - 0 - 2500 ohms
 - No loading to 24 kft, partial H88 loading beyond 24 kft
 - Gain applied to loops > 15 kft
 - Max BT on NL cable = 6 kft
 - End section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 4- Modified Resistance Design (MRD): (1980 - 1986)
 - 0 - 1500 ohms
 - Max BT on NL cable = 6 kft
 - Total NL cable plus BT = 15 kft
 - POTS = No loading to 15 kft, H88 loading beyond 15 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 5- Modified Long Route Design (MLRD): (1980 - 1986)
 - 1501 - 2000 ohms = Res Zone 18
 - 2001 - 2800 ohms = Res Zone 28
 - RZ 18 = Range Extension plus 3 dB of gain
 - RZ 28 = Range Extension plus 6 dB of gain
 - Full H88 loading
 - End section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 6- Concentrated Range Extension with Gain (CREG): (1980 - 1986, 1A & 2A ESS Only)
 - 0 - 2800 ohms
 - No loading to 15 kft, full H88 loading beyond 15 kft
 - Range extension with gain (REG) required for all loops over 1500 ohms
 - REG provided behind a stage of switching concentration
 - Total NL cable plus BT = 15 kft max
 - Max NL cable BT = 6 kft
 - Loaded end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 7- Revised Resistance Design: (after 1986)
 - 0 - 18 kft = 1300 ohms max
 - 18 - 24 kft = 1500 ohms max (CO permitting)
 - No loading to 18 kft, full H88 loading between 18 - 24 kft
 - Max NL cable plus BT = 18 kft
 - Max BT on NL cable = 6 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

EXHIBIT C

TR 72575
Issue 1, October 1996

Bell Atlantic Technical Reference

**Digital Unbundled Loop Services
Technical Specifications**

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July 2, 1997

ATTACHMENT III

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR-72575
Issue 1, October 1996**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of digital unbundled loop services. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

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With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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EXHIBIT C

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR 72575
Issue 1, October 1996**

**Bell Atlantic
Digital Unbundled Loop Services
Technical Specifications**

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1. General

1.01 This technical reference provides the technical specifications associated with the Digital Unbundled Loop Services offered by Bell Atlantic (BA) in the co-carrier section of local exchange tariffs. All of the services described in this document may not be available in every jurisdiction.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Digital unbundled loop services enable Other Telephone Companies (OTC) that are co-located in a BA Central Office to connect to BA subscriber loops that are designed to support digital services including Integrated Services Digital Network (ISDN) services.

1.04 The following digital unbundled loop services are defined: ISDN Basic Rate and DS1. HDSL and ADSL unbundled loop services are under study.

1.05 The technical specifications in this document assume that the OTC is co-located in the same CO as the digital unbundled loop service. In the future, BA may offer transport services for digital unbundled loop services. In that case, the technical specifications associated with the transport service should be consulted.

2. Service Description

A. General

2.01 The description, terms and conditions, rates, regulations, and Universal Service Order Codes (USOCs) for digital unbundled loop services are contained in applicable tariffs or contracts.

2.02 Digital unbundled loop services are provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

2.03 Digital unbundled loop services provide the OTC with a transmission channel suitable for the transport of certain digital services. The channel is between the Central Office Distributing Frame (CODF) or DSX-1 termination of OTC equipment in a BA Central Office (CO) and the Rate Demarcation Point (RDP) at an End User (EU) customer location.

B. ISDN Basic Rate Unbundled Loop Service (IBRULS)

2.04 IBRULS provides the OTC with an effective 2-wire channel that is suitable for the transport of 160 kbps digital signals in both directions simultaneously using the 2B1Q line code.

2.05 The interface at the OTC CODF termination is 2-wire and the interface at the EU-RDP is 2-wire. At each interface one conductor is called tip and the other conductor is called ring.

2.06 The transmission channel between the IBRULS 2-wire interfaces is effective 2-wire. An effective 2-wire channel may be entirely 2-wire or it may contain a 4-wire facility portion (such as a

Digital Loop Carrier) with a 2-wire metallic extension to the EU-RDP. A typical IBRULS configuration is shown in Figure 2-1.

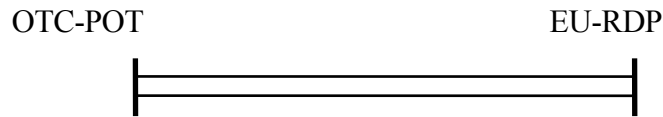


Figure 2-1: Typical 2-Wire IBRULS configuration

2.07 IBRULS supports full duplex 160 kbps digital transmission. The 160 kbps ISDN Basic Rate supports a 16 kbps overhead channel for performance monitoring, framing, synchronization, and maintenance. In addition, the line rate supports 144 kbps of payload data which is divided into three channels, two 64 kbps "B" (Bearer) channels and one 16 kbps "D" (Data) channel.

2.08 IBRULS supports the standard ISDN Basic Rate Two-Binary One-Quaternary (2B1Q) line code. Vendor-specific, non-standard line codes are not supported and Bell Atlantic spectrum management rules do not permit their deployment.

2.09 IBRULS may be provided using a variety of loop transmission technologies, including but not limited to, metallic cable, metallic cable based digital loop carrier, and fiber optic digital loop carrier systems.

2.10 When digital loop carrier (DLC) is used to provide IBRULS, the DLC will provide an ISDN Basic Rate interface at the RDP that meets the network requirements in ANSI T1.601-1992 [1].

2.11 It is currently known that the 2B1Q line code is incompatible with a number of embedded services. These services include CO-LAN, 15 kHz Program Audio Service, and analog carrier systems.

2.12 Analog carrier systems are extremely susceptible to interference from the 2B1Q line code and separation into separate cable sheaths is required.

2.13 Program audio services are also susceptible to interference from the 2B1Q line code on the loop. In order for the program audio and the IBRULS services to coexist, binder group separation is necessary. Separation to non-adjacent binder groups is preferred but adjacent binder groups may provide adequate margin.

2.14 Data-Voice Multiplexers (DVM) are also incompatible with IBRULS depending upon the range at which the DVMs are deployed. If DVMs are operated at less than 80% of the manufacturer's maximum specified range, including CO and customer wiring, they may be compatible with the 2B1Q line code. If DVMs are operated at or above the 80% range and occupy the same cable sheath as a 2B1Q service, then the two services are considered to be incompatible. In this case binder group separation is necessary. If this is not possible, an alternate means of providing the 2B1Q service must be sought.

2.15 IBRULS utilizes subscriber loop facilities that were originally designed for Plain Ordinary (analog) Telephone Service (POTS). For this reason, some loops, such as loaded metallic facilities or analog carrier systems, may not be suitable for IBRULS.

2.16 Bell Atlantic will work with the OTC to resolve facility problems should the IBRULS loop facility require enhancement equipment to support BRI service.

2.17 If an OTC service is provided using IBRULS and electronic transmission enhancement equipment is required to meet OTC requirements that are more stringent than IBRULS and Basic Rate ISDN, the OTC will be responsible for providing such enhancement equipment.

C. DS1 (1.544 Mbps) Unbundled Loop Service (DS1ULS)

2.18 DS1ULS provides the OTC with a 4-wire transmission channel that is suitable for the transport of 1.544 Mbps (DS1) digital signals in both directions simultaneously.

2.19 The interface at the OTC DSX-1 termination in the BA CO is 4-wire and the interface at the EU-RDP is 4-wire. The conductors of the OTC or EU transmit pair are called tip and ring and the conductors of the OTC or EU receive pair are called tip 1 and ring 1.

2.20 The transmission channel between the DS1ULS interfaces consists of 4-wire facilities. DS1ULS may be provided using a variety of loop transmission technologies, including but not limited to, metallic cable, metallic cable with regenerators, metallic cable with High-Bit-Rate Digital Subscriber Line (HDSL) technology, or fiber optic transport systems. A typical DS1ULS configuration is shown in Figure 2-2.

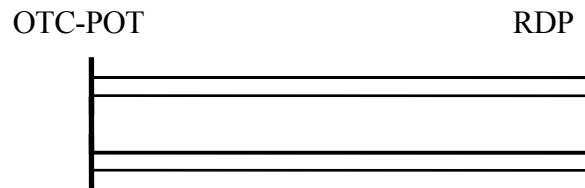


Figure 2-2: Typical 4-Wire DS1ULS configuration

2.21 DS1ULS enables full duplex 1.544 Mbps digital transmission. The 1.544 Mbps line rate supports an 8 kbps framing format and 1.536 Mbps of payload data. DS1ULS will support either the Superframe (SF) or Extended Superframe (ESF) framing formats as specified in ANSI T1.403-1995 [4].

2.22 DS1ULS is available with either the AMI or B8ZS line codes as specified in ANSI T1.403-1995 [4].

2.23 DS1ULS shall provide an electrical DS1 interface at the RDP that meets the network requirements in ANSI T1.403-1995 [4].

2.24 The DS1 interface provided by BA does not deliver direct-current power to the NI via the simplex leads of the transmit and receive pairs. When BA employs metallic facilities and no loopback device is deployed, direct-current power could appear at the NI on the simplex leads of the transmit and receive pairs however. In such cases, the OTC or EU equipment shall provide a direct-current connection between the simplexes of the transmit and receive pairs.

2.25 Direct-current power shall not be delivered to the EU-POT by customer equipment. In addition, customer equipment shall not apply voltages to the EU-POT other than those described in ANSI T1.403-1995.

2.26 The OTC will be responsible for providing synchronization timing for the DS1ULS.

2.27 Subscriber loop facilities were originally designed for Plain Ordinary (analog) Telephone Service (POTS). For this reason, some loops may not be suitable for DS1ULS.

D. High-Bit-Rate Digital Subscriber Line Unbundled Loop Service (HDULS)

2.28 HDULS is under study.

E. Asymmetrical Digital Subscriber Line (ADSL) Unbundled Loop Service

2.29 ADSL Unbundled Loop Service (ADULS) is under study.

F. Service Elements

2.30 IBRULS ordinarily consists of two elements:

(1) The CODF wire and tie cable(s) between the CODF termination of the co-located OTC equipment and the CODF termination of a subscriber loop; and,

(2) a subscriber loop facility between the CO and the EU-RDP. The loop is either:

(a) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with no intermediate electronics; or,

(b) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with transmission enhancement equipment; or,

(c) a universal digital loop carrier (DLC) facility with 2B+1D ISDN Basic Rate transport capability via three DS0 channels. The DLC facility consists of:

- CO cabling between the CODF and a DLC Central Office Terminal (COT) equipped with an ISDN Basic Rate Interface Terminal Equipment (BRITE) channel unit with NT functionality;

- a fiber or metallic facility from the DLC COT to the DLC Remote Terminal (RT) equipped with an ISDN BRITE channel unit with LT functionality; and,
- cable and wire between the DLC RT and the RDP.

2.31 DS1ULS ordinarily consist of two elements:

- (1) The DSX-1 wire and repeatered tie cable(s) between the DSX-1 termination of the co-located OTC equipment and the DSX-1 termination of subscriber loop facilities; and
- (2) a subscriber loop facility between the CO and the EU-RDP. The loop is either:
 - (a) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with no intermediate electronics; or,
 - (b) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with transmission enhancement equipment such as regenerators or DSL technology; or,
 - (c) a fiber facility from the CO to a Remote Terminal (RT) location with cable and wire between the DLC RT and the RDP.

2.32 HDULS is under study.

2.33 ADULS is under study.

3. Element Specifications

A. General

3.01 Two elements are always used with digital unbundled loop services. They are: CODF wire and tie cable(s), and subscriber loop facilities. A third element, electronic transmission enhancement equipment, is sometimes used with digital unbundled loop services. The following sections contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of co-located OTC equipment to the CODF termination of metallic subscriber loops, DLC COTs, and electronic transmission enhancement equipment.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 1500 feet. No bridged tap is permitted in the CO.

3.04 The direct-current resistance between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

3.05 The 1 kHz loss measured on the CODF wiring and tie cables when measured between 900 ohm impedances should be .85 dB or less.

C. Subscriber Loop Facilities

3.07 Subscriber loop facilities consist of feeder and distribution plant between the CODF and the EU customer's RDP. Feeder plant uses a variety of transmission technologies, including but not limited to, twisted-pair metallic cables, twisted-pair metallic cable based digital loop carrier, and fiber optic based digital loop carrier. Distribution plant usually consists of multipair metallic cables. Additional information about subscriber loops may be found in Bellcore SR-TSV-002275 [2].

3.08 Subscriber loop facilities have been designed on a global basis primarily to accommodate POTS and guarantee that loop transmission loss at 1 kHz is statistically distributed and that no single loop exceeds the signaling range of the CO.

3.09 Prior to 1980, loops were designed using one of the following design plans: Resistance Design (RD), Long Route Design (LRD), or Unigauge Design (UD). From 1980 to 1986, the Modified Resistance Design (MRD), Modified Long Route Design (MLRD), and Concentrated Range Extension with Gain (CREG) plans were applied on a going-forward basis (i.e., retroactive redesign was not implemented). In 1986, the Revised Resistance Design (RRD) plan was applied on a going-forward basis.

3.10 Most metallic loop facilities (98%) were designed using the RD, MRD, or RRD design rules. The RRD design rules currently in use limit the loop resistance to the design range of the CO switch (1300 or 1500 ohms) or 1500 ohms whichever is less. The vast majority of non-loaded loops, designed using these rules, will support IBRULS without the need for additional transmission enhancement.

3.11 An IBRULS qualified metallic loop facility is non-loaded and meets the following ISDN Basic Rate design parameters:

- (1) The length shall be 18 kft or less;
- (2) The direct-current resistance measured between the CODF and the EU-RDP shall be 1300 ohms or less;
- (3) Loaded bridged-tap is not permitted;
- (4) Bridged tap is limited to 6 kft;
- (5) The 40 kHz loss of a metallic loop facility when measured with a 135 ohm impedance at the CODF and a 135 ohm impedance at the RDP shall be 40.0 dB or less;

(6) Metallic loops with a 40 kHz loss between 40 and 76 dB will require transmission enhancement equipment.

3.12 The leakage resistance between the tip conductor and ground and the ring conductor and ground on an IBRULS metallic loop shall each be greater than 100 K ohms.

3.13 The longitudinal noise or power influence (PI) measured per IEEE Std 743-1984 [3] on an IBRULS metallic loop should be less than 90 dBrnC.

3.14 The longitudinal balance of a metallic IBRULS loop is defined as the longitudinal noise (in dBrnC) minus the C-message noise (in dBrnC). The longitudinal balance shall be >50 dB.

3.15 Qualification for IBRULS, may require the placement of a mid-span repeater or similar device. Bell Atlantic does not place more than one mid-span repeater per loop. If a loop will not operate with one repeater, construction of DLC will be necessary.

3.16 When a metallic IBRULS loop has a mid-span repeater, the metallic facility between the CODF and the mid-span repeater and the metallic facility between the mid-span repeater and the EU-RDP shall each meet the requirements in section 3.11.

3.17 IBRULS will not operate properly on non-staggered twist cable (installed prior to 1923) or on flat ribbon cables, such as those used for some CPE interconnections. Such cable may need to be replaced to accommodate IBRULS.

3.18 The HDULS loop facility is under study.

3.19 The ADULS loop facility is under study.

D. Transmission Enhancement Equipment

3.20 Transmission enhancement equipment is sometimes used with IBRULS. Such equipment can consist of a CO span power module, a mid-span repeater, or BRI extended range system equipment.

3.21 The span power module is located in the CO and provides power to a mid-span repeater. A mid-span repeater regenerates the 2B1Q line code. The repeater has NT functionality that faces the OTC equipment and LT functionality that faces the RDP. A mid-span repeater is deployed when the calculated loss of the non-repeated loop at 40 kHz (excluding BT) is $> 40.0 < 76.0$ dB.

3.22 BRI extended range systems consist of a unit located in the CO that has NT functionality and a 2B1Q line code that faces the OTC equipment and a remote unit near the RDP that has LT functionality and delivers a 2B1Q line code to the EU customer. The CO unit uses a line code that is spectrum compatible with BA services. The line code permits operation with a remote unit that is connected via a metallic cable that could have a 40 kHz loss of up to 60 dB.

3.23 The impedance of transmission enhancement equipment shall be a nominal 135 ohms.

3.24 Transmission enhancement equipment shall provide loop current when the RDP is terminated by a direct-current resistance of 135 ohms.

4. Service Specifications

A. General

4.01 Parameters are tested at the RDP in response to trouble reports or when additional testing is purchased.

4.02 Network Channel (NC) and Network Channel Interface (NCI) codes are used for providing channel and interface information to customers. The NC/NCI code set facilitates the identification of network channel requirements and associated interface specifications for services described in tariffs.

4.03 For switched services, the NC code is an encoded representation of the channel that is provided by from the OTC Point Of Termination (POT) to the BA CO. By varying the NC code, the customer is allowed to further specify the type of service.

4.04 The NCI code is an encoded representation used to identify five interface elements located at a POT. The five elements reflect the following physical and electrical characteristics: number of physical conductors, protocol, impedance, protocol options, and transmission levels points (if applicable).

4.05 Examples of the most common NC and NCI codes are given each service described in this section. The complete set of codes may be found in SR-STS-000307 [2].

4.06 Valid NCI code combinations are shown for each service described in this section. Complete NC/NCI compatibility information may be found in SR-STS-000323 [3].

B. IBRULS

4.07 The overall end-to-end IBRULS service is from the CODF termination of the OTC equipment to the EU customer's RDP.

4.08 IBRULS NC code information is shown in Figure 4-1 and IBRULS NCI code combinations are shown in Figure 4-2.

4.09 IBRULS Acceptance Limits (AL) and Immediate Action Limits (IAL) are shown in Table 4-3.

Figure 4-1: IBRULS NC Codes

NC CODE	Character 3	Character 4
UB	-	-

Figure 4-2: IBRULS NCI Code Combinations

OTC-POT	EU-POT
02QC5.OOS	02IS5

Figure 4-3: IBRULS Acceptance Limits (AL) and Immediate Action Limits (IAL)

Parameter	AL	IAL
40 kHz loss	< 40.0 dB	> 42.0 dB
Resistance	< 1300 ohms	> 1300 ohms
Leakage	> 100 kilohms	< 100 kilohms
Power Influence	< 90 dB	> 90 dB

C. DS1ULS

4.10 The overall end-to-end DS1ULS service is from the DSX-1 termination of the OTC equipment to the EU customer's RDP.

4.11 DS1ULS NC code information is shown in Figure 4-8, and DS1ULS NCI code combinations are shown in Figure 4-9.

4.12 DS1ULS performance objectives are shown in Figure 4-10 and DS1ULS test limits are shown in Figure 4-11.

4.13 Availability is a measure of the relative amount of time that a service is “usable” by the customer. Unavailability begins when the Bit Error Ratio (BER) in each second is worse than 10^{-3} for a period of 10 consecutive seconds. The DS1ULS objective is 99.925 percent availability in any twelve consecutive months. Availability equals the total time minus the outage time divided by the total time.

4.14 Accuracy denotes the error performance and is usually specified in terms of errored seconds (ES), or conversely, error-free seconds (EFS). EFS are the primary measure of error performance for DS1ULS. An EFS is any second that an error does not occur.

4.15 A Severely Errored Second (SES) is any one second interval that has a BER of less than (worse than) 10^3 .

Figure 4-4: DS1ULS NC Codes

NC CODE	Character 3	Character 4
HC	- (SF and AMI)	-
HC	D (ESF and AMI)	-
HC	E (ESF and B8ZS)	-

HC	Z (SF and B8ZS)	-
HC	E (ESF and B8ZS)	I (ISDN PRA)

Figure 4-5: DS1ULS NCI Code Combinations

OTC-POT	EU-POT
04QB9.11	04DU9-BN (SF and AMI)
04QB9.11	04DU9-DN (SF and B8ZS)
04QB9.11	04DU9-1KN (ESF and AMI)
04QB9.11	04DU9-1SN (ESF and B8ZS)

Figure 4-6: DS1ULS Performance Objectives

Parameter	Objective
Accuracy	0.25 % errored seconds long-term (30 days or more)
Availability	99.925 % per year

Figure 4-7: DS1ULS Test Limits

Test Duration	Errored Seconds	Severely Errored Seconds
15 min	0	0
30 min	3	0
45 min	5	2
24 hours	150	7

4.16 Acceptance testing for DS1ULS should be performed with a Quasi Random Signal Source (QRSS), on an OTC-POT to EU-POT basis, using ES performance parameters.

4.17 If BA has installed a loopback device on the DS1ULS, a dispatch for “cooperative testing” will not ordinarily be made and testing will be performed remotely. Normally, a technician will be dispatched by BA in the following instances:

- The DS1ULS is not equipped with a loopback device;
- The loopback device is inoperable;
- Test results do not meet applicable limits;
- The OTC requests a dispatch.

4.18 At the request of the OTC, BA will provide the remote test results to the OTC.

4.19 Other tests may be performed in response to trouble reports or when additional testing is purchased. The 3/24, 1/8, and All Ones patterns are acceptable diagnostic stress tests for DS1ULS when used in accordance with Figure 4-8.

4.20 The patterns in Figure 4-8 may not detect all possible troubles. Additional tests may be required using other patterns designed to detect specific problems (e.g., bridged tap, etc.).

4.21 If errors are detected using the QRSS, 3/24, or 1/8 patterns, it is recommended that the DS1ULS line code options (AMI/B8ZS) be verified using the procedures outlined in the Bell Atlantic Network Services Reference Manual Series 72710 & NS6050. These tests make use of the Framed 2/8 and Framed 1/8 patterns.

Figure 4-8: AMI and B8ZS Test Matrix (1)

TEST PATTERN (2)	TEST DURATION	ACCEPTANCE LIMIT	MAINTENANCE LIMIT
3/24 (AMI only)	5 minutes	7	60
1/8 (B8ZS only)	5 minutes	7	60
All Ones	5 minutes	7	60
QRSS	15 minutes	20	60
Framed All Zeros (3) (B8ZS only)	30 seconds	0	0

Notes:

(1) Test patterns should be framed.

(2) If compatible test equipment is not available to perform these tests, loopback testing should be utilized.

(3) WARNING: This pattern may cause DS1 failures if DS3 equipment is not optioned properly.

D. HDULS

4.22 HDULS service is under study.

E. ADULS

4.25 ADULS service is under study.

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Co-located OTC equipment used for interconnection with digital unbundled loop services shall meet all of the applicable generic equipment requirements in Bellcore GR-63-CORE [4] and Bellcore GR-1089-CORE [5].

5.02 Co-located OTC equipment used for interconnection with digital unbundled loop services shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Requirements that are not specified in this document, contractual technical requirements, or other applicable documents, shall meet the manufacturer's requirements consistent with industry standards.

5.03 The open circuit tip-to-ring dc voltage that co-located OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Co-located OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

5.05 Co-located OTC equipment shall not deliver more than 150 mA of loop current to any load via BA VF cable.

5.06 The noise limits for digital unbundled loop services require co-located OTC equipment to have a longitudinal balance of >60 dB.

5.07 The loss and noise limits for IBRULS requires co-located OTC equipment to have a nominal impedance of 135 ohms.

5.08 The maximum power level of any transmitted signal on IBRULS shall not exceed ANSI T1.601-1992 [1].

5.09 OTC equipment used with Digital Unbundled Loop Services shall be synchronized to a stratum 1 clock.

5.10 Loops may be exposed to electrical surges from lightning and commercial power system disturbances. Despite protective devices on the CODF, some of these disturbances are likely to reach OTC equipment. OTC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

5.11 The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. This device has an upper 3c limiting voltage of 1000 volts peak under surge conditions and 600 volts rms (800 peak) at 60 Hz. OTC equipment connected to digital unbundled loop services with loops protected by carbon blocks may be subjected to voltages up to these levels. Unexposed COs may not have primary protection, and OTC equipment not coordinating with carbon blocks may need protection in these locations.

5.12 If the subscriber loop facility is exposed to commercial ac power, the CO protector may also include 350 mA heat coils for limiting the current that is permitted to flow to CO equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to

coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

B. OTC Equipment CO Cabling Requirements

5.13 The CO cabling used to terminate OTC equipment on the CODF shall use twisted-pair conductors.

5.14 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.15 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [6] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.16 All CO cabling between OTC equipment and the CODF shall be connected as specified by the BA CO Engineer.

5.17 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

5.18 The C-message noise measured on the CO cabling between the OTC equipment and the CODF shall be 20 dBmC or less.

6. References

A. Definitions

Asymmetrical Digital Subscriber Line (ADSL)

A system that is capable of transmitting digital signals up to 6 Mbps toward the EU-POT and up to 640 kbps from the EU-POT.

ADSL Unbundled Loop Service (ADULS)

A service that provides an effective 2-wire channel, suitable for the transport of ADSL that uses using Carrierless AM/PM (CAP) technology, between the Bell Atlantic central office distributing frame termination of co-located equipment belonging to an OTC and the rate demarcation point at a customer location.

Basic Rate Integrated Services Digital Network Interface (BRI)

The BRI is a 2-wire ISDN interface that uses the two-binary one-quaternary line code at a 160 kilobit per second rate to transport overhead and up to two B channels and one D channel.

B Channel

The B channel is a 64 kilobit per second channel used for information transfer between users.

Bridged tap

Any branch section of a cable pair, or any extension of a cable pair beyond the point where it is used, in which no direct current flows when customer equipment is connected and used.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for EU customer loops, switching system ports, and inter-office facilities.

Channel

An electrical, or photonic communications path between two or more points of transmission.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and EU annoyance to tones as a function of frequency.

dBm

A unit for expression of power level in decibels relative to one milliwatt.

dBm

A unit used to express noise power in decibels relative to one picowatt (-90 dBm).

dBm0

A unit used to express power level in decibels relative to one milliwatt referred to, or measured at, a zero transmission level point (0TLP). A unit used to express noise power in decibels relative to one picowatt measured with C-message weighting.

dBmC0

Noise power in dBmC referred to, or measured at, a zero transmission level point (0TLP).

D Channel

The D Channel is a 16 kilobit per second packet-switched channel that carries signaling and control for the B channels and also supports customer packet data traffic at speeds up to 9.6 kilobits per second.

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Digital Signal Level One (DS1)

A digital signal transmitted at the nominal rate of 1.544 Mbit/s.

Facilities

Any cable, poles, conduit, microwave, or carrier equipment, central office distributing frames, central office switching equipment, computers (both hardware and software), business machines, etc., utilized to provide the services offered by a telephone company.

High-Bit-Rate Digital Subscriber Line (HDSL)

A system that is capable of transmitting bi-directional DS1 (1.544 Mbps) signals or bi-directional half DS1 (768 kbps) signals over metallic twisted-pair cables to provide access to digital telecommunications services.

HDSL Unbundled Loop Service (HDULS)

A service that provides a 2-wire or 4-wire metallic channel, suitable for the transport of HDSL, between the Bell Atlantic central office distributing frame termination of co-located equipment belonging to an OTC and the rate demarcation point at a customer location.

Integrated Services Digital Network (ISDN)

ISDN describes the end-to-end digital telecommunications network architecture which provides for the simultaneous access, transmission, and switching of voice, data, and image services. These functions are provided via channelized transport facilities over a limited number of standard user-network interfaces.

ISDN Basic Rate Unbundled Loop Service (IBRULS)

An unbundled loop service that provides an ISDN basic rate channel between the Bell Atlantic central office distributing frame termination of co-located equipment belonging to an OTC and the rate demarcation point at a customer location.

Leakage

The resistance between the conductors of an insulated metallic pair or the resistance between each conductor of an insulated metallic pair and ground.

Loop

A transmission channel between a EU customer location and a BA CO that is used as a transmission channel for telephone company services.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Plain Ordinary Telephone Service (POTS)

The basic single line switched access service offered by local exchange carriers to residential and business customers. POTS uses loop-start signaling.

Power Influence (PI)

The power of a longitudinal signal induced in a metallic loop by an electromagnetic field emanating from a conductor or conductors of a power system. PI is also called longitudinal noise or noise-to-ground.

Rate Demarcation Point (RDP)

The point at which Bell Atlantic network access recurring charges and responsibility stop and beyond which customer responsibility begins. The RDP is the point of demarcation and/or interconnection between a Bell Atlantic subscriber loop facility and EU premises cabling or terminal equipment. Bell Atlantic facilities at, or constituting, the rate demarcation point shall consist of wire or a jack conforming to Subpart F of Part 68 of FCC rules.

Transmission Enhancement Equipment

In general, any equipment that improves the characteristics of a transmitted signal. In this document, transmission enhancement equipment is any equipment that regenerates a digital signal.

Unbundled Loop

A transmission channel between a EU customer location and a LEC CO that is not a part of, or connected to, other LEC services.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ADSL	Asymmetrical Digital Subscriber Line
ADULS	ADSL Unbundled Loop Service
ANSI	American National Standards Institute
BA	Bell Atlantic
BRI	Basic Rate Interface
BRITE	Basic Rate Interface Terminal Equipment
CO	Central Office
CODF	Central Office Distributing Frame
COT	Central Office Terminal
DLC	Digital Loop Carrier
DS0	Digital Signal Level Zero
DS1	Digital Signal Level One
DVM	Data-Voice Multiplexer
HDSL	High-Bit-Rate Digital Subscriber Line
HDULS	High-Bit-Rate Digital Unbundled Loop Service
IBRULS	ISDN Basic Rate Unbundled Loop Service
ISDN	Integrated Services Digital Network
LT	Line Terminating
NT	Network Terminating
OTC	Other Telephone Company
PI	Power Influence
POTS	Plain Ordinary Telephone Service
RD	Resistance Design
RDP	Rate Demarcation Point
RT	Remote Terminal

July 2, 1997

ATTACHMENT III

USOC	Universal Service Order Code
VF	Voice Frequency
VG	Voice Grade
2B1Q	Two-Bit One-Quaternary

7. Bibliography

- 1- ANSI T1.601-1992, American National Standard for Telecommunications - ISDN - Basic Access Interface for Use on Metallic Loops for Application at the Network Side of NT, Layer 1 Specification.
- 2- Special Report SR-TSV-000307
- 3- Special Report SR-TSV-000323
- 3- IEEE Std 743-1984, IEEE Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice frequency Circuits.
- 4- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 1, (Bellcore, October 1995).
- 5- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 1 (Bellcore, November 1994).
- 6- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).
- 7- Committee T1 Technical Report No.28, *High-Bit-Rate Digital Subscriber Line (HDSL)*, February, 1994.

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

EXHIBIT D

**Specialized Routing Solution For
Operator & DA Calls**

CALL TYPE	5ESS	DMS-100	EWSD	1AESS	DMS-10
0-	AIN	AIN	AIN	SRN	SRN
0+ local	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)
0+ IntraLATA toll	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)
411	AIN	AIN	AIN	AIN	SRN
555-1212	AIN	AIN	AIN	AIN	SRN

¹After 2 PIC implementation, these calls will be routed to the IntraLATA toll provider.

Definitions:

1. AIN = Advanced Intelligent Network
2. SRN = Specialized Routing Node
3. LCC = Line Class Code

EXHIBIT E**AIN EXCEPTION LIST**

Lucent 5ESS	Nortel DMS100	Siemens EWSD
TND – # ISDN Attendant Lines	NISDN – BRI, Including EKTS	Two-Party Lines
– Lines without Office Equipment	MDC Attendant Consoles Data Units	Denied Origination Service
oPak Lines	MBS Data Units, Customized ISDN Lines, and functional signaling Meridian feature transparency (MFT) set. (P-phones)	Remote Call Forwarding
omized ISDN Lines	Datapath lines	
	WATS lines	

OTHER AIN-BASED SERVICE EXEPTIONS

1. CENTREX ARS
2. Easy Voice
3. Work At Home Billing Service
4. CENTREX Extend
5. Switch Redirect Service (requires special handling)

EXHIBIT F

TR 72580
Issue 1, January 1997

Bell Atlantic Technical Reference

**Analog Unbundled Port Services
Technical Specifications**

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**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR 72580
Issue 1, January 1997**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of Analog Unbundled Port Services. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

Bell Atlantic reserves the right to revise this technical reference for any reason including, but not limited to, changes in tariffs, laws, or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to herein. Liability for difficulties arising from technical limitations or changes herein is disclaimed.

Bell Atlantic reserves the right not to offer any or all of these services and to withdraw any or all of them at any future time. In addition, the services described herein are based on available facilities and equipment and may not be universally available.

With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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EXHIBIT F

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR 72580
Issue 1, January 1997**

**Bell Atlantic Technical Reference
Analog Unbundled Port Services
Technical Specifications**

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1. General

1.01 This technical reference provides the technical specifications associated with the Analog Unbundled Port Services offered by Bell Atlantic in the co-carrier section of some local exchange tariffs.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Analog Unbundled Port Services (UPS) enable Other Telephone Companies (OTC) that are collocated in a Bell Atlantic (BA) Central Office (CO) to connect to analog switch ports on BA local switching systems. The analog switch ports provide access to the functionality of the switch including supervisory signaling, digit reception and transmission, routing, rating, usage, as well as other line or trunk features.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the analog UPS. In the future, BA may offer transport services for analog UPS. In that case, the technical specifications associated with the transport service will supersede those in this document where applicable.

2. Service Description

2.01 The service description, terms and conditions, prices, and Universal Service Order Codes (USOCs) for analog UPS are contained in applicable tariffs or contracts.

2.02 Analog UPS are provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

2.03 Analog UPS vary according to the type of switch port (interface) and the services desired. This document contains the technical specifications associated with the analog switch port. The services associated with the analog switch port are described in applicable tariffs and other technical references.

2.04 Analog ports provide a local switch interface that is suitable for the transmission of analog voice grade signals between approximately 300 and 3000 Hz. Analog ports use various methods of dc supervisory signaling to control call processing.

2.05 The following analog UPS are offered: Basic, Centrex, PBX, and Direct Inward Dialing (DID). The Basic, Centrex, and PBX ports are on the line side of the local switching system and use Loop-Start or Ground-Start signaling. The DID port is on the trunk side of the local switching system and uses Loop Reverse-Battery signaling.

2.06 Basic, Centrex, PBX, and DID ports consist of a 2-wire analog interface associated with a local switching system and a 2-wire CODF cross-connect between a 2-wire OTC CODF termination and the CODF termination of the analog port. At each 2-wire interface one conductor is called tip and the other conductor is called ring. A typical analog port configuration is shown in Figure 2-1.

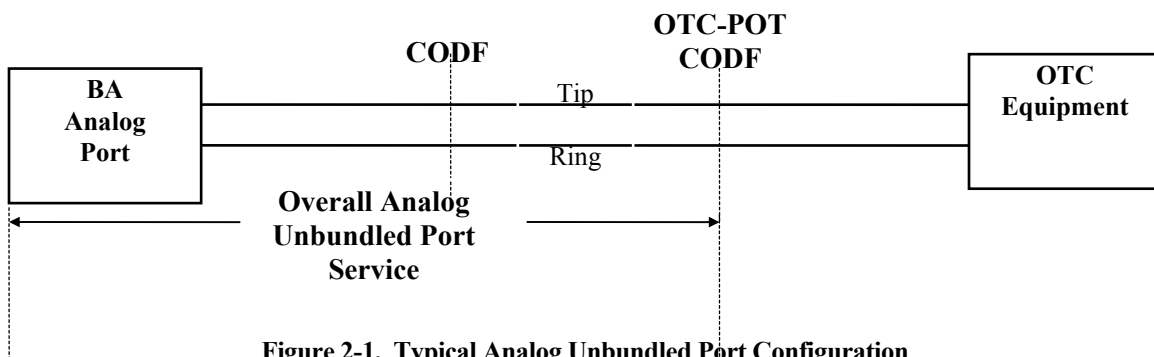
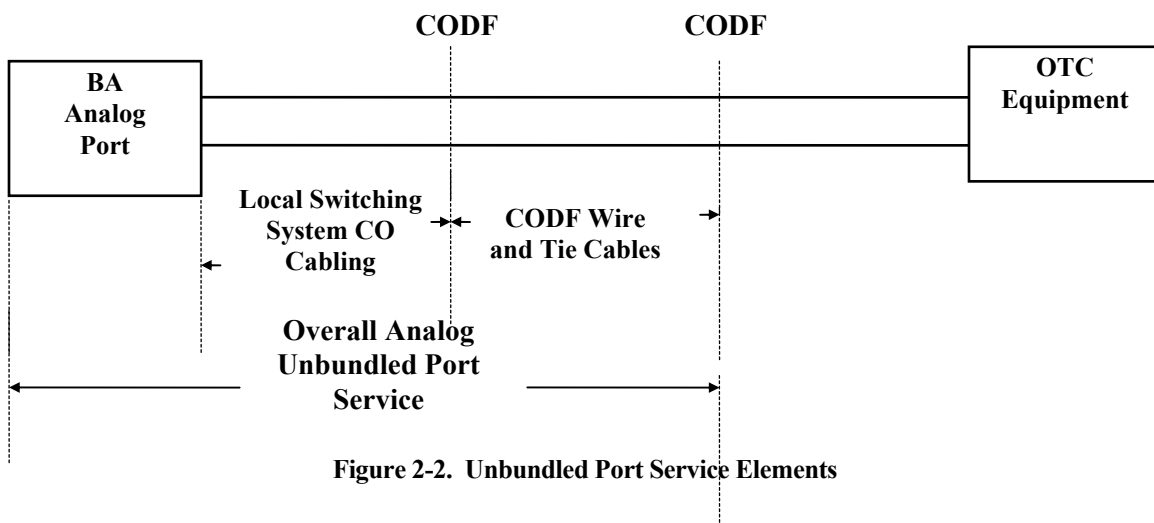


Figure 2-1. Typical Analog Unbundled Port Configuration

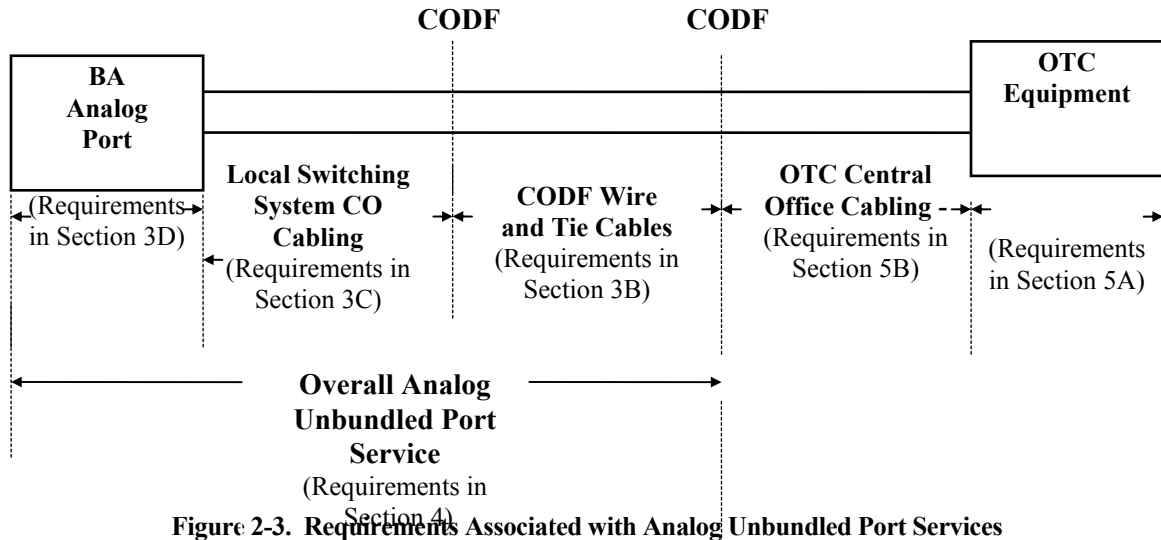
2.07 An analog UPS ordinarily consists of the following elements (see Figure 2-2):

- (1) Central Office Distributing Frame (CODF) wire and tie cable(s) between the CODF termination of the OTC equipment and the CODF termination of the BA analog switch port;
- (2) CO cabling between the CODF and the BA analog switch port; and,
- (3) an analog switch port on a BA local switching system that is either;
 - (a) a loop-start line-side port (LSLS);
 - (b) a ground-start line-side port (GSLs); or,
 - (c) a loop reverse-battery trunk-side port (LRTS). The LRTS port is either;
 - (I) an LRTS port on the trunk-side of a local switching system; or,
 - (II) an LRTS port on a digital channel bank in the same building that has a high capacity connection (such as DS1) to the local switching system.
- (4) Each LSLS or GSLs port has the following basic characteristics and capabilities:
 - (a) an associated telephone number;
 - (b) Dial Pulse (DP) or Dual Tone Multi-Frequency (DTMF) address signaling;
 - (c) access to local calling within the minimum BA-defined local calling area for each rate center;
 - (d) basic intercept;
 - (e) one primary directory listing;
 - (f) PIC1 and PIC2 access;
 - (g) access to 911;
 - (h) access to call routing, switch usage, and recording capability.
- (5) Each LRTS port has the following basic characteristics and capabilities:
 - (a) one way call routing from the BA local switching system to the OTC for associated telephone numbers;
 - (b) DP, DTMF, or MF address signaling;
 - (c) access to call routing and switch usage capabilities.



2.08 The requirements for the BA unbundled port service elements are provided in Section 3 of this technical reference. The overall service requirements are specified in Section 4. Section 5 provides OTC equipment and cabling specifications. Figure 2-3 shows the requirements associated with unbundled port services.

2.09 The Basic line-side port is suitable for single line residential or business service. Unless the OTC requests ground-start supervisory signaling or DP address signaling at the time the service is ordered, the Basic port will be provided with loop-start supervisory signaling and DTMF address signaling capabilities. DP address signaling can be used on a port that is arranged for DTMF signaling.



2.10 The Centrex port is suitable for Centrex line service. Unless the OTC requests ground-start supervisory signaling or DP address signaling at the time the port is ordered, the Centrex port will be provided with loop-start supervisory signaling and DTMF address signaling capabilities. DP address signaling can be used on a port that is arranged for DTMF signaling.

2.11 The PBX port is suitable for Private Branch Exchange (PBX) Central Office trunks. Unless the OTC requests loop-start supervisory signaling or DP address signaling at the time the port is ordered, the PBX port will be provided with ground-start supervisory signaling and DTMF address signaling. DP address signaling can be used on a port that is arranged for DTMF signaling.

2.12 The DID port is suitable for one-way Direct Inward Dialing (DID) trunks. Loop reverse battery is the only supervisory signaling available. Unless the OTC requests DTMF or MF address signaling at the time the port is ordered, the DID port will be provided with DP address signaling.

2.13 The following list of supplementary features are some of the features that are available on line-side ports where technically feasible. Detailed feature lists by switch port type will be provided by the product manager.

- Additional listings
- Operator services
- Directory assistance
- Call Blocking (customer or OTC activated)
- Caller ID (calling number delivery)
- Speed calling
- 3-Way calling
- Call Waiting
- Call Forwarding (including Call Forwarding Busy and No Answer)
- Early fraud warning
- Hunt group arrangements
- Usage recording and daily usage tapes indicating the to and from number and start and stop time by port
- Simplified Message Desk Interface data link
- Routing options

2.14 All analog UPS services use the SN network channel (NC) code. Additional NC option codes are shown in Figure 2-4.

2.15 Network Channel Interface (NCI) codes describe the type of OTC signaling. Valid analog NCI codes are shown in Figure 2-5.

2.16 Valid analog NC/NCI code combinations are shown in Figure 2-6.

Figure 2-4: UPS NC Codes

NC Code	Character 3	Character 4
SN	A (2-wire)	L (line-side port) T (trunk-side port)

Figure 2-5: UPS NCI Codes (see note)

NCI Code	Description
02QC3.OOE	Loop-start signaling - Closed End
02QC3.OOC	Ground-start signaling - Closed End
02QC3.RVT	Loop Reverse-Battery Terminating Signaling

Note: NCI codes describe the function performed by the connecting OTC equipment not the function of the unbundled port service. For example, an LSLS port performs the open end function of an access line and connecting OTC equipment performs the closed end function.

Figure 2-6: Valid analog UPS NC/NCI Code Combinations

Unbundled Port Service	NC Code	NCI Code
LSLS	SNAL	02QC3.OOE
GSLs	SNAL	02QC3.OOC
LRTS	SNAT	02QC3.RVT

3. Service Elements

A. General

3.01 Three elements are always used with analog Unbundled Port Services. They are: Central Office Distributing Frame (CODF) wire and tie cable(s), BA local switching system CO cabling, and a BA local switching system port. The following sections contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of OTC equipment to the CODF termination of the BA local switching system port.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables used for analog UPS should be less than 1500 feet.

3.04 The direct-current resistance of the CODF wiring and tie cable used for analog UPS should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

3.05 The 1kHz loss of the CODF wiring and tie cable used for UPS, when measured between 900 ohm impedances, should be less than .5 dB.

3.06 The C-message noise measured on the CODF wiring and tie cables used for analog UPS shall be 20 dBmC or less when measured between 900 ohm impedances..

C. Bell Atlantic Local Switching System CO Cabling

3.07 The voice grade CO cabling used to terminate BA Local Switching System ports on the CODF shall use twisted-pair conductors.

3.08 The type, gauge, and length of the BA CODF cabling shall be specified based on this specification and BA equipment vendor requirements. If the specifications in this document differ from the equipment manufacturers specifications, then the more stringent of the two shall be used.

3.09 The direct-current resistance of the CO cabling between the BA local switching system port and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [1] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

3.10 The 1kHz loss of the CO cabling between the BA local switching system port and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

3.11 The C-message noise measured on the CO cabling between the BA local switching system port and the CODF shall be 20 dBmC or less.

D. Local Switching System Analog Ports

3.12 Bell Atlantic currently offers three different local switching system analog ports. They are: (1) the loop-start line-side (LSLS) port, (2) the ground-start line-side (GSLs) port, and (3) the loop reverse-battery terminating (LRTS) trunk-side port.

3.13 The impedance of the local switching system analog port is based on the type of local switching system. Most BA local switching system ports have a nominal 900 ohms + 2.16uF impedance, however some switching system ports have a nominal impedance of 800 ohms in parallel with 0.05 uF and 100 ohms.

3.14 Line-side analog ports shall provide 20 mA or more of loop current when terminated by a direct-current resistance of between 430 ohms and 1730 ohms.

3.15 The C-message noise measured on the analog port shall be 20 dBmC or less.

3.16 The C-Notched noise measured on the analog port shall be 45 dBmC or less with a -13 dBm0 1004 Hz holding tone.

3.17 Signaling on the LSLS (02QC3.OOE) and GSLs (02QC3.OOC) ports shall conform to the network specifications in ANSI T1.401-1993 [2].

3.18 Signaling on the LRTS (02QC3.RVT) port shall conform to the network specifications in ANSI T1.405-1996 [3].

4. Service Specifications

4.01 The overall end-to-end analog UPS service is from the CODF termination of the OTC equipment (OTC-POT) to the BA local switching system port (See Figure 2-1).

4.02 Analog UPS should meet the limits in Figure 4-1, 4-2, and 4-3 when measured at the BA local switching system test position. Parameters are usually tested in response to trouble reports or when additional testing is purchased.

Figure 4-1: Analog UPS Acceptance Limits (AL) and Immediate Action Limits (IAL)

Parameter	AL	IAL
Loss	< 1.0 dB	> 1.5 dB
Resistance	< 100 ohms	> 100 ohms
C-Message Noise	< 30 dBmC0	> 30 dBmC0
LSLS & GSLS Loop Current	> 20 mA	< 20 mA

4.03 Signaling on the LSLS (02QC3.OOE) and GSLS (02QC3.OOC) ports shall conform to the network specifications in ANSI T1.401-1993 [2]. Signaling on the LRTS (02QC3.RVT) port shall conform to the network specifications in ANSI T1.405-1996 [3].

4.04 Compatible TLP ranges are shown in Figures 4-2 and 4-3.

Figure 4-2: Compatible TLP Ranges at the OTC-POT

Specified NCI Code	OTC Transmit TLP ²⁹	OTC Receive TLP ³⁰
02QC3.OOE, 02QC3.OOC	0.0 to -8.0 [0.0]	0.0 to -1.0
02QC3.RVT	-2 to -3.5 [-3.5]	0.0 to -1.0

Figure 4-3: Compatible TLP Ranges at the BA Local Switching System

Specified NCI Code	BA Transmit TLP	BA Receive TLP
02QC3.OOE, 02QC3.OOC	0.0	0.0 to -8.0
02QC3.RVT	0.0	-2 to -4 ³¹

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Collocated OTC equipment used for interconnection with analog UPS shall meet all of the applicable generic equipment requirements in GR-63-CORE [4] and GR-1089-CORE [5].

5.02 Collocated OTC equipment shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Where requirements are not specified in this document, contractual technical requirements, or other applicable documents, the manufacturer's requirements consistent with industry standards shall be met.

5.03 The open circuit tip-to-ring dc voltage that collocated OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Collocated OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

²⁹ The OTC transmit TLP is normally specified by the OTC. When the OTC transmit TLP is not specified, the bracketed [] value denotes the default TLP.

³⁰ The OTC receive TLP will be a function of the BA transmit TLP (0.0) and the total loss of the BA port, BA CO cabling, and BA CODF wiring. The average OTC receive TLP is -0.5 dBm and the level cannot be adjusted.

³¹ When the LRTS port is an analog trunk circuit, the BA receive TLP will be a function of the OTC transmit TLP and the total loss of the BA CO cabling, the BA CODF wiring, and the BA LRTS port. The average total loss of the BA CO cabling, BA CODF wiring, and BA port is about 0.5 dB and the BA receive TLP cannot be adjusted by BA. When the LRTS port is on a channel bank that has a high capacity connection to the BA Local Switching System, the BA receive TLP is obtained by Local Switching System translations and is always -4.0.

5.05 Collocated OTC load equipment shall not draw more than 100 mA of loop current from LSLS and GSTS ports and shall not deliver more than 100mA of loop current to any LRTS port.

5.06 The noise limits for analog UPS are predicated on the OTC equipment having a longitudinal balance of > 60 dB when measured using the methods and equipment specified in ANSI/IEEE 455-1984 [6].

5.07 The loss and noise limits for analog UPS are predicated on collocated OTC equipment having a nominal impedance of 900 ohms when measured using the methods and equipment in ANSI/IEEE 743-1995 [7].

5.08 The applied power level of any transmitted signal averaged over 3 seconds shall not exceed -12 dBm0.

5.09 The signaling characteristics of OTC equipment associated with LSLS and GSLS ports shall conform to the loop-start and ground-start customer installation specifications in ANSI T1.401-1993 [2].

5.10 The signaling characteristics of OTC equipment associated with LRTS ports shall conform to the loop reverse battery customer installation specifications in ANSI T1.405-1996 [3].

B. OTC CO Cabling Requirements

5.11 The voice grade CO cabling used to terminate OTC equipment on the CODF for interconnection with analog UPS shall use twisted-pair conductors.

5.12 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.13 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [1] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.14 All CO cabling between OTC equipment and the CODF shall be equipped with connectors at each end. The type of connectors shall be specified by the CO Engineer.

5.15 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances using the methods and equipment specified in ANSI/IEEE 743-1995 [7], shall be less than .15 dB.

5.16 The C-message noise measured on the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances using the methods and equipment specified in ANSI/IEEE 743-1995 [7], shall be 20 dBmC or less.

6. References

A. Definitions

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

Closed end

The closed end of an access line is the end of the access line that is not switched. The closed end connects to CPE or OTC equipment that functions as terminal equipment.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and end-user annoyance to tones as a function of frequency.

C-Notched Noise

The C-message frequency-weighted noise on a channel with a holding tone that is removed at the measuring end through a notch (very narrow band) filter.

dBm

A unit for expression of power level in decibels relative to one milliwatt.

dBm0

Power level referred to, or measured at, a zero transmission level point (OTLP).

dBm

A unit used to express noise power relative to one picowatt (-90 dBm).

dBmC

Noise power measured with C-message weighting expressed in dBm.

dBmC0

Noise power in dBmC referred to, or measured at, a zero transmission level point (OTLP).

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Dial Pulse (DP)

A type of switched access line address signaling that uses rapid loop open and loop closure signals (pulses) to indicate the digit being dialed. The digits 1 through 9 are represented by the same number of pulses and the digit zero is represented by ten pulses.

Dual Tone Multi-Frequency (DTMF)

A type of switched access line address signaling that uses two tones transmitted simultaneously to indicate a digit (0 to 9) or character (* or #).

Ground-Start (GS) signaling

A type of switched access line supervisory signaling in which the network provides a battery source. To initiate a call, CPE or OTC equipment provides a ground on the ring lead. The ring ground causes dc current to flow which the local switching system will detect as a request for service. On terminating calls, CPE or OTC equipment will provide an off-hook loop closure that is recognized as an answer signal.

Line-side

That part of a local switching system that interfaces access lines.

Local switching system

A system that establishes connections between access lines and connections between access lines and interoffice trunks. Access line ports are located on the line-side of the local switching system and trunk ports are located on the trunk-side of the local switching system.

Loop reverse-battery signaling

A type of switched access line supervisory signaling that uses loop-open and loop-closure signals to indicate on-hook and off-hook signals in one direction and normal battery polarity and reverse battery polarity to indicate on-hook and off-hook signals in the other direction. The end of the service that generates loop open and loop closure signals is called the

originating end and the other end which generates the normal battery polarity and reverse battery polarity signals is called the terminating end. For LRTS and other DID-type ports, the local switching system is the originating end and the CPE or OTC equipment is the terminating end. The interface code for such applications represents the function performed by the CPE or OTC equipment (02QC3-RVT).

Loop-Start (LS) signaling

A type of switched access line signaling in which the network provides a battery source. To initiate and maintain a call, CPE or OTC equipment will provide an off-hook loop closure. The loop closure causes dc loop current to flow which the local switching system will recognize as a service request. On terminating calls, CPE or OTC equipment will provide an off-hook loop closure that is recognized as an answer signal.

Open end

The open end of an access line is the end of the access line that connects to the local switching system port. The open end can be switched to other line or trunk ports associated with the same local switching system.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Trunk-side

That part of a local switching system that interfaces interoffice trunks.

Unbundled Port

A physical termination (port) on a switching system that provides access to and from the public switched telephone network.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

AL	acceptance limit
ANSI	American National Standards Institute
BA	Bell Atlantic
CO	central office
CODF	central office distributing frame
CPE	customer premises equipment
DID	Direct Inward Dialing
DP	dial pulse
DS1	digital signal level one
DTMF	dual tone multi-frequency
GS	ground-start
GSLS	ground-start line-side
FCC	Federal Communications Commission
IAL	immediate action limit
IEEE	International Electrical and Electronic Engineers
LRB	loop reverse-battery
LRTS	loop reverse-battery trunk-side
LS	loop-start
LSLS	loop-start line-side
NC	network channel
NCI	network channel interface
NEC	National Electric Code
OTC	Other Telephone Company
PBX	Private Branch Exchange
PIC1	primary interconnect carrier one

PIC2	primary interconnect carrier two
POTS	plain ordinary (analog) telephone service
UL	Underwriter's Laboratory
UPS	Unbundled Port Service
USDL	United States Department of Labor
USOC	Universal Service Order Code
VF	voice frequency
VG	voice grade

7. Bibliography

- 1- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).
- 2- American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling, ANSI T1.401-1993.
- 3- American National Standard for Telecommunications - Network-to-Customer Installation Interfaces - Direct-Inward-Dialing Analog Voice grade Switched Access Using Loop Reverse-Battery Signaling, ANSI T1.405-1996.
- 4- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 1, (Bellcore, October 1995).
- 5- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 2 (Bellcore, November 1994).
- 6- ANSI/IEEE 455-1984 (R1993), Test Procedure for Measuring Longitudinal Balance of Telephone Equipment Operating in the Voice Band.
- 7- ANSI/IEEE 743- 1995, Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice Frequency Circuits.

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

EXHIBIT G

TR 72585
Issue 1, April 1997

Bell Atlantic Technical Reference

**Digital Unbundled Port Services
Technical Specifications**

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July 2, 1997

ATTACHMENT III

Bell Atlantic Network Services, Inc.
Technical Reference

TR 72585
Issue 1, April 1997

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EXHIBIT G

Bell Atlantic Network Services, Inc.
Technical Reference

TR 72585
Issue 1, April 1997

Bell Atlantic Technical Reference
Digital Unbundled Port Services
Technical Specifications

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1. General

1.01 This technical reference provides the technical specifications associated with the Digital Unbundled Port Services offered by Bell Atlantic (BA) in the co-carrier section of some local exchange tariffs or via contract.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Digital Unbundled Port Services (DUPS) enable Other Telephone Companies (OTC) that are collocated in a BA Central Office (CO) to connect to digital switch ports on BA local switching systems. The digital switch ports provide access to the functionality of the switch including supervisory signaling, digit reception and transmission, routing, rating, usage, as well as other line and trunk features.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the digital UPS. In the future, BA may offer transport services for DUPS. In that case, the technical specifications associated with the transport service will supersede those in this document where applicable.

2. Service Description

A. General

2.01 The service description, terms and conditions, prices, and Universal Service Order Codes (USOCs) for DUPS are contained in applicable tariffs or contracts.

2.02 DUPS are provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

2.03 DUPS vary according to the type of switch port (interface) and the services desired. This document contains the technical specifications associated with the digital switch ports. The services associated with the digital switch port are described in applicable tariffs and other technical references.

2.04 Digital ports provide a local switch interface that is suitable for the transmission of digital signals at the rates specified for each port.

2.05 The following DUPS are currently offered: Basic Rate ISDN (BRI), Centrex Basic Rate ISDN (CBRI), Primary Rate ISDN (PRI), DS1 message trunk interface (DS1MT), and DS1 Direct Inward Dialing (DS1DID). Other port types will be considered upon receipt of a bona-fide request.

2.06 DUPS ordinarily consists of the following elements:

- (1) (a) For BRI and CBRI: Central Office Distributing Frame (CODF) wire and tie cable(s) between the CODF termination of the OTC transport equipment and the CODF termination

of the BA switch port. (b) For PRI, DS1MT, and DS1DID: Digital Signal 1 Cross-Connect (DSX-1) wire and repeated tie cable between the DSX-1 termination of the OTC transport equipment and the DSX-1 termination of the BA switch port. (In some cases, an electronic digital cross-connect (EDSX) system can be substituted for the DSX-1.)

(2) CO cabling between the CODF or DSX-1 and the BA Digital switch port; and,

(3) a digital switch port on a BA local switching system that is either;

- (a) a line-side Basic Rate ISDN or Centrex Basic Rate ISDN interface;
- (b) a line-side³² DS1 interface for Primary Rate ISDN; or,
- (c) a trunk-side DS1 interface for Message Trunks, or Direct Inward Dialing trunks.

2.07 Each DUPS line-side port has the following basic characteristics and capabilities:

- an associated telephone number;
- access to local calling within the minimum BA-defined local calling area for each rate center;
- basic intercept;
- PIC1 and PIC2 (where deployed) access;
- access to 911;
- access to call routing, switch usage, and recording capability.

2.08 Each DS1DID trunk-side port has the following basic characteristics and capabilities:

- One-way call routing from the BA local switching system to the OTC for associated telephone numbers;
- wink-start address control signal;
- DP, DTMF, or MF address signaling;
- access to call routing and switch usage capabilities.

2.09 Each DS1MT trunk-side port has the following basic characteristics and capabilities:

- One-way call routing from the BA local switching system to the OTC for associated telephone numbers, or,
- One-way call routing from the OTC to the BA local switching system for associated telephone numbers;
- SS7 out-of-band signaling, or,
- wink-start address control signal with MF address signaling; and ,
- access to call routing and switch usage capabilities.

³² Primary Rate ISDN (PRI) services use a DS1 interface (port) on the local switching system. Depending upon the architecture of the local switching system, the port may be on the line-side or the trunk-side of the local switching system. Since the location of the port has no bearing on the functional characteristics of the port, for the purposes of this technical reference a line-side port is assumed.

2.10 The following list of supplementary features are some of the features that are available on line-side ports where technically feasible. Detailed feature lists by switch port type will be provided by the product manager.

- Additional listings
- Operator services
- Directory assistance
- Call Blocking (customer or OTC activated)
- Caller ID (calling number delivery)
- Speed calling
- 3-Way calling
- Call Forwarding (including Call Forwarding Busy and No Answer)
- Hunt group arrangements
- Visual message waiting indicator
- Usage recording and daily usage tapes indicating the to and from number and start and stop time by port

B. Basic Rate ISDN (BRI)

2.11 BRI service consists of a 2-wire line-side port associated with a local switching system and a 2-wire CODF cross-connect between a 2-wire OTC CODF termination and the BRI CODF termination. At each 2-wire interface one conductor is called tip and the other conductor is called ring. A typical BRI port configuration is shown in Figure 2-1.

2.12 The BRI interface provides Line Termination (LT) functionality and utilizes the Two-Binary One-Quaternary (2B1Q) line code operating at 160 kbps that is described in Bellcore technical reference TR-NWT-000393 [1].

2.13 BRI is available in the 2B + D configuration which provides two B channels and one D channel (for signaling). BRI also supports a maintenance channel (M channel).

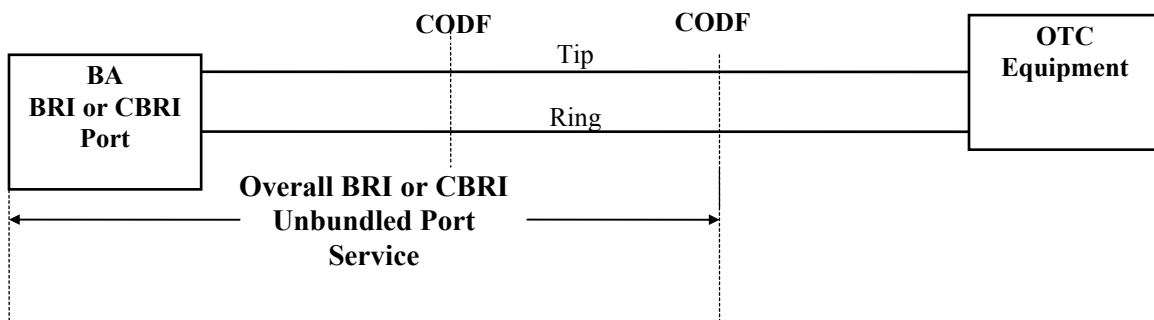


Figure 2-1. Typical BRI or CBRI Unbundled Port Configuration

C. Centrex Basic Rate ISDN (CBRI)

2.14 CBRI service consists of a 2-wire line-side port associated with a local switching system and a 2-wire CODF cross-connect between a 2-wire OTC CODF termination and the CTX BRI CODF

termination. At each 2-wire interface one conductor is called tip and the other conductor is called ring. A typical CBRI port configuration is shown in Figure 2-1.

2.15 The CBRI interface provides Line Termination (LT) functionality and utilizes the Two-Binary One-Quaternary (2B1Q) line code operating at 160 kbps that is described in Bellcore technical reference TR-NWT-000393 [1].

2.16 CBRI is available in the 2B + D configuration which provides two B channels and one D channel (for signaling). CBRI also supports a maintenance channel (M channel).

D. Reserved for future use.

E. Primary Rate ISDN (PRI)

2.17 PRI service consists of a 4-wire DSX-1 port associated with a local switching system and the 4-wire DSX-1 cross-connect between the OTC DSX-1 termination and the local switching system DSX-1 termination. A typical PRI port configuration is shown in Figure 2-2.

2.18 PRI ports are DSX-1 interfaces that meet the electrical specifications in ANSI T1.102 [3]. PRI service uses B8ZS line code and the Extended SuperFrame (ESF) Format described in ANSI T1.403 [5].

2.19 PRI is synchronized by the BA local switching system that uses timing that is traceable to a stratum one timing supply. The associated Building Integrated Timing Supply (BITS) meets the 3E specifications in ANSI T1.101 [6].

2.20 PRI is available in several configurations. The 23B + D configuration provides 23 B channels and one D channel (for signaling) that is always assigned to timeslot 24. The 24B configuration provides 24 B channels and signaling is carried over the D-channel of an associated PRI.

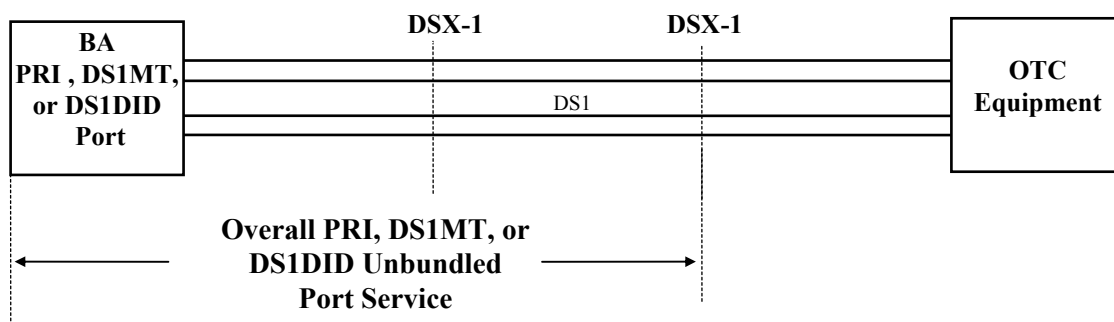


Figure 2-2. Typical PRI, DS1MT, or DS1DID Unbundled Port Configuration

2.21 Circuit Mode 3.1 kHz Audio is assumed for all calls originating from the Public Switched Telephone Network (PSTN). In addition, the analog voice grade signals on each DS0 for such calls are encoded and decoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

F. DS1 Message Trunk (DS1MT)

2.22 DS1MT service consists of a 4-wire DSX-1 port associated with the trunk-side of a local switching system and the 4-wire DSX-1 cross-connect and repeatered tie cable between the OTC DSX-1 termination and the local switching system DSX termination. A typical DS1MT port configuration is illustrated in Figure 2-2.

2.23 DS1MT ports are DSX-1 interfaces that meet the electrical specifications in ANSI T1.102 [3]. DS1MT ports use the B8ZS line code and the ESF framing format described in ANSI T1.403 [5].

2.24 DS1MT ports are synchronized by the BA local switching system that uses a timing supply that is traceable to a stratum one clock as described in ANSI T1.101 [6]. The Building Integrated Timing Supply (BITS) meets the 3E clock specifications in ANSI T1.101 [6].

2.25 DS1MT ports are channelized into 24 DS0 channels.

2.26 For out-of-band common channel signaling (CCS) applications, each DS0 can carry a 56 kbps or 64 kbps information payload. Signaling System 7 (SS7) signaling conforming to Bellcore GR-905-CORE [7] will be used in such applications.

2.27 For non-CCS/SS7 applications, robbed bit supervisory signaling conforming to ANSI T1.403 [5], wink-start call control protocol, and MF signaling will be used. When robbed bit supervisory signaling is used, each DS0 is limited to a 56 kbps payload.

2.28 Analog voice grade signals on each DS0 are encoded and decoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

G. DS1 Direct Inward Dialing (DS1DID)

2.29 DS1DID service consists of a 4-wire DSX-1 port associated with the trunk-side of a local switching system and the 4-wire DSX-1 cross-connect and repeatered tie cable between the OTC DSX-1 termination and the local switching system DSX termination. A typical DS1DID port configuration is illustrated in Figure 2-2.

2.30 DS1DID ports are DSX-1 interfaces that meet the electrical specifications in ANSI T1.102 [3]. DS1DID uses the AMI or B8ZS line code and the SF or ESF framing format described in ANSI T1.403 [5].

2.31 DS1DID ports are synchronized by the BA local switching system using a timing supply that is traceable to a stratum one clock as described in ANSI T1.101 [6]. The Building Integrated Timing Supply (BITS) meets the 3E clock specifications in ANSI T1.101 [6].

2.32 DS1DID ports are channelized into twenty-four 56 kbps DS0 channels. Each DS0 channel uses robbed bit supervisory signaling conforming to the loop reverse battery signaling (customer installation provided loop current feed) specifications in ANSI T1.403, Annex C [5].

2.33 Each DID DS0 channel uses the wink-start call control protocol and either dial pulse (DP), Dual Tone Multi-Frequency (DTMF), or Multi-Frequency (MF) address signaling. DP address

signaling is transmitted using the robbed bit supervisory signaling. DTMF and MF address signaling is transmitted along with other voiceband frequencies in the DS0 payload after being encoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

2.34 Analog voice grade signals on each DS0 are encoded and decoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

H. Network Channel and Network Channel Interface Codes

2.35 Network Channel (NC) and Network Channel Interface (NCI) codes are used for communicating channel and interface information. The NC/NCI code set facilitates the identification of network channel requirements and associated interface specifications for services described in tariffs.

2.36 For switched services, the NC code is an encoded representation of the channel that is provided from the OTC Point Of Termination (POT) to the BA CO. By varying the NC code, the customer is allowed to further specify the type of service.

2.37 The most common DUPS NC codes are shown in figure 2-3. The complete set of NC codes for DUPS and other services may be found in SR-STS-000307 [9].

2.38 The NCI code is an encoded representation used to identify five interface elements located at a POT. The five elements reflect the following physical and electrical characteristics: number of physical conductors, protocol, impedance, protocol options, and transmission levels points (if applicable).

2.39 Valid DUPS NCI codes are shown in Figure 2-4.

2.40 Valid Digital NC/NCI code combinations are shown in Figure 2-5. Complete NC/NCI compatibility for DUPS and other services may be found in SR-STS-000323 [10].

Figure 2-3: DUPS NC Codes

Service	NC Code	Character 3	Character 4
BRI & CBRI	SN	A (2-Wire)	L (line side)
Primary Rate ISDN	HC	E (ANSI ESF & B8ZS)	E (PRI 24B)
			I (PRI 23B + D)
DS1 Message Trunk	SD	U	K (EO to EO SS7)
			L (EO to LT SS7)
DS1 DID	SD	-	Y (DID - DTMF)

Figure 2-4: DUPS NCI Codes

NCI Code	Description
----------	-------------

02QC5.OOS	Basic Rate ISDN
02QC5.OOS	Centrex Basic Rate ISDN
04QB9.11	Primary Rate ISDN
04QB9.11	DS1 Message Trunk
04QB9.11	DS1 Direct Inward Dialing

Figure 2-5: Valid NC/NCI Code Combinations

Service	NC Code	NCI Code
Basic Rate ISDN	SNAL	02QC5.OOS
Centrex Basic Rate ISDN	SNAL	02QC5.OOS
Primary Rate ISDN (24B)	HCEE	04QB9.11
Primary Rate ISDN (23B+D)	HCEI	04QB9.11
DS1 Message Trunk (EO to EO SS7)	SDUK	04QB9.11
DS1 Message Trunk (EO to Tandem SS7)	SDUL	04QB9.11
DS1 Direct Inward Dialing	SD-Y	04QB9.11

3. Service Elements

A. General

3.01 Three elements are always used with BRI and CBRI Unbundled Port Services. They are: CODF cross-connect wiring and tie cable(s), BA local switching system CO voice frequency (VF) cabling, and a BA local switching system port. Figure 3-1 illustrates the BRI and CBRI Unbundled Port Service elements and identifies the sections of this document that contain the requirements for each of the elements.

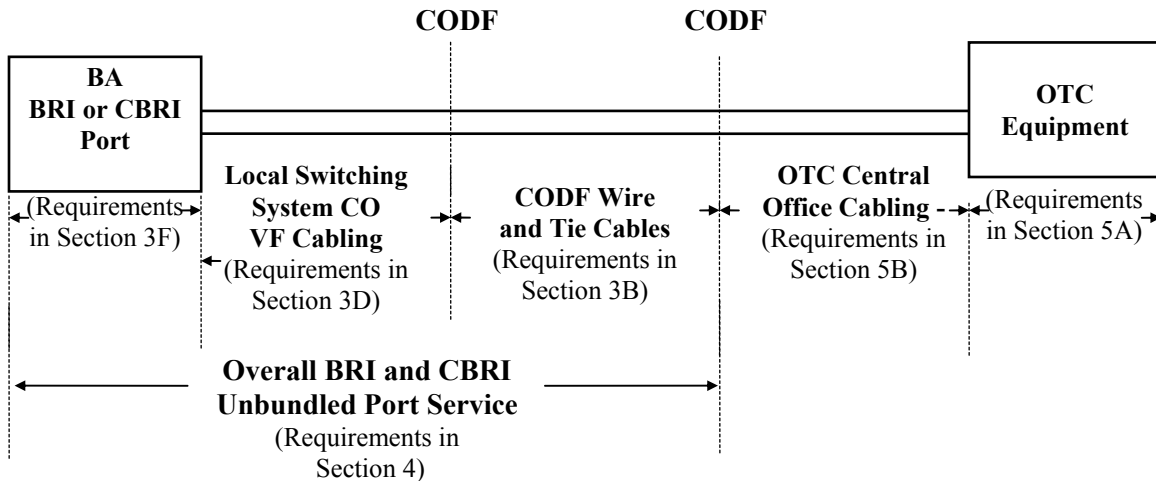


Figure 3-1. BRI and CBRI Unbundled Port Service Elements

3.02 Three elements are always used with the DS1s associated with the PRI, DS1MT, and DS1DID Unbundled Port Services. They are: DSX-1 cross-connect wiring and tie cable(s), BA local switching system CO DSX-1 cabling, and a BA local switching system DS1 port. Figure 3-2 illustrates the PRI, DS1MT, and DS1DID Unbundled Port Service elements and identifies the sections of this document that contain the specifications for each of the elements.

B. CODF Wiring and Tie Cable(s)

3.03 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of OTC transport equipment to the CODF termination of the BA BRI or CBRI port.

3.04 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables used for DUPS should be less than 1500 feet.

3.05 The direct-current resistance of the CODF wiring and tie cable used for DUPS should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

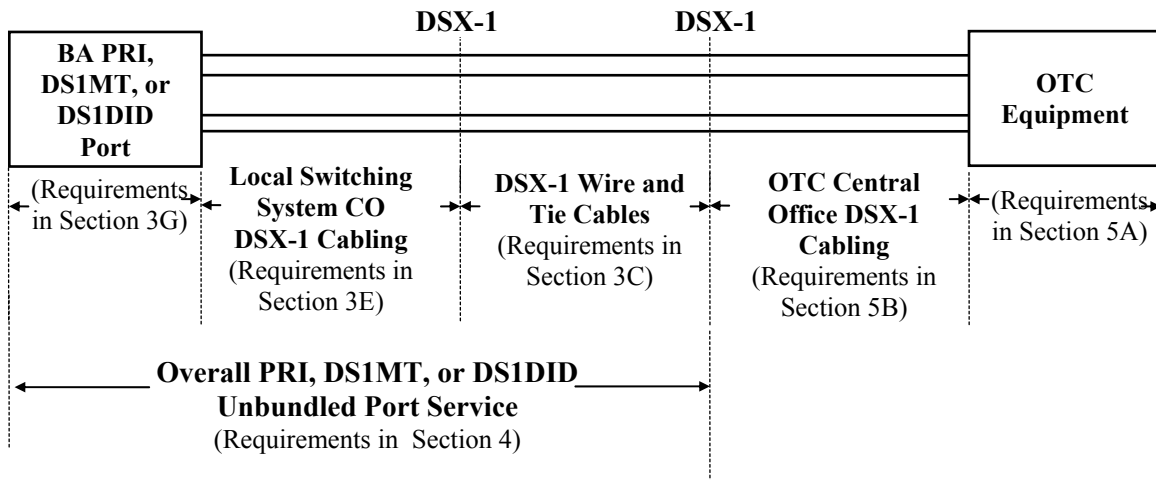


Figure 3-2. PRI, DS1MT, and DS1DID Unbundled Port Service Elements

C. DSX-1 Wiring and Repeated Tie Cable(s)

3.06 DSX-1 cross-connect wiring and tie cable(s) are used to link the DSX-1 termination of OTC equipment to the DSX-1 termination of the BA PRI, DS1MT, or DS1DID port. In some cases, an electronic digital cross-connect (EDSX) system may be substituted for the DSX-1.

3.07 The total length of all DSX-1 cross-connect wiring should be less than 185 feet.

3.08 When repeated tie cables are used to link OTC DSX-1 terminations to BA DSX-1 terminations, the cabling between the repeaters and the DSX-1 panels shall be built-out in each direction of transmission such that the overall cabling and build-out is the equivalent of 655 feet of 22 gauge ABAM cable.

D. Bell Atlantic Local Switching System CO Voice Grade Cabling

3.09 The voice-grade CO cabling used to terminate BRI or CBRI local switching system ports on the CODF shall use twisted-pair conductors.

3.10 The type, gauge, and length of the BA CODF cabling shall be specified based on this specification and BA equipment vendor requirements. If the specifications in this document differ from the equipment manufacturers specifications, then the more stringent of the two shall be used.

3.11 The direct-current resistance of the CO cabling between the BA local switching system port and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [11] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

E. Bell Atlantic Local Switching System CO DSX-1 Cabling Requirements

3.12 BA cabling between the Local Switching System and the DSX-1 panels shall be built-out in each direction of transmission such that the overall cabling and build-out is the equivalent of 655 feet of 22 gauge ABAM cable.

F. BRI and CBRI Local Switching System Ports

3.13 The BRI and CBRI line-side ports shall conform to the LT specifications in TR-NWT-000393 [1] and the network specifications in ANSI T1.601-1993 [12].

G. PRI, DS1MT, and DS1DID Local Switching System Ports

3.14 The PRI port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF requirements in ANSI T1.403 [5], the network requirements in ANSI T1.408 [13], the timing requirements in ANSI T1.101 [6], and (for PSTN calls) the μ 255 coding scheme in ITU-T Recommendation G.711 [4].

3.15 The DS1MT port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF requirements in ANSI T1.403 [5] and the μ 255 coding scheme in ITU-T Recommendation G.711 [4]. In SS7 applications, the DS1MT shall conform to the specifications in GR-905-CORE. In MF applications, the DS1MT shall conform to the robbed-bit signaling specifications in ANSI T1.403 Annex C [5] and the MF signaling requirements in FR-NWT-000064 [11].

3.16 The DS1DID port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the AMI or B8ZS and SF or ESF requirements in ANSI T1.403 [5], the robbed-bit signaling specifications in ANSI T1.403 Annex C [5], the μ 255 coding scheme in ITU-T Recommendation G.711 [4], and the DP, DTMF, or MF signaling requirements in FR-NWT-000064 [11].

4. Service Specifications

A. General

4.01 The overall end-to-end DUPS service is from the CODF or DSX-1 termination of the OTC equipment to the BA local switching system port.

4.02 DUPS should meet the limits of this section when measured at the BA local switching system port. Parameters are usually tested in response to trouble reports or when additional testing is purchased.

B. BRI and CBRI

4.03 The overall end-to-end BRI or CBRI service is from the CODF termination of the OTC equipment to the local switching system port (see figure 2-1).

4.04 BRI and CBRI Acceptance Limits (AL) and Immediate Action Limits (IAL) are shown in Table 4-1.

4.05 BRI and CBRI services shall meet the LT specifications in TR-NWT-000393 [1] and the network specifications in ANSI T1.601-1993 [12].

**Table 4-1: BRI and CBRI
Acceptance Limits (AL) and Immediate Action Limits (IAL)**

Parameter	AL	IAL
40 kHz loss	< 6.0 dB	> 6.0 dB
Resistance	< 130 ohms	> 130 ohms
Leakage	> 5 Megaohms	< 5 Megaohms

C. PRI, DS1MT, and DS1DID

4.06 The overall end-to-end PRI, DS1MT, and DS1DID service is from the DSX-1 termination of the OTC equipment to the digital port on the local switching system.

4.07 PRI service shall meet the B8ZS and ESF specifications in ANSI T1.403 [5], the network specifications in ANSI T1.408 [13], and the 3E timing requirements in ANSI T1.101 [6].

4.08 DS1MT service shall meet the B8ZS and ESF specifications in ANSI T1.403 [5]. If SS7 signaling is used, it shall conform to the specifications in GR-905-CORE [7] and BA 905 [8]. If MF signaling is used, it shall conform to the MF requirements in FR-NWT-000064 [11] and the robbed-bit signaling specifications in ANSI T1.403 Annex C [5].

4.09 DS1DID service shall meet the AMI or B8ZS and SF or ESF specifications in ANSI T1.403 [5]. The robbed-bit signaling specifications in ANSI T1.403 Annex C [5], and the DP, DTMF, or MF signaling requirements in FR-NWT-000064 [11].

4.10 The PRI, DS1MT, and DS1DID services consist of one DS1. The electrical signals of each DS1 at the OTC POT shall meet the DSX-1 specifications in ANSI T1.102 [3].

4.11 Accuracy and availability performance objectives for each PRI, DS1MT, and DS1DID are shown in Figure 4-2. DS1 performance test limits are shown in Figure 4-3.

4.12 Availability is a measure of the relative amount of time that a service is “usable” by the customer. Unavailability begins when the Bit Error Ratio (BER) in each second is worse than 1×10^{-3} for a period of 10 consecutive seconds. The DS1 objective is 99.925 percent availability in any twelve consecutive months. Availability equals the total time minus the outage time divided by the total time.

4.13 Accuracy denotes the error performance and is usually specified in terms of errored seconds (ES), or conversely, error-free seconds (EFS). EFS are the primary measure of error performance for DS1s. An EFS is any second that an error does not occur.

4.14 A Severely Errored Second (SES) is any one second interval that has a BER of less than (worse than) 1×10^{-3} .

4.15 Acceptance and maintenance tests for DS1s should be performed with a Quasi-Random Signal Source (QRSS), on an OTC-POT to local switching system basis, using the Errored Second and Severely Errored Second performance parameters in Figure 4-3.

4.16 Other tests may be performed in response to trouble reports or when additional testing is purchased. The All Ones, 3/24, and 1/8 patterns are acceptable diagnostic stress tests. The pattern sensitivity test criteria associated with these patterns is provided in Figure 4-4.

4.17 If errors are detected using the QRSS or 1/8 patterns, it is recommended that the DS1 line code options (AMI/B8ZS) be verified using the procedures outlined in the Bell Atlantic Network Services Reference Manual Series 72710 & NS6050 and the test criteria in Figure 4-4. These tests make use of the Framed 3/24 and Framed All Zeros patterns.

Figure 4-2: DS1 Performance Objectives

Parameter	Objective
Accuracy	0.25 % errored seconds long-term (30 days or more)
Availability	99.925 % per year

Figure 4-3: DS1 Acceptance and Maintenance Test Limits³³

Test Duration	Errored Seconds	Severely Errored Seconds
15 min	0	0
30 min	3	0
45 min	5	2
24 hours	150	7

³³ While some of the entries in this table are “0”, it should be noted that an isolated error event is not necessarily indicative of a service affecting problem.

Figure 4-4: Pattern sensitivity test criteria (see notes 1 and 2)

TEST PATTERN (see note 3)	TEST DURATION	ACCEPTANCE LIMIT
All Ones	5 minutes	0
3/24 (AMI only)	5 minutes	0
1/8	5 minutes	0
Framed All Zeros (4) (B8ZS only)	30 seconds	(see note 5)

Notes:

- (1) Test patterns should be framed.
- (2) One retest is allowed if the initial test fails.
- (3) If compatible test equipment is not available to perform these tests, loopback testing should be utilized.
- (4) WARNING: If used with the DS1 SF framing format, zeros will occur in time slot 2 of every octet (channel). Terminal equipment will display a false Remote Alarm Indication (a.k.a., yellow alarm). In addition, the use of the framed all-zeros pattern through some types of DS3 equipment may cause DS1 failure if the equipment is not properly optioned for B8ZS.
- (5) As an equipment option check, failure will typically be seen as large error counts. Very low counts (e.g., 1 or 2 errors) are not indicative of an optioning problem.

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Collocated OTC equipment shall meet all of the applicable generic equipment requirements in Bellcore GR-63-CORE [14] and GR-1089-CORE [15].

5.02 Collocated OTC equipment shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Where requirements are not specified in this document, contractual technical requirements, or other applicable documents, the manufacturer's requirements consistent with industry standards shall be met.

5.03 The open circuit tip-to-ring dc voltage that collocated OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Collocated OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

5.05 Collocated OTC equipment shall not deliver more than 100 mA of loop current to any load via BA VF cable.

5.06 OTC equipment connecting to BRI and CBRI ports shall conform to the NT specifications in TR-NWT-000393 [1] and the customer installation specifications in ANSI T1.601-1993 [12].

5.07 OTC equipment connecting to PRI ports shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF specifications in ANSI T1.403 [5], the customer installation requirements in ANSI T1.408 [13], the timing requirements in ANSI T1.101 [6], and the μ 255 coding scheme in ITU-T Recommendation G.711 [4].

5.08 OTC equipment connecting to DS1MT ports shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF specifications in ANSI T1.403 [5], and the μ 255 coding scheme in ITU-T Recommendation G.711 [4]. For SS7 applications, OTC equipment shall also conform to the specifications in GR-905-CORE [7] and BA 905 [8]. For MF applications, OTC equipment shall also conform to the robbed-bit signaling specifications in ANSI T1.403 Annex C [5] and the MF signaling requirements in FR-NWT-000064 [11].

5.09 OTC equipment connecting to the DS1DID port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the AMI or B8ZS and SF or ESF specifications in ANSI T1.403 [5], the robbed-bit signaling specifications in ANSI T1.403, Annex C [5], and the μ 255 coding scheme in ITU-T Recommendation G.711 [4], and the DP, DTMF, or MF signaling requirements in FR-NWT-000064 [11].

B. OTC CO VF Cabling Requirements

5.10 The voice-grade CO cabling used to terminate OTC equipment on the CODF for interconnection with BRI or CBRI port services shall use twisted-pair conductors.

5.11 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.12 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [11] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

C. OTC DSX-1 Cabling Requirements

5.13 OTC DSX-1 cabling and build-out in each direction of transmission shall be the equivalent of 655 feet of 22 gauge ABAM cable.

6. References

A. Definitions

Acceptance Limit (AL)

The maximum margin, value, or deviation that is allowed at service turnup or customer acceptance.

Alternate Mark Inversion (AMI)

A DS1 line code that does not perform zero code suppression and is therefore transparent to an all zeros byte.

Basic Rate ISDN (BRI)

Basic Rate ISDN is a 2-wire line-side local switching system port that uses the two-bit one-quaternary line code at a 160 kilobit per second rate to transport overhead and up to two B channels and one D channel.

B Channel

The B channel, or bearer channel, is a 64 kbps channel used for information transfer between users.

Bipolar Eight Zero Substitution (B8ZS)

A DS1 line code that performs zero code suppression by replacing an all zeros byte with a special pattern of ones and zeros that contains two consecutive bipolar violations.

Bit Seven (BIT7)

A TR08 DS1 line code that performs zero code suppression by placing a one in bit 7 of an all zeros byte.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

Channel

An electrical, or photonic communications path between two or more points of transmission.

D Channel

The D channel is a packet-switched channel that carries signaling and control for B channels. In BRI applications, it can also support customer packet data traffic at speeds up to 9.6 kilobits per second.

DS1 Message Trunk (DS1MT)

A digital trunk-side port of a local switching system that operates at 1.544 Mbps and is channelized to provide twenty-four 64 kbps or 56 kbps trunks for the message telecommunications network..

Digital Unbundled Port Services (DUPS)

A service, not bundled with a loop or transport facility, that provides digital access to the functionality of a local switching system.

Extended SuperFrame (ESF)

A type of DS1 framing format that utilizes the framing bit of twenty-four consecutive frames to provide a 2 kbps framing pattern sequence, a 4 kbps data link, and a 2 kbps cyclic redundancy check channel.

Immediate Action Limit (IAL)

The bound of acceptable performance and the threshold beyond which BA will accept a customer's trouble report and take immediate corrective action.

Integrated Services Digital Network (ISDN)

ISDN describes the end-to-end digital telecommunications network architecture which provides for the simultaneous access, transmission, and switching of voice, data, and image services. These functions are provided via channelized transport facilities over a limited number of standard user-network interfaces.

Line Termination (LT)

Equipment that terminates a BRI or Centrex BRI digital subscriber line on the network side of the network to customer (or OTC) interface.

Maintenance Limit

The maximum margin, value, or deviation associated with normal in-service performance.

Network Termination (NT)

Equipment that terminates a BRI or CTX BRI digital subscriber line on the customer (or OTC) side of the network to customer (or OTC) interface.

Other Telephone Company (OTC)

The term "Other Telephone Company" (OTC) denotes any individual, partnership, association, joint-stock company, trust, governmental entity, or corporation engaged for hire in intrastate exchange communication by wire, fiber, or radio.

Point Of Termination (POT)

The point of demarcation at which the BA's responsibility for the provision of services ends.

Protocol Code

A component of an interface code that is readily associated with the basic electrical function of the interface.

Primary Rate ISDN (PRI)

PRI is a 4-wire 1.544 Mbps (DS1) local switching system port that uses the B8ZS line code and the ESF framing format. PRI is available in a twenty-three B channel plus one D channel (23B + D) configuration or a twenty-four B channel (24B) configuration.

SuperFrame (SF)

A type of DS1 framing format that utilizes the framing bit of twelve consecutive frames to provide terminal framing and signaling framing.

Two Binary, One Quaternary (2B1Q)

A line code used for BRI and Centrex BRI where each two bits of the binary data stream are combined into a single four-level pulse amplitude modulation signal.

Unbundled Port

An interface (port) on a local switching system, that is not bundled with a loop or transport facility, that provides access to and from the public switched telephone network and the functionality of the local switching system.

Voice-Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or Digital data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ABAM	Cable Type
AL	Acceptance Limit
ANSI	American National Standards Institute
BA	Bell Atlantic
BRI	Basic Rate ISDN
B8ZS	Bipolar Eight Zero Substitution
OTC	Other Telephone Company
CO	Central Office
CODF	Central Office Distributing Frame
DID	Direct Inward Dialing
DSX-1	Digital Signal Cross-Connect One
DS1	Digital Signal One (1.544 Mbps)
DS1DID	DS1 Direct Inward Dialing
DS1MT	DS1 Message Trunk
DUPS	Digital Unbundled Port Services
ESF	Extended Superframe Format
FCC	Federal Communications Commission
IAL	Immediate Action Limit
IDLC	Integrated Digital Loop Carrier
IEEE	International Electrical and Electronic Engineers
LT	Line Termination
NC	Network Channel
NCI	Network Channel Interface
NEC	National Electric Code
POT	Point Of Termination
POTS	Plain Ordinary (analog) Telephone Service
RBS	Robbed-Bit Signaling
SF	Superframe Format
TR08	Technical Reference TR-NWT-000008
UL	Underwriter's Laboratory
USDL	United States Department of Labor
USOC	Universal Service Order Code

VF	Voice Frequency
VG	Voice Grade
2B1Q	Two-Bit One-Quaternary

7. Bibliography

- 1- Technical Reference TR-NWT-000393, Generic Requirements for ISDN Basic Access Digital Subscriber Lines, Issue 2, (Bellcore, April 1991).
- 2- Technical Reference TR-TSY-000008, Digital interface Between the SLC®96 Digital Loop Carrier System And A Local Digital Switch, Issue 2, (Bellcore, August 1987).
- 3- American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces, ANSI T1.102-1993.
- 4- ITU-T Recommendation G.711, Pulse Code Modulation (PCM) of Voice Frequencies, Blue Book Fasc. III.4, (ITU-TSS, 1988).
- 5- American National Standard for Telecommunications - Network-to-Customer Installation - DS1 Metallic Interface, ANSI T1.403-1995.
- 6- American National Standard for Telecommunications - Synchronization Interface Standards for Digital Networks, ANSI T1.101-1994.
- 7- Generic Requirements GR-905-CORE, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and Integrated Services Digital Network User Part (ISDNUP), Issue 2, (Bellcore, December 1996).
- 8- BA905, Bell Atlantic Supplement Common Channel Signaling Network Interface Specification.
- 9- Special Report SR-STS-000307, Issue 3, *Industry Support Interface (ISI): NC/NCI Code Dictionary*, Bellcore, April 1992.
- 10- Special Report SR-STS-000323, *NC/NCI Compatibility Guide*, Issue 4, (Bellcore, May 1994).
- 11- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).
- 12- American National Standard for Telecommunications - ISDN Basic Access Interface for use on Metallic Loops for Application at the Network Side of NT, Layer 1 Specification, ANSI T1.601-1992.
- 13- American National Standard for Telecommunications - ISDN Primary Rate - Customer Installation Metallic Interfaces - Layer 1 Specification, ANSI T1.408 -1990.

14- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 2, (Bellcore, October 1995).

15- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 1, Rev 1, (Bellcore, November 1996).

NOTE: These documents are subject to change. References reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

EXHIBIT H

INTRALATA TELECOMMUNICATIONS SERVICES SETTLEMENT

This IntraLATA Telecommunications Services Settlement Agreement is made this ___ of _____, 1996, by and between Bell Atlantic - Pennsylvania, Inc. ("BA"), a Pennsylvania corporation with offices at _____, and _____ ("CLEC"), a _____ corporation with offices at _____.

SECTION I

SCOPE

This Agreement sets forth the terms and conditions for the following:

- (a) administering and processing messages in the intraLATA Toll Originating Responsibility Plan (ITORP); and
- (b) the settlement of compensation for the following telecommunications traffic within a BA LATA:
 - (1) intrastate and interstate intraLATA traffic terminated to CLEC and originated by an Independent Telephone Company or wireless carriers that transits the facilities of BA within a BA LATA, including Message Telecommunications Service and Local Exchange Service (the "ITORP Transit Service Traffic");
 - (2) intrastate and interstate intraLATA Message Telecommunications Service and Local Exchange Service traffic which originates from a Certified Local Exchange Carrier or CLEC, transits BA's network and terminates to CLEC, or a wireless carrier or an Exchange Carrier other than BA, which traffic is subject to a Meet-Point Billing arrangement (the "Meet-Point Transit Service Traffic");
 - (3) intraLATA 800/888 Service Traffic; and
 - (4) intraLATA Alternately Billed Calls billed to a line-based telephone number within the state where the call is originated.

By way of clarification, this Agreement does not cover the following: (x) traffic that does not use BA facilities (except intraLATA 800/888 Service Traffic); (y) interLATA traffic; and (z) any statewide services (whether interLATA or intraLATA) provided entirely by an Interexchange Carrier such as statewide WATS.

SECTION II

DEFINITIONS

For purposes of this Agreement, the terms set forth below shall have the following meaning:

- A. 800/888 Number Database shall mean the call management service database that provides POTS telephone number translation or routing information or both for a given 800/888 telephone number.
- B. 800/888 Number Query shall mean routing information obtained from an 800/888 Number Database for originating 800/888 calls.

- C. 800/888 Service Traffic means a toll free call originating with the Originating Company and billed to the Terminating Company's end user. 800/888 service MOUs are recorded by the Originating Company and provided to the Terminating Company so that it can bill its end user(s).
- D. Access Tandem shall mean a switching entity that is used to connect and switch trunk circuits between and among End Offices and between and among End Office switches and carriers' aggregation points, points of termination, or points of presence, which entity has billing and recording capabilities that are used to provide switched Exchange Access services.
- E. Alternately Billed Calls shall mean all intraLATA land-line Collect Calls, Calling Card Calls and Third-Number Calls that originate and terminate in the Commonwealth of Pennsylvania and are billed to a line-based number within the jurisdiction of the Commonwealth of Pennsylvania serviced by the Billing Company. Alternately Billed Calls are identified in ITORP reports as "Received Collect/Sent Collect Calls".
- F. Billing Company shall mean the Local Exchange Carrier that provides the local telephone exchange service for the number to which an Alternately Billed Call is to be billed.
- G. Calling Card Call shall mean a call billed to a pre-assigned end user line-based billing number, including calls dialed or serviced by an operator system.
- H. Carrier Common Line Facilities means the facilities from the end user's premises to the End Office used to originate or terminate Transit Service Traffic and 800/888 Service Traffic. Such carrier common line facilities are as specified in each party's Exchange Access Tariff.
- I. Category 01 shall mean the EMR/billing record for usage charges applicable to the terminating 800/888 number service subscriber.
- J. Category 08 shall mean the EMR/copy record containing the information necessary for CLEC to bill/settle intraLATA terminating charges with other carriers.
- K. Category 11 shall mean the EMR/access record containing information necessary for CLEC to bill/settle interexchange access charges.
- L. CCS/SS7 shall mean the Common Channel Signaling/Signaling System 7, which refers to the packet-switched communication, out-of-band signaling architecture that allows signaling and voice to be carried on separate facilities, and thus is a signaling network that is common to many voice channels. There are two modes of operation defined for CCS/SS7: database query mode, and trunk signaling mode.
- M. Centralized Message Distribution System (CMDS) shall mean the message processing system which handles the distribution of Message Records from the Earning Company to the Billing Company.
- N. Competitive Local Exchange Carrier (CLEC) means a carrier certified by the Pennsylvania Public Utility Commission to provide Local Exchange or Exchange Access services within the BA operating territory in that state.
- O. Clearing House shall mean the monthly function performed by BA for a fee to collect funds owed by one Exchange Carrier or wireless carrier and the distribution of those funds to other Exchange Carriers or wireless carriers. These Clearing House funds include but are not limited to amounts owed for terminating traffic and Alternately Billed Calls. The Clearing House function will include funds due from and payable to each Independent Telephone Company, Certified Local Exchange Carrier and wireless carrier that contracts with BA to provide the Clearing House function and will not include any funds due from or payable to BA.

- P. Collect Call shall mean a non-sent paid call that is billed to the number receiving the call, including calls dialed or serviced by an operator system.
- Q. Discounted Toll Services means services in which the originating end user is charged a rate less than would normally be assessed for calls placed to similar points outside the end user's local calling area.
- R. Earning Company shall mean the Local Exchange Carrier that provides local telephone exchange service for the number from which an Alternately Billed Call originates.
- S. End Office means the end office switching and end user line termination facilities used to originate or terminate switched intraLATA telecommunications services traffic.
- T. Exchange means a geographic area established for the furnishing of local telephone service under a local tariff. It usually embraces a city, town or village and its environs. It consists of one or more wire centers together with the associated facilities used in furnishing communications service within the area.
- U. Exchange Access means the facilities and services used for the purpose of originating or terminating interexchange telecommunications in accordance with the schedule of charges, regulations and conditions specified in lawfully established Exchange Access Tariffs.
- V. Exchange Access Tariffs means the tariffs lawfully established with the Federal Communications Commission or the by an Exchange Carrier for the provision of Exchange Access facilities and services.
- W. Exchange Carrier shall mean a carrier licensed to provide telecommunications services between points located in the same Exchange area.
- X. Exchange Message Record (EMR) shall mean the standard used for exchange of telecommunications message information among Local Exchange Carriers for billable, non-billable, sample, settlement and study data. EMR format is described in BR-010-200-010 CRIS Exchange Message Record, a Bell Communications Research, Inc. document that defines industry standards for Exchange Message Records, which is hereby incorporated by reference.
- Y. ITORP Transit Service Traffic shall have the meaning set forth in Section I above titled "Scope".
- Z. Independent Telephone Company shall mean any entity other than BA which, with respect to its operations within the Commonwealth of Pennsylvania, is an incumbent Local Exchange Carrier.
- AA. Inter-Company Net Billing Statement shall mean the separate monthly financial reports issued by BA to the Exchange Carriers for settlement of amounts owed.
- BB. IntraLATA Toll Originating Responsibility Plan (ITORP) shall mean the information system owned and administered by BA for calculating charges between BA and Local Exchange Carriers for termination of intraLATA calls.
- CC. Interexchange Carrier (IXC) means a carrier that provides, directly or indirectly, interLATA or intraLATA telephone toll services.
- DD. Local Access and Transport Area (LATA) means a contiguous geographic area: (1) established before the date of enactment of the Telecommunications Act of 1996 by BA such that no Exchange area includes points within more than one metropolitan statistical area, consolidated metropolitan statistical area, or state, except as expressly permitted under the AT&T Consent

Decree; or (2) established or modified by BA after such date of enactment and approved by the Federal Communications Commission.

EE. Local Exchange Carrier (LEC) means any person that is engaged in the provision of Local Exchange Service or Exchange Access. Such term does not include a person insofar as such person is engaged in the provision of a commercial mobile service under Section 332 (c) of the Telecommunications Act of 1996, except to the extent that the Federal Communications Commission finds that such service should be included in the definition of such term.

FF. Local Exchange Service means telecommunications services provided between points located in the same LATA.

GG. Meet -Point Billing (MPB) means an arrangement whereby two or more LECs jointly provide to a third party the transport element of a switched access Local Exchange Service to one of the LECs' End Office switches, with each LEC receiving an appropriate share of the transport element revenues as defined by their effective Exchange Access tariffs.

HH. Meet-Point Transit Service Traffic shall have the meaning set forth in Section 1, "Scope".

II. Message Records shall mean the message billing record in Exchange Message Record format.

JJ. Message Telecommunications Service (MTS) means message toll telephone communications, including Discounted Toll Services, between end users in different Exchange areas, but within the same LATA, provided in accordance with the schedules of charges, regulations and conditions specified in lawfully applicable tariffs.

KK. Minutes of Use (MOU) means the elapsed time in minutes used in the recording of Transit Service Traffic and 800/888 Service Traffic.

LL. Multiple Bill/Single Tariff means the MPB method whereby each LEC prepares and renders its own Meet Point Bill in accordance with its own tariff(s) for the portion of the jointly-provided Exchange Access service which the LEC provides.

MM. Multiple Exchange Carrier Access Billing (MECAB) means the document prepared by the Billing Committee of the Ordering and Billing Forum, which functions under the auspices of the Carrier Liaison Committee of the Alliance for Telecommunications Industry Solutions, and published by Bellcore as Special Report SR-BDS-000983, which document contains the recommended guidelines for the billing of an Exchange Access service provided by two or more LECs, or by one LEC in two or more states, within a single LATA, and is incorporated herein by reference.

NN. Originating Company means the company which originates intraLATA MTS or Local Exchange Service on its system. (For compensation purposes, the Originating Company shall be considered the Terminating Company for 800/888 Service Traffic.)

OO. Terminating Company means the company which terminates intraLATA MTS or Local Exchange Service on its system where the charges for such services are collected by the Originating (or Billing) Company. (For compensation purposes, the Terminating Company shall be considered the Originating Company for 800/888 Service Traffic.)

PP. Third-Number Call shall mean a call billed to a subscriber's line-based billing number which is not the number to which the call either terminates or originates.

QQ. Transit Traffic shall refer to both ITORP Transit Service Traffic and Meet-Point Transit Service Traffic.

RR. Transiting Company shall mean a Local Exchange Carrier which transports intraLATA telecommunications traffic on its system between an Originating Company and a Terminating Company.

SS. Transport Facilities means the facilities from the End Office to an interconnection point used to originate or terminate switched intraLATA telecommunication services traffic.

SECTION III

SETTLEMENT OF TRANSIT SERVICES

(a) ITORP Transit Service Traffic.

(1) Call Routing and Recording; Billing Percentages. BA will route ITORP Transit Service Traffic over the combined local and toll trunk groups between BA and CLEC for those Independent Telephone Companies, Certified Local Exchange Carriers and wireless carriers who have either executed an IntraLATA Telecommunications Services Settlement Agreement with BA, or another agreement with BA setting forth the terms under which Transit Traffic will be exchanged. BA and CLEC agree to designate the points of interconnection for the purpose of terminating ITORP Transit Service Traffic which originates from an Independent Telephone Company or wireless carrier and terminates to CLEC. Both parties further agree to develop and mutually agree to billing percentages applicable to ITORP Transit Service Traffic, which billing percentages shall be calculated in accordance with ITORP guidelines.

(2) Exchange of Billing Data. The Originating Company will provide to BA all billing data relating to ITORP Transit Service Traffic for processing in ITORP within thirty(30) days from the date the usage occurs (to the extent usage occurs on any given day) for traffic originating from an Independent Telephone Company or wireless carrier, which traffic transits BA's facilities and terminates to CLEC.

(3) Billing. BA will, on behalf of CLEC, bill Exchange Carriers and wireless carriers for intraLATA ITORP Transit Service Traffic, and collect compensation due CLEC based on CLEC's established and legally-approved tariffed or negotiated rates utilizing ITORP. The charges set forth in Attachment A, attached hereto and incorporated herein by reference, shall apply to the billing and collection services provided by BA to CLEC hereunder. CLEC will record the ITORP Transit Service Traffic usage at its switch, and shall bill BA for this traffic in accordance with the rates set forth in the Interconnection Agreement under Section 251 and 252 of the Telecommunications Act of 1996, dated as of June 13, 1997, by and between BA and CLEC.

(b) Meet-Point Transit Service Traffic.

(1) Call Routing and Recording; Billing Percentages. BA and CLEC will route their respective Meet-Point Transit Service Traffic over the combined local and toll trunk groups between them. BA and CLEC agree to designate the points of interconnection for the purpose of terminating Meet-Point Transit Service Traffic which originates from a CLEC and terminates to CLEC, or originates from CLEC and terminates to a CLEC, Independent Telephone Company, or a wireless carrier. Both parties further agree to develop and file mutually agreed to billing percentages applicable to Meet-Point Transit Service Traffic in the National Exchange Carrier Association F.C.C. Tariff No. 4, which billing percentages shall be calculated in accordance with MECAB guidelines.

(i) End Offices Subtending BA Access Tandem. Meet-Point Transit Service Traffic will be routed over the local and toll interconnection facilities used to terminate similar traffic directly between BA and CLEC when the Originating and Terminating Company's End Office switches subtend BA's Access Tandem. BA will record this traffic at the BA Access Tandem, and forward the terminating call records to the Terminating Company for purposes of Meet-Point Billing.

(ii) End Offices That Do Not Subtend a BA Access Tandem. When the Originating and/or the Terminating Company's End Office switches do not subtend BA's Access Tandem, the Meet-Point Transit Service Traffic must be routed over interconnection facilities other than those used to terminate intraLATA MTS or Local Exchange Service to BA's end users. The Terminating Company will record this traffic at its Access Tandem and forward the terminating call records to BA for Meet-Point Billing purposes.

(iii) Special Access. Upon request, any Meet-Point Service Transit Traffic may be routed over special access interconnection facilities between CLEC, on the one hand, and a CLEC, an Independent Telephone Company, or a wireless carrier, on the other.

(2) Exchange of Billing Data. All billing data exchanged hereunder will be exchanged on magnetic tape or via electronic data transfer, to be delivered at the addresses set forth below, using the Electronic Message Record format. BA will provide to CLEC the switched-access detail usage data (category 1101XX records) on magnetic tape within thirty (30) days from the date the usage occurs (to the extent usage occurs on any given day) for traffic originating from a CLEC, transiting BA's facilities and terminating to CLEC, and CLEC will provide to BA the switched access summary usage data (category 1150XX records) on a magnetic tape on a monthly basis within thirty (30) days of receipt from BA of the switched access detail usage data referenced above.

(3) Billing. BA and CLEC will submit to CLECs separate bills under their respective tariffs for their portion of jointly-provided Meet-Point Transit Service Traffic. With respect to Meet-Point Transit Service Traffic, BA and CLEC will exchange billing data and render bills under Multiple Bill/Single Tariff arrangements in accordance with the applicable terms and conditions set forth in MECAB.

(4) Addresses. Magnetic tapes to be sent hereunder to CLEC will be sent to the following address (which address CLEC may change upon prior written notice to BA):

Magnetic tapes to be sent hereunder to BA will be sent to the following address(es), as appropriate (which address(es) BA may change upon prior written notice to CLEC):

SECTION IV

800/888 SERVICE

800/888 Service Traffic will be exchanged among BA, CLEC, Independent Telephone Companies, CLECs and wireless carriers via CCS/SS7 trunks, and all will deliver/route these calls as appropriate and provide EMRs to the Terminating Company. These EMRs will, per industry standards, include the following: Category 01 (800/888 number subscriber billing), Category 08 (copy record/local exchange charges), and Category 11 (interexchange carriers access records).

(a) Delivery of Translated 800/888 Number Queries and calls over CCS/SS7 links and trunks. BA and CLEC will launch their own 800/888 Number Query for 800/888 Service Traffic originated in their networks, and route this traffic to each other, as appropriate, utilizing existing local and toll interconnection facilities.

(b) Exchange of Records: Compensation. All 800/888 Service Traffic hereunder shall be subject to the appropriate access charges, as set forth in the applicable tariffs. In addition, for jointly provided intraLATA

800/888 Service Traffic between two Local Exchange Carriers, the Originating Company is responsible for billing its tariffed 800/888 Number Query charge to the Terminating Company. CLEC, when acting as an Originating Company, must submit to BA, via magnetic tape(s) in EMR format, (i) the information necessary to bill/settle intraLATA charges (EMR Category 110125), and (ii) the usage charges applicable to the terminating 800/888-number service subscriber (EMR Category 010125).

(c) Settlement. EMR records submitted by CLEC hereunder acting as an Originating Company, as contemplated in Paragraph (b) above, will be processed in accordance with ITORP. For purposes of calculating the access charges due Local Exchange Carriers with respect to 800/888 Service Traffic, the Originating Company shall be deemed the Terminating Company. Access charges payable hereunder shall be calculated in accordance with Section VI of this Agreement, as applicable.

(d) Payment of Amounts Outstanding. Upon receipt of the Inter-Company Net Billing Statement from BA, CLEC shall, within thirty (30) days of invoice, remit to BA full payment of amounts owed under the Inter-Company Net Billing Statement.

SECTION V

ALTERNATELY BILLED CALLS

(a) Responsibilities of the Billing Company. The Billing Company agrees to provide the Earning Company with billing services, as specified below, with respect to Alternately Billed Calls.

(1) Billing. Upon receipt of the appropriate Message Record from CMDS, the Billing Company shall include this record in the bill to be issued to the end user responsible for payment. The Earning Company shall also submit copies of these Message Records to BA, at least once a month, in order to determine monthly settlement amounts for both the Billing Company and the Earning Company which will be reflected in the Inter-Company Net Billing Statement. These amounts will reflect any and all applicable charges due the Billing Company for performing billing services hereunder. In addition, as applicable, the Inter-Company Net Billing Statement will reflect any amounts owed by CLEC to BA for administering and processing ITORP.

(2) Payment of Amounts Outstanding. Upon receipt of the Inter-Company Net Billing Statement from BA, CLEC shall, within thirty (30) days of invoice, remit to BA full payment of amounts owed under the Inter-Company Net Billing Statement.

(b) Responsibilities of the Earning Company. In connection with Alternately Billed Calls, the Earning Company shall provide Message Records to the Billing Company on a daily basis to the extent that any usage has been recorded. These Message Records will be delivered by the Earning Company to the Billing Company via the CMDS system, unless otherwise agreed to by the parties hereto.

(c) Fees for Settlement of Alternately Billed Calls. The billing services provided by the Billing Company to the Earning Company with respect to Alternately Billed Calls shall be subject to the applicable charges set forth in Attachment A, which charges will be reflected in the Inter-Company Net Billing Statement. These charges may be revised upon mutual written agreement of the parties hereto.

SECTION VI

CALCULATION OF COMPENSATION

BA and CLEC agree to compensate each other with respect to Transit Services Traffic and 800/888 Service Traffic in accordance with the terms established below, and the rate elements set forth in Attachments A and B, attached hereto and incorporated herein by reference.

(a) Compensation due to the Terminating/Transiting Company. Compensation due to the Terminating Company/Transiting Company will be determined separately for each month as follows:

(1) For Carrier Common Line facilities provided by the Terminating Company, an amount calculated as specified for Carrier Common Line Facilities in the Terminating Company's Exchange Access Tariff. Compensation will be determined by multiplying a) the Terminating Company's Carrier Common Line rate, times b) the MOU.

(2) For End Office facilities provided by the Terminating Company, an amount calculated as specified for End Office facilities in the Terminating Company's Exchange Access Tariff. Compensation will be determined by multiplying a) the Terminating Company's appropriate Exchange Access End Office rate elements, times b) the MOU.

(3) For Transport facilities, where these facilities are provided by the Terminating Company, or a Transiting and Terminating Company, an amount calculated in accordance with the following steps:

- (i) Determine the Terminating Company's airline miles from the End Office which serves the Terminating Company's end user to the Terminating Company's Access Tandem switching facility and/or to the interconnection point with the Transiting Company(ies).
 - (ii) Determine the Transiting Company's airlines miles from the interconnection point with the Terminating Company to the Transiting Company(ies) Access Tandem switching facility and/or to the interconnection point with the Originating Company.
 - (iii) Determine the sum of the total airline miles by adding (i) and (ii) above.
 - (iv) Divide the Terminating Company's airline miles determined in (i) preceding by the total airline miles determined in (iii) preceding, to determine the ratio of local transport miles provided by the Terminating Company.
 - (v) Divide the Transiting Company's airline miles determined in (ii) preceding by the total airline miles determined in (iii) preceding, to determine the ratio of local transport miles provided by the Transiting Company.
 - (vi) Identify the rates set forth in the Exchange Access Tariff for either the Terminating Company or Transiting Companies, or both, as appropriate, which rates are applicable to Transport Facilities.
 - (vii) Multiply the ratio determined in (iv) preceding, times the rate calculated in (vi) preceding, times the MOU, and add the amount set forth in (ix) below to determine the amount due the Terminating Company.
 - (viii) Multiply the ratio determined in (v) preceding, times the rate calculated in (vi) preceding, times the MOU, and add the amount set forth in (ix) below to determine the amount due the Transiting Company.
 - (ix) To the extent the Exchange Access Tariffs of the Terminating or Transiting Company, or both, provide for the payment of a fixed transport charge to be assessed with respect to a terminating location (End Office or toll switch), multiply this charge times the chargeable MOU.
- (4) For 800/888 Number Query facilities, provided by the Originating Company, an amount calculated as specified for query facilities in the Originating Company's Exchange Access Tariff. Compensation will be determined by multiplying a) the Originating Company's query rate, times b) the number of queries.
- (5) For Local Call Termination facilities, provided by the Terminating Company, an amount calculated as specified for local call termination facilities in the Terminating Company's

applicable Tariff or Agreement. Compensation will be determined by multiplying a) the Terminating Company's local call termination rate, times b) the MOU.

SECTION VII

ITORP ADMINISTRATION AND RESPONSIBILITIES

(a) Responsibilities of BA. BA shall:

1. Operate and maintain the ITORP system.
2. Provide the requirements and standards for ITORP records and tapes.
3. Inform CLEC of any proposed change in tape creation or distribution process at least sixty (60) days prior to the actual implementation of the change.
4. Develop and implement all system enhancements required to maintain the integrity of BA's ITORP system.
5. Process ITORP tapes received from CLEC, or its agent, during the next available billing cycle.
6. Review and analyze daily pre-edit reports to determine if a tape is acceptable for ITORP processing; provided, however, that CLEC is not absolved, as the Originating Company, from its responsibility to conform to ITORP input requirements.
7. Communicate with CLEC, or its agent, to resolve the problems with tapes which are identified as being unacceptable for ITORP processing.
8. Create and/or maintain all ITORP tables.
9. Include the monthly compensation due to and from CLEC as identified by ITORP on the Inter-Company Net Billing Statement. The compensation includes 800/888 Service Traffic and Alternately Billed Services traffic.
10. If requested by CLEC to perform the Clearing House function; settle with all local Exchange Carriers, via the Inter-Company Net Billing Statement, for ITORP Transit Service Traffic, 800/888 Service Traffic and Alternately Billed Calls originating from and/or terminating to CLEC.
11. Distribute monthly ITORP reports.

(b) Responsibilities of CLEC. CLEC shall:

1. Compensate BA for the administration and processing of ITORP as specified in Attachment A.
2. Notify BA Exchange Carrier Services staff in writing of any changes in its rates affecting ITORP tables, as specified in Attachment A, thirty (30) days prior to the effective date of any such changes.
3. Notify BA Exchange Carrier Services staff in writing of any network changes, such as changes in traffic routing, sixty (60) days prior to the implementation of the change in the network.

4. Conform to BA's ITORP record requirements and standards.
5. CLEC or its designated agent will forward the Exchange Message Records to BA, in a timely manner for processing.
6. Inform the BA Exchange Carrier Services staff in writing of any proposed changes in the Exchange Message Record creation or distribution process at least sixty (60) days prior to the actual implementation of the change.
7. Reimburse BA for compensating other local Exchange Carriers on behalf of CLEC, as reflected in the Inter-Company Net Billing Statement.

(c) Fees. Compensation for the administration and processing of ITORP will be due BA on a monthly basis, based on the number of messages processed in ITORP for CLEC. The processing and administrative fees are set forth in Attachment A. These fees may be revised by BA, at its discretion and upon notice to CLEC, based on periodic studies conducted by BA, and CLEC hereby agrees to be bound by such revised rates. A minimum monthly processing fee, as specified in Attachment A, will be assessed when CLEC's monthly ITORP processing charges are below the stated minimum monthly charge.

SECTION VIII

LIABILITIES

In the event of an error on the part of BA in calculating or settling any compensation amounts hereunder, CLEC's sole remedy and BA's only obligation shall be to re-calculate the compensation amount, and to the extent any amounts are owed to or owed by CLEC, such amounts will be reflected as an adjustment in the next Inter-Company Net Billing Statement. In the event any records are lost or destroyed, BA and CLEC will jointly estimate the charges due to either party hereunder as follows:

- (1) Total the compensation paid for the most recent six (6) months period preceding the month covered by the lost or destroyed tapes with respect to the following types of traffic (but only to the extent records for that particular type of traffic are lost or destroyed): ITORP Transit Service Traffic, Meet-Point Transit Service Traffic, 800/888 Service Traffic or Alternately Billed Calls.
- (2) Divide the total determined in (1) preceding, by 180 days.
- (3) Multiply the compensation per day determined in (2) preceding, by the number of days covered by the lost or destroyed tapes. The calculated amount will be included as an adjustment for lost or destroyed tapes in the next Inter-Company Net Bill Statement.

BA shall have no liability whatsoever, including any related access charges, with respect to any lost, damaged or destroyed records submitted hereunder by CLEC. In addition and to the extent applicable, BA's liability under this Agreement and/or in connection with the settlement, payment and/or calculation of any amounts due hereunder shall be limited as set forth in the applicable tariffs. BA shall have no obligation or liability with respect to any billing, settlement or calculation-of-compensation errors or omissions, including without limitation the duty to re-calculate any compensation amounts reflected in the Inter-Company Net Billing Statement, if such error or omission occurred more than two (2) years prior to the time in which it is brought to BA's attention in writing. Without limiting the foregoing, in no event shall either party hereto be liable for consequential, incidental, special or indirect damages (including without limitation loss of profit or business) hereunder whether such damages are based in tort (including, without limitation, under any theory of negligence), contract breach or otherwise, and even if said party knew or should have known of the possibility thereof.

SECTION IX

RELATIONSHIP OF THE PARTIES

Nothing herein contained will be deemed to constitute a partnership or agency relationship between the parties. Each party agrees that it will perform its obligations hereunder as an independent contractor and not as the agent, employee or servant of the other party. Neither party nor any personnel furnished by such party will be deemed employees or agents of the other party or entitled to any benefits available under any plans for such other party's employees. Each party has and hereby retains the right to exercise full control of and supervision over its own performance of the obligations under this Agreement, and retains full control over the employment, direction, compensation and discharge of all employees assisting in the performance of such obligations, including without limitation all matters relating to payment of such employees, including compliance with social security taxes, withholding taxes and all other regulations governing such matters. In addition, each party will be responsible for its own acts and those of its own subordinates, employees, agents and subcontractors during the performance of that party's obligations hereunder.

SECTION X

TERM AND TERMINATION

(a) Term - Upon execution by all parties hereto, this Agreement shall become effective as of the date first shown on Page 1 of this Agreement, and shall remain in effect until terminated by either party in accordance with paragraphs (b), (c), (d), or (e) below.

(b) Termination for Breach - Either party may, upon prior written notice to the other party, terminate this Agreement in the event the other party is in default or breach of this Agreement and such breach or default is not corrected within thirty (30) days after the breaching party has been notified of same.

(c) Termination for Convenience - Upon six (6) months written advance notice to the other party, either party may terminate this Agreement.

(d) Acts of Insolvency - Either party may terminate this Agreement or any portion thereof, effective immediately, by written notice to the other party, if said other party (1) applies for or consents to the appointment of or the taking of possession by receiver, custodian, trustee, or liquidation of itself or of all or a substantial part of its property; (2) becomes insolvent; (3) makes a general assignment for the benefit of creditors; (4) suffers or permits the appointment of a receiver for its business or assets; (5) becomes subject to any proceeding under any bankruptcy or insolvency law whether domestic or foreign, voluntarily or otherwise; or (6) fails to contest in a timely or appropriate manner, or acquiesces in writing to, any petition filed against it in an involuntary case under the Federal Bankruptcy Code or any application for the appointment of a receiver, custodian, trustee, or liquidation of itself or of all or a substantial part of its property, or its reorganization, or dissolution.

(e) Termination of Interconnection Agreement. Unless otherwise agreed to by the parties hereto in writing, in the event that the Interconnection Agreement under Sections 251 and 252 of the Telecommunications Act of 1996, dated as of June 13, 1997, by and between BA and CLEC expires without being renewed, or expires or is terminated and no other interconnection agreement has been entered into by BA and CLEC, then this Agreement shall be deemed terminated effective on the date the aforesaid Interconnection Agreement expires or is terminated.

SECTION XI

NETWORK CONFIGURATION

Each party shall provide six (6) months advance written notice to the other party of any network configuration that may affect any of the services or compensation contemplated under this Agreement, and the parties hereto agree to use reasonable efforts to avoid service interruptions during any such network change.

SECTION XII

CONSTRUCTION AND EFFECT

All services contemplated under this Agreement are provided in accordance with any and all applicable regulatory requirements and effective tariffs filed with and approved by the appropriate federal and/or state regulatory bodies, as these tariffs and requirements may be modified from time to time. To the extent there is a conflict between the terms of any said tariff or regulatory requirement and this Agreement, the terms of the tariff or the regulatory requirement shall prevail. However, to the extent not in conflict with the provisions of the applicable tariffs or regulatory requirements, this Agreement shall supplement the tariffs or regulatory requirements, and it shall be construed to the fullest extent possible in harmony with such tariffs or regulatory requirements.

SECTION XIII

MISCELLANEOUS

(a) Headings. Headings used in this Agreement are for reference only, do not constitute part of this Agreement, and shall not be deemed to limit or otherwise affect any of the provisions hereof.

(b) Notices. All notices, requests, demands, or other communications required or permitted hereunder shall be in writing, shall be deemed delivered (1) on the date of delivery when delivered by hand, (2) on the date of transmission when sent by electronic mail or facsimile transmission during normal business hours with telephone confirmation of receipt, (3) one (1) day after dispatch when sent by overnight courier maintaining records of receipt, or (4) three (3) days after dispatch when sent by registered mail, postage prepaid, return-receipt requested, all addressed as follows (or at such other addresses as shall be given in writing by either party to their other):

If to BA:	Address: 1320 N. Court House Road, 9 th Floor Arlington, VA 22201
	Attn.: Manager-Local Interconnection
	Facsimile: 703 974 2188
	Telephone: 704 974 4614

If to CLEC:	Address:
	Attn:
	Facsimile:
	Telephone:

(c) Successors; Assignment. This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns, and nothing herein shall be construed to create any rights enforceable by any other person or third party. This Agreement may not be assigned by either party (except by BA to an affiliate or successor in interest) without the prior written consent of the other party, which consent shall not be unreasonably withheld.

(d) Waiver. No waiver of any right or term hereof shall be effective unless in a writing executed by the waiving party. No waiver of any right or privilege hereunder shall operate as a waiver of any subsequent or similar right or privilege.

(e) Modifications. This Agreement may be modified or amended only by a written agreement executed by the parties hereto.

(f) Counterparts. This Agreement may be executed in counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

(g) Severability. If any term, provision, paragraph or clause of this Agreement or any application thereof shall be held invalid or unenforceable in any particular jurisdiction, the remainder of this Agreement and any other application of such term, provision, paragraph or clause shall not be affected thereby in such jurisdiction (where such remainder or application shall be construed as if such invalid or unenforceable term, provision, paragraph or clause has not been inserted), and this Agreement and such application of such term, provision, paragraph or clause shall not be affected in any other jurisdiction.

(h) Contingency. Neither party will be held liable for any delay or failure in performance of this Agreement from any cause beyond its control and without its fault or negligence including but not limited to acts of God, acts of civil or military authority, government regulations, embargoes, epidemics, wars, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, strikes, power blackouts, other major environmental disturbances, unusually severe weather conditions, inability to secure products or services of other persons or transportation facilities, or acts or omissions of transportation common carriers.

(i) Governing Law. Except as otherwise expressly provided herein, this Agreement shall be interpreted, construed and governed by the laws of the Commonwealth of Pennsylvania, without regard to conflict of law provisions.

(j) Confidentiality. Unless by mutual agreement, or except to the extent directed by a court of competent jurisdiction, neither party shall disclose this Agreement or the terms hereof to any person other than such party's affiliates or such party's officers, employees and consultants, who are similarly bound hereby. This paragraph shall not prevent the filing of this Agreement with a state or federal commission having jurisdiction over the parties hereto if such filing is required by rule or order of that commission; provided, however, that the parties hereto shall jointly request that the Agreement be treated as confidential by that commission to the extent permitted under the commission's regulations and procedures. Each party hereto must maintain the confidentiality of all message, billing, traffic, and call records, traffic volumes and all other material information and data pertaining to the traffic covered by this Agreement and the carriers and end users associated with such traffic.

(k) Remedies under Law. All remedies available to the parties hereto under the terms of this Agreement shall be in addition to, and not by way of limitation of, any other rights that said parties may have at law or equity, none of which are hereby waived.

(l) Entire Agreement. This Agreement, including all Attachments and Schedules attached hereto, contains the entire agreement, and supersedes and voids any prior understanding, between BA and CLEC regarding the subject matter hereof.

In witness whereof, the undersigned parties have caused this Agreement to be executed on their behalf this day of _____, 199_.

July 2, 1997

ATTACHMENT III

Witness:

CLEC

By:

Witness:

Bell Atlantic - Pennsylvania, Inc.

By:

ATTACHMENT A

BASIS OF COMPENSATION

CHARGES FOR ADMINISTRATION OF ITORP AND ITORP PROCESSING

A. Bell Atlantic - Pennsylvania, Inc. charges the following rates for providing ITORP services:

July 2, 1997

ATTACHMENT III

1.	Administrative Charge (monthly) (includes Clearing House function)	\$100.00
2.	Processing Charge Elements:	
a.	Terminating Traffic (per message)	\$0.00190
b.	Minute/Message (per message)	\$0.00001
c.	800/888 Message (per message)	\$0.00105
d.	Net Compensation (per message)	\$0.00001
e.	Collected Revenue Processing (per message)	\$0.00026
3.	Minimum Monthly Processing Fee (monthly)	\$100.00
4.	Alternately Billed Calls (per message)	\$0.0434

ATTACHMENT B

I.
Message Telecommunications Service - Terminating to CLEC

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	CLEC
End Office	CLEC
Transport	Based on negotiated billing percentages (BIPs)

II.
800/888 - Terminating to or originating from CLEC Customers

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	Originating Company
End Office	Originating Company
Transport	Based on negotiated billing percentages (BIPs)
Query	Originating Company

III.

July 2, 1997

ATTACHMENT III

Local Exchange - Terminating to CLEC

<u>Rate Element</u>	<u>Billing Company</u>
Local Call Termination Charge	CLEC
Transport	Based on negotiated billing percentages (BIPs)

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ATTACHMENT IV
INTERCONNECTION

Section 1. Local Interconnection Trunk Arrangement

1.1 The Parties shall terminate Local Traffic and intraLATA/interLATA toll traffic originating on each other's networks as follows:

1.1.1 Initially, the Parties shall make available to each other two-way trunks, to be used one-way, for the reciprocal exchange of combined Local Traffic, non-equal access intraLATA toll traffic, and local transit traffic to other ILECs. In quarterly joint planning meetings pursuant to Section 8.3, where mutually agreed, the Parties may combine these trunk groups on a single shared two-way trunk group.

1.1.2 Bell Atlantic shall make available to MCIIm a two-way trunk group, to Bell Atlantic's appropriate access tandem(s), to be used two-way, for the exchange of equal access traffic between MCIIm and purchasers of Bell Atlantic's switched Exchange Access Services.

1.1.3 The Parties shall make available to each other trunks, to connect the originating Party's Switch to the appropriate E911 tandem of the other Party, or to connect the originating Party's Switch to the appropriate 911 PSAP.

1.1.4 Bell Atlantic Operator Services Trunks

1.1.4.1 The Parties shall make available to each other trunks to connect the originating Party's Switch to the other Party's Operator Service center for operator-assisted Line Status Verification/Verification and Call Interrupt.

1.1.4.2 For traffic from the Bell Atlantic network to MCIIm for Operator Services, Bell Atlantic shall provide one trunk group per NPA served by Bell Atlantic.

1.1.4.3 Bell Atlantic shall provide such trunks as one-way trunks from the Bell Atlantic network to the MCIIm network.

1.1.5 Bell Atlantic shall make available to MCIIm trunks to connect MCIIm's Switch to Bell Atlantic's Directory Assistance center in instances where MCIIm is purchasing Bell Atlantic's Directory Assistance service.

1.1.6 It is recognized by the Parties that there is no technical requirement to segregate local and toll traffic from MCIIm to Bell Atlantic, or from Bell Atlantic

to MCIIm, provided that the classification of the traffic can reliably be identified by the Parties in accordance with the terms of Section 7.5 herein.

1.2 Interconnection Point

1.2.1 Definitions

1.2.1.1 "Interconnection Point" or "IP" means the switching, Wire Center, or other similar network node in a Party's network at which such Party accepts Local Traffic from the other Party. Bell Atlantic IPs include any Bell Atlantic End Office, for the delivery of traffic terminated to numbers served out of that End Office, and/or any Bell Atlantic access Tandem Office, for the delivery of traffic to numbers served out of any Bell Atlantic End Office that subtends that access Tandem Office. MCIIm IPs include any MCIIm Switch, for the delivery of traffic terminated to numbers served out of that Switch.

1.2.1.2 "Point of Interconnection" or "POI" means the physical point that establishes the technical interface, the test point, and the operational responsibility hand-off between the Parties for the Local Interconnection of their networks. Unless otherwise mutually agreed, MCIIm will be responsible for engineering and maintaining its network on its side of the POI and Bell Atlantic will be responsible for engineering and maintaining its network on its side of the POI.

1.2.2 MCIIm shall establish at Technically Feasible points in Bell Atlantic's network at least one POI in each of the Bell Atlantic access tandem service areas in which MCIIm originates Local Traffic and interconnects with Bell Atlantic; provided that Bell Atlantic may request relief from the Commission if Bell Atlantic reasonably believes that MCIIm has manipulated the designation of POIs in order to maximize the transport revenues Bell Atlantic must pay to MCIIm. The Party delivering traffic to the other Party's IP(s) shall do so by purchasing from the other Party transport between the POI(s) and the IP(s), if necessary. MCIIm shall deliver traffic to at least one IP in each Bell Atlantic access tandem serving area to which its end users have local calling; provided, however, that if MCIIm delivers traffic to only one IP in an access tandem serving area, the IP shall be the access tandem. Bell Atlantic shall deliver traffic to at least one (1) MCIIm IP in each Bell Atlantic access tandem service areas.

1.2.2.1 If and when the Parties choose to interconnect at a fiber optic mid-span meet, MCIIm and Bell Atlantic will mutually agree on the technical, operational and compensation issues associated with each specific mid-span meet implemented, and jointly provision the fiber optic facilities that connect the two networks in accordance with such agreement.

1.2.2.2 In response to a Party's request for any POI, the other Party shall provide any information in its possession or control regarding the

environmental conditions of those POIs whose location is within its possession or control. The Party controlling the POI shall notify the requesting Party of any hazardous environmental conditions of the POI, including the existence and condition of asbestos, lead paint, hazardous substance contamination, and the like. The Party controlling the POI shall respond to any such request within ten (10) business days for manned sites and within no more than thirty (30) calendar days for unmanned sites.

1.2.2.3 The Party controlling a POI shall allow the requesting Party to perform at reasonable hours, reasonable environmental site investigations, including, but not limited to, asbestos surveys, that the requesting Party deems to be necessary in support of its interconnection needs.

1.2.2.4 If interconnection is complicated by the presence of environmental contamination or hazardous materials, and an alternative route is available within the space controlled by the Party controlling an POI, then such Party shall make such alternative route available for the requesting Party's consideration.

Section 2. Compensation Mechanisms

2.1 Point of Interconnection

2.1.1 Each (originating) Party is responsible for bringing their traffic to a POI.

2.2 Compensation for Local Traffic Transport and Termination

2.2.1 The POI determines the point at which the originating carrier shall pay the terminating carrier for the Transport and Termination of local traffic. The following compensation elements shall apply:

2.2.1.1 "Transport," which includes the transmission of Local Traffic from the POI to the terminating carrier's IPs, and any necessary Tandem Switching, and any necessary transport between the terminating carrier's access Tandem Office and the terminating carrier's End Office Switch that directly serves the called end user.

2.2.1.2 "Termination," which includes the switching of Local Traffic at the terminating carrier's End Office Switch.

2.3 When an MCIIm customer places a call to a Bell Atlantic customer, MCIIm will hand off that call to Bell Atlantic at the POI. Conversely, when Bell Atlantic hands over Local Traffic to MCIIm for MCIIm to transport and terminate, Bell Atlantic must use an established POI.

2.4 MCIIm may designate as its means of delivering traffic to a POI any Technically Feasible methods, including but not limited to, Collocation using electronic or manual

cross-connect points via a digital signal access point (“DSAP”), or mutually-agreed mid-span meets. The transport and termination charges for Local Traffic delivered to POI shall be as follows:

2.4.1 When Local Traffic from MCIIm is terminating on Bell Atlantic’s network through the Bell Atlantic access Tandem Office IP, MCIIm will pay Bell Atlantic transport charges from the POI to the Tandem Office for Dedicated Transport. Alternatively, MCIIm may choose to collocate at the Bell Atlantic access Tandem Office and pay applicable Collocation and cross-connect charges. MCIIm may also choose to purchase Bell Atlantic Dedicated Transport from the POI to a Collocation site established by MCIIm or a third Party at the Bell Atlantic access Tandem Office IP. MCIIm shall also pay a charge for the tandem termination rate. The tandem termination rate includes Tandem Switching, Common Transport to the End Office, and End Office termination and will be charged at the rate set forth in Attachment I.

2.4.2 When Local Traffic from Bell Atlantic is terminating on MCIIm’s network through the POI, Bell Atlantic shall pay MCIIm transport charges from the POI to the MCIIm Switch for Dedicated Transport. This transport charge shall not exceed Bell Atlantic’s equivalent charge. Bell Atlantic shall also pay a charge symmetrical to its own charges to MCIIm for Tandem Switching, Tandem Office to End Office transport, and End Office termination, provided that the MCIIm Switch covers an area comparable to the Bell Atlantic access Tandem Office serving the same area. If the area covered by the MCIIm Switch is comparable instead to the area of an End Office, Bell Atlantic shall not pay the charges for Tandem Switching or Tandem Office to End Office transport.

2.4.3 MCIIm may choose to establish direct trunking to any given Bell Atlantic End Office from the POI. If MCIIm leases trunks from Bell Atlantic, it shall pay charges for Dedicated Transport. For calls terminating from MCIIm to subscribers served by these directly-trunked end offices, MCIIm shall also pay for Local Traffic termination at the End Office termination rate. For Bell Atlantic Local Traffic terminating to MCIIm over the direct End Office trunking, compensation payable by Bell Atlantic shall be the same as that detailed in Section 2.4.2 above.

Section 3. Signaling

3.1 Signaling protocol. The Parties will interconnect their networks using SS7 signaling as defined in Bellcore documents GR-905-CORE, Issue 1, March 1995, Bellcore Special Report SR-TSV-002275, BOC Notes on the LEC Networks-Signaling, Bellcore Generic Requirements GR-317, Issue 1, February 1994 and GR-394, Issue 1, February 1994, including ISDN User Part (“ISUP”) for trunk signaling and Transaction Capabilities Application Part (“TCAP”) for CCS-based features in the interconnection of their networks.

3.2 The Parties will provide CCS to each other in conjunction with all trunk groups supporting intraLATA, local, transit, and toll traffic. CCS will not be provided in

conjunction with trunk groups supporting Operator Services (Call Completion and Directory Assistance), 911, or where CCS has not been deployed by the originating carrier. The Parties will cooperate on the exchange of Transactional Capabilities Application Part ("TCAP") messages to facilitate full inter-operability of CCS-based features between their respective networks, including all CLASS features and functions. All CCS signaling parameters will be provided including Automatic Number Identification ("ANI"), originating line information ("OLI"), calling party category, Charge Number, *etc.* For terminating FGD, Bell Atlantic will pass CPN if it receives CPN from FGD carriers. All privacy indicators will be honored. Where available, network signaling information such as Transit Network Selection ("TNS") parameter (CCS platform) and CIC/OZZ information (non-CCS environment) will be provided by either Party wherever such information is needed for call routing or billing. The Parties will generally conform to OBF adopted guidelines pertaining to TNS and CIC/OZZ codes in accordance with Section 15.4 of Part A.

3.3 Refer to Attachment III, Section 11 for detailed terms of SS7 Network Interconnection.

3.4 Standard interconnection facilities shall be ESF with B8ZS line code. Where ESF/B8ZS is not available, both Parties will agree to use other interconnection protocols on an interim basis until the standard ESF/B8ZS is available. For specific arrangements not deployed as ESF/B8ZS, Bell Atlantic will provide anticipated dates of ESF/B8ZS availability for these facilities.

3.4.1 Where MCIIm is unwilling to utilize an alternate interconnection protocol, MCIIm will provide Bell Atlantic with a request for 64 kbps Clear Channel Capability ("64K CCC") trunk quantities consistent with the quarterly forecasting agreements between the Parties pursuant to Section 8.3. Upon receipt of this request, the Parties will begin joint planning for the engineering, procurement, and installation of the segregated 64K CCC Local Interconnection Trunk Groups, and the associated B8ZS Extended Super Frame ("ESF") facilities, for the sole purpose of transmitting 64K CCC data calls between MCIIm and Bell Atlantic. Where additional equipment or network rearrangements are required, such equipment and rearrangements will be obtained, engineered, installed, and performed on the same basis and with the same intervals as any similar subscriber specific special construction jobs for IXCs, CLECs, or Bell Atlantic internal subscriber demand for 64K CCC trunks. Such equipment and rearrangements shall be charged at Commission-approved, applicable special construction rates. Should the foregoing not be adequate, MCIIm may invoke the BFR process. Where Technically Feasible and mutually agreed, these trunks will be established as two-way.

Section 4. Network Servicing

4.1 Trunk Forecasting

4.1.1 The Parties shall work toward the development of their forecasting responsibilities for traffic utilization over trunk groups. Orders for trunks that exceed forecasted quantities for forecasted locations will be accommodated as facilities and/or equipment are available. Parties shall make all reasonable efforts and cooperate in good faith to develop alternative solutions to accommodate orders when facilities are not available. Intercompany forecast information must be provided by MCI to Bell Atlantic on a quarterly basis. The forecasts shall include:

4.1.1.1 Yearly forecasted trunk quantities to each of Bell Atlantic's End Offices and access Tandem Office(s) affected by the exchange of traffic (which include measurements that reflect actual Tandem and End Office Local Interconnection and meet point trunks and tandem-subtending Local Interconnection End Office equivalent trunk requirements for no more than two years (current plus one year)) by traffic type (local/toll, operator services, 911, etc.), Access Carrier Terminal Location ("ACTL"), interface type (e.g., DS1), and trunks in service each year (cumulative);

4.1.1.2 The use of A location/Z location Common Language Location Identifier ("CLLI-MSG"), which are described in Bellcore documents BR 795-100-100 and BR 795-400-100; and

4.1.1.3 Descriptions of major network projects that affect the other Party will be provided in the forecasts. Major network projects include, but are not limited to, trunking or network rearrangements, shifts in anticipated traffic patterns, or other activities by either Party that are reflected by a significant increase or decrease in trunking demand for the following forecasting period.

4.1.2 Parties shall meet to review and reconcile their forecasts if forecasts vary significantly.

4.1.2.1 Because each Party's trunking requirements will, at least during an initial period, be dependent on the subscriber segments to whom MCI decides to market its services, Bell Atlantic will be largely dependent on MCI to provide accurate trunk forecasts for both inbound (from Bell Atlantic) and outbound (from MCI) traffic. Bell Atlantic will, as an initial matter, and upon receipt of a forecast from MCI, order a sufficient number of trunks from MCI for Local Traffic and intraLATA toll, to MCI from Bell Atlantic, to handle the traffic forecast. Upon the establishment of any new set of trunks for traffic, each Party will monitor traffic for up to ninety (90) days, and will, as necessary, either augment trunks or disconnect trunks, based on the application of reasonable engineering criteria to the actual traffic volume experienced. If, after such ninety (90) day period, either Party has determined that the trunks are not warranted by actual traffic volumes, then, it shall inform the other in writing. Thereafter, within ten (10) business days of receipt of the written

notice, the Party receiving notice shall inform the other Party of whether it desires to keep in operation any unused trunk. Each Party may hold the other financially responsible for such trunks, installed at the request of the other Party, retroactive to the start of the ninety (90) day period until such time as they are justified by actual traffic volumes, based on the application of reasonable engineering criteria.

4.1.3 Each Party shall provide a specified point of contact for planning, forecasting, and trunk servicing purposes.

4.1.4 Trunking can be established to Tandem or End Offices or a Combination Class 5/Class 4 via either one-way or two-way trunks in accordance with the standards set forth in Section 1 above. Trunking will be at the DS-0 level, DS-1 level, or higher, as mutually agreed in accordance with the standards set forth in Section 1 of this Attachment. Initial trunking will be established between the MCIIm switching centers and Bell Atlantic's access Tandem Office(s). The Parties may use direct End Office trunking for their traffic when deemed appropriate. Requests for direct End Office trunking will not be unreasonably denied.

4.2 **Grade of Service**

4.2.1 A blocking standard of one percent (.01) during the average busy hour, as defined by each Party's standards, for final trunk groups between MCIIm and Bell Atlantic shall be maintained.

4.3 **Trunk Servicing**

4.3.1 Orders between the Parties to establish, add, change or disconnect trunks shall be processed by use of an Access Service Request ("ASR"), or another industry standard eventually adopted to replace the ASR for local service ordering.

4.3.2 As discussed in this Agreement, both Parties will manage the capacity of their Local Interconnection Trunk Groups. Bell Atlantic will issue an ASR to MCIIm to trigger changes Bell Atlantic desires to the Bell Atlantic Local Interconnection Trunk Groups based on Bell Atlantic's capacity assessment. MCIIm will issue an ASR to Bell Atlantic to trigger changes MCIIm desires to the MCIIm Local Interconnection Trunk Groups based on MCIIm's capacity assessment.

4.3.3 The standard interval used for the provisioning of local interconnection trunk groups shall be ten (10) business days for orders of fewer than ninety-six (96) DS-0 trunks. Orders beyond this amount shall be determined on an individual case basis. Where feasible, Bell Atlantic will expedite installation, upon MCIIm's request.

4.3.4 Orders that comprise a major project that directly impacts the other Party may be submitted at the same time, and their implementation shall be jointly planned and coordinated. Major projects are those that require the coordination and execution of multiple orders or related activities between and among Bell Atlantic and MCIIm work groups, including but not limited to the initial establishment of Local Interconnection or Meet Point trunk groups and service in an area, facility grooming, or network rearrangements.

4.3.5 MCIIm and Bell Atlantic agree to exchange escalation lists which reflect contact personnel including vice president-level officers. These lists shall include name, department, title, phone number, and fax number for each person. MCIIm and Bell Atlantic agree to exchange an up-to-date list promptly following changes in personnel or information.

Section 5. Network Management

5.1 Protective Protocols

5.1.1 Either Party may use protective network traffic management controls such as 7-digit and 10-digit code gaps on traffic toward the other Party's network, when required to protect the public switched network from congestion due to facility failures, Switch congestion or failure, or focused overload. MCIIm and Bell Atlantic will immediately notify each other of any protective control action planned or executed.

5.2 Expansive Protocols

5.2.1 Where the capability exists, originating or terminating traffic reroutes may be implemented by either Party to temporarily relieve network congestion due to facility failures or abnormal calling patterns. Reroutes will not be used to circumvent normal trunk servicing. Expansive controls will only be used when mutually agreed to by the Parties.

5.3 Mass Calling

5.3.1 MCIIm and Bell Atlantic shall cooperate and share pre-planning information, where available, regarding cross-network call-ins expected to generate large or focused temporary increases in call volumes, to prevent or mitigate the impact of these events on the public switched network.

Section 6. Line Status Verification And Verification With Call Interruption

6.1 Each Party shall offer Line Status Verification ("LSV") and Verification and Call Interrupt ("VCI") services to enable its subscribers to verify and/or interrupt calls of the receiving Party's subscribers. The receiving Party shall accept and respond to LSV and VCI requests from the operator bureau of the originating Party, provided that the

originating Party has ordered the requisite underlying LSV/VCI service from the receiving Party.

6.2 The receiving Party operator shall only verify the status of the line or interrupt the line to inform the called Party that there is a call waiting. The receiving Party operator will not complete the telephone call of the subscriber initiating the LSV/VCI request. The receiving Party operator will only make one LSV/VCI attempt per subscriber operator bureau telephone call, and the applicable charges apply whether or not the called Party releases the line.

6.3 Each Party's operator bureau shall accept LSV and VCI inquiries from the operator bureau of the other Party in order to allow transparent provision of LSV/VCI traffic between the Parties' networks.

6.4 Each Party shall route LSV/VCI traffic inquiries over separate direct trunks (and not the local/intraLATA/interLATA trunks) established between the Parties' respective operator bureaus. Each Party shall offer interconnection for LSV/VCI traffic at its Operator Services tandem office or other mutually agreed point in the LATA. Separate LSV/VCI trunks will be directed to the Operator Services tandem office designated by the receiving Party. The originating Party shall outpulse the appropriate NPA, ATC Code, and Routing Code (operator code) to the receiving Party.

6.5 When a LSV/VCI request for a ported number is directed to either Party's operator and the query is not successful (*i.e.*, the request yields an abnormal result), the operator shall confirm whether the number has been ported and shall direct the request to the appropriate operator. The Parties shall work cooperatively to develop this process, which does not exist as of the Effective Date.

6.6 Compensation: Each Party shall charge the other Party for LSV and VCI at rates specified in Attachment I.

Section 7. Usage Measurement

7.1 Each Party shall calculate terminating interconnection minutes of use based on standard Automatic Message Accounting ("AMA") recordings made within each Party's network, these recordings being necessary for each Party to generate bills to the other Party.

7.2 Measurement of minutes of use over Local Interconnection Trunk Groups shall be in actual conversation seconds. The total conversation seconds over each individual Local Interconnection Trunk Group will be totaled for the entire monthly bill-round and then rounded to the next whole minute.

7.3 For billing purposes, each Party shall pass Calling Party Number ("CPN") information on each call carried over the traffic exchange trunks at such time as the originating Switch is equipped for SS7 and from all switches no later than December 31, 1998. At such time as either Party has the ability, as the Party receiving the traffic, to use

such CPN information to classify on an automated basis traffic delivered by the other Party as either Local Traffic or toll traffic, such receiving Party shall bill the originating Party the Local Traffic termination rates, intrastate Exchange Access rates, or interstate Exchange Access rates applicable to each minute of traffic for which CPN is passed, as provided in Attachment I and applicable Tariffs.

7.4 If, under the circumstances set forth in Section 7.3, the originating Party does not pass CPN on up to ten percent (10%) of calls, the receiving Party shall bill the originating Party the Local Traffic termination rates, intrastate Exchange Access rates, intrastate/interstate transit traffic rates, or interstate Exchange Access rates applicable to each minute of traffic, as provided in Attachment I and applicable Tariffs, for which CPN is passed. For the remaining up to ten percent (10%) of calls without CPN information, the receiving Party shall bill the originating Party for such traffic at Local Traffic termination rates, intrastate Exchange Access rates, intrastate/interstate transit traffic rates, or interstate Exchange Access rates applicable to each minute of traffic, as provided in Attachment I and applicable Tariffs, in direct proportion to the minutes of use of calls passed with CPN information.

7.5 If the originating Party fails to pass CPN on more than ten percent (10%) of calls, either Party may require that separate trunk groups for Local Traffic and toll traffic be established. If neither Party requests such separate trunk groups, or if the receiving Party lacks the ability to use CPN information to classify on an automated basis traffic delivered by the other Party as either Local Traffic or toll traffic, and the originating Party desires to combine Local Traffic and toll traffic on the same trunk group, it will supply an auditable Percent Local Usage ("PLU") report quarterly, based on the previous three months' traffic, and applicable to the following three months. If the originating Party also desires to combine interstate and intrastate toll traffic on the same trunk group, it will supply an auditable Percent Interstate Usage ("PIU") report quarterly, based on the previous three months' terminating traffic, and applicable to the following three months. In lieu of the foregoing PLU and/or PIU reports, the Parties may agree to provide and accept reasonable surrogate measures for an agreed-upon period.

7.6 Measurement of billing minutes for purposes of determining terminating compensation shall be in conversation seconds.

Section 8. Responsibilities of the Parties

8.1 Bell Atlantic and MCIIm agree to treat each other fairly and nondiscriminatorily for all items included in this Agreement, or related to the support of items included in this Agreement.

8.2 MCIIm and Bell Atlantic agree to exchange such reports and/or data as provided in this Attachment in Section 7 to facilitate the proper billing of traffic. Either Party may request an audit of such usage reports on no fewer than ten (10) business days' written notice and any audit shall be accomplished during normal business hours at the office of the Party being audited. Such audit must be performed by a mutually agreed-to independent auditor paid for by the Party requesting the audit and may include review of

the data described in Section 7 above. Such audits may be requested within six (6) months of having received the PLU factor and usage reports from the other Party.

8.3 MCIIm and Bell Atlantic will review engineering requirements on a quarterly basis and establish forecasts for trunk and facilities utilization provided under this Agreement. Bell Atlantic and MCIIm will work together to begin providing these forecasts within thirty (30) days from the Effective Date of this Agreement. New trunk groups will be implemented as dictated by engineering requirements for either Bell Atlantic or MCIIm.

8.4 Unless otherwise mutually agreed for specific facility arrangements, Bell Atlantic shall be solely responsible for Control Office functions for local interconnection trunks and trunk groups that Bell Atlantic orders from MCIIm. In addition, Bell Atlantic shall be solely responsible for the overall coordination, installation, and maintenance responsibilities for the trunks and trunk groups that MCIIm orders from Bell Atlantic. The Parties shall agree upon the assignment of Control Office, coordination, installation, and maintenance responsibilities for shared interconnection trunks and for mid-span meet trunks at such time as the Parties agree to install each such facility.

8.5 MCIIm and Bell Atlantic shall:

8.5.1 Provide trained personnel with adequate and compatible test equipment to work with each other's technicians.

8.5.2 Notify each other when there is any change affecting the service requested, including the due date.

8.5.3 Coordinate and schedule testing activities of their own personnel, and others as applicable, to ensure its interconnection trunks/trunk groups are installed per the interconnection order, meet agreed-upon acceptance test requirements, and are placed in service by the due date.

8.5.4 Perform sectionalization to determine if a trouble is located in its facility or its portion of the interconnection trunks prior to referring the trouble to each other.

8.5.5 Advise each other's Control Office if there is an equipment failure which may affect the interconnection trunks.

8.5.6 Provide each other with a trouble reporting/repair contact number that is readily accessible and available twenty-four (24) hours/seven (7) days a week. Any changes to this contact arrangement must be immediately provided to the other Party.

8.5.7 Provide to each other test-line numbers to enable testing of interconnection trunks.

October 2, 1997

ATTACHMENT IV

8.5.8 Cooperatively plan and implement coordinated repair procedures for the meet point and local interconnection trunks and facilities to ensure trouble reports are resolved in a timely and appropriate manner.

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ATTACHMENT V

COLLOCATION

Section 1. Introduction

This Attachment sets forth the requirements for Collocation. Bell Atlantic shall provide MCIIm Collocation in accordance with the terms of its FCC and Pennsylvania Collocation Tariffs and the provisions of this Attachment V. Any conflicts between the Tariff and the provisions hereof shall be resolved as set forth in Section 1, Part A of this Agreement.

Section 2. Technical Requirements

2.1 Bell Atlantic shall provide space, as reasonably requested by MCIIm, to meet MCIIm's needs for placement of equipment. MCIIm may collocate only that equipment which is used for interconnection and access to Network Elements. Such equipment may include Remote Switching Modules ("RSMs") in Bell Atlantic's Central Offices which currently provide loops using digital loop carriers or are scheduled to provide loops using digital loop carriers.

2.1.1 To the extent practicable and consistent with the needs of Bell Atlantic and other collocators, Bell Atlantic will use reasonable efforts to place MCIIm's physically collocated interconnection space so as to permit MCIIm to expand its collocated interconnection space to a contiguous area, up to a maximum of four-hundred (400) square feet.

2.1.2 Subject to availability, physically-located interconnection will be provided on a first-come, first-served basis in a physically-located office until available Collocation space and facilities are exhausted. In such instances where two (2) or more requests for space are received at the same time for a Central Office building with limited space, a lottery will be administered to determine the order of selection of applicants.

2.1.3 If the space remaining in the portion of the Central Office in which physical Collocation is provided (the "Collocation Space") is less than one-hundred (100) square feet or otherwise configured so as to be unsuited to meet the requirements of another collocator that has requested such space, the existing collocator(s) shall have the option of applying for any portion(s) of the remaining space.

2.1.4 In the event that MCIIm withdraws its request for Collocation service prior to completion, Bell Atlantic will refund the pre-paid design and planning fee, less actual costs incurred by Bell Atlantic.

2.1.5 Upon receipt of MCIIm's first Collocation application form, Bell Atlantic will, upon request, make available to MCIIm at cost any applicable Bellcore or

Bell Atlantic-specific documentation as listed in Bell Atlantic's Tariff F.C.C. No. 1, Section 19.3.5. MCIIm is responsible for obtaining all other applications listed in Appendix 1 to Part A.

2.1.6 At the time Bell Atlantic submits contractor bids to MCIIm, Bell Atlantic shall provide any information in its possession or control regarding the environmental condition of the space provided for those sites, where the information is reasonably available. Bell Atlantic shall also notify MCIIm at such time of the following conditions of which it is aware: the existence and condition of asbestos, lead paint, hazardous substance contamination, and the like.

2.1.7 Bell Atlantic shall allow MCIIm to perform reasonable environmental site investigations within the designated Collocation Space, including, but not limited to, asbestos surveys, which MCIIm deems to be necessary in support of its Collocation needs, upon completion of Bell Atlantic's required construction work for the MCIIm Collocation space.

2.1.8 If the space provided for the placement of equipment, interconnection, or provision of service contains environmental contamination or hazardous material, particularly but not limited to asbestos or lead paint which makes the placement of such equipment or interconnection hazardous, Bell Atlantic shall offer an alternative space, if available at the same Bell Atlantic premise, for MCIIm's consideration.

2.2 Bell Atlantic shall provide intraoffice facilities (*e.g.*, DS1, DS3, DS0, OC3, OC12, OC48, and STS-1, terminations where and when available) as requested by MCIIm to meet MCIIm's need for placement and interconnection of equipment, where Technically Feasible.

2.3 Bell Atlantic agrees to allow MCIIm's employees and designated agents unrestricted access to MCIIm dedicated space in Bell Atlantic offices twenty-four (24) hours per day each day of the week. Bell Atlantic may place reasonable security restrictions on access by MCIIm's employees and designated agents to the MCIIm Collocated space in Bell Atlantic offices, in accordance with Attachment IX.

2.4 Where Technically Feasible, Bell Atlantic shall provide the connection between the equipment in the collocated spaces of two (2) or more Telecommunications Carriers permitting such Telecommunications Carrier(s) to interconnect its network with that of another collocating Telecommunications Carrier at Bell Atlantic premises, provided that the collocated equipment is used for interconnection with Bell Atlantic or for access to Bell Atlantic's Network Elements.

2.5 Bell Atlantic shall permit MCIIm to subcontract the construction of physical Collocation arrangements within the MCIIm Collocation space, to Bell Atlantic's construction specifications, with contractors approved by Bell Atlantic, provided, however, that Bell Atlantic shall not unreasonably withhold approval of contractors.

Approval by Bell Atlantic shall be based on the same criteria it uses in approving contractors for its own purposes.

2.6 MCI may order from Bell Atlantic basic business telephone service at the Collocation space, as may be required for administrative purposes.

2.7 Bell Atlantic shall provide lighting, ventilation, power, heat, air conditioning, and other environmental conditions for MCI's space and equipment in substantial conformance with Bell Communication Research ("Bellcore") Network Equipment-Building System ("NEBS") standards TR-EOP-000063. MCI may order additional lighting and AC power in accordance with Bell Atlantic's Collocation Tariffs.

2.8 Bell Atlantic shall provide access to bathrooms and drinking water within a collocated facility on a twenty-four (24) hours per day, seven (7) days per week basis for authorized MCI personnel and agents in facilities where such amenities are located in Collocation common areas. Where such amenities are not available within a Collocation common area and where Bell Atlantic has employees available on the premise, Bell Atlantic shall provide an escort for access to such facilities.

2.9 Bell Atlantic shall provide all ingress and egress of fiber and power cabling to MCI Collocated Spaces in compliance with MCI's reasonable cable diversity requirements. The specific level of diversity requested for each site or Network Element will be provided in the Collocation request. MCI shall pay Bell Atlantic any reasonable special construction charges incurred in providing MCI the requested level of diversity where said diversity is not available.

2.10 In a Collocation arrangement hereunder, Bell Atlantic shall protect MCI's Proprietary Information to the extent required by Applicable Law.

2.11 Bell Atlantic shall notify MCI's National Network Management Center at least five (5) business days prior to those instances when Bell Atlantic or its subcontractors know they will be performing work reasonably anticipated to affect MCI's service on the DC power plants which support MCI equipment. Bell Atlantic will inform MCI by telephone of any emergency related activity reasonably anticipated to affect MCI's service that Bell Atlantic or its subcontractors may be performing on the DC power plants which support MCI equipment. Notification of any emergency related activity shall be as soon as practicable so that MCI can take any action required to monitor or protect its service.

2.12 MCI shall submit a request to collocate equipment using the form attached as Exhibits A and B to this Attachment V. Promptly following MCI's submission of a Collocation application, Bell Atlantic shall review the application, and within ten (10) business days, conduct a meeting with MCI to review the details of the application to assure that it is complete.

2.12.1 Within forty-five (45) days after the application review meeting, Bell Atlantic shall tender to MCI drawings of the proposed Collocation space.

MCIIm shall review the drawings and either approve them or specify changes to the space design within thirty (30) days after receiving them. Promptly thereafter, Bell Atlantic and MCIIm shall agree on final drawings, specifications and charges for the requested space specified on MCIIm's application. Upon MCIIm's request, Bell Atlantic shall construct the Collocation space in substantial compliance with MCIIm's Collocation application.

2.13 MCIIm and Bell Atlantic will complete an acceptance walk through of the Collocated space constructed by Bell Atlantic. Exceptions from drawings and plans approved under Section 2.12 that would materially affect MCIIm's intended use of the space that are noted by MCIIm during this acceptance walk through shall be corrected, or the price otherwise adjusted, by Bell Atlantic within five (5) business days after the walk through unless otherwise agreed. The correction of these exceptions from the original Collocation application shall be at Bell Atlantic's expense.

2.14 Bell Atlantic shall provide telephone equipment drawings depicting the location, type, and cable termination requirements (*i.e.*, connector type, number and type of pairs, and naming convention) for Bell Atlantic point of termination bay(s) to MCIIm upon completion of Bell Atlantic construction of the MCIIm Collocation space.

2.15 Bell Atlantic shall provide drawings depicting available paths, with dimensions, for MCIIm outside plant fiber ingress and egress into MCIIm collocated space at the initial site implementation meeting between MCIIm and Bell Atlantic within ten (10) business days after Bell Atlantic's acceptance of MCIIm's request for collocated space. Such path and any areas around it in which MCIIm must work to perform installation shall be free of asbestos, lead paint (unless encapsulated), and other health or safety hazards to the same extent that comparable Bell Atlantic work areas in the same premises are free of such conditions.

2.16 Bell Atlantic shall provide power cabling connectivity information, including the sizes and number of power feeders, to MCIIm upon completion of Bell Atlantic construction of MCIIm Collocation space.

2.17 Bell Atlantic shall provide positive confirmation to MCIIm when its construction of MCIIm's Collocation space is fifty percent (50%) completed. This confirmation shall also include confirmation of the scheduled completion and turnover dates.

2.18 Bell Atlantic shall make commercially reasonable efforts to provide the following information to MCIIm within ten (10) business days after receipt of request from MCIIm unless otherwise agreed:

2.18.1 Work restriction guidelines.

2.18.2 Bell Atlantic or industry technical publication guidelines that impact the design of virtually collocated equipment.

2.18.3 Bell Atlantic contacts (names and telephone numbers) for the following areas:

- Engineering
- Physical & Logical Security
- Billing
- Operations
- Site and Building Managers
- Environmental and Safety

2.18.4 Escalation process for Bell Atlantic employees (names, telephone numbers and the escalation order) for any disputes or problems that might arise in connection with MCI's Collocation activities.

2.19 "Power" as referenced in this Section 2.19 refers to any electrical power source supplied by Bell Atlantic for MCI Collocation equipment. It includes necessary superstructure, infrastructure, and overhead facilities, including, but not limited to, cable, cable racks and bus bars. Bell Atlantic will supply power to support collocated MCI equipment at equipment-specific and industry standard DC and AC voltages. Bell Atlantic shall supply power to MCI at Parity with that provided by Bell Atlantic to itself or to any third party at the premises.

2.19.1 Central Office power supplied by Bell Atlantic into the MCI equipment area shall be supplied in the form of power feeders (cables) on cable racking into the designated MCI equipment area. The power feeders (cables) shall support the requested quantity and capacity of MCI equipment in accordance with the Collocation Tariff. The termination location shall be as reasonably requested by MCI.

2.19.2 Bell Atlantic shall provide power as reasonably requested by MCI to meet MCI's need for the interconnection and placement of equipment in accordance with Tariff.

2.19.3 Bell Atlantic power equipment supporting MCI's equipment shall:

2.19.3.1 Comply in material respects with applicable industry standards (*e.g.*, Bellcore, and NEBS) for equipment installation, cabling practices, and physical equipment layout;

2.19.3.2 Have redundant power feeds with physical diversity and battery back-up for MCI equipment at Parity with that provided for similar Bell Atlantic equipment at the same premises. Power requirements for remote switching equipment, if any is collocated, and physical diversity for power feeds where such diversity is not already available, may require special construction.

2.19.3.3 Upon MCIIm's request, Bell Atlantic will provide prices and specifications for unique battery and power requirements, including those for other types of equipment that can be collocated under this Agreement;

2.19.3.4 Provide Central Office ground, connected to a ground electrode in compliance with applicable industry standards. Central Office ground for remote switching equipment, if any is collocated, may require special construction; and

2.19.3.5 Provide feeder capacity and quantity to support the equipment layout for MCIIm equipment in accordance with MCIIm's Collocation application. Feeder capacity for remote switching equipment, if any is collocated, may require special construction.

2.19.4 Bell Atlantic shall use commercially reasonable efforts to, within forty-five (45) days after MCIIm's application:

2.19.4.1 Provide documentation submitted to and received from contractors for any contractor bids for any work being done on behalf of MCIIm (except for any work that is covered by a Tariffed rate);

2.19.4.2 Provide MCIIm access to its Collocation space upon completion of construction that will provide safe and secure access to the Collocation space;

2.19.4.3 Provide cabling that adheres in all material respects to Bell Communication Research ("Bellcore") Network Equipment-Building System ("NEBS") standards TR-EOP-000063; and

2.19.4.4 Provide Lock Out-Tag Out and other electrical safety procedures and devices in conformance with agreed OSHA or industry guidelines.

2.20 Bell Atlantic shall provide virtual Collocation where physical Collocation is not practical for technical reasons or because of space limitations. Bell Atlantic shall take collocator demand into account when renovating existing facilities and constructing or leasing new facilities.

2.21 Standard intervals for physical Collocation shall be one hundred twenty (120) days from the date an application is finalized and approved by the Parties. Virtual Collocation will have a standard interval of sixty (60) days from the foregoing date.

2.22 MCIIm may collocate only that equipment which is used for interconnection and access to Network Elements. MCIIm may collocate the quantity and type of such equipment it reasonably deems necessary in its Collocation space, provided that the equipment meets Bellcore specifications. Approved vendors will, at a minimum, be vendors Bell Atlantic currently approves for their own use. Bell Atlantic will not

unreasonably withhold approval of additional vendors whose equipment meets Bellcore specifications.

2.23 MCIIm may choose to lease unbundled transport from Bell Atlantic or a third carrier for the purpose of connection to MCIIm collocated equipment, rather than construct to such facilities, all in accordance with FCC Rules and Regulations.

2.24 Bell Atlantic will maintain MCIIm's virtually collocated equipment in Parity with how it maintains its own equipment. Such maintenance shall include the change out of electronic cards provided by MCIIm and per MCIIm's request.

Section 3. License

Bell Atlantic hereby grants MCIIm a license to occupy any premises or rack space which contain collocated equipment as permitted hereunder, including without limit all necessary ingress and egress, all in accordance with the terms and conditions of this Agreement including this Attachment V.

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ATTACHMENT VI

Rights of Way, Conduits, Pole Attachments

Introduction

This Attachment VI sets forth the terms and conditions applicable to MCI's access to Poles, Conduits and Rights of Way owned or controlled by Bell Atlantic pursuant to Section 224 of the Act.

Section 1. Definitions

As used solely in this Attachment VI, the following terms shall have the following meanings. All other terms defined in the Agreement, including Part B, shall continue to apply within this Attachment.

1.1 Anchor

An assembly (rod and fixed object or plate) designed to resist the pull of a Guy Strand.

1.2 Conduit

A tube structure containing one or more Ducts or Innerducts used to house communication cables, that is owned by Bell Atlantic or with respect to which Bell Atlantic has the right to authorize the occupancy of MCI's Communications Facilities.

1.3 Conduit Occupancy

Occupancy of a Conduit System by any item of MCI's Communications Facilities.

1.4 Conduit Section

Conduit between two adjacent Manholes or between a Manhole and an adjacent Pole or other structure.

1.5 Conduit System

Any combination of Ducts, Innerducts, Conduits, and Manholes joined to form an integrated whole, including Central Office and other cable vaults (excluding controlled environmental vaults).

1.6 Duct/Innerduct

An enclosed raceway for communication facilities contained in a Conduit.

1.7 Guy Strand

A metal cable attached to a Pole and Anchor (or another structure) for the purpose of increasing Pole stability.

1.8 MCIIm's Communications Facilities

All facilities, including but not limited to cables, equipment and associated hardware, owned or utilized by MCIIm in providing communication services, which are attached to a Pole or occupy a Conduit or Right of Way.

1.9 Manhole

A subsurface enclosure used for the purpose of installing, operating and maintaining communications facilities, including handholes.

1.10 Make-Ready Work

All work, including but not limited to the rearrangement and/or transfer of Bell Atlantic's existing facilities and administering the rearrangement and/or transfer of the facilities of other licensees, replacement of a Pole, or other changes required to accommodate MCIIm's Communications Facilities on a Pole, or in a Conduit or Right of Way.

1.11 Pole

A Pole with respect to which Bell Atlantic owns or has the right to authorize the attachment of MCIIm's Communications Facilities.

1.12 Pole Attachment

Any item of MCIIm's Communications Facilities affixed to a Pole.

1.12.1 Horizontal attachment is for a single Pole Attachment associated with Pole to Pole construction.

1.12.2 Vertical attachment is for single Pole construction where MCIIm's facilities are affixed along the vertical axis of the Pole.

1.13 Prelicense Survey

All work, including field inspection and administrative processing, to determine the Make-Ready Work necessary to accommodate MCIIm's Communications Facilities on a Pole, or in a Conduit or Right of Way.

1.14 Right of Way

A right possessed by Bell Atlantic to use or pass over or under the land of another, with respect to which Bell Atlantic has the right to authorize the usage or passage of MCI's Communications Facilities over or through such land. Notwithstanding the foregoing, for the purposes of this Attachment VI, Right of Way shall also include real property owned by Bell Atlantic that contain Poles or Conduit or that would typically be used for such purposes.

Section 2. Scope of Licenses

2.1 Subject to the provisions of this Agreement, for license applications granted by Bell Atlantic in accordance with Section 7 below, Bell Atlantic hereby grants to MCI, for any lawful communications purpose, a nonexclusive license authorizing the attachment of MCI's Communications Facilities to Poles, or the placement of MCI's Communications Facilities in Bell Atlantic's Conduits or Rights of Way, as specified in the pertinent application.

2.2 No use, however extended, of Poles, Conduits and/or Rights of Way, or payment of any fees or charges required, under this Agreement, shall create or vest in MCI any easements or any other ownership of property rights of any nature in such Poles, Conduits and/or Rights of Way. MCI's rights herein shall be and remain a license. Neither this Agreement nor any license granted hereunder shall constitute an assignment of any of Bell Atlantic's rights to use the public or private property at locations of such Poles, Conduits, and/or Rights of Way.

2.3 Nothing contained in this Agreement shall limit Bell Atlantic's right to locate and maintain its Poles, Conduits and Rights of Way, and to operate its facilities in conjunction therewith, in such a manner as will best enable it to fulfill its own service requirements consistent with its obligations under Applicable Law.

2.4 Bell Atlantic shall grant MCI access to Poles, Conduits and/or Rights of Way at Parity and on a Non-Discriminatory basis, except as may be otherwise permitted under Applicable Law. In cases where Bell Atlantic does not have the right to authorize such access, Bell Atlantic shall reasonably cooperate with MCI in obtaining such permission subject to Bell Atlantic's right to provide a reasonable technical evaluation of the requirements for such access to the owner or other authorizing party. Nothing shall preclude MCI from obtaining any such additional authorization without requesting Bell Atlantic's cooperation. Upon reasonable request by MCI, Bell Atlantic will provide any documentation that is not confidential or privileged in its possession supporting a claim that it does not own or have authority to grant access to a given Right of Way.

Section 3. Fees and Charges

3.1 MCI is responsible for all fees and charges applicable in connection with the attachment of its Communications Facilities to a Pole, or occupancy of a Conduit or

Right of Way, as specified in Appendix I to this Attachment VI and hereby made a part of this Agreement. Such fees and charges shall be in accordance with Section 224 of the Act.

3.2 Nonpayment of any amount due under this Attachment VI shall constitute a breach by MCIIm of this Agreement and shall be resolved in accordance with Part A, Section 21 (Default and Termination). Late payments shall be subject to fees as prescribed in Attachment VIII, Section 3.

3.3 At such time that MCIIm's "net worth" (as defined under generally accepted accounting principles, hereinafter "Net Worth") fails to exceed \$100,000,000, Bell Atlantic may require a bond in a form satisfactory to Bell Atlantic or other satisfactory evidence of financial security in such amount as Bell Atlantic from time to time may reasonably require to guarantee the performance of all MCIIm obligations hereunder. The amount of the bond or financial security shall not operate as a limitation upon the obligations of MCIIm hereunder; and if MCIIm furnishes a deposit of money pursuant to this section, such deposit may be held during the continuance of this Agreement at the option of Bell Atlantic as security for any and all amounts which are or may become due to Bell Atlantic under this Attachment VI.

3.4 On an annual basis, changes in the amount of the fees and charges specified in Appendix I may be made by Bell Atlantic upon at least sixty (60) days prior written notice to MCIIm in the form of a revised Appendix I, and MCIIm agrees to pay such changed fees and charges provided they are in accordance with Applicable Law. Notwithstanding any other provision of this Agreement, MCIIm may terminate the licenses entered into pursuant to Section 7 below at the end of such notice period if the change in fees and charges is not acceptable to MCIIm, by giving Bell Atlantic written notice of its election to terminate such licenses at least thirty (30) days prior to the end of such notice period.

Section 4. Advance Payments

4.1 At such time that MCIIm's Net Worth fails to exceed \$100,000,000, MCIIm shall be required to make an advance payment to Bell Atlantic prior to:

4.1.1 Any undertaking by Bell Atlantic of a Preliminary Survey or the administrative processing of such a survey in an amount sufficient to cover the estimated charges for completing the specific work operation required; and

4.1.2 Performance by Bell Atlantic of any Make-Ready Work required in an amount sufficient to cover the estimated charges for completing the required Make-Ready Work.

4.2 The amount of the advance payment required (Appendix II, Forms A-1, B-1 and B-4) will be credited against the payment due Bell Atlantic for performing the Preliminary Survey and/or Make-Ready Work.

4.3 Where the advance payment is less than the charge by Bell Atlantic for such work, MCIIm agrees to pay Bell Atlantic within thirty (30) days of receipt of the bill all sums due in excess of the amount of the advance deposit.

4.4 Where the advance payment exceeds the charge by Bell Atlantic for such work, Bell Atlantic shall refund the difference to MCIIm.

Section 5. Specifications

5.1 MCIIm's Communications Facilities shall be placed and maintained in accordance with the requirements and specifications of the current editions of the Bellcore Manual of Construction Procedures ("Blue Book"), the National Electrical Code ("NEC"), the National Electrical Safety Code ("NESC"), the rules and regulations of the Occupational Safety and Health Act ("OSHA"), and regulations or directives of a governing authority having jurisdiction over such subject matter. Where a difference in specifications may exist, the more stringent shall apply.

5.2 MCIIm shall correct all material safety violations within ten (10) days from receipt of written notice from Bell Atlantic. MCIIm shall correct all other non-standard conditions within thirty (30) days from receipt or written notice from Bell Atlantic. If MCIIm does not correct any violation within the aforementioned time limits, Bell Atlantic may at its option correct said conditions at MCIIm's expense.

5.3 Notwithstanding Subsection 5.2 above, when conditions created by MCIIm's Communications Facilities pose an immediate threat to the safety of Bell Atlantic's employees or the public, interfere with the performance of Bell Atlantic's service obligations, or pose an immediate threat to the physical integrity of Bell Atlantic's facilities or structures, Bell Atlantic may perform such work and/or take such action as it deems necessary without first giving written notice to MCIIm. As soon as practicable thereafter, Bell Atlantic will advise MCIIm in writing of the work performed or the action taken and will endeavor to arrange for reaccommodation of MCIIm's facilities so affected. MCIIm shall pay Bell Atlantic for all reasonable costs incurred by Bell Atlantic in performing such work.

5.4 The failure of Bell Atlantic to notify MCIIm of violations or to correct violations pursuant to Subsections 5.2 or 5.3 shall not relieve MCIIm of its responsibility to place and maintain its facilities in a safe manner and condition in accordance with the terms of this Attachment VI, and shall not relieve MCIIm of any liability imposed by this Agreement.

5.5 Bell Atlantic and MCIIm agree to resolve disputes arising under this Attachment VI as set forth in Section 24, Part A of this Agreement.

Section 6. Legal Requirements

6.1 If Bell Atlantic's authority to occupy a Pole, Conduit or Right of Way does not allow MCIIm to place its facilities thereon or therein without some additional authorization or government approval, MCIIm shall be responsible for obtaining from the appropriate public and/or private authority any such additional authorization to construct, operate and/or maintain its communication facilities on public and/or private property before it attaches its communication facilities to Poles, or occupies Conduit or Rights of Way, located on such public and/or private property. Evidence of MCIIm's having obtained such additional authority to so construct and maintain facilities shall be submitted forthwith upon demand.

6.2 No license granted under this Agreement shall extend to any Pole, Conduit or Right of Way where the attachment or placement of MCIIm's Communication Facilities would result in a forfeiture of rights of Bell Atlantic or its existing licensees to occupy the property on which such Poles, Conduits or Rights of Way are located. If the existence of MCIIm's Communication Facilities on a Pole, or in a Right of Way or Conduit, would cause a forfeiture of the right of Bell Atlantic or its existing licensees to occupy such property, Bell Atlantic shall promptly notify MCIIm in writing describing the circumstances of forfeiture with reasonable specificity. Bell Atlantic and MCIIm shall cooperate in taking reasonable and prompt action to avoid such forfeiture, which may include obtaining a stay or other equitable relief. If such actions are not successful prior to forfeiture becoming imminent, then MCIIm shall remove its Communications Facilities forthwith upon receipt of written notification from Bell Atlantic. In such case, and provided MCIIm's facilities were placed in space authorized by Bell Atlantic, Bell Atlantic shall reimburse MCIIm for the full costs of the Preliminary Survey and Make-Ready Work charges (if any, or if shared and paid by MCIIm, those charges solely attributable to MCIIm's facilities) paid by MCIIm to Bell Atlantic, plus the costs of removing MCIIm's Communications Facilities; provided that where all parties, including Bell Atlantic, must remove all communications facilities from the property, MCIIm shall remove its Communications Facilities without reimbursement by Bell Atlantic. If MCIIm fails to remove said Communication Facilities as provided above, Bell Atlantic may perform or have performed such removal after the expiration of ten (10) days after the receipt of said written notification without liability on the part of Bell Atlantic, and MCIIm agrees to pay Bell Atlantic or other licensees or both, the cost thereof and for all losses and damages that may result, including, but not limited to, relocation costs of Bell Atlantic's facilities.

Section 7. Issuance of Licenses

7.1 Before MCIIm shall attach to any Pole, or occupy any portion of a Conduit or Right of Way, MCIIm shall make written application for and have received written license from Bell Atlantic utilizing the following forms: Appendix II, Forms A-1 and A-2 and/or B-1 through B-3. Bell Atlantic shall follow the same process in attaching to, or occupying, such Poles, Conduits or Rights of Way.

7.2 Bell Atlantic shall process all completed license applications, including the performance of a Preliminary Survey, on a first-come, first-serve basis (including all

license applications pertaining to itself) in accordance with the provisions of Sections 7 and 8 of this Attachment VI. Bell Atlantic shall make all access determinations in accordance with the requirements of Applicable Law, considering such factors as capacity, safety, reliability and general engineering considerations to the degree allowed by Section 224 of the Act, or, in the alternative, applicable state law. Bell Atlantic shall inform MCI in writing as to whether an application has been granted or denied (stating the reasons for such denial in reasonable detail) within forty-five (45) days after receipt of such application. Where an application involves an increase in capacity by Bell Atlantic, Bell Atlantic shall take reasonable steps to accommodate requests for access in accordance with Applicable Law, including making such determinations in the same manner as it would for itself. Before denying MCI access based on lack of capacity, Bell Atlantic shall explore potential accommodations in good faith with MCI. MCI shall bear the costs associated with any such expansion performed by Bell Atlantic in accordance with Applicable Law, provided that MCI shall be entitled to recover costs from subsequent licensees (including Bell Atlantic) that attach to or occupy such expanded capacity as provided by Applicable Law. Bell Atlantic shall provide reasonably detailed information on any environmental contamination or other environmental hazards of which it is aware for the specified route within twenty (20) days of the date of the application.

7.3 In order to facilitate MCI's completion of an application, Bell Atlantic shall make commercially reasonable efforts to, within ten (10) business days of a legitimate request identifying the specific geographic area and types and quantities of required structures, provide MCI such maps, plats or other relevant data reasonably necessary to complete the applications described above. All such materials and information shall be treated as Confidential Information by MCI in accordance with the provisions of Part A, Section 22. Such requests shall be processed by Bell Atlantic on a "first-come, first-serve" basis. Bell Atlantic shall also make commercially reasonable efforts to meet with or respond to MCI's inquiries regarding the information supplied to it under this Section 7.3 within five (5) business days following the receipt of such a request for a meeting or inquiry from MCI. Bell Atlantic shall also notify MCI of any environmental contamination or other environmental hazards of which it is aware that would make the placement of facilities within pathways specified by MCI hazardous.

7.4 License applications received by Bell Atlantic from two (2) or more applicants for the same Pole, Conduit Section or Right of Way will be processed by Bell Atlantic according to the order in which the applications are received by Bell Atlantic. Once any additional applicants file an application, Bell Atlantic shall use commercially reasonable efforts to, within twenty (20) days of receipt of the additional application, notify the additional applicant of the following: 1) that a previous application had been received for some or all of the same structures or property; 2) the name and address of the initial applicant; and 3) that the additional applicant may wish to share make ready costs with the initial applicant. The responsibility for arranging for the sharing of make ready costs shall be on the additional applicant. However, the responsibility for transmitting to Bell Atlantic any make ready changes resulting from the additional applicant shall be on the initial applicant, provided that the initial applicant is not obligated to share Make-Ready

Work or make ready costs with any subsequent applicant, unless required by Applicable Law. Bell Atlantic shall bill the initial applicant for the entire cost of all work necessary to accommodate both the initial and additional applicants, pursuant to executed Form B-4, Appendix II.

7.5 If within twelve (12) months from the date a license is granted by Bell Atlantic, MCI shall not at a minimum have initiated material construction or similar activity related to its attachment or occupation, MCI's license for the applicable Poles, Conduits or Rights of Way shall automatically terminate and MCI shall remove any communications facilities installed as of such date in accordance with Section 9.10 of this Attachment VI. MCI and any other attachers or occupier (including Bell Atlantic) shall be liable for attachment or occupancy charges commencing on the date that the license is granted if no Make-Ready Work is required, or on the date that any required Make-Ready Work is completed.

7.6 Where Bell Atlantic has available ducts or inner ducts, Bell Atlantic shall make available ducts or inner ducts to MCI for MCI's use in accordance with Applicable Law. No more than one full-sized duct (or one full-sized and one inner duct if both copper and fiber cable are used in the Conduit) shall be assigned as an emergency duct in each Conduit Section. If Bell Atlantic or any other service provider, including MCI, utilizes the last unoccupied full-sized duct in the applicable cross-section, that provider shall promptly, at its expense, reestablish a clear, full-sized duct for emergency restoration or immediately upon the occurrence of an emergency requiring such space.

Section 8. Pre-License Survey and Make-Ready Work

8.1 When an application for attachment to, or occupation of, a Pole, Conduit or Right of Way is submitted by MCI, a Prelicense Survey will be required to determine the existing adequacy of such structures or property to accommodate MCI's Communication Facilities.

8.1.1 The field inspection portion of the Prelicense Survey, which requires the visual inspection of such structures or property, shall be performed by Bell Atlantic (with participation by MCI at its option, for which Bell Atlantic shall provide at least twenty-four (24) hours advance notice). Bell Atlantic shall also perform the administrative processing portion of the Prelicense Survey which includes the processing of the application and the preparation of the Make-Ready Work orders (if necessary), including the notification of other attachers of Bell Atlantic's Make-Ready Work schedule and the provision to MCI of a list of such other attachers.

8.1.2 Bell Atlantic shall make commercially reasonable efforts to advise MCI in writing of the estimated charges that will apply for its Prelicense Survey work as soon as practicable after receipt of MCI's application but no later than ten (10) days from receipt thereof. Bell Atlantic shall receive written authorization from MCI before undertaking such work (Appendix II, Form B-1).

Alternatively, MCIIm may pay Bell Atlantic the estimated charges that will apply for a Preliminary Survey with its submission of an application provided that Bell Atlantic has advised MCIIm that standard estimated charges exist for the type of application that is being submitted.

8.2 In the event Bell Atlantic determines that a Pole, Conduit or Right of Way which MCIIm desires to utilize is inadequate or otherwise needs rearrangement or expansion of the existing structures or property to accommodate MCIIm's Communication Facilities, Bell Atlantic will advise MCIIm in writing of the estimated Make-Ready Work charges that would apply to any modifications or expansions of capacity that Bell Atlantic proposes to undertake (Appendix II, Form B-4). The estimated Make-Ready Work charges and completion date shall be given to MCIIm at the time that the application is accepted and access is granted. Bell Atlantic shall complete the steps described in paragraphs 8.1 through 8.2 within forty-five (45) days of the date the application is submitted, excluding the time taken by MCIIm to respond to Bell Atlantic's proposals in paragraph 8.1.2, if applicable.

8.3 MCIIm shall have thirty (30) days after the receipt of said Form B-4 to indicate its written authorization for completion of the required Make-Ready Work and acceptance of the resulting charges. If during such period MCIIm presents Bell Atlantic with a proposal from a Bell Atlantic-authorized subcontractor to complete such Make-Ready Work at a cost and/or time that is materially less than that estimated by Bell Atlantic, Bell Atlantic agrees to use such subcontractor to perform the Make-Ready Work. Bell Atlantic shall use commercially reasonable efforts to provide written notice to existing attachers or occupiers of the affected structures or property of the proposed Make-Ready Work within ten (10) days after receipt of MCIIm's authorization to perform such work. Such attachers or occupiers will be given sixty (60) days after such notice to indicate whether they desire to participate in the proposed modification or expansion.

8.4 If approved by MCIIm, Make-Ready Work will be initiated by Bell Atlantic no earlier than sixty (60) days after notice to existing attachers or occupiers, and Bell Atlantic shall use commercially reasonable efforts to complete such work as soon as practicable thereafter, depending upon the size of the job and the cooperation of necessary third parties. MCIIm shall pay Bell Atlantic for all Make-Ready Work performed by it in accordance with the provisions of this Agreement, and make arrangements with attachers or occupiers participating in the modification or expansion (including Bell Atlantic, if applicable), and with future attachers or occupiers who benefit from the modification or expansion, to reimburse MCIIm for their share of the make ready costs as required by Applicable Law.

Section 9. Construction, Maintenance and Removal of Communications Facilities

9.1 MCIIm shall, at its own expense, construct and maintain its Communications Facilities on Poles or in Conduits or Rights of Way covered by this Attachment VI, in a safe condition and in a manner acceptable to Bell Atlantic, so as not to physically conflict

or electrically interfere with the facilities attached thereon or placed therein by Bell Atlantic or other authorized licensees.

9.2 Bell Atlantic shall specify the point of attachment on each Pole to be occupied by MCI's Communications Facilities. Where communications facilities of more than one licensee are involved, Bell Atlantic will attempt, to the extent practical, to designate the same relative position on each Pole for MCI's Communications Facilities.

9.3 Subject to Section 9.10 of this Attachment VI, MCI shall secure Bell Atlantic's written consent, not to be unreasonably withheld or delayed, before adding to, relocating, replacing or otherwise modifying its facilities attached to a Pole where additional space or holding capacity may be required on either a temporary or permanent basis. No such modifications shall be made by MCI that would affect the placement or operations of attachments of Bell Atlantic or existing licensees, except through application to Bell Atlantic in accordance with the provisions of Sections 7 and 8 of this Attachment VI.

9.4 MCI must obtain prior written authorization from Bell Atlantic approving the work and the party performing such work before MCI shall install, remove, or provide maintenance of its Communications Facilities in any of Bell Atlantic's Conduit Systems. Bell Atlantic shall not withhold such authorization without good cause.

9.5 In each instance where MCI's Communications Facilities are to be placed in Bell Atlantic's Conduits, MCI and Bell Atlantic shall discuss the placement of MCI's Communications Facilities. Bell Atlantic shall designate the particular Duct(s) to be occupied, the location and manner in which MCI's Communications Facilities will enter and exit Bell Atlantic's Conduit System, and the specific location and manner of installation for any associated equipment which is permitted by Bell Atlantic to occupy the Conduit System. Bell Atlantic will attempt, to the extent practicable and consistent with its non-discrimination obligations, to designate the same relative position in each Conduit bank for each MCI facility.

9.6 Whenever Bell Atlantic intends to modify or alter any Poles, Conduits or Rights of Way which contain MCI's facilities, Bell Atlantic shall provide written notification to MCI at least sixty (60) days prior to taking such action so that MCI may have a reasonable opportunity to add to or modify MCI's facilities. If MCI adds to or modifies MCI's facilities according to this paragraph, MCI shall bear a proportionate share of the costs incurred by Bell Atlantic in making such facilities accessible in accordance with Applicable Law.

9.7 MCI shall be notified in writing at least sixty (60) days prior to any modification that will result in the rearrangement or replacement of its facilities. Subject to Section 9.6 above, MCI shall not be required to bear any of the costs of rearranging or replacing its facilities, if such rearrangement or replacement is required as a result of an additional attachment or the modification of an existing attachment sought by any entity other than MCI, including Bell Atlantic. MCI agrees to make such rearrangements or

replacements that are reasonably requested by Bell Atlantic to accommodate the attachment or placement of the facilities of other licensees on the applicable structures.

9.8 Bell Atlantic shall not attach, nor permit other entities to attach facilities on, within or overlashed to existing MCI facilities without MCI's prior written consent.

9.9 Bell Atlantic's Manholes shall be opened only as permitted by Bell Atlantic's authorized employees or agents. MCI shall be responsible for obtaining any necessary authorization from appropriate authorities to open Manholes and conduct work operations therein. Except in emergency situations provided that MCI makes reasonable efforts to give prior notice to Bell Atlantic, MCI's employees, agents or contractors will be permitted to enter or work in Bell Atlantic's Manholes only when an authorized employee or agent of Bell Atlantic is present or prior written authorization waiving this requirement is granted by the Bell Atlantic. Bell Atlantic's said employee or agent shall have the authority to suspend MCI's work operations in and around Bell Atlantic's Manholes if, in the reasonable judgment of said employee or agent any hazardous conditions arise or any unsafe practices are being followed by MCI's employees, agents, or contractors. MCI agrees to pay Bell Atlantic the charges, as determined in accordance with the terms and conditions of Appendix I of this Attachment VI, for having one Bell Atlantic employee or agent present when MCI's work is being done in and around Bell Atlantic's Manholes. The presence of Bell Atlantic's authorized employee or agent shall not relieve MCI of its responsibility to conduct all of its work operations in and around Bell Atlantic's Manholes in a safe and workman-like manner, in accordance with the terms of this Agreement.

9.10 Bell Atlantic shall maintain its Poles, Conduits and Rights of Way without additional charge to MCI beyond the charges provided for in this Attachment VI. MCI shall maintain its own facilities installed on or within Bell Atlantic's Poles, Conduits and Rights of Way at its sole cost. In the event of an emergency, Bell Atlantic shall use commercially reasonable efforts to begin repair of its structures containing MCI's facilities within two (2) hours of notification by MCI. If Bell Atlantic cannot begin repair within such two (2) hour period, MCI may, using qualified personnel and reasonable care, begin such repairs without the presence of Bell Atlantic personnel. MCI may climb Poles and enter the Manholes, handholes, Conduits and equipment spaces containing Bell Atlantic's facilities in order to perform such emergency maintenance, but only until such time as qualified personnel of Bell Atlantic arrives ready to continue such repairs. For emergency and non-emergency repairs, MCI may use spare Innerduct or Conduits, including the Innerduct or Conduit designated by Bell Atlantic as emergency spare for maintenance purposes; however, MCI may only use such spare Conduit or Innerduct until its repairs are completed but in no event for a period of greater than ninety (90) days, and shall terminate any non-emergency use immediately upon notification of an emergency warranting the use of such spare by Bell Atlantic or other licensees. The Parties agree to cooperate with one another with respect to the use of spare Innerduct or Conduit during any emergency affecting MCI, Bell Atlantic or other licensees.

9.11 Upon reasonable request, Bell Atlantic will provide MCIIm with space in its Manholes for racking and storage of cable and other materials of the type that Bell Atlantic stores in its Manholes.

9.12 MCIIm, contracting with Bell Atlantic or a contractor approved by Bell Atlantic, shall be permitted to add Conduit parts to Bell Atlantic's manholes or to add branches to Conduits when existing Conduits do not provide the connectivity required by MCIIm, provided that the structural integrity of the manhole is maintained and sound engineering judgment is employed.

9.13 If practicable and if additional space is required, Bell Atlantic shall within a reasonable period of time remove any retired cable from Poles or Conduit Systems to allow for the efficient use of Poles or Conduit space. Bell Atlantic will give MCIIm prior notice of its cable removal effort and MCIIm may have a representative present.

9.14 MCIIm, at its expense, will remove its Communications Facilities from Poles, Conduits or Rights of Way within sixty (60) days after:

9.14.1 Termination of the license covering such attachment or Conduit Occupancy in accordance with the terms of this Agreement; or

9.14.2 The date MCIIm replaces its existing facilities on a Pole with the placement of substitute facilities on the same Pole or another Pole or replaces its existing facilities in one Duct with the placement of substitute facilities in another Duct.

9.15 MCIIm shall remain liable for, and pay to Bell Atlantic, all fees and charges pursuant to provisions of this Agreement until all of MCIIm's facilities are physically removed from such Poles, Conduits or Rights of Way. If MCIIm fails to remove its facilities within the specified period, Bell Atlantic shall have the right to remove such facilities at MCIIm's expense and without any liability on the part of Bell Atlantic for damage to such facilities unless caused by the negligent or intentional acts of Bell Atlantic.

9.16 When MCIIm's Communications Facilities are removed from a Pole, Conduit or Right of Way, no reattachment to the same Pole, or occupancy of Conduits or Rights of Way, shall be made until:

9.16.1 MCIIm has first complied with all of the provisions of this Agreement as though no such Pole Attachment or Conduit or Right of Way occupancy had previously been made; and

9.16.2 All outstanding charges due Bell Atlantic for such previous attachment and/or occupancy have been paid in full.

9.17 MCIIm shall advise Bell Atlantic in writing as to the date on which the removal of its Communications Facilities from each Pole, Conduit or Right of Way has been completed.

Section 10. Termination of Licenses

10.1 Any license issued under this Agreement shall automatically terminate when MCIIm ceases to have authority to construct and operate its Communications Facilities on public or private property at the location of the particular Pole, Conduit or Right of Way covered by the license, but shall automatically revive for the balance of any unexpired term upon restoration of such authority within six (6) months of cessation thereof provided MCIIm pays all applicable charges in the interim period. Notwithstanding the foregoing, MCIIm shall be allowed to seek a stay or other equitable relief in order to prevent such automatic termination.

10.2 MCIIm may at any time terminate its license with respect to the attachment to a Pole, or occupancy of a Conduit or Right of Way, and remove its communications facilities by giving Bell Atlantic written notice of such intention (Appendix II, Forms C & D). Once MCIIm's Communications Facilities have been removed they shall not be reattached to such Pole, or occupy the same portion of such Conduit System or Right of Way, until MCIIm has complied with all provisions of this Agreement as though no previous license has been issued.

Section 11. Inspection of Licensee's Communications Facilities

11.1 Bell Atlantic reserves the right to make reasonable periodic inspections of any part of MCIIm's Communications Facilities attached to Poles, or occupying Bell Atlantic's Conduits or Rights of Way, to confirm adherence to the provisions of this Attachment VI.

11.2 Bell Atlantic will give MCIIm advance written notice of such inspections, except in those instances where Bell Atlantic determines that safety considerations justify the need for such an inspection without the delay of waiting until a written notice has been forwarded to MCIIm. In such cases and if practicable, Bell Atlantic shall provide telephonic notice to MCIIm.

11.3 The making of periodic inspections or the failure to do so shall not operate to impose upon Bell Atlantic any liability of any kind whatsoever nor relieve MCIIm of any responsibility, obligations or liability assumed under this Agreement.

Section 12. Unauthorized Attachment, Utilization or Occupancy

12.1 If any of MCIIm's Communications Facilities shall be found attached to Poles, or occupying Conduit or Right of Way, for which no license has been granted, Bell Atlantic without prejudice to its other rights or remedies under this Agreement may require MCIIm to submit an application pursuant to Section 7 of this Attachment within sixty (60) days after receipt of written notification from Bell Atlantic of the unauthorized attachment or

occupancy. If such application is not received by Bell Atlantic within the specified time period, MCIIm may be required to remove its unauthorized attachment or occupancy, or Bell Atlantic may, at Bell Atlantic's option, remove MCIIm's facilities at MCIIm's sole expense and risk and without liability to Bell Atlantic. In addition, MCIIm shall pay any unauthorized attachment or occupancy charge as specified in Appendix I of this Attachment.

12.2 No act or failure to act by Bell Atlantic with regard to said unlicensed use shall be deemed as a ratification of the unlicensed use; and if any license should be subsequently issued, said license shall not operate retroactively or constitute a waiver by Bell Atlantic of any of its rights or privileges under this Agreement or otherwise; provided, however, that MCIIm shall be subject to all liabilities, obligations and responsibilities of this Agreement in regard to said unauthorized use from its inception.

Section 13. Security Interest

At such time that MCIIm's Net Worth fails to exceed \$100,000,000, MCIIm shall grant Bell Atlantic a security interest in all of MCIIm's Communications Facilities now or hereafter attached to Poles, or placed in Conduit Systems or Rights of Way pursuant to this Agreement, and MCIIm agrees to perform all acts necessary to perfect Bell Atlantic's security interest under the terms of the Uniform Commercial Code, or applicable lien or security laws then in effect. If the terms of MCIIm's loan agreements and debentures preclude the grant of liens or security interests to Bell Atlantic, MCIIm shall grant to Bell Atlantic, upon Bell Atlantic's request, other permissible assurance of security for performance, satisfactory to Bell Atlantic, to cover any amounts due Bell Atlantic under this Agreement. Nothing in this Section shall operate to prevent Bell Atlantic from pursuing, at its option, any other remedies under this Agreement or in law or equity, including public or private sale of facilities under security interest or lien.

Section 14. Liability and Damages

14.1 Bell Atlantic shall exercise reasonable caution to avoid damaging MCIIm Communications Facilities and shall make an immediate report to MCIIm of the occurrence of any such damage caused by its employees, agents or contractors, and Bell Atlantic assumes all responsibility for any and all direct loss from such damage caused by Bell Atlantic's employees, agents or contractors. Bell Atlantic shall not be liable to MCIIm for any interruption of MCIIm's service or for interference with the operation of MCIIm's Communications Facilities.

14.2 MCIIm shall exercise reasonable caution to avoid damaging the facilities of Bell Atlantic and of others attached to Poles, or occupying Conduits or Rights of Way, and shall make an immediate report to the owner of facilities so damaged and MCIIm assumes all responsibility for any and all direct loss from such damage caused by MCIIm's employees, agents or contractors. MCIIm shall not be liable to Bell Atlantic for any interruption of Bell Atlantic's service or for interference with the operation of Bell Atlantic's communications facilities.

14.3 MCI shall promptly advise Bell Atlantic of all claims relating to damage of property or injury to or death of persons, arising or alleged to have arisen in any manner by the erection, maintenance, repair, replacement, presence, use or removal of MCI's facilities. Copies of all accident reports and statements made to MCI's insurer by MCI or others shall be furnished promptly to Bell Atlantic. Similarly, Bell Atlantic shall promptly advise MCI of all claims relating to damage of property or injury to or death of persons, arising or alleged to have arisen in any manner by the erection, maintenance, repair, replacement, presence, use or removal of Bell Atlantic's facilities where MCI Communication Facilities are involved in such claim. Copies of all related accident reports and statements made to Bell Atlantic's insurer by Bell Atlantic or others shall be furnished promptly to MCI.

14.4 Except as expressly provided in this Attachment VI, the Parties indemnification and liability obligations with respect to the use of Poles, Conduits and Rights of Way shall be as provided for in Part A of the Agreement.

Section 15. Insurance

15.1 MCI shall obtain and maintain insurance issued by an insurance carrier authorized to conduct business in Bell Atlantic's operating region and having an A.M. Best rating of not less than A-VII to protect Bell Atlantic and other authorized user of transport structures from and against all claims, demands, causes of actions, judgments, costs, including attorneys' fees, expenses and liabilities of every kind and nature which may arise or result from or by reason of any negligent or wrongful act of MCI related to activities covered by this Attachment VI.

15.2 The amounts of such insurance:

15.2.1 against liability due to damage to property shall be not less than \$2,000,000 as to any one occurrence and \$2,000,000 aggregate, and

15.2.2 against liability due to injury or death of persons shall be not less than \$2,000,000 as to any one person and \$2,000,000 as to any one occurrence.

15.3 MCI shall name Bell Atlantic as an additional insured and shall provide certificates by each company insuring MCI to the effect that it has insured MCI for all liabilities of MCI covered by this Agreement and that it will not cancel any such policy of insurance issued to MCI except after thirty (30) days written notice to Bell Atlantic.

15.4 All insurance required in accordance with Subsections 15.1 and 15.2 above must be effective before Bell Atlantic will authorize attachment to a Pole, or occupancy of Conduit or Rights of Way, and shall remain in force until such MCI's facilities have been removed from all such Poles, Conduits or Rights of Way. In the event that MCI shall fail to maintain the required insurance coverage, Bell Atlantic may pay any

premium thereon falling due, and MCIIm shall forthwith reimburse Bell Atlantic for any such premium paid.

15.5 Notwithstanding the foregoing, if MCIIm's net worth exceeds \$100,000,000, MCIIm may elect to self-insure in lieu of obtaining any of the insurance required by this Section 15. If MCIIm self insures, MCIIm shall furnish to Bell Atlantic, and keep current, evidence of such net worth. If MCIIm self insures, MCIIm shall release, indemnify, defend, and hold Bell Atlantic harmless against all losses, costs (including reasonable attorney's fees), damages, and liabilities resulting from claims that would otherwise have been covered by the foregoing insurance requirements (including without limitation claims alleging negligence or breach of contract).

Section 16. Authorization Not Exclusive

Nothing herein contained shall be construed as a grant of any exclusive authorization, right or privilege to MCIIm. Subject to the provisions of this Agreement, Bell Atlantic shall have the right to grant, renew and extend rights and privileges in a Non-Discriminatory manner to others not parties to this Agreement, by contract or otherwise, to use any Pole, Conduit or Right of Way covered by this Attachment VI.

Section 17. Assignment of Licenses

MCIIm shall not assign or transfer any license or any authorization granted under this Attachment VI, and such licenses shall not inure to the benefit of MCIIm's successors or assigns, without the prior written consent of Bell Atlantic unless such transfer of rights is made pursuant to an assignment of this Agreement pursuant to the provisions of Part A, Section 5 (Assignment). Bell Atlantic shall not unreasonably withhold such consent. In the event such consent or consents are granted by Bell Atlantic, then prior to such assignment becoming effective the assignee shall be required to execute Bell Atlantic's generally available license agreement covering the affected licenses.

Section 18. Additional Terminations

18.1 Subject to provisions of Section 17 of this Attachment, should MCIIm cease to provide its Telecommunications Services in or through the area covered by any license under this Attachment VI on other than a demonstrably temporary basis not to exceed six (6) months, then MCIIm's rights, privileges and authorizations under any such license issued hereunder shall automatically terminate as of the date following the final day that such Telecommunications Services are provided.

18.2 Subject to Section 18.3 below and the Force Majeure provisions of Part A of the Agreement, Bell Atlantic shall have the right to terminate any license issued hereunder whenever MCIIm is in default of any material term of this Agreement, including, but not limited to, the following conditions, as applicable to the affected facilities:

18.2.1 If MCIIm uses its Communications Facilities or maintains such facilities in violation of any Applicable Law or in aid of any unlawful act or undertaking; or

18.2.2 Subject to Section 10.1 of this Attachment, if any authorization which may be required of MCIIm by any governmental or private authority for the construction, operation, and maintenance of MCIIm's Communications Facilities is denied or revoked; or

18.2.3 If MCIIm's insurance carrier shall at any time notify Bell Atlantic or MCIIm that the policy or policies of insurance, required under Section 15 hereof, will be canceled or if Bell Atlantic reasonably determines that the requirements of Section 15 of this Attachment will no longer be satisfied.

18.3 Bell Atlantic will promptly notify MCIIm in writing of any condition(s) applicable to 18.1 and 18.2 above specifying the license and facilities in question. MCIIm shall take immediate corrective action to eliminate any such condition(s) and shall confirm in writing to Bell Atlantic within thirty (30) days following receipt of such written notice that the cited condition(s) has ceased or been corrected. If MCIIm fails to discontinue or correct such condition(s) and fails to give the required confirmation, Bell Atlantic shall so notify MCIIm and thereafter may immediately terminate MCIIm's licenses for the affected facilities under this Attachment VI. Notwithstanding the foregoing, in the event that such corrective action is incapable of correction within thirty (30) days, MCIIm shall initiate such corrective action within the thirty (30) day period referred to above and shall be allowed a reasonable time to complete such correction before MCIIm is considered in default under this Section 18. MCIIm shall use its best efforts to complete such correction as soon as possible.

18.4 In the event of termination of this Agreement, MCIIm shall remove its Communications Facilities from the affected Poles, Conduits and Rights of Way within six (6) months from the date of such termination; provided, however, that MCIIm shall be liable for and pay all fees and charges pursuant to terms of this Attachment VI to Bell Atlantic until MCIIm's Communications Facilities are actually removed from Bell Atlantic's Poles, Conduits and Rights of Way.

18.5 If MCIIm does not remove its Communications Facilities from Bell Atlantic's Poles, Conduits and Rights of Way within the applicable time periods specified in this Attachment VI, Bell Atlantic shall have the right to remove them at the expense of MCIIm and without any liability on the part of Bell Atlantic to MCIIm therefor.

Section 19. Term of Licenses

19.1 All licenses issued hereunder shall continue in effect until the Agreement expires or is terminated, unless earlier terminated by MCIIm in accordance with this Attachment VI.

19.2 Termination of licenses shall not affect MCIIm's liabilities and obligations incurred with respect thereto prior to the Effective Date of such termination.

July 2, 1997

ATTACHMENT VI

APPENDIX I**SCHEDULE OF FEES AND CHARGES**

THIS APPENDIX I, effective as of _____, is an integral part of the License Agreement between Bell Atlantic - Pennsylvania, Inc. (Bell Atlantic) and MCImetro Access Transmission Services, Inc. (MCIIm), dated _____ and contains the fees and charges governing the use of Bell Atlantic's Poles, Conduits and Rights of Way by MCIIm's Communications Facilities.

1. Attachment, Utilization, and Occupancy Fees**1.1 General**

- a) Attachment, utilization, and occupancy fees commence on the date set forth in Section 7.5 of the License Agreement. Subject to clause c) below, such fees cease as of the final day on which the attachment or occupancy is physically removed or is discontinued.
- b) A one (1) month minimum charge is applicable for all attachment, and occupancy accommodations.
- c) Fees shall be payable semi-annually in advance on the first day of January and July. No fees shall be refunded for any licenses terminated and attachments or occupancies removed during any period for which such advance payments have been made.
- d) The total attachment, and occupancy fees due hereunder, shall be based upon the number of Poles and Duct feet of Conduit for which licenses have been issued before the first day of January and the first day of July each year. Each semi-annual payment shall include a proration of the monthly attachment, and occupancy charges applicable for attachments, or occupancy initially authorized by Bell Atlantic during the preceding six (6) month period. Any such fees shall be computed in accordance with Applicable Law.

2. Fees**2.1 Application and Engineering Survey Fee**

- a) Per Pole attached \$
- b) Per Manhole/per Duct run \$
- c) Right of Way (determined on a case by case basis)

2.2 Annual Fee

- | | | |
|--|--|----|
| a) Horizontal Attachment | | |
| Per attachment | | \$ |
| b) Vertical Attachment | | |
| Per Pole attached (\$/Vertical foot of occupancy) | | \$ |
| c) Per foot of cable placed in the | | |
| Conduit | | \$ |
| d) Right of Way (determined on a case by case basis as mutually agreed by the parties) | | |

2.3 Other Charges

Computation

Charges for all work performed by Bell Atlantic or by its authorized representative in connection with the furnishing of Pole, Conduit and Right of Way accommodations as covered by this Agreement shall be based upon the cost to Bell Atlantic for performance of such work in accordance with Applicable Law, if any. Such charges will apply for, but not be limited to, Prelicense Survey; Make-Ready Work; inspection and removal of MCIIm's Communications Facilities, where applicable; and supervision by one (1) employee, at the option of the Bell Atlantic, of MCIIm-performed work in and around the immediate vicinity of a Conduit System limited to one (1) employee.

2.4 In the event that it is determined that MCIIm has made attachment in or on any Pole, Conduit or Right of Way of Bell Atlantic for which a License has not been executed, MCIIm shall be obliged to: a) apply for such license immediately; and b) pay to Bell Atlantic fees for said attachment for the entire period of time which can be reasonably established as the date of MCIIm's attachment, but in no case less than one (1) year prior to date of discovery.

APPENDIX II

ADMINISTRATIVE FORMS AND NOTICES

THIS APPENDIX II, effective as of _____, is an integral part of the License Agreement between Bell Atlantic - Pennsylvania, Inc. (Bell Atlantic), and MCI metro Access Transmission Services, Inc., (MCIIm), dated _____ and contains the administrative forms governing the use of Bell Atlantic's Poles and Conduit by MCIIm's Communications Facilities.

INDEX OF ADMINISTRATIVE FORMS

Application and Pole Attachment License

A-1

Pole Details

A-2

Application and Conduit Occupancy License

B-1

Conduit System Diagram

B-2

Cable to occupy Conduit and Equipment to be placed in Manholes

B-3

Authorization for Make-Ready Work

B-4

Notification of Removal of Pole Attachments

C

Notification of Removal of Conduit Occupancy

D

APPLICATION AND POLE ATTACHMENT LICENSE

Bell Atlantic - Pennsylvania, Inc.

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19 ____ , application is hereby made for a nonexclusive license to attach communication facilities to _____ Poles as indicated on Form A-2. This request will be designated:

Pole Application # _____

Enclosed is a check in the amount of \$ _____ to cover the cost of the Pre-License Survey. (Appendix I)

MCIIm: _____

Signed: _____

Dated: _____

Tel. No: _____

.....
Permission is hereby granted to attach communication facilities to _____ Poles as indicated on the attached Form A-2.

Atlantic)

Bell Atlantic - Pennsylvania, Inc. (Bell

Signed: _____

Dated: _____

Tel. No: _____

Applications shall be numbered in sequential ascending order by MCIIm. Bell Atlantic will process applications in ascending order according to the applications numbers assigned by MCIIm.

(MCIIm)

(Central Office Area)
#)

(Pole Application

POLE DETAILS

	Telephone Pole #	Power Pole #	Location	Type Attach		Make Ready
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

APPLICATION AND CONDUIT OCCUPANCY LICENSE

Bell Atlantic - Pennsylvania, Inc.

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19_____, application is hereby made for a license to occupy the Conduit system shown on Form B-2, with the cable and equipment detailed on Forms B-3 and B-4. This request will be designated:

Conduit Application # _____

Enclosed is a check in the amount of \$ _____ to cover the cost of the Pre-License Survey. (Appendix I)

(MCIIm)
Signed: _____
Dated: _____
Tel. No: _____

.....
Permission is hereby granted to occupy Bell Atlantic's Conduit system, as indicated on the attached Form B-2, with cable equipment and facilities specified on the attached Forms B-3. The Duct footage for this License is _____

Bell Atlantic - Pennsylvania, Inc.
(Bell Atlantic)
Signed: _____
Dated: _____
Tel. No: _____

Applications shall be numbered in sequential ascending order by MCIIm. Bell Atlantic will process applications in ascending order according to the applications numbers assigned by MCIIm.

(MCIIm)

(Area)

(Conduit Application #)

SAMPLE CONDUIT SYSTEM DIAGRAM

CONDUIT SYSTEM DIAGRAM

_____ (MCIIm)

_____ (Area)

_____ (Conduit Application #)

CABLE TO OCCUPY CONDUIT

	Type Cable		Weight Per Ft.	Maximum Voltage to Ground AC/ DC	Maximum Current in a Conductor	Type Sheath
1						
2						
3						
4						
5						

EQUIPMENT TO BE PLACED IN MANHOLES

	Location	Type	Height	Width	Depth	Weight
1						
2						
3						
4						
5						

AUTHORIZATION FOR MAKE-READY WORK

Following is a summary of the estimated charges for the following application:

Pole attachment application number _____

or

Conduit occupancy application number _____

or

Right of Way occupancy application number _____

Estimated cost \$ _____

Note that in the event that an advance payment is required, actual costs will be billed at the conclusion of the work.

(Bell Atlantic)

By: _____
(Signature of authorized person)

Its: _____
(Title of authorized person)

Date: _____

Telephone Number: _____

Order Number: _____

I hereby acknowledge and agree to pay all charges, as above, and authorize work to begin.

(MCIIm)

By: _____
(Signature of authorized person)

Its: _____
(Title of authorized person)

Date: _____

Telephone Number: _____

NOTIFICATION OF REMOVAL OF POLE ATTACHMENTS

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19____, notice is hereby given that the following Pole attachments have been removed.

	Telephone Co. Pole	Joint Use Pole	Location	Date Removed
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

SUBMITTED:

APPROVED:

(MCIIm)

Bell Atlantic - Pennsylvania, Inc.
(Bell Atlantic)

Signed: _____

Signed: _____

Dated: _____

Dated: _____

NOTIFICATION OF REMOVAL OF CONDUIT OCCUPANCY

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19____, notice is hereby given that the occupancy of the following Conduit has been removed.

	Conduit Location	Conduit Application #	Date Removed
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

SUBMITTED:

APPROVED:

(MCIIm)

Bell Atlantic - Pennsylvania, Inc.
(Bell Atlantic)

Signed: _____

Signed: _____

Dated: _____

Dated: _____

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Attachment VII

NUMBER PORTABILITY

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ATTACHMENT VII

NUMBER PORTABILITY

Section 1. Provision of Number Portability

1.1 Each Party shall provide Number Portability in accordance with Applicable Law. Currently available Interim Number Portability (“INP”) shall also be provided by each Party to the other in accordance with Applicable Law. Each Party shall use commercially reasonable efforts to provide INP with a minimum impairment of functionality, quality, reliability and convenience to subscribers of each other’s services.

1.2 The donor Party will provide the porting Party INP and NP for subscribers moving to a different location (where Technically Feasible for INP), or staying at the same location, within the same Rate Center area. INP and NP are not available for other purposes, such as the creation of new vanity numbers.

Section 2. Interim Number Portability (“INP”)

2.1 Each Party shall make available INP by Remote Call Forwarding (“RCF”), Flex Direct Inward Dialing (“FLEX-DID”) or LERG reassignment (in full NXX codes only). The porting Party must order the appropriate services and facilities (e.g., trunk groups) from the donor Party.

2.1.1 Remote Call Forwarding: RCF is an INP method to provide subscribers with service-provider portability by redirecting calls within the telephone network. When RCF is used to provide INP, calls to the ported number will first route to the Party’s Switch to which the ported number was previously assigned. Such Switch will then forward the call to a number associated with the porting Party’s designated Switch to which the number is ported. Each Party may order additional paths to handle multiple simultaneous calls to the same ported telephone number.

2.1.2 FLEX-DID is an INP method that makes use of direct inward dialing trunks. Each FLEX-DID trunk group used for INP is dedicated to carrying traffic between the donor Party’s Switch and the porting Party’s Switch. Traffic on these trunks cannot overflow to other trunks, so the porting Party must order a trunk group size it believes results in conservative engineering. Also, inter-Switch signaling is usually limited to multi-frequency (“MF”). This precludes passing calling line identification to the porting Party’s Switch.

2.1.3 LERG Reassignment: Portability for an entire NXX of numbers shall be provided, when mutually agreed, by utilizing reassignment of the block to the porting Party through the Local Exchange Routing Guide (“LERG”). Updates to translations in the donor Party’s switching offices from which the NXX code is

reassigned will be made by the donor Party by the date on which national LERG changes become effective.

2.2 Other Currently Available Number Portability Provisions:

2.2.1 Each Party shall exchange with the other Party SS7 TCAP messages as required for the implementation of Custom Local Area Signaling Services ("CLASS") or other features available in their respective networks, as are Technically Feasible to exchange.

2.2.2 Promptly following receipt of an INP order for a number served by a particular End Office Switch, each Party shall disclose to the other any technical or capacity limitations that would prevent use of a requested INP method in a particular switching office.

2.2.2.1 In all cases in which installation or removal of INP is to be coordinated with the installation, modification, or removal of another service (*e.g.*, an Unbundled Local Loop), the Parties shall follow the coordination procedures set forth in Attachment VIII, Section 2.2.3.

2.2.3 When any INP method available hereunder is used to port a subscriber, the donor Party must maintain the LIDB record for that number to reflect appropriate conditions as reported to it by the porting Party and to provide such LIDB information in accordance with any LIDB agreement subsequently entered between the Parties.

2.2.4 The donor Party shall send a CARE transaction 2231 to notify the appropriate IXC that access is now provided by the porting Party for that number.

2.2.5 The INP service offered herein shall not initially apply to NXX Codes 555, 915, 950, or 976, or for Feature Group A or coin telephone service, because of the special billing characteristics of such services. Upon a Bona Fide Request from either Party, the provisions of INP for these services will be mutually negotiated between the Parties and provided to the extent feasible under negotiated rates, terms, and conditions. INP shall not apply for any arrangement that would render the forwarded call toll traffic.

Section 3. Number Portability ("NP")

3.1 The Parties acknowledge that they disagree on the form of NP that should be adopted and prescribed by the FCC, and accordingly hereby reserve their rights to advocate their respective positions before legislative, judicial, and regulatory bodies, notwithstanding any other provisions of this Agreement. To the extent that this Agreement includes provisions regarding the implementation of the Location Routing Number ("LRN") method of NP, such provisions shall apply only if it is ordered that LRN shall be deployed in Pennsylvania, and only to the extent required by FCC Rules and Regulations, and the presence of such provisions in this Agreement shall not be deemed a waiver of

Bell Atlantic's position that LRN should not be deployed in Pennsylvania. If another NP methodology is adopted for Pennsylvania, the Parties shall promptly modify any provisions of this Agreement that refer to or assume the implementation of LRN to replace it with such other methodology.

3.2 The requirements for NP, when available, shall include the following:

3.2.1 Notwithstanding any other provision of this Agreement, each Party shall provide NP service in accordance with FCC Rules and Regulations.

3.2.2 To the extent required by FCC Rules and Regulations and to the extent Technically Feasible, the donor Party's NP network architecture shall not subject the porting Party to any degradation of service compared to the donor Party in any material measure, including switching and transmission quality, call set-up time and post-dial delay, and the porting Party shall not be required to rely on the donor Party's network for calls completing to its ported subscribers; provided, however, that a Query On Release system may be used by donor Party if expressly permitted under Applicable Law.

3.2.3 After an office is equipped with NP, and after an NXX is defined as portable, translations will be changed in the donor's LNP-capable switches which trunk directly to such office to open the NXX(s) for database queries. Any NXX with at least one ported number in the NXX shall be defined as portable.

3.2.4 Upon introduction of LRN in a metropolitan statistical area/county, the associated tandems (local and access) shall be among the first converted, with no unreasonable delay. All portable NXXs shall be recognized in these tandems as portable, with queries launched from these switches.

3.2.5 During the process of porting a subscriber, the donor Party shall implement the 10-digit trigger feature when Technically Feasible. When the donor Party receives the porting request, it shall use reasonable efforts to apply the 10-digit trigger to the subscriber's line at least twenty-four (24) hours prior to the order due date in order to facilitate the smooth transitioning of the subscriber to the new provider.

3.3 Joint Cooperation

3.3.1 At such time that NP is available, both MCI and Bell Atlantic shall:

3.3.1.1 Support emergency and Operator Services in a manner to be mutually agreed.

3.3.1.2 Use commercially reasonable efforts to use scarce numbering resources efficiently and administer such resources in a competitively neutral manner.

3.3.1.3 Cooperate with each other so that each carrier shall be able to rate and bill different types of calls.

3.3.1.4 Cooperate with each other to apply NP consistently.

3.3.1.5 Upon the agreement of the Parties or issuance of applicable FCC and/or Commission order(s) or regulations mandating the adoption of a NP arrangement, the Parties will commence migration from INP to the agreed upon or mandated NP arrangement as quickly as practically possible (and in any event no later than the migration dates set forth in the applicable FCC and/or Commission order(s) or regulations) while minimizing interruption or degradation of service to their respective subscribers. Once NP is implemented, either Party may withdraw, at any time and at its sole discretion, its INP offerings, subject to advance notice to the other Party and coordination to allow the seamless and transparent conversion of INP subscribers' numbers to NP. Upon implementation of NP pursuant to FCC or Commission regulation, both Parties agree to conform and provide such NP. To the extent NP rates or cost recovery mechanisms are not established by the applicable FCC or Commission order or regulation mandating the adoption of NP, the Parties will negotiate in good faith the charges or cost recovery mechanism for NP service at such time as a NP arrangement is adopted by the Parties.

3.4 Location Routing Number ("LRN")

3.4.1 If and to the extent that the FCC requires implementation of LRN as the NP methodology applicable in Pennsylvania, Bell Atlantic and MCI shall work cooperatively to implement an LRN-NP solution when Technically Feasible.

3.4.2 A ten-digit code, consistent with the North American Numbering Plan, called the location routing number ("LRN") shall be used as a network address for each Switch that terminates subscriber lines, (*i.e.*, an End Office). LRN shall support existing six-digit routing and may be implemented without changes to existing Switch routing algorithms. In existing End Offices, the LRN shall be selected from one of its existing NPA-NXXs. New End Offices shall be assigned LRNs through normal administrative processes.

3.4.3 LRN employs an "N-1" query strategy for interLATA or intraLATA toll calls, by which the originating carrier will pass the call to the appropriate toll carrier who will perform a query to an external routing database and route the call to the appropriate terminating local carrier either directly or through an access tandem office. For a local call to a ported number, the originating carrier is the "N-1" carrier. It will perform an external database query and pass the call to the appropriate terminating carrier. The "N-1" methodology will be used to extend portability on a phased, region-by-region basis and it does not place Bell Atlantic, MCI or other carriers needlessly in the call path.

3.4.4 The Parties shall furnish each other with the first six (6) digits of the originating LRN when they supply each other with the Jurisdiction Information Parameter (“JIP”) in the Initial Address Message (“IAM”), assuming the necessary LRN software is available from the Switch manufacturer and is loaded in the specific Switch that will populate the JIP parameter per the timetable set by the FCC and Commission.

3.4.5 Each Party agrees to use commercially reasonable efforts to begin the introduction of LRN to end user subscribers who may begin changing local service providers and retaining their existing telephone number based on the time line set out by the FCC in its Telephone Number Portability Order (CC Docket No. 95-116), or as per a State order if such time for introduction of LRN set by the State is earlier than would result under the FCC Order.

3.5 Additional NP Requirements (when available)

3.5.1 In the absence of Query On Release, for local calls to a portable NXX, each Party shall query an external database as soon as the call reaches the first NP-capable Switch in the call path. An LRN-capable originating Switch shall query on a local call to a portable NXX native to another Central Office as soon as the LNP trigger is encountered and it is determined that it (the originating Switch) does not serve the dialed number.

3.6 SMS Administration

3.6.1 Each Party will work cooperatively with other local service providers to establish the NP service management system (“SMS”). The SMS shall be administered by a neutral third party, to provide for the efficient porting of numbers between carriers. Subject to Applicable Law, there must be one exclusive Number Portability Administration Center (“NPAC”) per portability State or region, and each Party shall provide all information uploads and downloads regarding ported numbers to/from, respectively, the exclusive NPAC. Bell Atlantic and MCI shall cooperate to facilitate the expeditious deployment of LRN-based NP through the process prescribed by the FCC and the Commission, including, but not limited to, participation in the selection of a neutral third party and development of SMS, as well as SMS testing for effective procedures, electronic system interfaces, and overall readiness for use consistent with that specified for provisioning in this Agreement.

Section 4. Requirements for INP and NP

4.1 INP Cut-Over Process

The following cut-over coordination procedures shall apply for INP-ported numbers. NP cut-over procedures shall be reasonably agreed by the Parties at such time as the capability has been developed.

4.1.1 Upon request by the porting Party, the donor Party will apply the following coordination procedures to cut-overs of ported numbers.

4.1.2 The porting Party shall request the porting of a number from the donor Party by delivering to the donor Party a valid electronic transmittal service order (when available) or another mutually agreed-upon type of service order. Such service order shall be provided in accordance with industry format and specifications or such format and specifications as may be agreed to by the Parties. Within forty-eight (48) hours of the donor Party's receipt of such valid service order, the donor Party shall provide the porting Party the firm order commitment date and time according to the installation time frames set forth in Section 4.2 below.

4.1.3 On each porting order, the Parties will agree on a cut-over time at least forty-eight (48) hours before that cut-over. RCF cut-over time will be defined as a fifteen (15) to thirty (30) minutes per line window within which both Parties will make telephone contact to complete the cut-over. The cut-over window for other methodologies will be agreed to by the Parties.

4.1.4 Within the appointed fifteen (15) to thirty (30) minute cut-over time, the porting Party will call the donor Party to coordinate cut-over work and when the donor Party is reached in that interval, such work will be promptly performed.

4.1.5 If the porting Party requires a change in scheduling, it must contact the donor Party to issue a supplement to the original order. The negotiations process to determine the date and time of cut-over will then be reinitiated pursuant to Section 4.1.3 above.

4.1.6 If the porting Party is not ready within the appointed interval and if it had not called to reschedule the work at least two (2) hours prior to the start of the interval, the porting Party shall be liable for the non-recurring charge for such work for the missed appointment. In addition, non-recurring charges, if applicable, for the rescheduled appointment will apply.

4.1.7 If the donor Party is not available or not ready at any time during the appointed fifteen (15) to (30) minute interval, the Parties will reschedule and the donor Party will waive the non-recurring charge, if applicable, for such work whenever it is performed pursuant to an agreed-upon rescheduling.

4.1.8 Beginning nine (9) months from the Effective Date, if unusual or unexpected circumstances prolong or extend the time required to accomplish the coordinated cut-over, the Party responsible for such circumstances is responsible for the reasonable labor charges of the other Party. Delays caused by the subscriber are the responsibility of the porting Party.

4.2 Installation Time Frames

4.2.1 Installation time frames for RCF INP will be as follows:

4.2.1.1 Lines and Trunks:

4.2.1.1.1 For installations of RCF INP that are not installed and/or coordinated with in conjunction with any other service or service disconnect ordered from Bell Atlantic, installation time frames will be as follows: orders of 1-20 lines in four (4) business days; orders of 21-30 lines in seven (7) business days; orders over 30 lines will have an installment time frame as mutually agreed by the Parties; and

4.2.1.1.2 Notwithstanding Section 4.2.1.1.1, installation time frames for RCF INP when installed in conjunction with another service ordered from Bell Atlantic will be as follows: orders of 1-10 lines in six (6) business days; orders of 11-20 lines in ten (10) business days; orders of twenty-one (21) or more lines will have an installment time frame mutually agreed upon by the Parties.

4.2.1.2 The installation time frames set forth in Section 4.2.1.1 shall be applied as follows:

4.2.1.2.1 The time frames set forth in Section 4.2.1.1 shall apply on average to the order types and sizes specified therein; and

4.2.1.2.2 No individual order shall be installed in a time frame more than twice the length of the time frame specified in Section 4.2.1.1 for the order type and size, except in unusual circumstances. Unusual circumstances shall qualify to modify any time frame only to the extent that the unusual circumstances have comparable effects on Bell Atlantic's customer services and INP services for other CLECs.

4.3 INP Call Referral Announcements

4.3.1 Within forty-five (45) days after the Effective Date, Bell Atlantic will provide MCIIm a cost-based cost estimate and proposed implementation schedule for the development and implementation of the capability to allow MCIIm to order all referral announcements, and specify the particular announcement from Bell Atlantic's standard set of call referral announcement options, on a per telephone number basis, for telephone numbers which MCIIm has ported from Bell Atlantic to MCIIm and for which INP measures, at MCIIm's direction, have been terminated. Upon MCIIm's acceptance of the cost estimate and proposed implementation schedule (adjusted as necessary to reflect any significant delay in

such acceptance), Bell Atlantic will develop and implement said capability and MCIIm will pay the cost thereof, as set forth in the accepted cost estimate.

4.4 Engineering and Maintenance

4.4.1 Bell Atlantic and MCIIm will cooperate with the objective that the performance of trunking and signaling capacity shall be engineered and managed at Parity. Additional specific engineering and maintenance requirements shall apply as specified in this Agreement.

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ATTACHMENT VIII

BUSINESS PROCESS REQUIREMENTS

Section 1. General Business Requirements

1.1 Procedures

1.1.1 Contact with Subscribers

1.1.1.1 Each Party at all times shall be the primary contact and account control for all interactions with its own subscribers regarding such Party's services purchased by the subscribers, except as otherwise agreed. A Party's subscribers shall include active subscribers as well as those for whom it has service orders pending.

1.1.1.2 With respect to a Party that may receive inquiries from the other Party's subscribers, or otherwise have opportunity for such subscriber contact, the Party shall: (i) provide mutually agreed referrals to subscribers who inquire about the other Party's services or products; (ii) not disparage or discriminate against the other Party, or its products or services; and (iii) not provide information about its own products or services during that same inquiry or subscriber contact unless asked by the subscriber.

1.1.1.3 Each Party shall protect the Proprietary Information of the other Party and the other Party's subscribers in accordance with Section 22 of Part A.

1.1.2 Expedite, Escalation, and Disaster Procedures

1.1.2.1 No later than thirty (30) days after the Effective Date of this Agreement, the Parties shall develop mutually acceptable escalation and expedite procedures which may be invoked at any point in the service ordering, provisioning, maintenance, and subscriber usage data transfer processes to facilitate rapid and timely resolution of disputes. In addition, the Parties will establish intercompany contacts lists for purposes of handling subscriber and other matters which require attention/resolution outside of normal business procedures within thirty (30) days after the Effective Date of this Agreement. Each Party shall provide to the other an updated escalation contacts list promptly following any changes thereto.

1.1.3 **Subscriber of Record**

1.1.3.1 Each Party shall recognize the other as the subscriber of record for all services ordered by the other Party and shall send all notices, invoices, and information which pertain to such ordered services directly to such other Party. Each Party shall provide the other Party with addresses to which such notices, invoices, and information shall be sent.

1.1.4 **Work Center Interface Procedures**

1.1.4.1 Bell Atlantic and MCI shall, as early as practicable, but no later than ninety (90) days, after the Effective Date of this Agreement, develop and implement work center interface procedures where appropriate for a function/business process provided by a Party. Each Party shall provide reasonable notice to the other Party of changes to its processes.

1.2 **Service Offerings**

1.2.1 **Changes in Retail Service Offerings**

1.2.1.1 Bell Atlantic shall notify MCI of any proposed changes in the terms and conditions under which Bell Atlantic offers Telecommunications Services to subscribers who are not Telecommunications Service providers or carriers, including, but not limited to, the introduction or discontinuance of any features, functions, services, promotions, or changes in retail rates. Such notification shall be by such public notice, including Tariff filings, as is required by State law or Commission rule. In addition, Bell Atlantic shall provide notification by posting such changes on Bell Atlantic's World Wide Web site within five (5) business days after the date of the public notice required by State law or Commission rule.

1.2.2 **Essential Services**

1.2.2.1 Bell Atlantic shall designate an access line as an essential service line ("ESL") upon MCI's request. MCI will be responsible for following National Security Emergency Preparedness ("NSEP") guidelines for designating ESL services.

1.2.3 **Deaf and Disabled Services**

1.2.3.1 The Parties shall cooperate to provide services necessary to serve deaf and disabled service subscribers.

1.2.4 Training Support

1.2.4.1 Each Party will provide the other Party with sufficient operational instruction to enable the purchasing Party to access any of the providing Party's operational support systems provided for elsewhere in this Agreement.

1.2.5 Carrier Identification Codes

1.2.5.1 The providing Party shall provide to the purchasing Party a list of active carrier identification codes ("CIC") and shall provide occasional updates, as required, for each of the providing Party's access tandems or functional equivalent; provided, however, that MCI shall be obligated to provide such information only for CIC codes on any MCI access tandem or functional equivalent thereof which do not appear on the most current list provided to MCI by Bell Atlantic for such access tandem or functional equivalent thereof.

Section 2. Ordering and Provisioning

2.1 General Business Requirements

2.1.1 Ordering and Provisioning Parity

2.1.1.1 During the term of this Agreement, Bell Atlantic shall provide necessary ordering and provisioning business process support as well as those technical and systems interfaces as may be required to enable MCI to provide Local Resale services and Network Elements at parity with Bell Atlantic.

2.1.2 CLEC Sales and Support Center ("CSSC")/Single Point of Contact ("SPOC")

2.1.2.1 Bell Atlantic shall provide up to three (3) CSSCs or reasonable equivalent which shall serve as MCI's SPOC for all activities involved in the ordering and provisioning of Bell Atlantic's Network Elements and Local Resale services. The SPOC shall receive orders (through an electronic interface) twenty-four (24) hours a day, seven (7) days a week.

2.1.2.2 The SPOC shall provide service during the hours of 8:30 a.m. to 4:30 p.m., EST, Monday through Friday (or such additional hours as Bell Atlantic shall provide service to its own subscribers) answered by personnel reasonably trained to answer questions and resolve problems in connection with the ordering and provisioning of Network Elements and Local Resale services.

2.1.2.3 Bell Atlantic shall provide, through electronic interfaces, provisioning and premises visit installation support for coordinated

scheduling, status, and dispatch capabilities from 7:00 a.m. to other 10:00 p.m., EST, Monday through Friday, and Saturday from 7:00 a.m. to 8:00 p.m., EST, or for such additional hours as Bell Atlantic shall provide service to its own subscribers. Additional charges will be incurred for dispatches outside of Bell Atlantic's normal work days and work hours.

2.1.3 Street Address Guide ("SAG")

2.1.3.1 Commencing with the Effective Date of this Agreement, if Bell Atlantic should cease using postal information to develop and maintain its SAG, then upon terms and conditions to be mutually agreed, Bell Atlantic shall provide to MCIIm SAG data, or its equivalent, in a standard electronic format.

2.1.4 Subscriber Payment History

2.1.4.1 Neither Party shall refuse service to a potential subscriber of the other Party on the basis of the subscriber's past payment history with the providing Party, provided that the purchasing Party shall be responsible for payment to the providing Party for purchased services with respect to such subscriber regardless of the payment performance of the subscriber.

2.1.5 Carrier Selection

2.1.5.1 For Local Resale services or Network Elements, Bell Atlantic shall provide to MCIIm, when ordered by the Commission, the capability to order local service, intraLATA, and interLATA service by entering MCIIm's subscriber's choice of carrier on a single order. Bell Atlantic shall provide MCIIm with the capability to order separate interLATA and intraLATA carriers on a line or trunk (with line side treatment) basis.

2.1.5.2 Where intraLATA toll carrier selection is not implemented, Bell Atlantic agrees to provide intraLATA toll services for Local Resale and Local Switching, to resold or unbundled Switch lines provided to MCIIm. Where intraLATA toll carrier selection is implemented, Bell Atlantic will route toll calls to the appropriate carrier as designated by MCIIm.

2.1.6 Notification to Long Distance Carrier

2.1.6.1 Subject to Section 15 of Part A, Bell Atlantic agrees to notify MCIIm using OBF-approved CARE transactions, whenever an MCIIm subscriber who is provided local service through Local Resale or Local Switching changes PIC status.

2.1.6.2 Subject to Section 15 of Part A, Bell Atlantic shall support and implement new transaction code status indicators ("TCSIs") defined by OBF in support of Local Resale to enable MCIIm to provide seamless subscriber service.

2.1.6.2.1 Bell Atlantic shall implement TCSIs used in conjunction with the new local service provider (“LSP”) identification code for handling account maintenance, subscriber service, and such other codes as OBF may define.

2.1.6.2.2 In addition, Bell Atlantic shall implement TCSIs used in conjunction with the new ported telephone number field to link “shadow” and ported telephone numbers in support of INP.

2.1.6.3 Bell Atlantic shall provide to MCIIm the LSP ID on purchased lists of MCIIm’s PIC’d and non-PIC’d subscribers.

2.1.6.4 Bell Atlantic shall provide the ported telephone number on purchased CARE lists of MCIIm’s PIC’d and non-other party’s PIC’d subscribers.

2.1.7 Number Administration/Number Reservations

2.1.7.1 Until number administration functions are assumed by a neutral third-party in accordance with FCC Rules and Regulations, Bell Atlantic shall assign NXXs to MCIIm on a Non-Discriminatory Basis with no restrictions other than those imposed upon all carriers under the North American Numbering Plan or comparable conventions. In addition, Bell Atlantic shall provide activation of translations routing of MCIIm’s NXXs to meet established national implementation dates. Further, Bell Atlantic shall provide MCIIm with access to abbreviated dialing codes, access arrangements for 555 line numbers, and the ability to obtain telephone numbers, including specific numbers where available, while a subscriber is on the phone with MCIIm, all at Parity. Bell Atlantic shall provide the same range of number choices to MCIIm, including choice of exchange number, as Bell Atlantic provides its own subscribers. Reservation and aging of numbers shall remain Bell Atlantic’s responsibility.

2.1.7.2 Where mutually agreed, which agreement shall not be unreasonably withheld, the Parties will implement LERG reassignment for particular NXX codes.

2.1.7.3 Bell Atlantic shall accept MCIIm orders for vanity numbers and blocks of numbers for use with complex services including, but not limited to, direct inward dialing, CENTREX, and hunting arrangements, as reasonably requested by MCIIm, in accordance with applicable Tariffs, and at Parity.

2.1.7.4 For simple services number reservations, Bell Atlantic shall provide real-time confirmation of the number reservation. For number reservations associated with complex services, Bell Atlantic shall provide

confirmation of the number reservation within two (2) business days of MCIIm's request. Number reservations shall be provided in accordance with applicable Tariffs and at Parity with that provided Bell Atlantic's own subscribers.

2.2 Service Order Process Requirements

2.2.1 OBF Compliance

2.2.1.1 Subject to Section 15 of Part A and in accordance with OBF standards, Bell Atlantic and MCIIm shall generally follow the OBF-developed ordering and provisioning process standards. These include pre-order service inquiry, pre-order service inquiry response, firm order acknowledgment/rejection, firm order confirmation, and those to be developed for delay notification, completion notification and the like. Each Party agrees to work cooperatively to implement future relevant OBF-developed processes related to ordering and provisioning.

2.2.2 Service Migrations and New Subscriber Additions

2.2.2.1 Party A shall not require a disconnect order from a subscriber, another local service provider, or any other entity, to establish Party B's local service for a subscriber and/or migrate a subscriber to Party B's local service. Party B shall be responsible for obtaining a Third-Party Verification ("TPV"), Letter of Authorization ("LOA"), or the like which satisfies FCC and Commission requirements.

2.2.2.2 With respect solely to Local Resale services available for resale hereunder, Bell Atlantic shall not disconnect any such service or associated features at any time during the migration of a subscriber to MCIIm service without the prior consent of MCIIm, unless such disconnection is necessitated by the change in service requested by MCIIm. Upon completion of such migration, MCIIm shall be responsible for payment for any such non-disconnected service as set forth in Attachment I to this Agreement.

2.2.2.3 Party A shall recognize Party B as an agent for the subscriber in coordinating the disconnection of services provided by Party A or another carrier. MCIIm shall be responsible for obtaining a TPV, LOA, or the like which satisfies FCC requirements. In addition, when coordinated cut-over services are ordered, Bell Atlantic shall not disconnect any Bell Atlantic services provided to the Bell Atlantic subscriber until MCIIm notifies Bell Atlantic that MCIIm's service has been installed and operational, except where existing Bell Atlantic facilities are being reused.

2.2.2.4 Unless otherwise directed by MCIIm, when MCIIm orders Local Resale services or Local Switching, all trunk or telephone numbers

currently associated with existing POTS services shall be retained without loss of feature capability and without loss of associated ancillary services, including, but not limited to, Directory Assistance Services and 911/E911 capability offered by Bell Atlantic, provided that MCIIm includes such features and ancillary services in its orders.

2.2.3 Cut-Over Process

The following cut-over coordination procedures shall apply for conversions of “live” Telephone Exchange Services to Unbundled Local Loops, including conversions to Unbundled Local Loops with INP, and to any other conversions that either Party determines must be coordinated to avoid a substantial risk of significant subscriber service disruption. Although written below to describe only conversions from Bell Atlantic to MCIIm, these and other mutually agreed-upon coordination procedures shall apply reciprocally for the “live” cutover of subscribers from Bell Atlantic to MCIIm and from MCIIm to Bell Atlantic. NP cut-over procedures shall be reasonably agreed by the Parties at such time as the capability has been developed.

2.2.3.1 MCIIm shall request cut-over coordination by delivering to Bell Atlantic a valid electronic transmittal service order (when available) or another mutually agreed-upon type of service order. Such service order shall be provided in accordance with industry format and specifications or such format and specifications as may be agreed to by the Parties. Within forty-eight (48) hours after Bell Atlantic’s receipt of such valid service order, Bell Atlantic shall provide MCIIm the FOC date and time according to the installation time frames set forth in Section 2.5 below and for NP, Attachment VII, Section 4.2.

2.2.3.2 On each order, the Parties will agree on a cut-over time at least forty-eight (48) hours before that cut-over. Cut-over time will be defined as a fifteen (15) to thirty (30) minutes per line window within which both Parties will make telephone contact to complete the cut-over. The cut-over window for other methodologies will be agreed to by the Parties.

2.2.3.3 Within the appointed fifteen (15) to thirty (30) minute cut-over time, Bell Atlantic will call MCIIm to coordinate cut-over work and when MCIIm is reached in that interval, such work will be promptly performed.

2.2.3.4 If MCIIm requires a change in scheduling, it must contact Bell Atlantic to issue a supplement to the original order. The negotiations process to determine the date and time of cut-over will then be reinitiated as usual pursuant to Section 2.2.3.3.

2.2.3.5 If MCIIm is not ready within the appointed interval and if it had not called to reschedule the work at least two (2) hours prior to the start of the interval, MCIIm shall be liable for the non-recurring charge for such

work for the missed appointment. In addition, non-recurring charges, if applicable, for the rescheduled appointment will apply.

2.2.3.6 If Bell Atlantic is not available or not ready at any time during the appointed fifteen (15) to thirty (30) minute interval, the Parties will reschedule and Bell Atlantic will waive the non-recurring charge, if applicable, for such work whenever it is performed pursuant to an agreed-upon rescheduling.

2.2.3.7 Beginning nine (9) months from the Effective Date, if unusual or unexpected circumstances prolong or extend the time required to accomplish the coordinated cut-over, the Party responsible for such circumstances is responsible for the reasonable labor charges of the other Party. Delays caused by the MCI subscriber are the responsibility of MCI.

2.2.4 Intercept Treatment and Transfer of Service Announcements

2.2.4.1 For Local Resale services, Bell Atlantic shall provide unbranded basic intercept treatment and transfer of service announcements to MCI's subscribers.

2.2.4.2 When an end user customer changes its service provider from one Party to the other Party and does not retain its original telephone number, the Party formerly providing service to such end user shall provide a referral announcement on the end user's former telephone number that provides the end user's new number or other appropriate information to the extent known. Referral announcements shall be provided reciprocally, free of charge to either Party or the end user to the extent the providing Party does not charge its own end user customers for such service, for the same period of time the providing Party provides its own end user customers when they change their telephone numbers.

2.2.4.3 The providing Party shall provide such basic treatment and transfer of service announcement in accordance with its normal policies and procedures for all service disconnects, suspensions, or transfers.

2.2.5 Desired Due Date ("DDD")

2.2.5.1 For services with agreed upon intervals, the purchasing Party shall select on each order the DDD consistent with agreed intervals. For services with variable intervals, the purchasing Party shall select among available due dates, obtained through an electronic interface, for specific services with variable intervals. The providing Party shall use reasonable efforts to not complete the order prior to the DDD or later than the DDD unless authorized by the purchasing Party.

2.2.5.2 If the DDD falls after the standard order completion interval (as mutually agreed by the Parties), the providing Party shall use reasonable efforts to complete the order on the DDD.

2.2.5.3 Subsequent to an initial order submission, the purchasing Party may request a new/revised due date that is earlier than the minimum defined interval. The providing Party shall use reasonable efforts to meet such date and may assess Non-Discriminatory expedite charges. The Parties agree that expedite orders are not to be used as a mechanism for routine avoidance of the standard DDD or standard interval(s) set forth in this Agreement. If (i) the providing Party does not assess an expedite charge on the purchasing Party; and (ii) based on the exercise of reasonable judgment, the providing Party determines that the purchasing Party is using expedite orders at a rate substantially in excess of the rate at which the providing Party and other parties use expedite orders on the providing Party's ordering systems, the providing Party shall immediately notify the purchasing Party at the Director level of escalation. The Parties shall immediately undertake good faith negotiations, based on each Party's data, to resolve the issue at the Director level of escalation, and, failing prompt and successful negotiations, through the complaint processes of the Commission or the FCC.

2.2.5.4 Any special or preferred scheduling options available to the providing Party shall also be available to the purchasing Party. The providing Party may assess Non-Discriminatory charges for such options.

2.2.6 Subscriber Premises Inspections and Installations

2.2.6.1 MCIm shall perform or contract for any needs assessments, including equipment and installation requirements, at the premises of the subscriber, for the provision of MCIm services to such subscribers.

2.2.6.2 Bell Atlantic shall notify MCIm of any problems observed on the customer side of the NID in a timely manner. Bell Atlantic shall not relay to the customer that inside wire could have been performed during a Bell Atlantic technician's visit if the customer was a Bell Atlantic customer rather than an MCIm customer.

2.2.7 Firm Order Confirmation ("FOC")

2.2.7.1 Subject to Section 15 of Part A, the providing Party shall provide to the purchasing Party, via an electronic interface, a FOC meeting OBF standards for each purchasing Party order, after a reasonable implementation interval from final acceptance of the particular OBF standard.

2.2.7.2 For a revised FOC, the providing Party shall provide order detail in accordance with OBF standards after a reasonable implementation interval from final acceptance of the particular OBF standard.

2.2.8 Order Rejections

2.2.8.1 The providing Party shall reject and return to the purchasing Party any order that is incomplete, internally inconsistent, or that the providing Party cannot provision due to defects, including, but not limited to, the requested due date is prior to the submission date. When MCIIm orders reach Bell Atlantic's service order processing systems, those orders will be processed or rejected at Parity.

2.2.9 Service Order Changes

2.2.9.1 If an installation or other ordered work requires a material change from the original service order, the providing Party shall call the purchasing Party in advance of performing the installation or other work to obtain authorization. The providing Party shall then provide the purchasing Party an estimate of additional labor hours and/or materials. After all installation or other work is completed, the providing Party shall promptly notify the purchasing Party of actual labor hours and/or materials used in accordance with regular service order completion processes.

2.2.9.1.1 If additional work is completed on a service order, as approved by the purchasing Party, the cost of the additional work must be reported to the purchasing Party.

2.2.9.1.2 If work on a service order is partially completed, notification shall identify the work that was performed and work remaining to be completed.

2.2.9.2 If an MCIIm subscriber requests a service change at the time of installation or other work being performed by Bell Atlantic on behalf of MCIIm, Bell Atlantic, while at the subscriber premises, shall direct the MCIIm subscriber to contact MCIIm to order such change.

2.2.10 Jeopardy Situations

2.2.10.1 The providing Party shall provide to the purchasing Party known delayed order notification prior to the committed due date, and other known delays in completing work specified on the purchasing Party's service order as detailed on the FOC, in accordance with mutually agreed procedures.

2.2.11 Cooperative Testing

2.2.11.1 Cooperative Testing shall be performed in accordance with Attachment III, Section 15.1.

2.2.11.2 Systems and Process Testing

2.2.11.2.1 The Parties shall cooperate upon request to assess whether all operational interfaces and processes are in place and functioning as intended. Testing shall simulate actual operational procedures and systems interfaces to the greatest extent possible. Either Party may request cooperative testing as it deems appropriate to assess service performance, reliability, and subscriber serviceability. The requested Party may levy time and materials charges on the requesting Party.

2.2.12 Service Suspensions/Restorations

2.2.12.1 Upon a request through a suspend/restore order, which shall comply with Applicable Law, Bell Atlantic shall suspend or restore the functionality of any Network Element or Local Resale service. Bell Atlantic shall provide restoration priority on a per Network Element or Combination basis in a manner that conforms with priorities requested by MCI, which shall comply with Applicable Law.

2.2.13 Disconnects

2.2.13.1 The providing Party shall notify the purchasing Party of any termination of service provided under this Agreement when such termination is requested by the providing Party or any third-party. Such notice shall be in a format and detail consistent with industry standards.

2.2.14 Order Completion Notification

2.2.14.1 Subject to Section 15 of Part A and when industry standards are developed for such service, and after a reasonable implementation interval, upon completion of a service order by the providing Party, the providing Party shall submit to the purchasing Party an order completion which reasonably details the work performed. Notification shall be provided in accordance with industry standards when developed. The Parties will cooperate in the interim to assure adequate notification.

2.2.15 Fulfillment Process

2.2.15.1 Each Party shall conduct all activities associated with the account fulfillment process for all of its subscribers.

2.2.16 Specific Unbundling Requirements

2.2.16.1 MCIIm may order and Bell Atlantic shall provision Network Elements either individually or in Technically Feasible Combinations. Network Elements ordered as combined shall be reasonably provisioned as combined by Bell Atlantic, unless MCIIm specifies that the Network Elements ordered in Combination be provisioned separately.

2.2.16.2 Prior to providing service in a specific geographic area or when MCIIm requires a change of network configuration, the Parties shall cooperate in planning the preparation of Network Elements and Switch translations in advance of orders for additional Network Elements from MCIIm.

2.2.16.3 For mutually-agreed Combinations of Network Elements, Network Elements that are currently connected and ordered together will not be physically disconnected, except for technical reasons.

2.2.16.4 Network Elements to be provisioned together shall be identified and ordered by MCIIm as such.

2.2.16.5 When ordering a Combination of Network Elements, MCIIm shall have the option of ordering all features, functions and capabilities of each Network Element, as they exist in Bell Atlantic's network on the Effective Date.

2.2.16.6 When MCIIm orders Network Elements, Bell Atlantic shall provision the features, functions, and capabilities of the Network Elements specified in this Agreement for such element, as reflected on MCIIm's order.

2.2.16.7 MCIIm and Bell Atlantic shall cooperate and coordinate activities including the sharing of relevant specifications in such a manner as to promote compatibility between and among respective service elements.

2.2.16.8 Orders for Network Elements will generally contain relevant administration, bill, contact, and subscriber information, as defined by the OBF.

2.3 Systems Interfaces and Information

2.3.1 General Requirements

2.3.1.1 Where access to operational support systems functionality is required, Bell Atlantic shall provide to MCIIm electronic interface(s) for transferring and receiving information and executing transactions in regards to service ordering and provisioning of Network Elements and Local Resale. Subject to Section 15 of Part A, the interface(s) shall be capable of supporting the steps in the OBF-developed ordering and provisioning process no later than April 1, 1997.

2.3.1.2 Bell Atlantic interfaces shall provide MCIm with the same process and system capabilities for both residence and business ordering and provisioning at Parity.

2.3.1.3 Bell Atlantic and MCIm shall agree on and implement interim solutions for Bell Atlantic interfaces within forty-five (45) days after the Effective Date of this Agreement. Such interim interface(s) shall, at a minimum, provide MCIm the same functionality and level of service as is currently provided by the electronic interfaces used by Bell Atlantic for its own systems, users, or subscribers.

2.3.1.4 The foregoing interim interfaces or processes may be modified, if so agreed by MCIm and Bell Atlantic, during the interim period.

2.3.1.5 Until the Party's electronic interfaces are available, the providing Party agrees that a co-carrier service center ("CSSC") or similar function will accept a purchasing Party's orders. Orders will be transmitted to the CSSC via an interface or method agreed upon by the Parties.

2.3.1.6 For territories in which Bell Atlantic provides Telephone Exchange Services, Bell Atlantic shall provide MCIm with at least 1-2 months prior notification of local calling area changes, and generally publish any area code splits at least three (3) months prior to such splits going into effect.

2.3.1.7 **[RESERVED]** Bell Atlantic shall provide to MCIm, via an electronic interface, a list by end office switch of all CLASS, CENTREX and all other features and functions and shall provide updates to such list at the time new features and functions become available.

2.3.2 Ordering and Provisioning for Resale Services

2.3.2.1 Bell Atlantic shall provide to MCIm all intraLATA (when presubscription is available) and interLATA carriers available for subscriber selection based on a valid subscriber address.

2.3.2.2 **[RESERVED]**

2.3.2.3 Subject to the provisions of Part A, Section 22 (Confidentiality and Publicity) and in accordance with all Applicable Law and regulations, the providing Party shall provide the requesting Party with access to CPNI of a requesting Party subscriber without requiring the requesting Party to produce a signed LOA based on the requesting Party's representation that the subscriber has authorized the requesting Party to obtain such CPNI.

2.3.2.3.1 Bell Atlantic shall provide to MCIm an electronic interface to Bell Atlantic subscriber information systems which

will allow MCIIm to obtain Bell Atlantic's current subscriber profile based on valid bill telephone number or working telephone number, including subscriber name, billing and service addresses, billed telephone number(s), and identification of features and services on the subscriber accounts, and, in response to a valid telephone number or address, allow MCIIm to obtain information on features and services available in the end office where subscriber's services are currently provisioned.

2.3.2.3.2 Until access is available via an electronic interface for subscriber profile information, MCIIm agrees that Bell Atlantic can obtain subscriber profile information in an interim manner. The Parties shall agree on and implement interim solutions for interfaces within forty-five (45) days after the Effective Date of this Agreement.

2.3.2.4 Bell Atlantic shall provide to MCIIm a list of Local Resale services, including new services and eligible trial offers and promotions, within sixty (60) days after the Effective Date of this Agreement, and shall provide updates to such information as soon as practicable after new features and functions become available.

2.3.2.5 Bell Atlantic shall provide to MCIIm mediated query-response via an electronic interface to Bell Atlantic information systems as soon as possible, but no later than April 1, 1997 to allow MCIIm to:

2.3.2.5.1 assign telephone number(s) (if the subscriber does not already have a telephone number or requests a change of telephone number);

2.3.2.5.2 schedule dispatch and installation appointments;

2.3.2.5.3 provide service availability dates; and

2.3.2.5.4 transmit status information on service orders. Until the electronic interface is available, Bell Atlantic agrees that it will provide status on service orders at the following critical intervals: acknowledgment and firm order confirmation according to interim procedures to be mutually developed.

2.3.3 Ordering and Provisioning for Unbundling

2.3.3.1 Bell Atlantic shall provide to MCIIm, upon reasonable request a listing of available, orderable services for Network Elements.

2.3.3.2 Bell Atlantic shall provide to MCIIm upon request such engineering design and layout information for Network Elements as may be mutually agreed.

2.3.3.3 Bell Atlantic shall provide to MCIIm an electronic interface as soon as practicable after applicable OBF standards are formally accepted which will allow MCIIm to determine service due date intervals and schedule appointments.

2.3.3.4 Where applicable, Bell Atlantic shall provide to MCIIm information on charges associated with special construction. Bell Atlantic agrees that it will, as soon as practicable, notify MCIIm of any charges associated with necessary construction.

2.3.3.5 On request from MCIIm, Bell Atlantic shall provide MCIIm with results from mechanized loop tests where such tests are Technically Feasible on a time and materials basis or at Commission-approved rates, as appropriate.

2.3.3.6 Bell Atlantic shall provide MCIIm with confirmation of circuit assignments at Parity.

2.4 Standards

2.4.1 General Requirements

2.4.1.1 MCIIm and Bell Atlantic shall agree upon the appropriate ordering and provisioning codes to be used for Network Elements. These codes shall apply to all aspects of the unbundling of that element or Combination of elements and shall be known as data elements as defined by the Telecommunications Industry Forum Electronic Data Interchange Service Order Subcommittee ("TCIF-EDI-SOSC").

Section 3. Billing and Recording

This Section 3 describes the requirements for Bell Atlantic to bill and record charges MCIIm incurs when purchasing services under this Agreement, except as may be otherwise specified in this Agreement.

3.1 Billable Information And Charges

3.1.1 Interim Billing

The interim billing process described herein shall commence upon the Effective Date and continue until replaced by the standard billing process described below, with such replacement by no later than the end of the third quarter 1997 for Local Resale services purchased from Bell Atlantic by MCIIm. With regard to Network Elements, interim billing shall commence upon the Effective Date and continue until replaced by standard Billing Operations System ("BOS") billing for such elements. Bell Atlantic shall implement the BOS release that includes Network

Element billing as soon as practicable after the release is available, and will promptly inform MCIIm in writing if, given the nature and magnitude of that release, implementation is likely to take more than sixty (60) days after the release is made available. Notwithstanding the foregoing, with respect to unbundled loops, unbundled switching and INP, Bell Atlantic will provide MCIIm with an implementation date for BOS billing within ninety (90) days after the Effective Date.

3.1.1.2 Except as otherwise provided in this Section 3, Bell Atlantic will use its existing billing systems to issue bills and invoices to MCIIm for amounts due under this Agreement. These bills and invoices will contain a summary of account charges with component elements and/or records when applicable. The Parties acknowledge that Bell Atlantic's existing billing system does not issue bills or invoices in accordance with national industry standard specifications in all respects.

3.1.1.3 Bell Atlantic will provide MCIIm with the capability to summarize by features and functions both monthly recurring and non-recurring charges. This capability may be satisfied by use of Bell Atlantic's CD-ROM billing for Resellers. Bell Atlantic shall cooperate with MCIIm on the testing and acceptance of interim billing procedures.

3.1.1.4 The providing Party will initially identify the purchasing Party's Billing Account Numbers (BAN) (or for MCIIm, the functionally equivalent thereof) and will not change them without ten (10) days advance written notice to the purchasing Party.

3.1.1.5 The providing Party will use a minimum of two BANs per state, one for residential customers and one for business customers. The Parties acknowledge that in Bell Atlantic's billing system, only 50,000 component accounts can be on one summary bill and that a new summary bill may be created when any MCIIm master account exceeds 45,000 component accounts.

3.1.1.6 Bell Atlantic will not use the 7th or the 14th day of the month for bill closing dates.

3.1.1.7 The providing Party will use reasonable efforts to transmit paper bills to the purchasing Party within ten (10) days of the bill closing date. If the providing Party fails to transmit an invoice within the time period specified above, the payment due date for that invoice will be extended by the number of days it is late.

3.1.2 **Standard Billing**

3.1.2.1 The providing Party will bill services in accordance with this Section 3 and at the rates set forth in Attachment I. The providing Party

will use commercially reasonable efforts to format its electronic bills in accordance with national industry standard specifications, as appropriate. These electronic bills will include a separate and unique billing code for, and the quantity of, each type of service purchased by the purchasing Party. The providing Party will jurisdictionally identify the charges on these bills wherever it has the information necessary to do so. Wherever the providing Party is unable to identify the jurisdiction of the service purchased by the purchasing Party, the Parties will jointly develop a process to determine the appropriate jurisdiction.

3.1.2.2 The providing Party will bill the purchasing Party on a monthly basis under this Agreement. These monthly bills will include all appropriate charges, credits and adjustments for the services that were ordered, established, utilized, discontinued or performed during the relevant billing period.

3.1.2.3 The providing Party and the purchasing Party will use reasonable commercial efforts to establish the same monthly billing date ("Bill Date") for each purchasing Party account within the state. The providing Party will include the Bill Date on each invoice transmitted to the purchasing Party. The payment due date (as described in this Attachment) shall be thirty (30) calendar days after the Bill Date. The providing Party will transmit all invoices within ten (10) calendar days after the Bill Date. Any invoice transmitted on a Saturday, Sunday or a day designated as a holiday by the Parties' bill processing departments will be deemed transmitted on the next business day. If the providing Party fails to transmit an invoice within the time period specified above, the payment due date for that invoice will be extended by the number of days it is late.

3.1.2.4 The providing Party will use the same account identification numbers each month, unless it provides the purchasing Party with ten (10) days advance written notice of any change. If either Party requests an additional copy(ies) of a bill, such Party shall pay the other Party a reasonable fee per additional bill copy, unless such copy was requested due to an error or omission of the providing Party.

3.1.2.5 Except as otherwise specified in this Agreement, each Party shall be responsible for (i) all costs and expenses it incurs in complying with its obligations under this Agreement; and (ii) the development, modification, technical installation and maintenance of any systems or other infrastructure which it requires to comply with and to continue complying with its responsibilities and obligations under this Agreement.

3.1.2.6 The providing Party and purchasing Party will identify a contact person for the handling of any questions or problems that may arise during the implementation and performance of the terms and conditions of this Attachment.

3.1.3 Meet-Point Billing

3.1.3.1 For purposes of this Section 3.1.3, "Tandem Party" shall mean the Party connected to the IXC. The "End Office Party" shall mean the Party using the Tandem Party to reach the IXC. The End Office Party and the Tandem Party will utilize commercially reasonable efforts, individually and collectively, to establish meet-point billing ("MPB") arrangements to provide a Common Transport option to switched Access Services subscribers via an access Tandem Switch in accordance with the Meet-Point Billing guidelines adopted by and contained in the OBF's MECAB and MECOD documents, except as modified herein and the Tandem Party's Tariffs. The arrangements described in this section are intended to be used to provide switched Exchange Access Service that originates and/or terminates on a Telephone Exchange Service that is provided by either Party, where the transport component of the switched Exchange Access Service is routed through a Tandem Switch that is provided by the Tandem Party.

3.1.3.2 In each LATA, the Parties shall establish MPB arrangements between the applicable rating point/the Tandem Party local serving Wire Center combinations.

3.1.3.3 Interconnection for the MPB arrangement shall occur at the applicable access tandems or functional equivalent in the LATA, unless otherwise agreed to by the Parties.

3.1.3.4 The Parties will use commercially reasonable efforts, individually and collectively, to maintain provisions in their respective federal and state access Tariffs, and/or provisions within the National Exchange Carrier Association ("NECA") Tariff No. 4, or any successor Tariff, to reflect the MPB arrangements identified in this Agreement, in MECAB and in MECOD.

3.1.3.5 Each Party will implement the "multiple bill/single tariff" or "multiple bill/multiple tariff" option, as appropriate, in order to bill any IXC for the portion of the jointly provided Access Service provided by that Party. For all traffic carried over MPB arrangements using Network Elements or interconnection services provided under this Agreement, the Parties shall bill each other all applicable rates specified in this Agreement.

3.1.3.6 The rate elements to be billed by each Party are as set forth below. The actual rate values for each Party's affected Access Service rate element shall be the rates contained in that Party's own effective federal and state access Tariffs, or other document that contains the terms under which that Party's Access Services are offered. The MPB billing

percentages for each rating point/Tandem Party local serving Wire Center Combination shall be calculated in accordance with the formula set forth in subsection 3.1.3.15 below.

3.1.3.6.1 Rate Elements under Meet-Point Billing

Interstate Access - Terminating to or originating from End Office Party subscribers

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	End Office Party
Local Switching	End Office Party
Interconnection Charge	End Office Party
Local Transport Facility/ Tandem Switched Transport Per Mile	Based on negotiated billing percentage
Tandem Switching	Tandem Party
Local Transport Termination/ Tandem Switched Transport Fixed	Tandem Party
Entrance Facility	Tandem Party
800 Database Query	Party that performs query

Intrastate Access - Terminating to or originating from End Office Party subscribers (Pre-LTR tariff)

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	End Office Party
Local Switching	End Office Party
Transport	Based on negotiated billing percentage

Intrastate Access - Terminating to or originating from End Office Party subscribers (Post-LTR tariff)

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	End Office Party
Local Switching	End Office Party
Interconnection Charge	End Office Party
Local Transport Facility/ Tandem Switched Transport Per Mile	Based on negotiated billing percentage
Tandem Switching	Tandem Party
Local Transport Termination/ Tandem Switched Transport Fixed	Tandem Party
Entrance Facility	Tandem Party
800 Database Query	Party that performs query

3.1.3.7 Each Party shall provide the other Party with the billing name, billing address, and carrier identification code ("CIC") of the IXC, and identification of the IXC's local serving Wire Center in order to comply with the MPB notification process as outlined in the MECAB document via facsimile or such other media as the Parties may agree to, all in accordance with a Party's existing offerings.

3.1.3.8 The Tandem Party will provide the End Office Party with the switched access detail usage data (category 1101XX records) on magnetic tape or via such other media as the Parties may agree to, no later than ten (10) business days of bill rendering.

3.1.3.9 The End Office Party will provide the Tandem Party with the switched access detail usage data (category 1101XX records) on magnetic tape or via such other media as the Parties may agree to, no later than ten (10) business days after the date the usage occurred.

3.1.3.10 The Parties will coordinate and exchange the billing account reference ("BAR") and billing account cross reference ("BACR") numbers or OCN, as appropriate, for the MPB arrangements described in this Agreement. Each Party will notify the other if the level of billing or other BAR/BACR elements change, resulting in a new BAR/BACR number.

3.1.3.11 Errors in MPB data exchanged by the Parties may be discovered by the End Office Party, the Tandem Party or the billable IXC. Both the End Office Party and the Tandem Party agree to provide the other Party with notification of any discovered errors as soon as practicable following such discovery. The other Party shall attempt to correct the error and resubmit the data as soon as practicable after notification. In the event the errors cannot be corrected within the time period specified above, the erroneous data shall be considered lost. If MPB data is lost due to intractable errors or otherwise, both Parties shall cooperate to reconstruct the lost data and, if such reconstruction is not possible, shall accept a reasonable estimate of the lost data based upon prior usage data. Each Party shall be responsible for any lost revenue arising from its inability to relocate lost data that is adequate to support the other Party's billing of IXCs' subscriber(s).

3.1.3.12 Neither Party will charge the other for the services rendered, or for information provided pursuant to this Section 3, except those MPB and other charges set forth herein. Both Parties will identify a contact person to handle any MPB questions or problems.

3.1.3.13 MPB will apply for all traffic bearing the 500, 900, 800/888 (to the extent provided by an IXC) or any other non-geographic NPA which may be likewise designated for such traffic in the future.

3.1.3.14 In the event a Party determines to offer Telephone Exchange Services in a LATA in which the other Party operates an access Tandem Switch, the Tandem Party shall permit and enable the End Office Party to subtend the Tandem Party access Tandem Switch(es) designated for the Tandem Party end offices in the area where the End Office Party rating points(s) associated with the NPA-NXX(s) to/from which the switched Exchange Access Services are homed. The MPB billing percentages for each new rating point/the End Office Party local serving Wire Center Combination shall be calculated according to the following formula:

$$a / (a + b) = \text{End Office Party Billing Percentage; and}$$

$$b / (a + b) = \text{Tandem Party Billing Percentage}$$

where:

a = the airline mileage between the rating point and the actual point of interconnection for the MPB arrangement; and

b = the airline mileage between the Tandem Party local serving Wire Center and the actual point of interconnection for the MPB arrangement.

The End Office Party shall inform the Tandem Party of the LATA in which it intends to offer Telephone Exchange Services and its calculation of the billing percentages which should apply for such arrangement. Within ten (10) business days of the End Office Party's delivery of notice to the Tandem Party, the Tandem Party and the End Office Party shall confirm the new rating point/Tandem Party local serving Wire Center Combination and billing percentages. Nothing in this subsection shall be construed to limit the End Office Party's ability to interconnect with the Tandem Party in additional LATAs by means of interconnection at a local serving Wire Center, to the extent that such interconnection is permitted under this Agreement.

3.1.4 Collocation

3.1.4.1 Bell Atlantic agrees to issue a separate bill to MCIIm for any Collocation capital expenditures (*e.g.*, costs associated with building the "cage") incurred under this Agreement. Bell Atlantic will send these separate bills for Collocation capital expenses to the location specified by MCIIm. Bell Atlantic will bill all other non-capital recurring Collocation rates to MCIIm in accordance with this Section 3.

3.1.5 Local Number Portability

3.1.5.1 The providing Party agrees to track and record the purchasing Party's Interim Number Portability usage. After the Commission establishes a final competitively neutral Interim Number Portability funding mechanism and rate, the providing Party will bill the purchasing Party for the usage that accrued before the Commission's final decision. The purchasing Party agrees to pay these bills with appropriate Commission-determined interest charges, but reserves the right to challenge the accuracy of the tracking.

3.1.5.2 Under the INP arrangement in this Agreement, terminating compensation on calls to ported numbers should be received by each customer's chosen local service provider as if each call to the customer had been originally addressed by the caller to a telephone number bearing an NPA-NXX directly assigned to the customer's chosen local service provider. In order to accomplish this objective where INP is employed, the Parties shall utilize the process set forth in this Subsection 3.1.5.2 whereby terminating compensation on calls subject to INP will be passed from the Party that performs the INP to the other Party for whose subscriber the INP is provided.

3.1.5.2.1 The Parties shall individually and collectively make best efforts to track and quantify INP traffic between their networks based on the CPN of each call by identifying CPNs which are ported numbers. MCI shall charge Bell Atlantic for each minute of INP traffic at the INP traffic rate specified in Subsection 3.1.5.2.3 in lieu of any other compensation charges for terminating such traffic, except as provided in Subsection 3.1.5.2.2.

3.1.5.2.2 By the interconnection activation date within a LATA, the Parties shall jointly estimate for the prospective six (6) months, based on historic data of all traffic in the LATA, the percentages of such traffic that, if dialed to telephone numbers bearing NPA-NXXs directly assigned to MCI (as opposed to the ported number), would have been subject to: (i) local compensation ("Local Traffic"); (ii) appropriate intrastate FGD charges ("Intra Traffic"); (iii) interstate FGD charges ("Inter Traffic"); or (iv) handling as transit traffic. On the date which is six (6) months after the interconnection activation date, and thereafter on each succeeding six month anniversary of such interconnection activation date, the Parties shall establish new INP traffic percentages in the prospective six (6) month period, based on Bell Atlantic's choice of actual INP traffic percentages from the preceding six (6) month period or historic data of all traffic in the LATA.

3.1.5.2.3 The INP traffic rate shall be equal to the sum of:

(Local Traffic percentage times the rate for local traffic transportation and termination set forth in Attachment I)
plus
 (Intra Traffic percentage times MCIIm's effective intrastate FGD rates)
plus
 (Inter Traffic percentage times MCIIm's effective interstate FGD rates).

MCIIm shall compensate Bell Atlantic for its billing and collection of charges for the intrastate and interstate FGD Access Services provided by MCIIm to a third-party through the greater of: (i) the difference between the intrastate and interstate FGD rates of MCIIm and Bell Atlantic; or (ii) three percent (3%) of Bell Atlantic's intrastate and interstate FGD revenues for ported numbers. Under no circumstances shall Bell Atlantic, in performing the billing and collections service on behalf of MCIIm, be obligated to pass through more than ninety-seven percent (97%) of its FGD access charge to MCIIm in connection with any given ported call.

3.1.6 Electronic Transmissions

3.1.6.1 The providing Party agrees to transmit bills and invoices in the appropriate CABS or SECAB format electronically via Connect:Direct (formerly known as Network Data Mover) to the purchasing Party at an agreed upon location.

3.1.7 Tape or Paper Transmissions

3.1.7.1 In the event that the Connect:Direct capabilities of either Party are not available, the Parties will transmit billing information to each other via magnetic tape or paper, as agreed to by the Parties. The Parties shall cooperate in determining such alternate billing methods, when necessary.

3.1.8 Payment Of Charges

3.1.8.1 Payments of all undisputed amounts due under this Agreement shall be made in U.S. Dollars no later than the due date on an invoice or bill. At least thirty (30) days prior to the first transmission of a bill or invoice under this Agreement, the Parties shall provide each other the name and address to whom payment shall be made, including where appropriate, the respective banks, and account and routing numbers. If such banking information changes, each Party shall provide the other Party at least sixty (60) days written notice of the change and such notice shall include the new banking information. In the event the purchasing Party receives multiple bills or invoices from the providing Party which

are payable on the same date, the purchasing Party may remit one payment for the sum of all bills and invoices. Each Party shall provide the other Party with a contact person for the handling of payment questions or problems under this Agreement.

3.1.8.2 Undisputed amounts which are not paid by the due date stated on the providing Party's bill shall be subject to a late payment charge. The late payment charge shall be in the amount provided in Bell Atlantic's interstate access tariff; provided, that in the absence of an interstate access tariff late payment charge, the late payment charge shall be in an amount specified by the providing Party, which shall not exceed a rate of one and one-half percent (1.5%) of the overdue amount (including any unpaid, previously billed late payment charges) per month.

3.1.8.3 Although it is the intent of each Party as a providing Party to submit timely and accurate bills, failure by a providing Party to present bills to a purchasing Party in a timely or accurate manner shall not constitute a breach or default of this Agreement, or a waiver of a right of payment of the incurred charges, by the providing Party. Closure of a specific billing period shall occur by joint agreement of the Parties whereby the Parties agree that such billing period is closed to any further charges, analysis and financial transactions, except those resulting from an Audit or for charges due under a "true-up" of charges pursuant to Sections 3.1.5 hereunder. Closure shall take place within nine (9) months of the Bill Date. The month being closed represents those charges that were billed or should have been billed by the respective Bill Date.

3.1.9 Billing Dispute

3.1.9.1 Subject to and without waiver of any of the providing Party's rights under Section 21.3 of Part A of this Agreement, each Party agrees to notify the other Party upon the discovery of a billing dispute. In the event of a billing dispute, the Parties will endeavor to resolve the dispute within sixty (60) days of the Bill Date on which such disputed charges appear. Resolution of the dispute is expected to occur at the first level of management resulting in a recommendation for settlement of the dispute and closure of a specific billing period. If the issues are not resolved within the allotted time frame, the following resolution procedure will begin:

3.1.9.1.1 If the dispute is not resolved within sixty (60) days of the Bill Date, the dispute will be escalated to the second level of management for each of the respective Parties for resolution.

3.1.9.1.2 If the dispute is not resolved within ninety (90) days of the Bill Date, the dispute will be escalated to the third level of management for each of the respective Parties for resolution.

3.1.9.1.3 If the dispute is not resolved within one hundred and twenty (120) days of the Bill Date, the dispute will be resolved in accordance with the dispute resolution procedures set forth in Part A of this Agreement.

3.1.9.2 Upon resolution of the dispute, the relevant Party shall pay all amounts determined to have been due in accordance with Section 21.3 of Part A.

3.2 Standards

3.2.1 At least twenty (20) days prior to the providing Party transmitting a bill or invoice to the purchasing Party for the first time via electronic transmission or tape, or at least thirty (30) days prior to changing mechanized formats (i.e., from SECAB to CABS), the providing Party will transmit to the purchasing Party a test bill or invoice in the appropriate mechanized format. The providing Party will also provide to the purchasing Party the providing Party's originating or state level company code, so that it may be added to the purchasing Party's internal tables at least twenty (20) calendar days prior to testing or a change in the providing Party's originating or state level company code. The purchasing Party will notify the providing Party within the time period agreed to by the Parties if the test bill or invoice transmission fails to meet the purchasing Party's testing specifications. The Parties will work cooperatively to resolve any problems identified by the transmission of the test bill or invoice.

3.2.2 As mutually agreed upon prior to any change in existing formats or change to a different format, the providing Party shall send to the purchasing Party connectivity bill data in the appropriate mechanized format for testing to ensure that the bills can be processed and that the bills comply with the requirements of this Attachment. The providing Party agrees that it shall not send to the purchasing Party bill data in the new mechanized format until such bill data has met the testing specifications as set forth in this subsection. The providing Party shall provide the purchasing Party documentation on proposed format changes within ninety (90) days of the implementation of such changes.

3.2.3 The providing Party agrees that if it transmits data to the purchasing Party in a mechanized format, the providing Party shall also comply with the following specifications which are not contained in CABS or SECAB guidelines, but which are necessary for the purchasing Party to process connectivity billing information and data:

3.2.3.1 The Bill Date shall not contain spaces or non-numeric values.

3.2.3.2 Each Connectivity Bill must contain at least one detail record, unless no usage has been recorded. Industry standards require that zero bills be rendered.

3.2.3.3 Any “from” date should be less than the associated “thru” date and neither date can contain spaces, unless otherwise permitted under applicable industry standards.

3.2.3.4 The invoice number must not have embedded spaces or low values.

3.2.4 The providing Party agrees to use commercially reasonable efforts to transmit to the purchasing Party accurate and current bills and invoices. If necessary beyond the provisions of this Section 3, the Parties agree to negotiate implementations of controls and processes to facilitate the transmission of accurate and current bills and invoices.

Section 4. Provision Of Subscriber Usage Data

For Local Resale and Local Switching, this Section 4 sets forth the terms and conditions for Bell Atlantic’s provision of Recorded Usage Data (as defined in Section 4.1.1.3 below) to MCIIm in connection with the provision to MCIIm of Bell Atlantic’s Switch-based services.

4.1 Procedures

4.1.1 General

4.1.1.1 Bell Atlantic shall use commercially reasonable efforts to comply with OBF and other standards set forth in this Section 4. To satisfy this requirement, Bell Atlantic and MCIIm shall mutually agree to the interpretation of any such standards referred to in this Section 4.

4.1.1.2 Bell Atlantic shall use commercially reasonable efforts to comply with Bellcore-documented EMR standards and the additional standards set forth in this Section 4 when recording and transmitting Recorded Usage Data to MCIIm.

4.1.1.3 Bell Atlantic shall record such Recorded Usage Data originating from MCIIm subscribers that Bell Atlantic records with respect to its own customers in the ordinary course of business, using services ordered by MCIIm. “Recorded Usage Data” as used in this Section 4 means billing detail recorded in the normal course of business by Bell Atlantic including, but not limited to, billing detail recorded for the following categories of information:

4.1.1.3.1 Completed calls;

4.1.1.3.2 Use of CLASS/LASS/Custom features;

4.1.1.3.3 Calls to Directory Assistance where Bell Atlantic provides such service to an MCIIm subscriber;

4.1.1.3.4 Calls completed via Bell Atlantic's Operator Services where Bell Atlantic provides such service to MCIIm's subscribers; and

4.1.1.3.5 CENTREX usage recorded by Bell Atlantic on its switches in the normal course of business.

4.1.1.4 **Retention of Records.** Bell Atlantic shall maintain a machine readable back-up copy of the message detail provided to MCIIm for the Recorded Usage Data described above for a minimum of forty-five (45) calendar days.

4.1.1.5 Bell Atlantic shall provide to MCIIm Recorded Usage Data for MCIIm subscribers in accordance with the terms herein. Bell Atlantic shall not submit other carrier local usage data as part of MCIIm Recorded Usage Data.

4.1.1.6 MCIIm, and not Bell Atlantic, shall bill MCIIm subscribers for services purchased by MCIIm hereunder.

4.1.1.7 For Local Resale, Bell Atlantic shall record and rate all calls to information service providers (*i.e.*, 976 service calls) and include such information on the data usage file ("DUF") provided to MCIIm hereunder. MCIIm shall bill such calls directly to its subscribers. To the extent either Party offers variable rated service (*e.g.*, 976, 554, and/or 915, as applicable), the Parties shall agree to separate arrangements for the billing and compensation of such services. With respect to unbundled Local Switching, Bell Atlantic shall record, and provide to MCIIm, unrated calls to information service providers (*i.e.*, 976 service calls) and include such information on the data usage file ("DUF") provided to MCIIm hereunder.

4.1.1.8 Bell Atlantic shall provide Recorded Usage Data to MCIIm billing locations as reasonably designated by MCIIm.

4.1.1.9 Bell Atlantic shall establish a CLEC sales and service center (CSSC) or similar function to serve as MCIIm's single point of contact to respond to MCIIm's call usage, data error, and record transmission inquiries.

4.1.1.10 Bell Atlantic shall provide MCIIm with a single point of contact, remote identifiers ("IDs"), and expected usage data volumes for each sending location.

4.1.1.11 MCIIm shall provide a single point of contact responsible for receiving usage transmitted by Bell Atlantic and receiving usage tapes from a courier service in the event of a facility outage.

4.1.1.12 Bell Atlantic shall bill MCIIm, and MCIIm shall pay such charges for, Recorded Usage Data at the prices set forth in Attachment I. Billing and payment shall be in accordance with the applicable terms and conditions set forth in Attachment VIII, Section 3.

4.1.2 **Incomplete Calls.** No charges shall be assessed by Bell Atlantic for incomplete call attempts, unless Bell Atlantic assesses a charge for such incomplete call attempts to its subscribers.

4.1.3 **Central Clearinghouse & Settlement (ICS/Non-ICS Incollects/Outcollects)**

4.1.3.1 Bell Atlantic shall comply with clearinghouse and incollect/outcollect procedures to be determined by the Parties from time to time.

4.1.3.2 Bell Atlantic shall reasonably cooperate with MCIIm in its development of a neutral third-party in and out-collect process developed for intra-region alternately billed messages.

4.1.3.3 Bell Atlantic shall settle with MCIIm intra-region and inter-region billing exchanges relating to calling card calls, bill-to-third-party calls and collect calls.

4.1.4 **Lost Data**

4.1.4.1 Loss of Recorded Usage Data - MCIIm Recorded Usage Data determined to have been lost, damaged or destroyed as a result of an error or omission by Bell Atlantic in its performance of the recording function shall, upon MCIIm's request, be recovered by Bell Atlantic at no charge to MCIIm. In the event the data cannot be recovered by Bell Atlantic, Bell Atlantic shall estimate the messages and associated revenue, with assistance from MCIIm, based upon the method described below. This method shall be applied on a consistent basis, subject to modifications agreed to by Bell Atlantic and MCIIm. This estimate shall be used to adjust amounts MCIIm owes Bell Atlantic for services Bell Atlantic provides in conjunction with the provision of Recorded Usage Data.

4.1.4.2 Partial Loss - Bell Atlantic shall review its daily controls to determine if data has been lost. When there has been a partial loss, actual message and minute volumes shall be reported, if possible. Where actual data are not available, a full day shall be estimated for the recording entity, as outlined in the following paragraphs. The amount of the partial

loss is then determined by subtracting the data actually recorded for such day from the estimated total for such day.

4.1.4.3 Complete Loss - Estimated message and minute volumes for each loss consisting of an entire AMA tape or entire data volume due to its loss prior to or during processing, lost after receipt, degaussed before processing, receipt of a blank or unreadable tape, or lost for other causes, shall be reported.

4.1.4.4 Estimated Volumes - From message and minute volume reports for the entity experiencing the loss, Bell Atlantic shall secure message/minute counts for the four (4) corresponding days of the weeks preceding that in which the loss occurred and compute an average of these volumes.

4.1.4.5 If the day of loss is not a holiday but one (1) (or more) of the preceding corresponding days is a holiday, use additional preceding weeks in order to procure volumes for two (2) non-holidays in the previous two (2) weeks that correspond to the day of the week that is the day of the loss.

4.1.4.6 If the loss occurs on a weekday that is a holiday (except Christmas and Mother's day), Bell Atlantic shall use volumes from the two (2) preceding Sundays.

4.1.4.7 If the loss occurs on Mother's Day or Christmas day, Bell Atlantic shall use volumes from that day in the preceding year multiplied by a growth rate specified by MCIIm.

4.1.4.8 MCIIm may also request data be provided that has previously been successfully provided by Bell Atlantic to MCIIm. Bell Atlantic shall re-provide such data, if available. Any charges to MCIIm will be negotiated on a case by case basis.

4.1.5 Testing, Changes and Controls

4.1.5.1 The Recorded Usage Data, EMR format, content, and transmission process shall be tested as set forth in this subsection 4.1.5 and, if necessary, as otherwise agreed by the Parties.

4.1.5.2 **Interface Testing.** The purpose of this test is to determine whether the usage records can be sent by Bell Atlantic to MCIIm and can be accepted and processed by MCIIm. Bell Atlantic shall provide a test file to MCIIm's designated regional processing center ("RPC") in the format that shall be used for Bell Atlantic's live day-to-day processing. The file shall contain one (1) full day's production usage and all potential call types. MCIIm shall also provide Bell Atlantic with the agreed-upon control reports as part of this test.

4.1.5.3 Pursuant to a separate testing agreement between the Parties, for testing purposes Bell Atlantic shall provide MCIIm with Bell Atlantic recorded, unrated usage for a minimum of five (5) consecutive days. MCIIm shall provide Bell Atlantic with the message validation reports associated with test usage.

4.1.5.4 **Test File.** Test data should be transported via industry standard on-line transmission software. In the event that courier service must be used to transport test media, the physical tape characteristics to be used are described in Subsection 4.2.3.2.

4.1.5.5 **Periodic Review.** Control procedures shall be part of the normal production interface management function. Breakdowns which impact the flow of usage data between Bell Atlantic and MCIIm shall be identified and jointly resolved as they occur. The resolution may include changes to control procedures to avoid similar problems in the future. Any changes to control procedures shall be mutually agreed upon by MCIIm and Bell Atlantic.

4.1.5.6 **System and Software Changes**

4.1.5.6.1 When Bell Atlantic plans to introduce any system or software changes which impact the format or content structure of the usage data feed to MCIIm, designated Bell Atlantic personnel shall notify MCIIm no less than one hundred twenty (120) calendar days before such changes are implemented, unless a shorter time frame is mutually agreed to by the Parties, which agreement shall not be unreasonably withheld.

4.1.5.6.2 Bell Atlantic shall communicate the projected changes to MCIIm in reasonable detail to enable MCIIm to determine potential impacts on processing.

4.1.5.6.3 MCIIm may arrange to have its usage data tested utilizing the modified system or software when the latter are ready for testing.

4.1.5.6.4 If it is necessary for Bell Atlantic to make changes in the schedule, content or format of usage data transmitted to MCIIm, Bell Atlantic shall notify MCIIm.

4.1.5.7 **Requested Software Changes**

Bell Atlantic will consider reasonable requests for software changes that impact the format or content structure of the usage data feed to MCIIm.

The Parties shall mutually agree on the terms and conditions governing any such changes that Bell Atlantic agrees to implement.

4.1.5.8 **Changes to Data Exchange Controls**

Bell Atlantic will provide current data exchange controls to MCIIm promptly following the execution of this Agreement. Bell Atlantic shall notify MCIIm at least ninety (90) calendar days before such changes are implemented, unless a different time frame is mutually agreed to by the Parties and such consent shall not be unreasonably withheld.

4.1.5.9 **Verification Of Changes**

4.1.5.9.1 Based on the detailed description of material changes furnished by Bell Atlantic, MCIIm and Bell Atlantic personnel shall, as appropriate:

4.1.5.9.1.1 Determine the type of change(s) to be implemented.

4.1.5.9.1.2 Develop a comprehensive test plan.

4.1.5.9.1.3 Arrange for review of modified controls, if applicable.

4.1.5.10 **Introduction of Changes**

4.1.5.10.1 When any applicable testing requirements have been met, designated MCIIm and Bell Atlantic personnel shall develop an implementation plan.

4.2 **Information Exchange and Interfaces**

4.2.1 **Core Billing Information**

4.2.1.1 Bell Atlantic shall provide MCIIm with unrated industry standard EMR records associated with all intraLATA toll and local usage recorded on MCIIm's behalf. MCIIm shall be given notification thirty (30) days prior to implementation of a new type and/or category of record.

4.2.1.2 Bell Atlantic shall provide to MCIIm rated EMR records for alternative billed calls (*e.g.*, collect and billed to third number calls) and pursuant to Section 4.1.1.7.

4.2.1.3 **Data Delivery Schedules.** Data shall be delivered to MCIIm by Bell Atlantic five (5) days per week unless otherwise negotiated, except for weeks containing MCIIm and/or Bell Atlantic Data Center holidays.

Bell Atlantic and MCIIm shall exchange schedules of designated Data Center holidays. Bell Atlantic shall provide its transmission schedule to MCIIm.

4.2.2 Product/Service Specific

4.2.2.1 Bell Atlantic shall provide MCIIm a 42-50-01 record to support any special features star services resold by MCIIm.

4.2.3 Information Transport

4.2.3.1 Bell Atlantic and MCIIm shall jointly provide the transport facility for transmitting usage and billing data between Bell Atlantic locations and MCIIm locations as set forth in this Section 4.2. MCIIm shall be responsible for the circuit between the locations. Each Party shall be responsible for any software or hardware needed at its end of the circuit. Bell Atlantic shall transmit via NDM/Connect:Direct. In the event usage transfer cannot be accommodated by NDM because of extended (one (1) business day or longer) facility outages, Bell Atlantic shall contract for a courier service to transport the data via tape cartridge. The Party responsible for the outage shall incur the cost of transport.

4.2.3.2 Bell Atlantic shall comply with the following standards when data is transported to MCIIm on tape or cartridge via a courier. The data shall be in fixed or variable block format as mutually agreed by the Parties and be in the following format:

Tape: 9-track, 6250 (or 1600) BPI (Bytes per inch)
Cartridge: 38,000 BPI
LRECL: 2,472 Bytes
Parity: Odd
Character Set: Extended Binary Coded Decimal Interchange Code ("EBCDIC")
External labels: Exchange Carrier Name, Dataset Name ("DSN") and volume serial number
Internal labels: IBM Industry OS labels shall be used. They consist of a single volume label and two sets of header and trailer labels.

4.2.4 Rejected Recorded Usage Data

Any messages that cannot be rated and/or billed by MCIIm due to an error or omission by Bell Atlantic may be returned to Bell Atlantic via NDM. Returned messages shall be sent directly to Bell Atlantic in EMR format. Standard EMR return codes shall be utilized. Bell Atlantic shall investigate such returned records and use reasonable efforts to rectify the error or omission.

4.2.4.1 Bell Atlantic must return EMR/EMI records to Bell Atlantic’s billing and collections customers with the OBF standard message reject code which indicates that Bell Atlantic no longer serves the end user and which includes the OCN/local service provider ID of the new local service provider/Reseller serving the end user.

4.2.5 Interfaces

4.2.5.1 MCIIm shall notify Bell Atlantic of resend requirements if a pack or entire dataset must be replaced due to pack rejection, damage in transit, dataset name failure, etc.

4.2.5.2 Notification of pack rejection shall be made by MCIIm within one (1) business day of processing. Bell Atlantic shall use reasonable efforts to correct and retransmit rejected packs within twenty-four (24) hours, or within an alternate timeframe negotiated on a case by case basis.

4.2.5.3 A pack shall contain a minimum of one message record or a maximum of 9,999 message records plus a pack header record and a pack trailer record. A file transmission contains a maximum of 99 packs. A dataset shall contain a minimum of one pack. The providing Party shall provide the purchasing Party one dataset per Revenue Accounting Office (“RAO”) sending location, with the agreed upon RAO/OCN populated in the header and trailer records.

4.2.6 Formats and Characteristics

4.2.6.1 Rated in collect messages should be transmitted via the NDM and can be intermingled with the unrated messages. No special packing is needed.

4.2.6.2 **EMR.** Bell Atlantic shall provide Recorded Usage Data in the EMR format and by category, group and record types as specified herein, and shall be transmitted, via a direct feed, to MCIIm. The following is a list of EMR records that MCIIm can expect to receive from Bell Atlantic:

Header Record	20-21-01
Trailer Record	20-21-02
Detail Records	*01-01-01, 06, 07, 08, 09, 14, 16, 17, 18, 31, 32,35, 37, 80, 81, 82, 83, 42-50-01, 10-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37
Credit Records	03-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,
Rated Credits	41-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,
Cancel Records	51-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,

Correction Records 71-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,

*Category 01 is utilized for Rated Messages; Category 10 is utilized for Unrated Messages. Category 10 records are to have indicator 13 populated with a value of 5.

4.2.6.3 Bell Atlantic shall reasonably comply with the most current version of Bellcore standard practice guidelines for formatting EMR records, or any superseding industry standards.

4.2.6.4 The Interfacing Bell RAO, OCN, and remote identifiers shall be used by MCIIm to control invoice sequencing and each shall have its own invoice controls. The OCN shall also be used to determine where the message returns file, containing any misdirected and unguidable usage, shall be sent.

4.2.6.5 The file's record format shall be variable block, unless otherwise agreed. The size and the logical record length shall be 2472 bytes.

4.2.6.6 Bell Atlantic shall not sort Recorded Usage Data for MCIIm except upon terms and conditions that may be mutually agreed by the Parties, including additional charges for such services.

4.2.6.7 Bell Atlantic shall transmit the usage data to MCIIm using dataset naming conventions reasonably prescribed by MCIIm.

4.2.7 Controls

4.2.7.1 MCIIm shall test and certify the NDM interface to ensure the accurate receipt of Recorded Usage Data.

4.2.7.2 Header and trailer records shall be populated in positions 13-27 with the following information for MCIIm:

Position	
13-14	Invoice numbers (1-99)
15-16	Bell Co. ID number or zeroes
17-19	Interfacing Bell RAO Code
20-23	MCIIm OCN value 7299
24-27	0000

The trailer grand total record count shall be populated with total records in pack (excluding header & trailer).

4.2.7.3 **Control Reports.** MCIIm shall accept input data provided by Bell Atlantic in EMR format in accordance with the requirements and

specifications detailed in Section 4. In order to ensure the overall integrity of the usage being transmitted from Bell Atlantic to MCIIm, data transfer control reports shall be provided by MCIIm. These reports shall be provided by MCIIm to Bell Atlantic on a daily or otherwise negotiated basis and reflect the results of the processing for each pack transmitted by Bell Atlantic.

4.2.7.4 Control Reports - Distribution. Since Bell Atlantic is receiving control reports, dataset names shall be established as mutually agreed.

4.2.7.5 Message Validation Reports. MCIIm shall provide once per day (or as otherwise negotiated) message validation reports to the designated Bell Atlantic system control coordinator. These reports shall be provided for all data received within Bell Atlantic Local Resale and Local Switching feed and shall be transmitted concurrent with the daily usage file schedule.

4.2.7.6 Incollect Pack Processing. MCIIm shall provide to Bell Atlantic a standard EMR report showing vital statistics and control totals for packs rejected and accepted and dropped messages. MCIIm will provide this in the following report formats and control levels:

Company Name
Reseller Total Messages processed in a pack
Packs processed shall reflect the number of messages initially erred and accepted within a pack
Reseller Total Packs processed

4.3 Miscellaneous

4.3.1 When requested by MCIIm for law enforcement purposes, Bell Atlantic shall provide MCIIm with Recorded Usage Data as soon as practicable following such request. If not available in EMR format, the Recorded Usage Data may be provided in AMA format.

4.3.2 Bell Atlantic shall include the working telephone number of the originating dial tone line on each EMR call record provided to MCIIm.

4.3.3 End user subscriber usage records and station level detail records shall be in packs in accordance with EMR standards.

4.3.4 Bell Atlantic shall use its best commercially reasonable efforts to provide MCIIm with Recorded Usage Data to be provided hereunder not more than three (3) business days after termination of the call for which usage data is to be provided.

Section 5. Maintenance

5.1 General Requirements

5.1.1 The Parties shall provide repair, maintenance, testing, and surveillance for all Local Resale services, interconnection, and Network Elements in accordance with the terms and conditions of this Section 5 of Attachment VIII.

5.1.2 The Parties shall cooperate with each other to meet maintenance standards for all Local Resale services, interconnection, and Network Elements ordered under this Agreement, as specified in this Section 5 of Attachment VIII. Such maintenance standards shall include, without limitation, standards for testing, network management, call gapping, and notification of standards upgrades as they become available.

5.1.3 Bell Atlantic shall provide repair service that is at Parity in quality to that provided to Bell Atlantic subscribers; trouble calls from MCI shall receive response time priority that is at Parity to that of Bell Atlantic subscribers. MCI shall provide repair service that is at Parity in quality to that provided to MCI subscribers; trouble calls from Bell Atlantic shall receive response time priority that is at Parity to that of MCI subscribers.

5.1.4 The Parties shall provide scheduled and non-scheduled maintenance at Parity, including, without limitation, required and recommended maintenance intervals and procedures, for all Local Services, interconnection, and Network Elements under this Agreement that it currently provides for the maintenance of its own network. Each Party will provide reasonable notice of such maintenance if it is known to or is reasonably foreseeable to materially affect the other Party's subscribers.

5.1.4.1 Plans for scheduled maintenance shall include, at a minimum, the following information: description of work to be completed and date and time work is scheduled to be completed.

5.1.5 The Parties shall advise each other of all non-scheduled maintenance, testing, monitoring, and surveillance activity to be performed on any Network Element, including, without limitation, any hardware, equipment, software, or system, providing service functionality which is known or is reasonably foreseeable to materially affect the other Party's subscribers.

5.1.6 The Parties shall provide each other with a summary description of any and all network emergency restoration plans and network disaster recovery plans, however denominated, which are in place during the term of this Agreement. Such plans, if warranted by the nature thereof, shall include the following: (i) provision for notification to the other Party of the existence, location, and source of any emergency network outage reportable to the FCC that materially affects subscribers of the other Party, via fax to a single number designated by the other Party; (ii) establishment of a single point of contact responsible for initiating

and coordinating the restoration of all Local Resale services, interconnection, or Network Elements; (iii) provision of status of restoration efforts and problem resolution during the restoration process, via fax to a single number designated by the other Party; (iv) reasonably equivalent priority, as between MCIIm subscribers and Bell Atlantic subscribers, for restoration efforts, consistent with FCC service restoration guidelines, including, without limitation, deployment of repair personnel, and use of spare parts and components on the Party's own network; and (v) a mutually-agreeable process for escalation of maintenance problems, including a complete, up-to-date list of responsible contacts, each available twenty-four (24) hours per day, seven (7) days per week. Said plans shall be modified and updated as needed.

5.1.6.1 As identified, the Parties shall provide timely notification to each other of network outages at Parity with the notification provided to their own repair centers. Such outages may include, but are not limited to:

- 5.1.6.1.1 Central Office outages;
- 5.1.6.1.2 Facility outages such as cable cuts and repeater failures;
- 5.1.6.1.3 Commercial power outages;
- 5.1.6.1.4 Load sharing situations;
- 5.1.6.1.5 Subscriber loop outages;
- 5.1.6.1.6 Signaling network congestion; and
- 5.1.6.1.7 General network congestion.

5.1.7 Bell Atlantic and MCIIm will make reasonable efforts to minimize the number of calls misdirected to the other Party's repair bureau. Bell Atlantic and MCIIm shall establish mutually acceptable methods and procedures for the referral from Bell Atlantic to MCIIm, and vice versa, of any and all misdirected calls from subscribers requesting repair.

5.1.7.1 MCIIm and Bell Atlantic each agree to provide their own subscribers with a toll free or ordinary number to call for repair service. Bell Atlantic will accomplish this, and will assist MCIIm to accomplish this, in three stages:

(1) From the execution hereof until March 31, 1997, calls to 611 shall be answered by a voice response unit or live operator. Such unit or operator will provide a referral telephone number (provided by MCIIm) to those MCIIm customers who call this number. Such referrals shall be provided on a Non-Discriminatory basis.

(2) By April 1, 1997, calls to 611 will be answered solely by an automated announcement. This announcement will inform Bell Atlantic subscribers to call a toll free number and will inform all other subscribers to call their respective carriers. The automated announcement will not provide referral numbers. However, the

Bell Atlantic toll free referral number will be answered by a voice response unit or live operator who will provide maintenance referral numbers to non-Bell Atlantic subscribers.

(3) Commencing no later than December 31, 1997, the 611 repair number will be deactivated and callers will be informed by a recorded message that it is no longer a working number, and that they should contact their carrier directly. At all times, and on a Non-Discriminatory basis, Bell Atlantic operators will refer callers to the repair number of their respective carriers.

5.1.8 Each Party's repair bureau shall perform the following functions in conformance with performance and service quality standards at Parity with those provided to itself when providing repair and maintenance to the other Party and the other Party's subscribers under this Agreement:

5.1.8.1 Either Party may request repairs to the other Party's network by calling the other Party's repair bureau.

5.1.8.2 Each Party shall make reasonable efforts to ensure that its repair bureau, including the electronic interface described in Section 5.2 herein, is on-line and operational twenty-four (24) hours per day, seven (7) days per week. MCI and Bell Atlantic will develop mutually agreed-upon manual processes for repair reporting in the event of unavailability or failure of the electronic interface.

5.1.8.3 Each Party's repair bureau shall provide to the other Party an "arrive by time" or "estimated time to arrive" on reported Telephone Exchange Service or Exchange Access Service trouble.

5.1.8.4 Each Party shall notify the other Party, via status screen or verbal communication, when the "arrive by time" or "estimated time to arrive" has been significantly changed or impacted by other events.

5.1.8.5 Each Party shall provide the status of repair efforts to the other Party upon reasonable request.

5.1.8.5.1 Bell Atlantic shall inform MCI of repair completion and the reason for trouble, if identified, as soon as practicable after restoration of Network Elements and any other trouble reports by MCI. Notification should be provided via electronic interface, when available.

5.1.8.5.2 When trouble is reported by a subscriber served through Network Elements, MCI will test its network (including basic unbundled loops) to identify any problems. If no problems are identified with the MCI network and/or no trouble is found in

Bell Atlantic's service, MCIIm will open a trouble report with Bell Atlantic. Bell Atlantic shall then test its portion of the network and perform repairs, as appropriate, based on appointment availability. Each Party shall share test results and otherwise cooperate in order to resolve the trouble.

5.1.8.6 The Parties shall establish escalation procedures for trouble tickets and maintenance requests that are not resolved in a timely manner. The escalation procedures to be provided under this Agreement shall include names and telephone numbers of each Party's management personnel who are responsible for maintenance issues.

5.1.8.7 Neither Party shall perform maintenance services involving additional charges for Local Resale services, interconnection or Network Elements without advance authorization from the other Party, excluding charges for maintenance services as set forth in Attachment I, which will be billed to the Party requesting the maintenance services.

5.1.8.8 Bell Atlantic shall dispatch its technicians to MCIIm subscriber premises at Parity in response to reports submitted by MCIIm via an electronic interface established pursuant to Section 5.2 herein. The electronic interface shall have the capability of allowing MCIIm to receive trouble report information, access Bell Atlantic's status field and designated narratives which will contain the original test results, if applicable, and receive all applicable close out information including time of repair, work done and any charges associated with the trouble report.

5.1.8.9 Each Party shall furnish the other Party with single points of contact ("SPOC") for all communications relating to trouble tickets and maintenance requests.

5.1.8.10 Bell Atlantic agrees that MCIIm may call Bell Atlantic to verify Central Office features and functions as they relate to an open trouble report. Bell Atlantic agrees to work with MCIIm on the initial trouble report to isolate the cause of the trouble and, where possible, resolve the feature/function related trouble at that time.

5.1.9 The Parties shall exchange unique numbers to identify each initial report opened.

5.2 Systems Interfaces

5.2.1 Bell Atlantic will provide electronic interfaces (ECG and OSI) that meet OSI T-1 M-1 standards (ANSI T1-227, 1995 and ANSI T1-228 1995 as may be amended), as gateways to allow MCIIm maintenance personnel and customer service representatives to perform the following functions for Local Services resold to MCIIm subscribers: the ability to transmit a new trouble ticket for an MCIIm subscriber; for all OSI electronically bonded reports, the ability to receive

notification of status changes as they occur including notification of dispatch, providing MCIm the ability to track current status on all open MCIm subscriber trouble tickets; the ability to request an escalation and receive escalation responses of said request; the ability to receive dispatch "arrive by time" appointment (POTS only) when the trouble is established and automatic notification of appointment changes; the ability to update trouble information; and the ability to receive all applicable time and material charges at the time of ticket closure (total by subscriber, per event) along with clearance time and description of work done. The Parties will negotiate reciprocal interfaces and procedures for maintenance of Interconnection and Network Elements. Prior to availability of electronic interfaces, Bell Atlantic shall respond to MCIm's telephonic inquires.

5.3 Standards

5.3.1 The following shall apply to premises visits by Bell Atlantic's employees and contractors:

5.3.1.1 Bell Atlantic employees or contractors shall provide to MCIm subscribers a written notice of charges for work completed, if any, or notice that additional work (on access to the premises) will be necessary.

5.3.1.2 If work is not completed because of access problems, Bell Atlantic employees or contractors shall call MCIm to advise it of the need for access. The report will be held for a reasonable period as "no-accessed" in Bell Atlantic's system and will be redated once new access is established with respect to the subscriber premises so that MCIm can schedule a new appointment with Bell Atlantic and subscriber at the same time.

5.3.1.3 Bell Atlantic's employees or contractors shall use reasonable efforts to obtain the subscriber's signature on appropriate forms confirming any chargeable event.

Section 6. Miscellaneous Services & Functions

6.1 General Requirements

6.1.1 Basic 911 and E911 General Requirements

Basic 911 and E911 provides a caller access to the appropriate emergency service bureau by dialing a 3-digit universal telephone number (911). Basic 911 and E911 shall be provided to MCIm in accordance with Sections 6.1.1 and 6.1.2 below. Notwithstanding the indemnification provisions set forth in Part A of this Agreement, Bell Atlantic's liability for indemnification resulting from third-party claims in connection with the provision of such 911 and E911 Services shall be subject to the liability limitations contained in Bell Atlantic's applicable 911 Tariffs.

6.1.1.1 E911 shall provide additional routing flexibility for 911 calls. E911 shall use subscriber data, contained in the 911 database system, to determine to which PSAP to route the call.

6.1.1.2 If available, Bell Atlantic shall offer a third type of 911 Service, 911 using SS7 (S911). All requirements for E911 as set forth herein shall also apply to S911 with the exception of the type of signaling used on the interconnection trunks from the local Switch to the S911 tandem.

6.1.1.3 Basic 911 and E911 functions provided to MCIIm shall be at least at the same level Bell Atlantic provides to its subscribers for such functionality.

6.1.1.4 Basic 911 and E911 access shall be provided to MCIIm in accordance with the following:

6.1.1.4.1 Bell Atlantic and MCIIm shall conform to all state regulations concerning emergency services.

6.1.1.4.2 For E911, Bell Atlantic shall use its current process, as the same may be modified from time to time, to update and maintain subscriber information in the ALI/DMS data base.

6.1.1.5 If a jurisdiction has planned for overflow, then Bell Atlantic shall provide for such overflow 911 traffic to be routed to Bell Atlantic Operator Services or, at MCIIm's discretion, directly to MCIIm Operator Services.

6.1.1.6 Basic 911 and E911 access from the MCIIm local Switch shall be provided to MCIIm in accordance with the following:

6.1.1.6.1 When ordered by MCIIm from Bell Atlantic, Bell Atlantic shall interconnect direct trunks from the MCIIm network to the 911 PSAP, or the E911 tandems as designated by MCIIm. Such trunks may alternatively be provided by MCIIm.

6.1.1.6.2 In jurisdictions where Bell Atlantic has obligations under existing agreements as the primary provider of the 911 Service to a government agency, MCIIm shall participate in the provision of the 911 Service as follows:

6.1.1.6.2.1 Each Party shall be responsible for those portions of the 911 Service for which it has control, including any necessary maintenance to each Party's portion of the 911 Service.

6.1.1.6.2 Bell Atlantic shall be responsible for maintaining the E911 database.

6.1.1.6.3 If a third party is the primary service provider to a government agency, MCI shall negotiate separately with such third party with regard to the provision of 911 Service to the agency. All relations between such third party and MCI are independent of this Agreement and Bell Atlantic makes no representations on behalf of the third party.

6.1.1.7 If available, Bell Atlantic shall provide to MCI, upon request, the emergency public agency (*e.g.*, police, fire, rescue, poison, and bomb) telephone numbers linked to all NPA NXXs for the states in which MCI provides service.

6.1.1.8 If available to Bell Atlantic and for those jurisdictions previously requested by MCI, Bell Atlantic shall transmit to MCI as soon as practicable all changes, alterations, modifications, and updates to the emergency public agency telephone numbers linked to all NPA NXXs. This transmission shall be electronic and be a separate feed from the subscriber listing feed.

6.1.1.9 The following are E911 database requirements:

6.1.1.9.1 If Bell Atlantic possesses an MSAG and is not prohibited from providing it to MCI, it shall provide copies of the MSAG within three (3) business days from the time requested. Copies shall be provided on diskette, magnetic tape, or in a format suitable for use with desktop computers. Updates to the MSAG thereafter will be provided on a monthly basis.

6.1.1.9.2 MCI shall be solely responsible for providing MCI database records to Bell Atlantic for inclusion in Bell Atlantic's ALI database on a timely basis.

6.1.1.9.3 Bell Atlantic and MCI shall arrange for the automated input and periodic updating on a mediated access basis of the E911 database information related to MCI end users to replace the manual data entry process currently used. Bell Atlantic shall work cooperatively with MCI to ensure the accuracy of the data transfer by verifying it against the MSAG provided that MCI shall be responsible for the accuracy of information it provides Bell Atlantic. The relevant governmental jurisdiction is responsible for accuracy of the MSAG, and Bell Atlantic shall have no responsibility for accuracy of the MSAG. As soon as Technically Feasible, Bell Atlantic shall accept electronically transmitted files or magnetic tape that conform to National

Emergency Number Association (“NENA”) Version #2 format for MCIIm subscribers.

6.1.1.9.3.1 MCIIm shall provide information on new subscribers to Bell Atlantic as part of the ordering process. Bell Atlantic shall update its database within two (2) business days of receiving the information from MCIIm. If Bell Atlantic detects an error in the MCIIm provided data, the data shall be returned to MCIIm within one (1) business day after the error was detected by Bell Atlantic. MCIIm shall respond to requests from Bell Atlantic to make corrections to database record errors by uploading corrected records within two (2) business days. Manual entry of the data by Bell Atlantic shall be allowed until an interface between the Parties is developed and deployed, and thereafter in the event such interface is not functioning properly. In the event of an E911 database failure, MCIIm subscriber E911 information review and entry shall be at Parity.

6.1.1.9.4 MCIIm shall assign an E911 database coordinator charged with the responsibility of forwarding MCIIm end user ALI record information to Bell Atlantic or via a third-party entity charged with the responsibility of ALI record transfer. MCIIm assumes all responsibility for the accuracy of the data that MCIIm provides to Bell Atlantic.

6.1.1.9.5 Bell Atlantic agrees to treat all data on MCIIm subscribers provided under this Agreement as Confidential Information in accordance with the terms of Section 22 of Part A and to use data on MCIIm subscribers only as provided under this Agreement.

6.1.1.9.6 Upon completion of NENA Telco Identification Code standards, Bell Atlantic shall use a Carrier Code (a NENA standard five-character field) on all ALI records received from MCIIm. The Carrier Code shall identify the carrier of record in INP configurations. Prior to completion of the NENA standards, Bell Atlantic shall use the ACNA code obtained from Bellcore’s carrier identification code assignments.

6.1.1.9.7 Bell Atlantic shall identify which ALI databases cover which states, counties or parts thereof, and identify and communicate a point of contact for each.

6.1.1.10 The following are basic 911 and E911 network requirements:

6.1.1.10.1 Bell Atlantic shall provide the number of trunks as may be ordered by MCIIm. These trunks shall be dedicated to routing 911 calls from MCIIm's Switch to a Bell Atlantic selective router.

6.1.1.10.2 Where available, Bell Atlantic shall provide the Selective Routing of E911 calls received from MCIIm's switching office. This consists of the ability to receive the ANI of MCIIm's subscriber, selectively route the call to the appropriate PSAP, and forward the subscriber's ANI to the PSAP. Bell Atlantic shall provide MCIIm with the appropriate common language location identifier ("CLLI") codes and specifications regarding the tandem serving area associated addresses and meet-points in the network.

6.1.1.10.3 Bell Atlantic will supply, upon MCIIm's request, the written exchange of pertinent data, at the Rate Center level, for the routing of basic 911 and E911 calls to the proper public safety agency.

6.1.1.10.4 MCIIm shall ensure that its Switches provide ANIs and the line number of the calling station that are compatible with Bell Atlantic's network.

6.1.1.10.5 Each ALI discrepancy report shall be jointly researched by Bell Atlantic and MCIIm. Corrective action shall be taken promptly by the responsible Party.

6.1.1.10.6 Subject to mutual agreement, Bell Atlantic shall provide MCIIm with written technical specifications for network interfaces, and technical specifications for database loading and maintenance pursuant to NENA Standards. Bell Atlantic shall also cooperate with MCIIm on reasonable requests for Rate Center information.

6.1.1.10.7 Bell Atlantic shall identify special routing arrangements to complete 911 calls.

6.1.1.10.8 Bell Atlantic shall begin restoration of E911 and/or E911 trunking facilities promptly upon notification of failure or outage. Bell Atlantic shall provide priority restoration of trunks or network outages on the same terms/conditions it provides itself.

6.1.1.10.9 Bell Atlantic shall identify any special operator-assisted calling requirements to support 911.

6.1.1.10.10 Trunking shall be arranged in compliance with local emergency service requirements to minimize the likelihood of Central Office isolation due to cable cuts or other equipment

failures. If there is an alternate means of transmitting a 911 call to a PSAP, in the event of an emergency, it will be available at Parity.

6.1.1.10.11 Equipment and circuits used for 911 shall be monitored at all times. Monitoring of circuits shall be done to the individual circuit level. Monitoring shall be conducted by Bell Atlantic for trunks between the tandem and all associated PSAPs.

6.1.1.10.12 Repair service shall begin promptly upon receipt of a report of a malfunction, the priority of which shall depend upon whether such malfunction impairs provision of 911 and E911 Services. Repair service includes testing and diagnostic service from a remote location, dispatch of or in-person visit(s) of personnel. Technicians shall be dispatched without unreasonable delay.

6.1.1.10.13 All 911 trunks must be capable of transmitting and receiving Baudot codes necessary to support the use of telecommunications devices for the deaf (TTY/TDDs).

6.1.2 Basic 911 and E911 Additional Requirements

6.1.2.1 All MCIIm lines that have been ported via INP shall reach the correct PSAP when 911 is dialed. Bell Atlantic shall send both the ported number and the MCIIm number (if both are received from MCIIm) to the PSAP upon an ALI request from the PSAP. The PSAP attendant shall see both numbers where the PSAP is using a standard ALI display screen and the PSAP extracts both numbers from the data that is sent. The MCIIm subscriber's directory number may be shown on the "remarks" line of the ALI record.

6.1.2.2 Bell Atlantic shall work with the appropriate government agency to provide MCIIm the ten-digit POTS number of each PSAP which subtends each Bell Atlantic selective router/911 tandem to which MCIIm is interconnected.

6.1.2.3 Bell Atlantic shall use reasonable efforts to notify MCIIm forty-eight (48) hours in advance of any scheduled testing or maintenance affecting MCIIm 911 Service, and provide notification as soon as possible of any unscheduled outage affecting MCIIm 911 Service.

6.1.2.4 MCIIm shall be responsible for reporting all errors, defects and malfunctions to Bell Atlantic. Bell Atlantic shall provide MCIIm with the point of contact for reporting errors, defects, and malfunctions in the service and shall also provide escalation contacts.

6.1.2.5 Bell Atlantic shall provide reasonable notification of any pending tandem moves, NPA splits, or scheduled maintenance outages affecting MCIIm 911 Service.

6.1.2.6 Bell Atlantic shall establish a process for handling "reverse ALI" inquiries by public safety entities.

6.1.2.7 Bell Atlantic shall establish a process for the management of NPA splits by populating the ALI database with the appropriate new NPA codes.

6.1.2.8 Bell Atlantic shall provide the ability for MCIIm to update 911 database with end user information for lines that have been ported via INP or NP.

6.1.3 Directory Assistance Service

6.1.3.1 Bell Atlantic shall provide for the routing of Directory Assistance calls (including but not limited to 411, 555-1212, NPA-555-1212) dialed by MCIIm subscribers directly to either the MCIIm Directory Assistance service platform or Bell Atlantic Directory Assistance service platform as specified by MCIIm.

6.1.3.2 MCIIm subscribers shall be provided the capability by Bell Atlantic to dial the same telephone numbers for access to MCIIm Directory Assistance that Bell Atlantic subscribers are provided to access Bell Atlantic Directory Assistance.

6.1.3.3 If MCIIm purchases from Bell Atlantic MCIIm-branded Directory Assistance service selectively routed to Bell Atlantic's Directory Assistance platform, MCIIm shall give Bell Atlantic six (6) months notice before terminating that arrangement by selectively rerouting Directory Assistance traffic to another Directory Assistance platform.

6.1.3.3.1 Bell Atlantic agrees to provide MCIIm subscribers with Directory Assistance service at Parity.

6.1.3.3.2 Bell Atlantic shall notify MCIIm in advance of any changes or enhancements to its Directory Assistance service, and shall make available such service enhancements at Parity and on a Non-Discriminatory basis with respect to other CLECs.

6.1.3.3.3 Bell Atlantic shall provide Directory Assistance to MCIIm subscribers in accordance with Bell Atlantic's internal methods, procedures and standards, which shall, at a minimum, comply with applicable state regulations. Upon MCIIm's request,

Bell Atlantic shall provide to MCIIm its methods and procedures for providing Directory Assistance service.

6.1.3.3.4 Bell Atlantic shall provide MCIIm with provisioning of Directory Assistance at Parity.

6.1.3.3.5 Service levels shall comply, at a minimum, with applicable state regulatory requirements, including those for number of rings to answer and disaster recovery options.

6.1.3.3.6 Specialized Routing

6.1.3.3.6.1 Commencing after April 1, 1997, and in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall make available to MCIIm branded Directory Assistance for Directory Assistance traffic originating at any Bell Atlantic Switches where Bell Atlantic has already implemented the rerouting of Directory Assistance traffic pursuant to a request from a carrier.

6.1.3.3.6.2 Where Bell Atlantic is not offering this service in response to a request from a carrier, MCIIm may request that a Switch offer such rerouting capability and, in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall begin implementation of such request within ninety (90) days, and complete implementation within ninety (90) days thereafter. Bell Atlantic shall fulfill such requests on a Non-Discriminatory Basis.

6.1.3.3.6.3 Bell Atlantic shall provide front end branding as reasonably specified by MCIIm. MCIIm has the option of providing its own branded recordings and related materials for branding .

6.1.3.3.7 Bell Atlantic shall provide the following minimum Directory Assistance capabilities to MCIIm's subscribers:

6.1.3.3.7.1 Bell Atlantic shall provide to MCIIm subscribers seeking Directory Assistance the same number of responses and detail of information that it provides its own subscribers.

6.1.3.3.7.2 Upon request by subscriber, call completion to the requested number for local and intraLATA toll calls

shall be returned to the MCI network. Rating and billing shall be done by MCI.

6.1.3.3.7.2.1 Upon MCI's request and if Technically Feasible, Bell Atlantic shall provide blocking of Directory Assistance call completion on an ANI specific basis.

6.1.3.3.7.3 Bell Atlantic shall populate MCI listings in the Directory Assistance database in the same manner and in the same time frame as it does for Bell Atlantic subscribers.

6.1.3.3.7.4 Any information provided by a Directory Assistance automatic response unit shall be repeated the same number of times for MCI subscribers as for Bell Atlantic subscribers.

6.1.3.3.7.5 Bell Atlantic shall instruct MCI subscribers to call a toll free number for MCI customer service to request a credit. Bell Atlantic shall provide one toll free number for business subscribers and another for residential subscribers.

6.1.4 Operator Services

6.1.4.1 Bell Atlantic shall provide for the routing of 0+ local, 0- and operator transfers for local Operator Services calls dialed by MCI subscribers directly to either the MCI Operator Service platform or Bell Atlantic Operator Service platform as specified by MCI and pursuant to Attachment III, Section 7.2.2.

6.1.4.2 MCI subscribers shall be provided the capability by Bell Atlantic to dial the same telephone numbers to access MCI operator service that Bell Atlantic subscribers dial to access Bell Atlantic Operator Service.

6.1.4.3 If MCI purchases from Bell Atlantic MCI-branded Operator Services selectively routed to Bell Atlantic's Operator Services platform, MCI shall give Bell Atlantic six (6) months notice before terminating that arrangement by selectively rerouting Operator Services traffic to another Operator Services platform.

6.1.4.3.1 Bell Atlantic agrees to provide MCI subscribers Operator Services and service enhancements at Parity and on a Non-Discriminatory basis.

6.1.4.3.2 Specialized Routing

6.1.4.3.2.1 Commencing after April 1, 1997, and in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall make available to MCIIm branded Operator Services for Operator Services traffic originating at any Bell Atlantic Switches where Bell Atlantic has already implemented the rerouting of Operator Services traffic pursuant to a request from a carrier.

6.1.4.3.2.2 Where Bell Atlantic is not offering this service in response to a request from a carrier, MCIIm may request that a Switch(es) offer such rerouting capability and, in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall begin implementation of such request within ninety (90) days, and complete implementation within ninety (90) days thereafter. Bell Atlantic shall fulfill such requests from carriers requesting it on a Non-Discriminatory Basis.

6.1.4.3.2.2.1 Bell Atlantic shall provide front end branding as reasonably specified by MCIIm. MCIIm has the option of providing its own branded recordings and related materials for branding.

6.1.4.3.3 Bell Atlantic shall provide the following minimum Operator Service capabilities to MCIIm subscribers at Parity.

6.1.4.3.3.1 Completion of 0+ and 0- dialed local calls;

6.1.4.3.3.2 Completion of 0+ intraLATA toll calls;

6.1.4.3.3.3 Completion of calls that are billed to a calling card, with the exception of calls billed to proprietary cards, and MCIIm shall designate to Bell Atlantic the acceptable types of special billing;

6.1.4.3.3.4 Completion of person-to-person calls;

6.1.4.3.3.5 Completion of collect calls;

6.1.4.3.3.6 The capability for callers to bill to a third party and complete such calls;

6.1.4.3.3.7 Completion of station-to-station calls;

6.1.4.3.3.8 The processing of emergency calls;

6.1.4.3.3.9 The processing of Line Status Verification and Verification and Call Interrupt requests;

6.1.4.3.3.10 The processing of operator-assisted Directory Assistance calls;

6.1.4.3.3.11 Provision of rate quotes;

6.1.4.3.3.12 The processing of time-and-charges requests; and

6.1.4.3.3.13 The routing of 0- traffic directly to a "live" operator team.

6.1.4.3.3.14 When requested by MCI and commencing on availability, Bell Atlantic shall provide when Technically Feasible, credit on Operator Services calls as provided to Bell Atlantic subscribers or shall instruct MCI subscribers to call a toll free number for MCI customer service to request a credit. Bell Atlantic shall provide one toll free number for business subscribers and another for residential subscribers.

6.1.4.3.3.15 Caller assistance for the disabled; and

6.1.4.3.3.16 Provision of operator-assisted conference calling, when Technically Feasible.

6.1.4.4 Operator Service shall provide to the extent Technically Feasible MCI's local service rates when providing rate quote and time-and-charges services when branding MCI services pursuant to Section 6.1.4.3.2.

6.1.4.5 Bell Atlantic shall exercise at least the same level of fraud control in providing Operator Service to MCI that Bell Atlantic provides for its own Operator Service.

6.1.4.6 Bell Atlantic shall perform billed number screening when handling collect, third party, and calling card calls, both for station-to-station and person-to-person call types.

6.1.4.7 Bell Atlantic shall refer subscriber account and other similar inquiries to the subscriber service centers reasonably designated in advance by MCI from time to time.

6.1.4.8 Line Status Verification and Call Interrupt (LSV/CI)

6.1.4.8.1 Bell Atlantic shall permit MCIIm to connect its local Operator Service to Bell Atlantic's LSV/CI systems to enable MCIIm to perform BLV/BLI services.

6.1.4.8.2 Bell Atlantic shall engineer its LSV/CI facilities to accommodate the anticipated volume of BLV/BLI requests during the busy hour. MCIIm may, from time to time, provide its anticipated volume of BLV/BLI requests to Bell Atlantic. In those instances when the LSV/CI systems become unavailable, Bell Atlantic shall inform MCIIm as soon as practicable.

6.1.4.9 Where INP is deployed and when a BLV/BLI request for a ported number is directed to a Bell Atlantic operator and the query is not successful (i.e., the request yields an abnormal result), the operator shall if Technically Feasible confirm whether the number has been ported and shall direct the request to the appropriate operator.

6.1.4.10 Bell Atlantic shall allow MCIIm to order provisioning of telephone line number (TLN) calling cards and billed number screening (BNS), in its LIDB, for ported numbers, as agreed by the Parties. Bell Atlantic shall continue to allow MCIIm reasonable access to its LIDB for this purpose.

6.1.5 Directory Assistance and Listings Service Requests

6.1.5.1 These requirements pertain to Bell Atlantic's Directory Assistance and listings service request process that enables MCIIm to (a) submit MCIIm subscriber information for inclusion in Bell Atlantic Directory Assistance and Directory Listings databases; (b) submit MCIIm subscriber information for inclusion in published directories; and (c) provide MCIIm subscriber delivery address information to enable Bell Atlantic to fulfill directory distribution obligations.

6.1.5.1.1 Bell Atlantic shall accept orders on a real-time basis via electronic interface in accordance with OBF Directory Service request standards as soon as practicable.

6.1.5.1.2 Bell Atlantic shall migrate Directory Listing in accordance with OBF industry standards when developed.

6.1.5.1.3 Bell Atlantic shall enable MCIIm to electronically transmit multi-line listing orders.

6.1.5.1.4 Bell Atlantic shall provide MCIIm with a daily summary of completed Directory Service requests in accordance with OBF industry standards when developed.

6.1.5.1.5 To facilitate accurate order processing, Bell Atlantic shall provide to MCIIm the following information to the same extent and in the same manner and frequency as provided to Bell Atlantic customer service centers:

6.1.5.1.5.1 A matrix of NXX to Central Office;

6.1.5.1.5.2 Yellow pages heading codes;

6.1.5.1.5.3 Directory names and codes, and identification of which telephone directories are provided to which subscribers by subscriber address, NPA/NXX, or other criteria;

6.1.5.1.5.4 Listing format rules;

6.1.5.1.5.5 Listing alphabetizing rules;

6.1.5.1.5.6 Standard abbreviations acceptable for use in listings and addresses;

6.1.5.1.5.7 Titles and designations; and

6.1.5.1.5.8 A list of all available directories and their close dates.

6.1.5.1.6 Based on changes submitted by MCIIm as required by Bell Atlantic, Bell Atlantic shall update and maintain Directory Assistance and Directory Listings data for MCIIm subscribers who:

6.1.5.1.6.1 Disconnect Service;

6.1.5.1.6.2 Change carrier;

6.1.5.1.6.3 Install Service;

6.1.5.1.6.4 Change any service which affects DA information;

6.1.5.1.6.5 Specify Non-Solicitation; or

6.1.5.1.6.6 Are Non-Published, Non-Listed, or Listed.

6.1.6 Directory Listings General Requirements

6.1.6.1 This Section 6.1.6 pertains to listings published by Bell Atlantic in white/yellow pages, specialty directories or other printed or electronic formats containing such information. The provisions of this Section 6.1.6 shall apply to Bell Atlantic, and Bell Atlantic shall be responsible for compliance therewith, notwithstanding any arrangement between Bell Atlantic and another party (including an Affiliate of Bell Atlantic) whereby the other Party publishes or produces directories and associated products on Bell Atlantic's behalf.

6.1.6.2 Bell Atlantic shall include in its master subscriber system database list information for MCIIm subscribers as agreed by the Parties.

6.1.6.3 Upon receipt of written instructions from MCIIm with respect to all MCIIm subscriber listings, or from an MCIIm subscriber with respect to that subscriber's listing, Bell Atlantic shall not sell or license, nor allow any third party, the use of MCIIm subscriber listings. In the absence of such instructions, Bell Atlantic may sell or license such listings in the same manner as it does listings of Bell Atlantic subscribers. All revenues associated with the sale or license by Bell Atlantic of MCIIm subscriber listings shall be retained by Bell Atlantic. Bell Atlantic shall not disclose nor allow any third party to disclose non-listed name or address information for any purpose other than what may be necessary to complete directory distribution.

6.1.6.4 MCIIm subscriber listings, including State, Local, and Federal government listing, shall be interfiled with listings of Bell Atlantic and other CLEC subscribers.

6.1.6.5 Each MCIIm subscriber account number shall be provided the same white page basic listings that Bell Atlantic provides its subscribers.

6.1.6.6 Each MCIIm business subscriber account shall be provided the same yellow page basic listings that Bell Atlantic provides its subscribers.

6.1.6.7 Primary listings for all MCIIm subscribers shall be at Parity. Bell Atlantic shall make commercially reasonable efforts to develop a methodology to include MCIIm subscribers' listings in multiple directories covering the same geographic area at Parity.

6.1.6.8 As agreed by the Parties, MCIIm sales, service, billing, and repair information for business and residential subscribers, along with MCIIm logo, shall be included in the customer guide pages. The information required by this section shall be included in a form and font size substantially similar to that attached as Exhibit B of its Attachment VIII and shall be in the same section of the telephone directory in which Bell Atlantic lists its own similar information. All CLEC listings shall be placed alphabetically based on the name under which CLEC ordinarily

conducts business. There shall be no charge for the basic listing contemplated by this section. However, Bell Atlantic may impose a Non-Discriminatory charge for additional enhancements or changes to this information, or for other information that Bell Atlantic may agree to include.

6.1.6.9 Bell Atlantic and MCIIm agree to mutually develop a process whereby MCIIm can review and correct subscriber Directory Listings.

6.1.6.10 Charges for additional and foreign white page listings ordered by MCIIm should be billed to MCIIm and itemized at the subscriber billing telephone number level.

6.1.6.11 Bell Atlantic shall distribute appropriate primary alphabetical and classified directories (white and yellow pages) to MCIIm subscribers at Parity: 1) upon establishment of new service; 2) during annual mass distribution; and 3) upon subscriber request. Bell Atlantic shall provide MCIIm its policy on the number of telephone directories provided at no charge to the customer.

6.1.6.12 Bell Atlantic shall permit, or ensure a third party permits, MCIIm subscribers to place orders for foreign directories on the same terms and conditions such directories are made available to Bell Atlantic subscribers. Bell Atlantic shall provide to MCIIm the procedures, terms, and conditions for obtaining foreign telephone directories from Bell Atlantic.

6.1.6.13 Upon request, and at no charge, Bell Atlantic shall provide, or ensure a third party provides, reasonable quantities of directories for MCIIm's internal use to cover areas in which MCIIm is an authorized CLEC.

6.1.6.14 The directory cover shall state that it includes listings for all local telephone companies.

6.1.6.15 Bell Atlantic shall make available current recycling services to MCIIm subscribers under the same terms and conditions that Bell Atlantic makes such services available to its own subscribers.

6.1.7 Directory Assistance Data

6.1.7.1 To the extent required under Applicable Law, Bell Atlantic will provide MCIIm with "Direct Access" service to the same Directory Assistance ("DA") Database that is used by Bell Atlantic to provide Directory Assistance to Bell Atlantic customers. If other access methods are developed by Bell Atlantic, such will be made available to MCIIm at Parity. Direct Access will enable MCIIm's operator bureau to obtain direct electronic access to the DA Database for the purpose of providing

intraLATA Directory Assistance to MCIIm customers. MCIIm may search and read DA Database information at the per query rates specified in Table 1 of Attachment 1. Bell Atlantic will furnish ports for connection and termination of MCIIm facilities to the DA Database system. The type of ports and associated charges will be based on the type of access configuration required by MCIIm for termination of its facilities. At the request of MCIIm, Bell Atlantic will also accept electronic transmission of MCIIm Customer DA information for inclusion in the DA Database.

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ATTACHMENT IX

SECURITY REQUIREMENTS

Section 1. Physical Security

This Section 1 sets forth security requirements for physical Collocation at Bell Atlantic's premises. Each Party shall take reasonable steps to protect the other's personnel and property, including the following:

1.1 MCIIm shall access only equipment owned by MCIIm and shall enter only those areas of Bell Atlantic's premises where such equipment is located. Bell Atlantic shall maintain a log of its employees and agents that enter these areas. Bell Atlantic shall allow MCIIm, after reasonable advance notice, to inspect areas that house or contain MCIIm equipment or equipment enclosures in accordance with mutually acceptable procedures.

1.2 MCIIm shall deliver to Bell Atlantic within thirty (30) days of the date of this Agreement and every sixty (60) days thereafter a current list of its employees and agents authorized to enter Bell Atlantic's premises. While on Bell Atlantic's premises, such employees or agents shall prominently display identification badges. If requested by Bell Atlantic, MCIIm shall provide this information in an electronic format.

1.3 Each Party shall, while on the other's premises or in areas on its premises designated solely for the other Party's use, comply with the other's generally applicable security and safety procedures and requirements as may be provided from time to time by the other Party (including but not limited to sign-in, identification, and escort requirements); provided, however, that MCIIm's procedures and requirements for access to its equipment areas shall be consistent with those established by Bell Atlantic for the relevant premises.

1.4 Neither Party shall tamper with or perform any activities upon the other's equipment located on its premises, except as necessary to perform this Agreement (*e.g.*, equipment maintenance, installation, *etc.*) or in case of emergency. In an emergency, the affected Party shall promptly notify the other of the emergency, take steps it deems appropriate to manage the emergency (using reasonable care under the circumstances to protect the other's equipment), and allow the other Party to access its premises (subject to the requirements of this Section 1) to protect its equipment.

1.5 MCIIm shall ensure that areas that house MCIIm's equipment are adequately secured to prevent unauthorized entry. Bell Atlantic shall have no liability in this regard. MCIIm shall furnish Bell Atlantic with all keys, entry codes, lock combinations, and other materials and information necessary for Bell Atlantic to gain entry to any secured MCIIm area. Bell Atlantic shall limit access to such areas to its authorized employees and agents.

1.6 Each Party shall promptly notify the other of any breach by the other Party of the foregoing provisions.

1.7 MCIIm shall ensure that MCIIm equipment at Bell Atlantic's premises is suitable for use in the operational environment at such premises. Bell Atlantic shall have no liability in this regard, other than to maintain the general environmental conditions in the premises at normal operational levels suitable for its own equipment.

Section 2. System Security

2.1 Each Party shall provide the other a back-up and recovery plan to be used in the event of a system failure or emergency to facilitate prompt systems restoration and recovery. The Parties shall reasonably cooperate to determine which systems require disaster, restoration and recovery plans. Any such plans will be provided to the other Party.

2.2 Each Party shall maintain a reasonable standard of security between operation system interfaces consistent with its own information security practices.

Section 3. Fraud Prevention

3.1 Each Party shall make available to the other fraud prevention features, including prevention, detection, or control functionality, that may be embedded within any of the Network Elements in accordance with applicable Tariffs or as otherwise mutually agreed, such as 900 NPA and international blocking offered to business customers and aggregators.

3.2 Uncollectible or unbillable revenues from fraud and resulting from, but not confined to provisioning, maintenance, or signal network routing errors shall be the responsibility of the Party causing such error.

3.3 Neither Party shall be responsible to the other for any fraud incurred in connection with their respective service offerings, except that each Party shall indemnify and hold each other harmless for any losses payable to IXC carriers caused by "clip-on" fraud incurred as a result of unauthorized access to an indemnifying party's Service Area Concept ("SAC"); provided that the indemnifying party shall control all negotiations and settlements of such claims with the applicable IXC carriers.

Section 4. Law Enforcement Interface

Each Party shall provide reasonable assistance to the other in accordance with Applicable Law and the Party's internal procedures in connection with: installation of and information retrieval from traps in its network, emergency traces on and information retrieval from subscriber invoked CLASS services (e.g., call traces requested by the other Party), and execution of wiretap or dialed number recorder orders from law enforcement authorities.

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**Attachment X
PERFORMANCE REPORTING**

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ATTACHMENT X
PERFORMANCE REPORTING

Section 1. Initial Performance Reporting

1.1 Bell Atlantic shall supply to MCI initial performance reports each month on Bell Atlantic's performance in Pennsylvania in accordance with this Section 1. The reports shall be substantially in the format of the documents attached hereto as Schedules B through F. The definitions of the rows and columns in the reports are set forth in Schedule A. The coverage of each report is set forth in its title, with the additional explanations set forth below.

1.1.1 Schedule B (MCI-Specific) will report the statewide performance of Bell Atlantic for the services provided to MCI for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates in the cells in Schedule B are the dates that Bell Atlantic will be able to provide the information in that cell. Where the date is accompanied by the letters "Est." ("estimated"), the date in that cell is Bell Atlantic's best estimate and target, but not yet a commitment. Bell Atlantic will make its best efforts to meet the "Est." dates and will inform MCI of any potential change in those dates if and when that potential appears. Where the cell contains an "N/A" ("not applicable"), the measure is not applicable for that service category.

1.1.2 Schedule C (Bell Atlantic Including Bell Atlantic affiliates) will report statewide, system-wide performance of Bell Atlantic, including for the services provided to affiliate companies of Bell Atlantic, for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates and notations in Schedule C have the same meanings as those described above for Schedule B. Bell Atlantic does not have an immediately comparable service for Unbundling and, as a result, those columns have been marked as "N/A". Bell Atlantic's "Retail - POTS" column reflects results from Bell Atlantic's retail operations for POTS services and is comparable to the "Resale - POTS" service on the other schedules (Schedule B, Schedule D, Schedule E and, when available, Schedule F).

1.1.3 Schedule D (Top 3 Carriers) will report the statewide performance of Bell Atlantic for the services provided to the largest three telecommunications carriers interconnecting with or purchasing services from Bell Atlantic pursuant to Sections 251 and 252 of the Act, combined, for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates and notations in Schedule D have the same meanings as those described above for

Schedule B. In order to preserve the confidentiality of other carriers' information, results for a service (report column) will only be produced on this report if all three carriers purchased the reported service in the calendar month.

1.1.4 Schedule E (All CLECs) will report the statewide performance of Bell Atlantic for the services provided to telecommunications carriers interconnecting with or purchasing services from Bell Atlantic pursuant to Sections 251 and 252 of the Act and Bell Atlantic has a reporting obligation under the signed interconnection agreement, combined, for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates and notations in Schedule E have the same meanings as those described above for Schedule B. In order to preserve the confidentiality of other carriers' information, results for a service (report column) will only be produced on this report if three carriers purchased the reported service in the calendar month.

1.1.5 Schedule F (10 Largest Retail Customers) will, at such time as Bell Atlantic is able to collect and report such information, and upon agreement regarding compensation for the collection and reporting of such information, if any, report statewide performance of Bell Atlantic for the services provided to its ten largest retail customers for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The cells in Schedule F are all marked "TBD" ("to be determined") without an accompanying estimated date because Bell Atlantic has not yet determined that the collection and reporting of this information is feasible, and if it is, when such reporting might be available. Bell Atlantic agrees, however, that it will continue its best efforts assessment of the feasibility of collecting and reporting this information and will promptly report to MCI the results of that assessment and the availability of such information at such time as Bell Atlantic develops the capability to collect and report it for Bell Atlantic's own internal use.

1.2 The Parties agree that the performance information included in these reports is Confidential Information of Bell Atlantic and, with respect to MCI specific reports, Confidential Information of MCI under, Section 22 of this Agreement. The Parties shall use such Confidential Information solely for internal performance assessment purposes, for purposes of joint MCI and Bell Atlantic assessments of service performance, and for reporting to the Commission, the FCC, or courts of competent jurisdiction, under cover of a protective order pursuant to Section 22 of Part A.

1.3 The question of what remedies or other action might be appropriate in any situation where MCI believes, based on a statistically significant number of data elements described above, that Bell Atlantic is not complying with any of the performance standards in the Agreement shall be resolved, in the first instance, through negotiations between the Parties to resolve the issue at the Director level of escalation, and, failing prompt and successful negotiations, through the

complaint processes of the Commission, the FCC, or a court of competent jurisdiction. Bell Atlantic agrees to join MCI in encouraging the Commission to develop expedited procedures for the resolution of any performance-related complaints.

Section 2. Further Performance Reporting

2.1 In addition to the performance reporting identified in Section 1, Bell Atlantic shall develop and provide to MCI further performance reporting in accordance with this Section 2.

2.1.1 Within thirty (30) days after the Effective Date of this Agreement, Bell Atlantic shall review MCI's list of reports (Exhibit A hereto) and identify those reports that Bell Atlantic either: (i) has already included in the reporting set forth in Section 1; (ii) produces for internal use; or (iii) is obligated to produce for regulatory purposes.

2.1.2 Within ninety (90) days after the Effective Date of this Agreement, Bell Atlantic shall provide MCI the estimated incremental costs of providing the reports included in Exhibit A hereto that are not identified pursuant to Paragraph 2.1.1. For reports for which the costs cannot be determined without the substantial participation of Bell Atlantic's equipment, software, or systems vendors, Bell Atlantic will identify such reports, and proceed to develop cost estimates with the vendor(s) only if authorized by MCI. If, after receiving cost estimates for particular reports, MCI elects to receive such reporting, MCI and other CLECs who also elect to receive such reports shall bear the incremental costs, allocated on a competitively-neutral basis, of providing any reports that Bell Atlantic does not provide for internal use or is not obligated to provide for regulatory purposes. The costs of developing cost estimates shall also be allocated among the receiving CLECs on a competitively-neutral basis.

2.1.3 Bell Atlantic shall begin reporting to MCI, and to other CLECs who also elect to receive such reports, all reports included in Exhibit A that MCI elects to receive in accordance with this Section 2.1.3 as soon as reasonably practicable after receiving MCI's written election and commitment to pay the costs of such reporting. Such reporting shall be integrated into the reporting set forth in Section 1.

2.1.4 MCI may from time to time request reports from Bell Atlantic that are not contained in MCI's original list (Exhibit A hereto). Bona Fide Request procedures set forth in Section 25 of Part A shall apply.

2.1.5 The Parties acknowledge that further discussions will be necessary to define the data upon which the reports are based. Therefore, within sixty (60)

days after the Effective Date of this Agreement, the Parties shall agree to such definitions and will amend this Attachment accordingly.

Section 3. Definitions for Initial Performance Reports

3.1 The following definitions apply to the Initial Performance Reports included in Section 1 above. Bell Atlantic shall develop and supply definitions at a comparable level of detail for any further performance reporting deployed pursuant to Section 2.

SCHEDULE A

SERVICE CATEGORY (COLUMN) DEFINITIONS

Name	Definition
Performance Measurement	Provides a general description of the fourteen (14) performance measurements. See Measurement Definitions - Rows below.
Special Services (Access) <i>DS0</i> <i>DS1</i> <i>DS3</i>	The column group title Special Services (Access) refers to Private Line Special Access results (does not include resold or unbundled services). DS1 and DS3 are discrete services. DS0 includes all other special services.
CLEC Trunking	The column represents service for CLEC trunks that carry traffic office to office.
Unbundling <i>POTS</i> <i>Special Services</i>	The column group title Unbundling refers to both POTS and Special unbundling services purchased by the CLEC. The POTS column includes the unbundled loops and ports. The Special Services column includes all special services combined.
Resale - POTS	The Resale-POTS column refers to POTS services that have been resold to the CLEC. On the Bell Atlantic Including Affiliates Report, the Retail-POTS column is comparable to the Resale-POTS column of the other four (4) reports.

MEASUREMENT DEFINITIONS - ROW

Name	Definition
1. Number of Installations	<p>This is the total number of service orders issued/requested by MCI and completed by Bell Atlantic. Regardless of the number of elements or circuits ordered, each service order counts as one.</p> <p>Number of Installations results can not be compared from report (e.g., MCI-Specific) to report (e.g. Bell Atlantic Including Bell Atlantic Affiliates). However, volume is a good indicator as to whether meaningful comparisons can be made about provisioning intervals and percent orders completed on time.</p>
2. Average Interval in Days	<p>This is the sum of the receipt date to the service order due date as established on the firm order confirmation (FOC) for each service order where Bell Atlantic established the interval using the normal interval with this sum being divided by the total number of service orders used in the calculation</p> <p>MCI will send Bell Atlantic a service order request (PON) and Bell Atlantic will return the FOC which stipulates the scheduled completion date. The time from the PON date to the date due established on the FOC represents the average interval per order.</p> <p>Bell Atlantic flags each order with an appointment flag of either "x" or "w". If the scheduled interval reflected on the order is established by Bell Atlantic using the normal interval process, the order will be flagged with the "w". However, if MCI should request a date that is further out than the normal interval, the order will be flagged with the "x" to indicate that long interval was offered at the customer's request.</p> <p>For this category measurement, only those orders with the "w" indicator will be counted.</p> <p>If for some reason the order needs to be redated (longer or shorter), the final FOC date is the date that will be used for measurement purposes.</p>
3. Percent Install on Time	This measurement is the total number of installations (both "x" and "w" service orders) that were completed on time (based on the service order established due date) divided by the total number of service orders. This is the percentage of orders completed on time.

Name	Definition
4. Total Number of Missed Appointments	This measurement is the total number of service orders <i>not</i> completed on time. An appointment is defined as the date due agreed to by the customer and Bell Atlantic and shown on the order. If the customer issues a supplemental order changing the date due, the new date due will be measured as the appointment. Orders that are held or missed due to customer reasons <i>will not</i> be counted as a Bell Atlantic miss. This definition includes multi-item orders. If one item of a multi-item order is missed due to customer reasons, the order <i>will not</i> be counted as a Bell Atlantic miss.
5. Total Percent of Missed Appointments	Total Number of Missed Appointments divided by the total number of service orders See appointment definition on item # 4.
6. Number of Reports	This is the total number of customer trouble reports (i.e. CR troubles) received from MCIm by service category. Each trouble counts as one and in cases where the trouble is redated or subsequent reports are received for escalations or to question status, Bell Atlantic will not count the subsequent reports. From receipt to close, each trouble counts as 1, regardless of the trouble resolution (CPE, NTF or Bell Atlantic Network). This measurement <i>does not include</i> information tickets (i.e. INF troubles).
7. Mean Time to Clear Reports	<p>This is the total measurable hours and minutes from all customer trouble reports, i.e. #6 above, (from the time Bell Atlantic receives a trouble from MCIm until the service is restored and closed with MCIm) divided by the total number of troubles for the report period. This measurement <i>does not include</i> information tickets (i.e. INF troubles).</p> <p>For Special Services columns and CLEC Trunking, the measurements will be "Stop Clock" measurements where "no access" (customer access delayed) time is removed from the measurement.</p> <p>For POTS columns, this will be a running 24 hour clock from trouble receipt to trouble clearance time. The Bell Atlantic clear time is the time service is restored. The Bell Atlantic work process is for the customer (MCIm) to be notified as soon as service is cleared. Bell Atlantic does not use the "close time" because after clearing the trouble, the technician may stay and complete another hour or so of clean up before actually closing the trouble.</p>
8. Number of Failures	<p>The number of failures is the total number of trouble reports where the trouble was closed out with a code indicating that the fault was a Bell Atlantic service problem.</p> <p>Removed from the total trouble reports will be all the troubles that reflect the cause of the trouble to be other than a Bell Atlantic Network fault. Examples would be troubles caused by Customer Provided Equipment (CPE), errors by the customers/end user in the use of the service or where no trouble was detected (F/OK and T/OK).</p>
9. Failure Frequency Percent	The Number of Failures (#8 above) divided by the total number of circuits that MCIm has purchased from Bell Atlantic. The result expressed as a percentage.
10. Percent Without Report Outstanding	<p>For this measurement, Bell Atlantic is to do the following:</p> <ol style="list-style-type: none"> 1. Multiply the total number of circuits by the total hours in the report period to establish the total hours of service availability possible for the report period. 2. Add all of the measurable time (hours and minutes) for only the network reports (i.e. Failures) to establish the total non service availability hours for the report period. 3. Subtract the "non service availability" hours from the "total service availability" hours and divide the result by the "total service availability" hours and display this as a percentage.

Name	Definition
11. Total Number of Repeat Reports (30 days rolling)	This is the number of measured customer repeat reports (i.e. CR repeat reports) within a 30 day rolling window. The measured CR reports include: Came Clear (CC), Central Office (CO), Facility (FAC), Test OK (TOK), Serving Bureau Time (SVB), NPC - Bell Atlantic switch and beyond. Non-measured customer reports are Information (INF), Customer Provided Equipment (CPE), and Interexchange Carrier (IEC). This measurement will be provided initially at a regional level, not state specific. The 3 components of the regional measurement are: one for Pennsylvania and Delaware, one for New Jersey and one for the 4 former C&P Companies, Maryland, Virginia, West Virginia and Washington, DC. Bell Atlantic will request an enhancement to the support system being used for measurements. State specific measurements will be available on a date to be determined (TBD).
12. Repeats as a Percent of Total Troubles	Number of measured customer repeat reports (i.e. CR repeat reports) divided by the total number of customer reports (i.e. CR reports). See definition of customer report contained in item # 11. This measurement will also be provided initially at a regional level, not state specific. See definition of regions in item #11.
13. Number of Out of Service Cleared >= 24 Hours	<p>Number of out of service customer reports (i.e. CR reports) cleared in 24 hours or more. See definition of customer report contained in item # 11.</p> <p>For Special Services columns, the measurements will be “Stop Clock” measurements where “no access” time is removed from the measurement.</p>
14. Percent of Out of Service Cleared >= 24 Hours	<p>Number of Out of Service Cleared >= 24 Hours divided by the total number of customer reports (i.e. CR reports). The result is expressed as a percentage. See definition of customer report contained in item # 11.</p> <p>For Special Services columns, the measurements will be “Stop Clock” measurements where “no access” time is removed from the measurement.</p>

Exhibit A

Proposed Further Performance Reporting Measures
Ordering and Provisioning
Time to provision each unbundled element
Time to install resold lines and trunks - varies according to line size, line type, and need for premises visit.
Total number and percent of missed appointments
Total number and % of missed firm order commitment dates
Time to acknowledge receipt of service order
Time to provide FOC or notification of a rejected order
Time to complete any suspend/block/restore/order
Time to install Centrex lines
Time to implement feature change
Time to disconnect resold service - varies with or without premises visit
Time to disconnect resale service
Time to disconnect unbundled switching service
Time to disconnect other unbundled service
% of Outages within 30 days for new services provisioned
Usage Billing
Time taken to send records to MCI following recording
Number of omissions from records
Maintenance and Repair
In service and out of service repair intervals
Number and percentage of Repeat Troubles
Troubles per 100 lines
Time taken to answer phone where manual service provided
Number and percentage of missed appointments
Number and percentage of estimated time to restore met.
Number and percentage of troubles requiring a dispatch
% breakdowns attributed to each trouble category

Proposed Further Performance Reporting Measures
Operational Systems
Support Systems Availability
System Response Time
Operator Services
Monthly Average for Seconds of Operator Answer Delay
Monthly Total of Quarter Hours of Operator Answer Delay
Monthly Call Abandonment and Blockage
Directory Assistance
Voice DA Availability
Voice DA Outage Restoral Notification
Voice DA Time to Answer
Voice DA Average Work Time
Voice DA Abandonment From Queue
Network Performance
Switched Service Disruption
Dedicated Service Disruption
Network Event
Blocked Calls
Blocked Dial Tone
Post Dial Delay

**INTERCONNECTION AGREEMENT UNDER SECTIONS 251 AND 252 OF THE
COMMUNICATIONS ACT**

Dated as of September 28, 1999

by and between

BELL ATLANTIC - PENNSYLVANIA, INC.

and

MCI WORLDCOM COMMUNICATIONS, INC.

INTERCONNECTION AGREEMENT UNDER SECTIONS 251 AND 252 OF THE COMMUNICATIONS ACT

This Interconnection Agreement (this “Agreement”), under Sections 251 and 252 of the Communications Act, as amended by the Telecommunications Act of 1996 (the “Act”), is effective as of the 28th day of September, 1999 (the “Effective Date”), by and between Bell Atlantic - Pennsylvania, Inc. (“BA”), a Pennsylvania corporation with offices at 1717 Arch Street, 32nd Floor, Philadelphia, PA, 19103, and MCI WORLDCOM Communications, Inc., formerly known as MFS Intelenet of Pennsylvania, Inc. (“MFS”), a Delaware corporation with offices at 8521 Leesburg Pike, Vienna, Virginia 22182 (each, a “Party” and, collectively, the “Parties”).

WHEREAS, MFS has requested, pursuant to Section 252(i) of the Act, that BA make available to MFS Interconnection, services and unbundled Network Elements upon the same terms and conditions as provided in the Interconnection Agreement between MCImetro Access Transmission Services LLC and BA, dated July 8, 1997, and as subsequently amended, for Pennsylvania, approved by the Pennsylvania Public Utility Commission (the “Commission”) under Section 252 of the Act, copies of which agreement are attached hereto as Appendix 1 (the “Separate Agreement”); and

WHEREAS, BA has undertaken to make such terms and conditions available to MFS hereby only because of, and to the extent required by, Section 252(i) of the Act;

NOW, THEREFORE, in consideration of the mutual provisions contained herein, MFS and BA hereby agree as follows:

1.0 Incorporation of Separate Agreement by Reference

1.1 Except as expressly stated herein, the terms and conditions of the Separate Agreement, as it is in effect on the date hereof after giving effect to operation of law, are incorporated by reference in their entirety herein and form an integral part of this Agreement.

1.2 References in the Separate Agreement to MCImetro Access Transmission Services LLC and to MCIIm shall for purposes of this Agreement be deemed to refer to MFS.

1.3 References in the Separate Agreement to the “Effective Date”, the date of effectiveness thereof and like provisions shall for purposes of this Agreement be deemed to refer to the date first written above. Unless terminated earlier in accordance with the terms of the Separate Agreement, this Agreement shall continue in effect until the Separate Agreement expires or is otherwise terminated.

1.4 All references in the Separate Agreement to “800/888”, if any, shall for purposes of this Agreement be deemed to refer to “800/888/877”.

1.5 All notices, affidavits, exemption-certificates or other communications to MFS under Section 27.7 of Part A of the Separate Agreement shall be sent to the following address:

MCI WorldCom
Attn: Vice President & General Tax Counsel
1133 19th Street, N.W.
Washington, DC 20036
Facsimile (202) 736-6624

1.6 All notices, affidavits, exemption-certificates or other communications to BA under Section 27.7 of Part A of the Separate Agreement shall be sent to the following address:

Tax Administration
Bell Atlantic Corporation
1095 Avenue of the Americas
Room 3109
New York, New York 10036
Telephone: (212) 395-1280
Facsimile: (212) 597-2915

1.7 Notices to MFS under Section 14 of Part A of the Separate Agreement shall be sent to the following address:

MCI WORLDCOM Communications, Inc.
Attn: Vice President
Eastern Telco Line Cost Management
2 Northwinds Center
2520 Northwinds Parkway, 5th Floor
Alpharetta, GA 30004
Facsimile (770) 625-6889

with a copy to:

MCI WorldCom
Attn: Vice President – Network Financial Management
8521 Leesburg Pike, 7th Floor
Vienna, VA 22182
Facsimile (703) 918-6602

with a copy to:

MCI WorldCom
Chief Counsel – Business Transactions
1801 Pennsylvania Ave, N.W.
Washington, DC 20006
Facsimile (202) 887-2454

with a copy to:

MCI WORLDCOM Communications, Inc.
Attn: Senior Manager - Carrier Agreements
8521 Leesburg Pike, 6th Floor
Vienna, VA 22182
Facsimile (703) 918-0710

1.8 Notices to BA under Section 14 of Part A of the Separate Agreement shall be sent to the following address:

Director – Interconnection Services
Bell Atlantic Telecom Industry Services
1095 Avenue of the Americas
Room 1423
New York, New York 10036
Facsimile: (212) 704-4381

with a copy to:

Bell Atlantic Network Services, Inc.
Attn: Jack H. White, Jr.,
Associate General Counsel
1320 N. Court House Road, 8th Floor
Arlington, Virginia 22201
Telephone: (703) 974-1368
Facsimile: (703) 974-0744

with a copy to:

Bell Atlantic – Pennsylvania, Inc.
Attn: Vice President & General Counsel
1717 Arch Street, 37th Floor
Philadelphia, PA 19103

2.0 Clarifications

2.1 The entry into, filing and performance by the Parties of this Agreement does not in any way constitute a waiver by either Party of any of the rights and remedies it may have to seek review of any of the provisions of this Agreement or the Separate Agreement, or to petition the Commission, other administrative body or court for reconsideration or reversal of any determination made by any of them, or to seek review in any way of any portion of this Agreement or the Separate Agreement in connection with MFS's election under 47 USC § 252(i).

2.2 Neither the execution nor the filing (nor any other events related to the execution or the filing) of this Agreement is to be construed against MFS as a concession or admission that (i) this Agreement is legally necessary, (ii) this Agreement is required by Section 252(i) of the Act, or (iii) this Agreement should be submitted to the Commission for approval under Section 252(e) of the Act. It is MFS's position that, pursuant to Section 252(i) of the Act, MFS opted into the Separate Agreement on June 24, 1999 by its notice of adoption to BA. While BA is willing to permit the Separate Agreement to become effective between BA and MFS retroactively as of September 28, 1999, it is BA's position that MFS cannot opt into the Separate Agreement except upon entering into this Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of this 28th day of September, 1999.

MCI WORLDCOM COMMUNICATIONS,
INC.

BELL ATLANTIC – PENNSYLVANIA,
INC.

By: _____

By: _____

Printed: _____

Printed: Jeffrey A. Masoner

Title: _____

Title: Vice-President - Interconnection Services
Policy & Planning

APPENDIX 1

**Amendment Number One to the
Interconnection Agreement
between
Bell Atlantic-Pennsylvania, Inc.
and
MCImetro Access Transmission Services LLC**

THIS AMENDMENT NUMBER ONE to the Interconnection Agreement (the "Agreement") executed on July 8, 1997 between Bell Atlantic-Pennsylvania, Inc. ("Bell Atlantic"), a Pennsylvania corporation with offices at 1717 Arch Street, Philadelphia, Pennsylvania 19103, and MCImetro Access Transmission Services, Inc. ("MCI") is entered into this 17th day of December 1998 by and between Bell Atlantic and MCImetro Access Transmission Services LLC, a Delaware corporation with offices at 8521 Leesburg Pike, Vienna, Virginia 22182.

WHEREAS, MCImetro Access Transmission Services, Inc. has merged into MCImetro Access Transmission Services LLC effective December 1, 1998 at 5:01 p.m.; and

WHEREAS, by operation of law, as of the effective date of the merger, MCImetro Access Transmission Services LLC is responsible for all of the obligations and liabilities of MCImetro Access Transmission Services, Inc.; and

WHEREAS, pursuant to Section 41 of Part A of the Agreement, the Agreement is binding upon and inures to the benefit of MCImetro Access Transmission Services LLC as the successor to MCImetro Access Transmission Services, Inc.; and

WHEREAS, Bell Atlantic and MCImetro Access Transmission Services LLC (the "Parties") wish to amend the Agreement to reflect the appropriate corporate name; and

WHEREAS, Bell Atlantic and MCImetro Access Transmission Services LLC entered into a Directory Assistance License Agreement and a Settlement Agreement both dated November 19, 1998; and

WHEREAS, the Parties desire that the Agreement incorporate the rates, terms and conditions of the Directory Assistance License Agreement and the Settlement Agreement;

NOW, THEREFORE, pursuant to Section 36 of Part A of the Agreement, the Parties agree to amend the Agreement as set forth in the Parts A and B and Attachments I, III, VI and VIII attached hereto.

IN WITNESS WHEREOF, the undersigned have caused this Amendment Number One to be duly executed and become effective as of the date hereof.

MCIMETRO ACCESS TRANSMISSION SERVICES LLC

By: _____

Name: _____

Title: _____

Date: _____

BELL ATLANTIC-PENNSYLVANIA, Inc.

By: _____

Name: _____

Title: _____

Date: _____

**LIST OF REVISED SECTIONS
MCIIm-BELL ATLANTIC-PENNSYLVANIA
INTERCONNECTION AGREEMENT**

AMENDMENT NUMBER 1: Dated December 17, 1998

List of Affected Sections:

List of Current Versions
Part A, introductory paragraph
Part A, Section 14
Part B, definition of "MCIIm"
Attachment I, Table 1, Line Item 7.b.
Attachment III, Section 8
Attachment III, Section 17
Attachment VI, Appendix I (introductory paragraph)
Attachment VI, Appendix II (introductory paragraph)
Attachment VIII, Section 6.1.7

**LIST OF CURRENT VERSIONS
MCIIm-BELL ATLANTIC-PENNSYLVANIA
INTERCONNECTION AGREEMENT
(BY ATTACHMENT)**

<u>ATTACHMENT</u>	<u>VERSION</u>
PART A	Last Revised 12/17/98; Amendment Number 1
PART B	Last Revised 12/17/98; Amendment Number 1
ATTACHMENT I	Last Revised 12/17/98; Amendment Number 1
ATTACHMENT II	Original
ATTACHMENT III	Last Revised 12/17/98; Amendment Number 1
ATTACHMENT IV	Original
ATTACHMENT V	Original
ATTACHMENT VI	Last Revised 12/17/98; Amendment Number 1
ATTACHMENT VII	Original
ATTACHMENT VIII	Last Revised 12/17/98; Amendment Number 1
ATTACHMENT IX	Original
ATTACHMENT X	Original

**MCImetro/Bell Atlantic
INTERCONNECTION AGREEMENT 1997**

This MCImetro/Bell Atlantic Interconnection Agreement (the "Agreement"), effective on the date the Pennsylvania Public Utility Commission approves this Agreement, is entered into by and between MCImetro Access Transmission Services LLC ("MCIIm"), a Delaware corporation, and Bell Atlantic-Pennsylvania, Inc. ("Bell Atlantic" or "BA"), a Pennsylvania corporation, to establish the rates, terms and conditions for the purchase and provision of Local Interconnection, Local Resale, unbundled Network Elements and other services, all as set forth in this Agreement (individually referred to as the "service" or collectively as the "services") for the purpose of the purchasing Party's provision of Telephone Exchange Service, Exchange Access Service, and/or Telecommunications Services.

WHEREAS, on February 8, 1996, the Communications Act of 1934, 47 U.S.C. § 151, *et seq.*, (the "Act") was amended by the Telecommunications Act of 1996; and

WHEREAS, the Act places certain duties and obligations upon, and grants certain rights to, Telecommunications Carriers and Local Exchange Carriers; and

WHEREAS, the Parties are Telecommunications Carriers and Local Exchange Carriers; and

WHEREAS, the Act places certain duties and obligations upon, and grants certain rights to, Incumbent Local Exchange Carriers, and Bell Atlantic is an Incumbent Local Exchange Carrier; and

WHEREAS, the Parties wish to interconnect their local exchange networks for the provision of Telephone Exchange Service, for the transmission and termination of local calls, so that subscribers of each can receive local calls that originate on the other's network and place local calls that terminate on the other's network, and for use in the provision of Exchange Access Service ("Local Interconnection"); and

WHEREAS, MCIIm wishes to purchase Telecommunications Services for resale to others ("Local Resale" or "Services for Resale"), and Bell Atlantic is willing to provide such service; and

WHEREAS, MCIIm wishes to purchase on an unbundled basis Network Elements, and to use such services for the provision of Telecommunications Services to others, and Bell Atlantic is willing to provide such services on the terms set forth herein; and

WHEREAS, the Parties intend the rates, terms and conditions of this Agreement, and their performance of obligations thereunder, to comply with the Act, the Rules and Regulations of the Federal Communications Commission ("FCC"), and the orders, rules and regulations of the Pennsylvania Public Utility Commission (the "Commission");

NOW, THEREFORE, in consideration of the premises and the mutual covenants of this Agreement, and intending to be legally bound by this Agreement, the Parties hereby covenant and agree as follows:

PART A -- GENERAL TERMS AND CONDITIONS

Section 1. Scope of this Agreement

1.1 This Agreement, consisting of Parts A, B and C, specifies the rights and obligations of each Party with respect to the purchase and sale of Local Interconnection, Local Resale and Network Elements. This PART A sets forth the general terms and conditions governing this Agreement. Capitalized terms used in this Agreement shall have the meanings defined in PART B -- DEFINITIONS, or as otherwise elsewhere defined throughout this Agreement. PART C sets forth, among other things, descriptions of the services, pricing, technical and business requirements, and physical and network security requirements.

LIST OF ATTACHMENTS COMPRISING PART C:

- I. Price Schedule
- II. Local Resale
- III. Network Elements
- IV. Interconnection
- V. Collocation
- VI. Rights of Way
- VII. Number Portability
- VIII. Business Process Requirements
- IX. Security Requirements
- X. Performance Reporting

1.2 Bell Atlantic shall provide the services in any Technically Feasible Combination requested by MCIIm, pursuant to the terms of this Agreement and in accordance with the requirements of Applicable Law, or where appropriate, the Bona Fide Request ("BFR") process set forth in Section 25 (BFR Process for Further Unbundling) of Part A, except that Local Resale shall be provided pursuant to Attachment II. Neither Party shall discontinue or refuse to provide any service provided or required hereunder, except in accordance with the terms hereof, without the other Party's written agreement. Bell Atlantic shall not reconfigure, reengineer or otherwise redeploy its network in a manner which would impair MCIIm's ability to offer Telecommunications Services in the manner contemplated by this Agreement, the Act or the FCC's Rules and Regulations without providing notice of Network Changes in accordance with the Act and FCC Rules and Regulations.

1.3 The Parties acknowledge that some of the services, facilities and arrangements provided pursuant to this Agreement are or will be available under and subject to the terms of the federal or state Tariffs of the Party providing them. To the extent that a

Tariff of a Party applies to any service, facility or arrangement provided pursuant to this Agreement, the following shall apply:

1.3.1 The rates and charges set forth in Attachment I shall remain fixed for the term of this Agreement or until superseded by such rates (whether interim or permanent) as may be applied by the Commission, notwithstanding that either of such rates may be different from those set forth in any effective, pending or future Tariff of the providing Party, (including any changes or modifications to any such Tariff--or any new Tariff--filed after the Effective Date of this Agreement); provided, however, this Section 1.3.1 shall remain subject to Section 1.3.3.

1.3.2 This Agreement and any applicable Tariffs of either Party shall be construed whenever possible to avoid any conflict between them. The fact that a condition, term, right or obligation appears in the Agreement and not in a Tariff, or in a Tariff but not in the Agreement, shall not be interpreted as, or deemed grounds for finding, a conflict for the purposes of this Section 1.3.

1.3.3 Any change or modification to any Tariff (including any Tariff filed after the Effective Date hereof) filed by either Party that materially and adversely impacts the provision or receipt of services hereunder or which materially and adversely alters the terms hereof shall only be effective against the other Party to the extent permitted by: (i) that Party's written consent; or (ii) an affirmative order of the Commission. Each Party shall file any required Tariff revisions, modifications or amendments in order to comply with Applicable Law and to continue performance of this Agreement in a lawful manner.

1.4 Construction

1.4.1 For purposes of this Agreement, certain terms have been defined in Part B or elsewhere in this Agreement. These terms will have the meanings stated in this Agreement, which may differ from, or be in addition to, the normal definition of the defined word. A defined word intended to convey the meaning stated in this Agreement is capitalized when used. Other terms that are capitalized, and not defined in this Agreement, shall have the meaning stated in the Act.

1.4.2 Unless the context clearly indicates otherwise, any defined term which is defined or used in the singular shall include the plural, and any defined term which is defined or used in the plural shall include the singular.

1.4.3 The words "shall" and "will" are used interchangeably throughout this Agreement and the use of either indicates a mandatory requirement. The use of one or the other shall not mean a different degree of right or obligation for either Party.

1.4.4 Conflicts among terms in Parts A and B of this Agreement, the Attachments and the Exhibits thereto, and the Tariffs shall be resolved in accordance with the

following order of precedence, where the document identified in Subsection “(i)” shall have the highest precedence: (i) Parts A and B of this Agreement; (ii) the Attachments and the Exhibits thereto; and (iii) the Tariffs. The fact that a matter is addressed in one of these documents, but not in another, shall not constitute a conflict for purposes of this Section 1.4.4.

Section 2. Regulatory Approvals

2.1 The Parties shall promptly submit this Agreement, and any amendment or modification hereof, to the Commission for approval in accordance with Section 252 of the Act. Following such submission, the Parties shall submit the Agreement to any other applicable governmental entity for any requisite approvals. In the event any governmental authority or agency rejects any provision hereof, the Parties shall negotiate promptly and in good faith such revisions as may reasonably be required to achieve approval.

2.2 In the event the FCC or the Commission promulgates rules or regulations, or issues orders, or a court of competent jurisdiction issues orders, which make unlawful any provision of this Agreement, or which materially reduce or alter the services required by statute or regulations and embodied in this Agreement, then the Parties shall negotiate promptly and in good faith in order to amend the Agreement to substitute contract provisions which conform to such rules, regulations or orders. In the event the Parties cannot agree on an amendment within thirty (30) days after the date any such rules, regulations or orders become effective, then the Parties shall resolve their dispute under the applicable procedures set forth in Section 24 (Dispute Resolution Procedures) hereof.

2.3 The Parties intend that any services requested by either Party relating to the subject matter of this Agreement that are not offered hereunder will be incorporated into this Agreement by amendment upon agreement by the Parties.

2.4 In the event that any legally effective legislative, regulatory, judicial or other legal action materially affects any material terms of this Agreement, or the ability of MCI or Bell Atlantic to perform any material terms of this Agreement, MCI or Bell Atlantic may, on thirty (30) days written notice (delivered not later than thirty (30) days following the date on which such action has become legally binding or has otherwise become legally effective) require that such terms be renegotiated, and the Parties shall renegotiate in good faith such mutually acceptable new terms as may be required.

2.5 When this Agreement is filed with the Commission for approval, the Parties will request that the Commission: (a) approve the Agreement, and (b) refrain from taking any action to change, suspend or otherwise delay implementation of the Agreement.

2.6 Each Party shall be responsible for obtaining and keeping in effect all FCC, Commission, franchise authority and other governmental approvals, that may be required in connection with the performance of its respective obligations under this Agreement.

Section 3. Term of Agreement

3.1 This Agreement shall become effective as of the Effective Date stated above and, except as otherwise provided in this Agreement, shall remain in effect until August 31, 2000, and thereafter until terminated as provided in this Agreement. At least one hundred eighty (180) days before the term expires, either Party shall file with the Commission any request for an extension of that term, and shall on the same day provide notice to the other Party. At least one hundred fifty (150) days before the term expires, the other Party shall respond to the requested extension. If for any reason a new agreement has not been reached by the end of the three-year term, the existing interconnection agreement shall continue, month-to-month, under the same terms and conditions, subject to a true-up, until resolved by the Commission.

3.2 This Agreement shall be effective between the Parties as of the Effective Date, notwithstanding the pendency of proceedings challenging the Commission's approval of the Agreement.

3.3 Each Party recognizes that the services being provided under this Agreement at the time of its termination may need to be continued without interruption thereafter, and that upon such termination, either Party may itself provide or retain another vendor to provide comparable services. Each Party agrees to cooperate in an orderly and efficient transition to the other Party or another vendor such that the level and quality of the services are not degraded, and to exercise reasonable efforts to effect an orderly and efficient transition.

3.4 Unless a service is required to be offered by a Party under Applicable Law, either Party may terminate any service provided under this Agreement upon thirty (30) days prior written notice to the other Party unless a different notice period or different conditions are specified in this Agreement (including, but not limited to, in an applicable Tariff or Applicable Law) for termination of such service, in which event such specified period and/or conditions shall apply. Upon termination of its purchase of a service by the purchasing Party, the purchasing Party shall pay any applicable termination charges specified in this Agreement. Upon termination of a Local Resale service by Bell Atlantic, MCI shall be entitled to continue providing the terminated service to MCI's subscribers on a grandfathered basis to the same extent, and subject to the same terms and conditions, as would apply to such subscribers if they had been subscribers of Bell Atlantic for the terminated service at the time the service is terminated, and Bell Atlantic shall continue to provide such services to MCI on the same basis.

3.5 Following the expiration of this Agreement, this Agreement shall remain in effect as to any Expiring Service for the remainder of any contract period applicable to such Expiring Service at the time of the expiration of this Agreement. If an Expiring Service is terminated prior to the expiration of the contract period applicable to such Expiring Service, MCI shall pay any termination charge provided for in this Agreement, in an applicable Tariff, or in the contract applicable to the Expiring Service. Following expiration of the applicable contract period for an Expiring Service, the Expiring Service, until terminated, shall be subject to: (i) any effective agreement superseding this Agreement; or (ii) to the extent such Expiring Service is not covered by such superseding

agreement, applicable Tariffs. For the purposes of this Section 3.5, "Expiring Service" means: (a) any Local Resale service that, upon expiration of the term of this Agreement, is being provided under this Agreement and is subject to a remaining contract period greater than one (1) month; or (b) any Local Resale service: (i) for which an order has been submitted and accepted pursuant to this Agreement prior to the expiration of this Agreement but such service is not being provided at the expiration of this Agreement; and (ii) that is subject to an initial contract period which is greater than one (1) month.

Section 4. Charges and Payment

4.1 In consideration of the services provided under this Agreement, the purchasing Party shall pay the charges set forth in Attachment I. The billing and payment procedures for charges incurred by a purchasing Party hereunder are set forth in Attachment VIII.

Section 5. Assignment

5.1 Any assignment or delegation by either Party to any non-affiliated entity of any right, obligation or duty, or of any other interest hereunder, in whole or in part, without the prior written consent of the other Party shall be void (except the assignment of a right to moneys due or to become due). A Party assigning or delegating this Agreement or any right, obligation, duty or other interest hereunder to an Affiliate shall provide written notice to the other Party. All obligations and duties of any Party under this Agreement shall be binding on all successors in interest and assigns of such Party. No assignment or delegation hereof shall relieve the assignor of its obligations under this Agreement.

5.2 If any obligation of either Party is performed by a subcontractor or Affiliate, such Party shall remain fully responsible for the performance of this Agreement in accordance with its terms.

Section 6. Compliance with Laws

6.1 Each Party shall perform terms, conditions and operations under this Agreement in a manner that complies with all Applicable Law, including all regulations and judicial or regulatory decisions of all duly constituted governmental authorities of competent jurisdiction. Each Party shall be responsible for obtaining and keeping in effect all FCC, state regulatory commission, franchise authority and other regulatory approvals that may be required in connection with the performance of its obligations under this Agreement. Each Party shall reasonably cooperate with the other in obtaining and maintaining any approvals required by this Section. In the event the Act or FCC Rules and Regulations applicable to this Agreement are held invalid, this Agreement shall survive, and the Parties shall promptly renegotiate any provisions of this Agreement which, in the absence of such invalidated Act, Rule or Regulation, are insufficiently clear to be effectuated.

6.2 Except as otherwise specified in this Agreement, each Party shall be responsible for: (i) all costs and expenses it incurs in complying with its obligations under this Agreement; and (ii) the development, modification, technical installation and

maintenance of any systems or other infrastructure which it requires to comply with and to continue complying with its responsibilities and obligations under this Agreement.

Section 7. Governing Law

7.1 The validity of this Agreement, the construction and enforcement of its terms, and the interpretation of the rights and duties of the Parties, shall be governed by the Act and the laws of the Commonwealth of Pennsylvania, without regard to its conflicts of laws rules.

Section 8. Relationship of Parties

8.1 Each Party is an independent contractor, and has and hereby retains the right to exercise full control of and supervision over its own performance of its obligations under this Agreement.

8.2 Each Party retains full control over the employment, direction, compensation and discharge of all of its employees, agents and contractors assisting in the performance of its obligations under this Agreement. Each Party will be solely responsible for all matters relating to payment of its employees, agents and contractors, and payment of Social Security and other taxes in association with such employees, agents and contractors, and withholding and remittance of taxes from such employees, agents and contractors.

8.3 Nothing contained within this Agreement shall:

8.3.1 Make either Party the agent, servant or employee, of the other Party;

8.3.2 Grant either Party the authority to enter into a contract on behalf of, or otherwise legally bind, the other Party in any way;

8.3.3 Create a partnership, joint venture, or other similar relationship between the Parties; or

8.3.4 Grant to either Party a franchise, distributorship, or similar interest.

8.4 The relationship of the Parties under this Agreement is a non-exclusive relationship. Each Party shall have the right:

8.4.1 To provide services to be provided by it under this Agreement to persons other than the other Party; and

8.4.2 To purchase services which can be purchased by it under this Agreement from persons other than the other Party.

Section 9. No Third Party Beneficiaries

9.1 Except as may be specifically set forth in this Agreement, this Agreement does not provide and shall not be construed to provide any third parties (including, but not limited to, subscribers or subcontractors of a Party) with any right, remedy, claim, reimbursement, cause of action, or other privilege. The provisions of this Agreement are for the benefit of the Parties hereto and not for any other person, provided, however, that this shall not be construed to prevent either Party from providing its Telecommunications Services to any entities.

Section 10. Intellectual Property Rights

10.1 Any intellectual property which originates from or is developed by a Party shall remain in the exclusive ownership of that Party. Except for a limited license to use a Party's patents or copyrights to the extent necessary for the Parties to use any facilities or equipment (including software) or to receive any service solely as provided under this Agreement, no license in patent, copyright, trademark or trade secret, or other proprietary or intellectual property right now or hereafter owned, controlled or licensable by a Party, is granted to the other Party or shall be implied or arise by estoppel.

10.2 Bell Atlantic shall indemnify MCIIm with respect to MCIIm's use, pursuant to the terms of this Agreement, of intellectual property associated with any new Bell Atlantic network equipment or software acquisitions. Bell Atlantic warrants that it will not enter into any licensing agreements with respect to new Bell Atlantic network equipment or software acquisitions that contain provisions that would disqualify MCIIm from using or interconnecting with such network equipment or software pursuant to the terms of this agreement. Bell Atlantic also warrants that it has not and will not intentionally modify any existing licensing agreements for existing network equipment or software in order to disqualify MCIIm from using or interconnecting with such network equipment or software pursuant to the terms of this agreement. To the extent that the providers of equipment or software in Bell Atlantic's network provide Bell Atlantic with indemnities covering intellectual property liabilities and those indemnities allow a flow through of protection to third parties, Bell Atlantic shall flow those indemnity protections through to MCIIm. Bell Atlantic will inform MCIIm of any pending or threatened intellectual property claims relating to Bell Atlantic's network of which Bell Atlantic is aware and will update that notification periodically as needed, so that MCIIm receives maximum notice of any intellectual property risks it might want to address. Notwithstanding any part of this Section 10, MCIIm retains the right to pursue legal remedies against Bell Atlantic if Bell Atlantic is at fault in causing intellectual property liability to MCIIm.

10.2.1 For purposes of Section 10.2, Bell Atlantic's obligation to indemnify shall include the obligation to indemnify and hold MCIIm harmless from and against any loss, cost, expense or liability arising out of a claim that MCIIm's use, pursuant to the terms of this Agreement, of such new Bell Atlantic network equipment or software infringes the intellectual property rights of a third party. Moreover, should any such network equipment or software or any portion thereof provided by Bell Atlantic hereunder become, or, in Bell Atlantic's reasonable

opinion, be likely to become, the subject of a claim of infringement, or should MCIIm's use thereof be finally enjoined, Bell Atlantic shall, at its immediate expense and at its choice:

10.2.1.1 Procure for MCIIm the right to continue using such material; or

10.2.1.2 Replace or modify such material to make it non-infringing provided such replacement or modification is functionally equivalent.

10.3 Unless otherwise mutually agreed upon, neither Party shall publish or use the other Party's logo, trademark, or service mark in any product, service, advertisement, promotion, or any other publicity matter, except that nothing herein shall prohibit lawful comparative advertising or comparative marketing.

Section 11. Indemnification

11.1 Each Party agrees to release, indemnify, defend and hold harmless the other Party from and against all losses, claims, demands, damages, expenses, suits or other actions, or any liability whatsoever, including, but not limited to, costs and attorneys' fees (collectively, a "Loss") incurred by the indemnified Party to the extent that such Loss is: (a) suffered, made, instituted, or asserted by any other person, relating to personal injury to or death of any person, or for loss, damage to, or destruction of real and/or personal property, whether or not owned by others, incurred during the term of this Agreement and to the extent legally caused by the acts or omissions of the indemnifying Party, regardless of the form of action; or (b) suffered, made, instituted, or asserted by the indemnifying Party's own customer(s) against the indemnified Party arising out of the indemnified Party's provision of services to the indemnifying Party under this Agreement, except to the extent the Loss arises from a breach of this Agreement by the indemnified Party. Notwithstanding the foregoing indemnification, nothing in this Section 11 shall affect or limit any claims, remedies, or other actions the indemnifying Party may have against the indemnified Party under this Agreement, any other contract, or any applicable Tariff(s), regulations or laws.

11.2 MCIIm shall indemnify, defend and hold harmless Bell Atlantic, Bell Atlantic's Affiliates, and the directors, officers and employees of Bell Atlantic and Bell Atlantic's Affiliates, from and against any claim, demand, suit, action, judgment, liability, damage or loss (including reasonable costs, expenses and attorneys' fees on account thereof), that arises out of or results from: (i) MCIIm's negligent use or occupancy of a Bell Atlantic NID; (ii) wiring, facilities, equipment or other apparatus, negligently installed by MCIIm in or on a Bell Atlantic NID, or negligently connected by MCIIm to a Bell Atlantic NID; or (iii) the negligent acts or omissions of MCIIm, MCIIm's Affiliates, or the employees, agents or contractors of MCIIm or MCIIm's Affiliates, in connection with a Bell Atlantic NID. Where the NID is not used by Bell Atlantic or another Telecommunications Carrier (except MCIIm) to provide service to the premise, MCIIm shall have the burden, as between Bell Atlantic and MCIIm, to rebut the presumption that the claim, demand, suit, action, judgment, liability, damage or loss arises from wiring, facilities, equipment or other apparatus, negligently installed by MCIIm in or on a Bell Atlantic NID, or

negligently connected by MCIIm to a Bell Atlantic NID. For the purposes of this Section 11.2, references to “negligence” or “negligently” shall be read to also encompass acts of gross negligence and/or intentional misconduct.

11.3 The indemnification provided herein shall be conditioned upon:

11.3.1 The indemnified Party shall promptly notify the indemnifying Party of any action taken against the indemnified Party relating to the indemnification, provided that failure to notify the indemnifying Party shall not relieve it of any liability it might otherwise have under this Section 11 to the extent it was not materially prejudiced by such failure of notification.

11.3.2 The indemnifying Party shall have sole authority to defend any such action, including the selection of legal counsel, and the indemnified Party may engage separate legal counsel only at its sole cost and expense. In the event the indemnifying Party does not accept the defense of any such action, the indemnified Party shall have the right to employ counsel for its own defense at the expense of the indemnifying Party.

11.3.3 In no event shall the indemnifying Party settle or consent to any judgment pertaining to any such action without the prior written consent of the indemnified Party, which consent shall not be unreasonably withheld.

11.3.4 In any action for which indemnity is sought, the indemnified Party shall assert any and all provisions in applicable Tariffs that limit liability to third parties as a bar to any recovery by the third party claimant in excess of applicable limitations of liability.

11.3.5 The indemnified Party shall offer the indemnifying Party all reasonable cooperation and assistance in the defense of any such action.

Section 12. Limitation of Liability

12.1 Neither Party shall be liable to the other for any indirect, incidental, special or consequential damages arising out of or related to this Agreement or the provision of service hereunder. Notwithstanding the foregoing limitation, a Party’s liability shall not be limited by the provisions of this Section 12 in the event of its willful or intentional misconduct, including gross negligence. Bell Atlantic shall be liable to MCIIm for lost revenues resulting from Bell Atlantic’s breach of this Agreement only to the same extent that Bell Atlantic’s Tariffs provide liability for Bell Atlantic end user subscribers’ revenue losses. A Party’s liability shall not be limited with respect to its indemnification obligations.

Section 13. Warranties

13.1 As more specifically set forth herein, each Party shall perform its obligations hereunder at Parity, as defined in Part B of this Agreement, which definition is intended to embody the performance provisions set forth in 47 U.S.C. § 251, and any implementing regulations thereunder, as those provisions may apply to the Party and obligation in question.

13.2 As more specifically set forth in Attachment II, Bell Atlantic shall provide Local Resale at Parity.

13.3 As more specifically set forth in Attachment III, Bell Atlantic shall provide Network Elements at Parity.

13.4 As more specifically set forth in Attachment IV, Bell Atlantic shall provide Interconnection at Parity and on a Non-Discriminatory Basis. MCIIm shall provide Interconnection on a Non-Discriminatory Basis.

13.5 As more specifically set forth in Attachment V, Bell Atlantic shall provide Collocation in accordance with the legally effective rules, regulations and orders of the FCC and the Commission.

13.6 As more specifically set forth in Attachment VI, Bell Atlantic shall provide Non-Discriminatory access to poles, ducts, conduits, and ROW owned or controlled by Bell Atlantic, in accordance with the requirements of section 224 of the Act and legally effective rules, regulations and orders of the FCC and the Commission.

13.7 As more specifically set forth in Attachment VII, Bell Atlantic and MCIIm shall provide Interim Number Portability and Number Portability in accordance with the legally effective rules, regulations and orders of the FCC and the Commission.

13.8 As more specifically set forth in Attachment VIII, Bell Atlantic and MCIIm shall meet Business Process Requirements.

13.9 As more specifically set forth in Attachment VIII, Bell Atlantic shall provide Non-Discriminatory access to telephone numbers for as long as Bell Atlantic remains the code administrator for the North American Numbering Plan.

13.10 As more specifically set forth in Attachment VIII, Bell Atlantic and MCIIm shall provide dialing parity in accordance with the legally effective rules, regulations and orders of the FCC and the Commission.

13.11 As more specifically set forth in Attachment IX, Bell Atlantic and MCIIm shall meet security requirements, to the extent applicable to the security requirement in question.

13.12 As more specifically set forth in Attachment X, Bell Atlantic shall provide performance reporting.

EXCEPT AS SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY WARRANTIES WITH RESPECT TO ITS SERVICES, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, IN FACT OR IN LAW. THE WARRANTIES SET FORTH IN THIS AGREEMENT ARE A PARTY'S EXCLUSIVE WARRANTIES WITH RESPECT TO ITS SERVICES AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL, IN FACT OR IN LAW. EACH PARTY DISCLAIMS ANY AND ALL OTHER WARRANTIES WITH RESPECT TO ITS SERVICES, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST INFRINGEMENT.

Section 14. Notices

14.1 Except as otherwise provided herein, or where context or services dictate that immediate notice be given, all notices or other communication hereunder shall be deemed to have been duly given when made in writing and delivered in person or deposited in the United States mail, certified mail, postage prepaid, return receipt requested and addressed as follows:

To MCIIm:	MCImetro Access Transmission Services LLC Attention: Vice President 7900 Westpark Drive, 8 th Floor McLean, VA 22102
Copy to:	General Counsel MCI Communications Corporation 1801 Pennsylvania Ave., N.W. Washington, DC 20006
To Bell Atlantic:	Bell Atlantic Network Services, Inc. Attention: Vice President, Interconnection Services Policy & Planning 1320 North Courthouse Road, 2nd Floor Arlington, VA 22201
Copy to:	Legal Department Bell Atlantic Network Services, Inc. Attention: Associate General Counsel 1320 North Courthouse Road, 8th Floor Arlington, VA 22201
Copy to:	Bell Atlantic – Pennsylvania, Inc. Attn: Vice President & General Counsel 1717 Arch Street, 32 nd Floor

Philadelphia, Pennsylvania 19103

If personal delivery is selected to give notice, a receipt of such delivery shall be obtained. The address to which notices or communications may be given to either Party may be changed by written notice given by such Party to the other pursuant to this Section 14.

Section 15. Technical References

15.1 The Parties agree that the Bell Atlantic technical references set forth in Appendix I to this Part A (Technical Reference Schedule) provide the current technical specifications for the services offered by Bell Atlantic under this Agreement. Bell Atlantic reserves the right with reasonable notification to revise its technical references for any reason including, but not limited to, laws or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to in the technical references. Notification of changes that are made to the underlying Bell Atlantic services will be made in conformance with the requirements of Section 251(c)(5), Notice of Changes, of the Act, and the FCC's Rules and Regulations. The Parties acknowledge that the general technical references set forth below contain certain generally accepted industry guidelines for particular interface and performance parameters for telecommunications equipment used by LECs in the United States. Such accepted technical references may be used by LECs to specify suitable equipment and facilities components for use in their respective networks, to assure interoperability between components that collectively comprise such networks, and to specify the interface characteristics and typical end-to-end performance of certain services.

15.2 The Parties acknowledge that they and their vendors and suppliers derive guidance from such technical references, and make reasonable efforts to conform to them. Requests for specific performance, functionality, or capabilities not applied in a Party's network should be handled using the BFR process set forth in Section 25 (BFR Process for Further Unbundling) of this Part A.

15.3 If one or more of the technical requirements set forth in Appendix I are in conflict, the Parties shall reasonably agree on which requirement shall apply.

15.4 The Parties agree that they each intend, to the extent technically feasible and commercially reasonable, to conform generally to industry standards applicable to the Parties set by the OBF, within a reasonable time after publication of final standards. With respect to OBF and other industry standards, the Parties agree that they will negotiate in good faith the applicability, technical feasibility and commercial reasonableness for implementation of such standards for services and arrangements under the Agreement.

Section 16. Remedies

16.1 The obligations of the Parties and the services offered under this Agreement may be unique. Accordingly, in addition to any other available rights or remedies, either Party may sue in equity for specific performance.

16.2 In the event either Party fails to switch a subscriber to the other Party's service as requested through a service request from the other Party, within any applicable intervals set forth in this Agreement or required by Applicable Law, or erroneously switches the other Party's subscriber away from that Party, then such act (including the continued provision of Telecommunications Services to such subscriber by the Party erroneously switching or failing to switch) shall be deemed an improper change in subscriber carrier selection commencing with the time at which such Party erroneously failed to switch such subscriber, or erroneously switched such subscriber. If such an improper change in subscriber carrier selection should occur, the rights and obligations of the Parties shall be determined in accordance with the regulations pertaining to such conduct on the part of Interexchange Carriers as set forth in the FCC's Rules and Regulations, Part 64, Subpart K, as these may be amended from time to time. For the purpose of this Section, Bell Atlantic shall be deemed an Interexchange Carrier.

16.3 At such time as the FCC or other competent regulatory body adopts regulations implementing 47 U.S.C. Section 258 or otherwise adopt regulations applicable to illegal or improper changes in local service, then such regulations shall supersede those applicable to Interexchange Carriers for the purposes of this Section 16.

16.4 Unless otherwise specifically provided hereunder, all rights of termination, cancellation or other remedies prescribed in this Agreement, or otherwise available, are cumulative and are not intended to be exclusive of other remedies to which the injured Party may be entitled at law or equity.

Section 17. Waivers

17.1 A failure or delay of either Party (including any course of dealing or course of performance) to enforce any of the provisions of this Agreement, or any right or remedy available under this Agreement or at law or in equity, or to require performance of any of the provisions of this Agreement, or to exercise any option provided under this Agreement, shall in no way be construed to be a waiver of such provisions, rights, remedies or options.

17.2 Waiver by either Party of any default by the other Party shall not be deemed a waiver of any other default.

Section 18. Survival

18.1 Any liabilities or obligations of a Party for acts or omissions occurring prior to the expiration, cancellation or termination of this Agreement, any obligation of a Party under any provision for indemnification or defense (including, but not limited to, any of Sections 10, 11, 12, 23, 24, 28 and 29), Section 3, "Termination", Section 22,

“Confidential Information”, any provision for limitation of liability, and any obligation of a Party under any other provisions of this Agreement which, by their terms, are contemplated to survive (or to be performed after) expiration, cancellation or termination of this Agreement, shall survive the expiration, cancellation or termination of the Agreement, but solely to the minimum extent necessary to effectuate such provisions or complete such performance.

Section 19. Force Majeure

19.1 Except as otherwise specifically provided in this Agreement (including, by way of illustration, circumstances where a Party is required to implement disaster recovery plans to avoid delays or failure in performance and the implementation of such plans was designed to avoid the delay or failure in performance), neither Party shall be liable for any delay or failure in performance of any part of this Agreement by it caused by acts or failures to act of the United States of America or any state, district, territory, political subdivision, or other governmental entity, acts of God or a public enemy, strikes, labor slowdowns, or other labor disputes, but only to the extent that such strikes, labor slowdowns, or other labor disputes also affect the performing Party, fires, explosions, floods, embargoes, earthquakes, volcanic actions, unusually severe weather conditions, wars, civil disturbances, or other causes beyond the reasonable control of the Party claiming excusable delay or other failure to perform (“Force Majeure Condition”). In the event of any such excused delay in the performance of a Party’s obligation(s) under this Agreement, the due date for the performance of the original obligation(s) shall be extended by a term equal to the time lost by reason of the delay. In the event of such delay, the delaying Party shall perform its obligations at a performance level no less than that which it uses for its own operations. In the event of such performance delay or failure by Bell Atlantic, Bell Atlantic agrees to resume performance at Parity and in a Non-Discriminatory manner.

19.2 If any Force Majeure Condition occurs, the Party whose performance fails or is delayed because of such Force Majeure Condition shall give prompt notice to the other Party, and upon cessation of such Force Majeure Condition, shall give like notice and commence performance hereunder as promptly as reasonably practicable.

19.3 Notwithstanding Section 19.1, no delay or other failure by a Party to perform shall be excused pursuant to this Section by the delay or failure of a Party’s subcontractors, materialmen, or suppliers to provide products or services to the Party, unless such delay or failure is itself the product of a Force Majeure Condition, and such products or services cannot be obtained by the Party from other persons on commercially reasonable terms.

Section 20. Publicity

20.1 Neither Party shall produce, publish, or distribute any press release or other publicity referring to the other Party in connection with this Agreement, without the prior written approval of the other Party, which approval shall not be unreasonably withheld.

Section 21. Default and Termination

21.1 If a Party ("Breaching Party") materially breaches a material provision of this Agreement (other than an obligation to make payment of any amount billed under this Agreement), and such breach continues for more than thirty (30) days after written notice thereof from the other Party ("Injured Party"), then, except as otherwise required by Applicable Law, the Injured Party shall have the right, upon notice to the Breaching Party, to terminate or suspend this Agreement and/or the provision of services.

21.2 If a purchasing Party fails to make a payment of any amount billed under this Agreement by the due date stated on the providing Party's bill and such failure continues for more than thirty (30) days after written notice thereof from the providing Party, then, except as provided in Section 21.3 or as otherwise required by Applicable Law, the providing Party shall have the right, upon notice to the purchasing Party, to terminate or suspend this Agreement and/or the provision of services.

21.3 Billing Disputes.

21.3.1 If a billing dispute arises concerning any charges billed pursuant to this Agreement by a providing Party to a purchasing Party, payments withheld or paid pending settlement of the dispute shall be subject to interest at the rate set forth in Bell Atlantic's interstate access tariff..

21.3.2 If the purchasing Party pays the bill in full by the payment due date and later initiates a billing dispute pursuant to Attachment VIII, Section 3.1.9, interest will apply as follows:

21.3.2.1 If the billing dispute is resolved in favor of the purchasing Party, the purchasing Party shall receive a credit from the providing Party. This credit will be an amount equal to the disputed amount, plus interest at the rate set forth in Bell Atlantic's interstate access tariff. This amount will apply from the date of the purchasing Party's payment through the date on which the purchasing Party receives payment of the disputed amount and accrued interest from the providing Party.

21.3.2.2 If the dispute is resolved in favor of the providing Party, neither a late payment charge nor an interest charge is applicable.

21.3.3 If the purchasing Party withholds payment on the bill (in full or in part) and initiates a billing dispute pursuant to Attachment VIII, Section 3.1.9, interest will apply as follows:

21.3.3.1 If the billing dispute is resolved in favor of the providing Party, the purchasing Party shall pay the providing Party a payment equal to the amount withheld by the purchasing Party, plus interest at the rate set forth in Bell Atlantic's interstate access tariff. This amount will apply from the payment due date through the date on which the providing Party receives payment of the disputed amount and accrued interest from the purchasing Party.

21.3.3.2 If the dispute is resolved in favor of the purchasing Party, neither a late payment charge nor an interest charge is applicable.

21.4 Notwithstanding the foregoing, if a Party's material breach is for any failure to perform in accordance with this Agreement which materially and adversely affects the provision of service of the non-breaching Party's subscribers, the non-breaching Party shall give notice of the breach and the breaching Party shall cure such breach within ten (10) days or within a period of time equivalent to the applicable interval required by this Agreement, whichever is shorter, and if the breaching Party does not, the non-breaching Party may, as its sole option, terminate this Agreement, or any parts hereof. The non-breaching Party shall be entitled to pursue all available legal and equitable remedies for such breach.

21.5 MCIIm may terminate this Agreement in whole or in part at any time for any reason upon sixty (60) days prior written notice, except with respect to termination of any particular service(s), in which case, upon thirty (30) days prior written notice. MCIIm's sole liability for such termination shall be payment of amounts due for services provided up to the date of termination, unless otherwise provided for in this Agreement or in a Tariff providing a termination liability or minimum term for a service.

21.6 In the event of any termination under this Section 21 and, if applicable, pursuant to Section 3.3, Bell Atlantic agrees to provide for an uninterrupted transition of the services Bell Atlantic is providing to MCIIm at the time of termination to MCIIm or another vendor designated by MCIIm, and MCIIm agrees to provide for an uninterrupted transition of services MCIIm is providing to Bell Atlantic at the time of termination to Bell Atlantic or another vendor designated by Bell Atlantic.

21.7 Notwithstanding any termination hereof, the Parties shall continue to comply with their obligations under the Act to provide interconnection in accordance with Applicable Law.

Section 22. Confidentiality

22.1 For the purposes of this Section 22, “Confidential Information” means the following information disclosed by one Party (“Discloser”) to the other Party (“Recipient”) in connection with this Agreement:

22.1.1 All information disclosed by either Party to the other pursuant to Attachments I-X of this Agreement arising from the performance of this Agreement, including, but not limited to, books, records, documents and other information disclosed in an audit performed pursuant to this Agreement; and

22.1.2 Such other information as is identified as Confidential Information in accordance with Section 22.2.

22.2 All information which is to be treated as Confidential Information under Section 22.1.2 shall:

22.2.1 If in written, graphic, electromagnetic, or other tangible form, be marked as “Confidential Information”; and

22.2.2 If oral, (i) be identified by the Discloser at the time of disclosure to be “Confidential Information”, and (ii) be set forth in a written summary which identifies the information as “Confidential Information” and is delivered by the Discloser to the Recipient within ten (10) days after the oral disclosure.

22.2.3 Each Party shall have the right to correct an inadvertent failure to identify such oral information as Confidential Information by giving written notification within thirty (30) days after the information is disclosed. The Recipient shall, from that time forward, treat such information as Confidential Information.

22.3 In addition to any requirements imposed by law, including, but not limited to, 47 U.S.C. § 222, for a period of three (3) years from the receipt of Confidential Information from the Discloser, except as otherwise specified in this Agreement, the Recipient agrees:

22.3.1 To use the Confidential Information only for the purpose of performing under this Agreement, including, to the extent applicable, the planning and operation of the Recipient’s network; and

22.3.2 To use the same degree of care that it uses with similar confidential information of its own, to hold the Confidential Information in confidence and to disclose it to no one other than the directors, officers and employees of the Recipient and the Recipient’s Affiliates, having a need to know the Confidential Information for the purpose of performing under this Agreement.

22.4 A Recipient may disclose the Discloser’s Confidential Information to a third party agent or consultant, provided that prior to such disclosure the agent or consultant has executed a written agreement of non-disclosure and non-use comparable in scope to the terms of this Section 22.

22.5 The Recipient may make copies of Confidential Information only as reasonably necessary to perform its obligations and exercise its rights under this Agreement. All such copies shall bear the same copyright and proprietary rights notices as are contained on the original.

22.6 The Recipient shall return all Confidential Information defined in Section 22.1.2 in the format in which it was received from the Discloser, including any copies made by the Recipient, within thirty (30) days after a written request is delivered to the Recipient, and/or destroy all such Confidential Information, except for Confidential Information that the Recipient reasonably requires to perform its obligations under this Agreement. If the Recipient loses or makes an unauthorized disclosure of the Discloser's Confidential Information, it shall notify the Discloser immediately and use reasonable efforts to retrieve the lost or improperly disclosed information.

22.7 The requirements of this Section 22 shall not apply to Confidential Information:

22.7.1 Which was in the possession of the Recipient free of restriction prior to its receipt from the Discloser;

22.7.2 After it becomes publicly known or available through no breach of this Agreement by the Recipient, the Recipient's Affiliates, or the directors, officers, employees, agents, or contractors, of the Recipient or the Recipient's Affiliates;

22.7.3 After it is rightfully acquired by the Recipient free of restrictions on its disclosure;

22.7.4 Which is independently developed by personnel of the Recipient; or

22.7.5 To the extent the disclosure is required by law, or made to a court, or governmental agency for the purpose of enforcing its rights under this Agreement; provided the Discloser has been notified of an intended disclosure promptly after the Recipient becomes aware of a required disclosure or decides to make such a voluntary disclosure to enforce its rights, the Recipient undertakes reasonable, lawful measures to avoid disclosing the Confidential Information until the Discloser has had reasonable time to seek a protective order, and the Recipient complies with any protective order that covers the Confidential Information to be disclosed.

22.8 Each Party's obligations to safeguard Confidential Information disclosed prior to expiration, cancellation or termination of this Agreement shall survive such expiration, cancellation or termination.

22.9 Confidential Information shall remain the property of the Discloser, and the Discloser shall retain all of the Discloser's right, title and interest in any Confidential Information disclosed by the Discloser to the Recipient. Except as otherwise expressly

provided elsewhere in this Agreement, no license is granted by this Agreement with respect to any Confidential Information (including, but not limited to, under any patent, trademark, or copyright), nor is any such license to be implied, solely by virtue of the disclosure of any Confidential Information.

22.10 Each Party agrees that the Discloser would be irreparably injured by a breach of this Section 22 by the Recipient, the Recipient's Affiliates, or the directors, officers, employees, agents or contractors of the Recipient or the Recipient's Affiliates, and that the Discloser shall be entitled to seek equitable relief, including injunctive relief and specific performance, in the event of any breach of the provisions of this Section 22. Such remedies shall not be deemed to be the exclusive remedies for a breach of this Section 22, but shall be in addition to any other remedies available at law or in equity.

22.11 The provisions of this Section 22 shall be in addition to and shall not limit, alter, define or contradict any provisions of Applicable Law, including, but not limited to, 47 U.S.C. § 222, and are not intended to constitute a waiver by a Party of any right with regard to protection of the confidentiality of information (whether or not defined as "Confidential Information" for purposes of this Agreement) of the Party or its customers provided by Applicable Law.

22.12 Without in any way limiting the foregoing provisions of Section 22, each Party shall comply with 47 U.S.C. § 222, any implementing rules, regulations, and orders thereunder, and other federal and state rules and regulations addressing Customer Proprietary Network Information ("CPNI") and Carrier Information. A Party shall not access (including, but not limited to, through electronic interfaces and gateways provided under this Agreement), use or disclose CPNI or other customer information unless the Party has obtained any customer authorization required by Applicable Law for such access, use and/or disclosure. By accessing, using or disclosing CPNI or other customer information, a Party represents and warrants that the Party has obtained any customer authorization required by Applicable Law for such access, use or disclosure. A Party accessing, using or disclosing CPNI or other customer information shall upon request by the other Party provide proof of any customer authorization for such access, use or disclosure, required by Applicable Law (including, copies of any written authorization). Without limiting the foregoing provisions of this Section 22, where required by 47 U.S.C. § 222, or other provision of Applicable Law, a Party shall obtain a signed letter of authorization from the applicable end user in order to obtain CPNI or other customer information from the other Party.

22.13 Each Party ("Auditing Party") shall have the right to audit the other Party ("Audited Party"), to ascertain whether the Audited Party is complying with the requirements of Applicable Law and this Agreement with regard to the Audited Party's access to, and use and disclosure of, CPNI and other customer information, which is made available by the Auditing Party to the Audited Party under this Agreement. Any audit conducted under this Section 22.13 shall be conducted in accordance with Section 23, "Audits and Inspections". Any information disclosed by the Audited Party to the Auditing Party or the Auditing Party's employees, Agents or contractors, in an audit

conducted under this Section 22.13 shall be considered to be Confidential Information under this Section 22.

22.14 To the extent permitted by Applicable Law, each Party (“Auditing Party”) shall have the right to monitor the access of the other Party (“Audited Party”) to CPNI and other customer information which is made available by the Auditing Party to the Audited Party under this Agreement, to ascertain whether the Audited Party is complying with the requirements of Applicable Law and this Agreement with regard to the Audited Party’s access to, and use and disclosure of, such CPNI and other customer information. To the extent permitted by Applicable Law, the foregoing right shall include, but not be limited to, the right to electronically monitor the Audited Party’s access to and use of CPNI and other customer information which is made available by the Auditing Party to the Audited Party under this Agreement through electronic interfaces or gateways, to ascertain whether the Audited Party is complying with the requirements of Applicable Law and this Agreement with regard to the Audited Party’s access to, and use and disclosure of, such CPNI and other customer information.

22.15 Nothing herein shall be construed as limiting the rights of either Party with respect to its own subscriber information under any Applicable Law, including without limitation Section 222 of the Act.

Section 23. Audits and Examinations

23.1 As applicable consistent with the provision of the relevant services or functions by a Party under this Agreement, each Party may audit the other Party’s books, records and documents for the purpose of evaluating the accuracy of the other Party’s bills and performance reports rendered under this Agreement. Such audits may be performed no more than a total of four (4) times in a calendar year nor more often than once every nine (9) months for a specific subject matter area; provided, that particular subject matter audits may be conducted more frequently (but no more frequently than once in each calendar quarter) if the immediately prior audit for such area found previously uncorrected net inaccuracies or errors in billing or performance reporting in favor of the audited Party having an aggregate value of at least five percent (5%) of the amounts payable by the auditing Party, or statistics reportable by the audited Party, relating to services provided by the audited Party during the period covered by the audit.

23.2 In addition to the audits described in Section 23.1, each Party may audit the other Party’s books, records and documents for the purpose of evaluating compliance with CPNI where the audited Party has access to CPNI in the custody of the auditing Party pursuant to this Agreement. Such CPNI audits must be performed in a minimally disruptive fashion, and an audited Party may bring objections to the Commission, if the audits are unnecessarily intrusive and the Parties cannot resolve their disputes. Such CPNI audits may not be performed more frequently than annually; provided, however, that the frequency of CPNI audits may be increased to quarterly if violations of a Party’s CPNI obligations exceeds five percent (5%) of the audit sample.

23.3 The auditing Party may employ other persons or firms for this purpose. Such audit shall take place at a time and place agreed on by the Parties; provided, that the auditing Party may require that the audit commence no later than sixty (60) days after the auditing Party has given notice of the audit to the other Party.

23.4 The audited Party shall promptly correct any error that is revealed in a billing audit, including back-billing of any underpayments and making a refund, in the form of a billing credit, of any over-payments. Such back-billing and refund shall appear on the audited Party's bill no later than the bill for the third full billing cycle after the Parties have agreed upon the accuracy of the audit results.

23.5 Each Party shall cooperate fully in any audits required hereunder, providing reasonable access to any and all employees, books, records and documents, reasonably necessary to assess the accuracy of the audited Party's bills or performance reports, or compliance with CPNI obligations, as appropriate.

23.6 Audits shall be performed at the auditing Party's expense, provided that there shall be no charge for reasonable access to the audited Party's employees, books, records and documents necessary to conduct the audits provided for hereunder.

23.7 Books, records, documents, and other information, disclosed by the audited Party to the auditing Party or the Auditing Party's employees, agents or contractors in an audit under this Section 23, shall be deemed to be Confidential Information under Section 22.

23.8 This Section 23 shall survive expiration or termination of this Agreement for a period of two (2) years after expiration or termination of this Agreement.

Section 24. Dispute Resolution Procedures

24.1 In the event the Commission retains continuing jurisdiction to implement and enforce the terms and conditions of this Agreement, the Parties agree that any dispute arising out of or relating to this Agreement that the Parties themselves cannot resolve, may be submitted to the Commission for resolution. The Parties agree to seek expedited resolution by the Commission, pursuant to applicable procedures established by the Commission. During the Commission proceeding, each Party shall continue to perform its obligations under this Agreement; provided, however that neither Party shall be required to act in any unlawful fashion. This provision shall not preclude the Parties from seeking relief available in any other forum.

24.2 The Parties acknowledge that the terms of this Agreement were established pursuant to an order of the Commission. Any and all of the terms of this Agreement may be altered or abrogated by a successful challenge to the Agreement (or to the order approving the Agreement) as permitted by Applicable Law. By signing this Agreement, the Parties do not waive the right to pursue such a challenge.

Section 25. Bona Fide Request Process for Further Unbundling

25.1 The Parties recognize that, because MCIIm plans to maintain a technologically advanced network, it is likely to seek further unbundling of Network Elements or the introduction of new Network Elements. Accordingly, MCIIm may request such new unbundled Network Elements or arrangements from time to time by submitting a request in writing ("Bona Fide Request" or "BFR"). Bell Atlantic shall promptly consider and analyze MCIIm's submission of a Bona Fide Request that Bell Atlantic provide: (a) a method of Interconnection or access to a Network Element not otherwise provided under this Agreement at the time of such Bona Fide Request; (b) a method of Interconnection or access to a Network Element that is different in quality to that which Bell Atlantic provides to itself, its Affiliates, or its subscribers at the time of such request; (c) Collocation at a location other than a Bell Atlantic Central Office; and (d) such other arrangement, service, or Network Element for which a Bona Fide Request is required under this Agreement. Items (a) through (d) above may be referred to individually as a "BFR Item." The Bona Fide Request process set forth herein does not apply to those services requested pursuant to Report & Order and Notice of Proposed Rulemaking 91-141 (rel. October 19, 1992), Paragraph 259 and Footnote 603 or subsequent orders.

25.2 A Bona Fide Request shall be submitted in writing and shall contain information required to perform a preliminary analysis of the requested BFR Item. Such information will include a technical description of each BFR Item and reasonable estimates of the number or volume requested, the location(s) of each BFR Item, and the date(s) each BFR Item is desired. MCIIm shall submit each BFR via United States Postal Service or private courier, return receipt requested.

25.3 MCIIm may cancel a Bona Fide Request at any time, but shall pay Bell Atlantic's reasonable and demonstrable costs of processing and/or implementing the Bona Fide Request up to the date of cancellation; except MCIIm shall not be charged for preliminary analysis if costs do not exceed one hundred dollars (\$100). Bell Atlantic shall notify MCIIm if costs will exceed five thousand dollars (\$5,000). Bell Atlantic shall provide MCIIm with weekly status reports on the progress of its analysis and shall include the cost of such status reports in the costs of processing the BFR.

25.4 Within fifteen (15) business days after its receipt of a Bona Fide Request, Bell Atlantic shall provide to MCIIm a preliminary analysis of the BFR Item. The preliminary analysis shall respond in one of the following ways:

25.4.1 confirm that Bell Atlantic will offer the BFR Item and identify the date (no more than ninety (90) days after the date of the preliminary analysis) when Bell Atlantic will deliver a firm price proposal, including service description, pricing and an estimated schedule for availability ("Bona Fide Request Price Proposal");

25.4.2 provide a detailed explanation that such BFR Item is not technically feasible and/or that the BFR Item does not qualify as one that is required to be provided under the Act;

25.4.3 inform MCIIm that Bell Atlantic must do laboratory testing to determine whether the BFR Item is technically feasible;

25.4.4 inform MCIIm that Bell Atlantic must do field testing to determine whether the BFR Item is technically feasible;

25.4.5 inform MCIIm that it is necessary for the Parties to undertake a joint technical/operational field test in order to determine both technical feasibility and operational cost impacts of the BFR Item; or

25.4.6 request face-to-face meetings between technical representatives of both Parties to further explain the BFR Item. No later than five (5) business days following such meetings, Bell Atlantic will provide a preliminary analysis in one of the ways identified in Sections 25.4.1 through 25.4.5. Both Parties shall make reasonable efforts to schedule such meetings as expeditiously as possible.

25.5 Within ten (10) business days after receiving Bell Atlantic's preliminary analysis from Section 25.4.3, 25.4.4, or 25.4.5, MCIIm shall:

25.5.1 in the case of Sections 25.4.3 or 25.4.4, (i) negotiate a mutually agreeable, reasonably expeditious schedule for Bell Atlantic's testing, (ii) a mutually agreeable date (no more than ninety (90) days after the testing has shown the BFR Item is technically feasible) when Bell Atlantic will deliver a Bona Fide Request Price Proposal, and (iii) a mutually agreeable arrangement for sharing the testing costs; or

25.5.2 in the case of Section 25.4.5, (i) negotiate a mutually agreeable, reasonably expeditious schedule for joint technical/operational field testing, (ii) a mutually agreeable date (no more than 90 days after the testing has shown the BFR Item is technically feasible) when Bell Atlantic will deliver a Bona Fide Request Price Proposal, and a mutually agreeable arrangement for sharing the testing costs.

25.6 In handling a Bona Fide Request pursuant to Section 25.4, Bell Atlantic shall, to the extent possible, utilize information from previously developed Bona Fide Requests in order to shorten its response times. MCIIm may take advantage of previously canceled BFR work performed by Bell Atlantic on the same BFR Item or a substantially similar BFR Item, to the extent applicable.

25.7 Within ten (10) business days after receiving Bell Atlantic's preliminary analysis from Section 25.4.1, MCIIm shall:

25.7.1 accept Bell Atlantic's date to deliver a Bona Fide Request Price Proposal;

25.7.2 negotiate as expeditiously as possible a different date for Bell Atlantic to deliver a Bona Fide Request Price Proposal; or

25.7.3 cancel the Bona Fide Request.

25.8 Unless the Parties otherwise agree, a BFR Item shall be priced in accordance with Section 252(d)(1) of the Act and any applicable FCC or Commission rules, regulations, or orders. Consistent with Applicable Law, the price for each BFR Item shall include the reasonable and demonstrable costs incurred by Bell Atlantic in responding to the BFR, to the extent that Bell Atlantic has not previously been reimbursed for such costs.

25.9 Within ninety (90) days after its receipt of the Bona Fide Request Price Proposal, MCIIm must either place an order for such BFR Item pursuant to the Bona Fide Request Price Proposal or, if it believes such Bona Fide Request Price Proposal is inconsistent with the requirements of the Act, seek arbitration by the Commission, including the use of any available expedited procedures. If, within ninety (90) days after its receipt of the Bona Fide Request Price Proposal, MCIIm fails to confirm an order for such BFR Item or seek arbitration by the Commission, Bell Atlantic may treat the Bona Fide Request as canceled by MCIIm. If within ninety (90) days after issuance of a Commission order finding that a Bona Fide Request Price Proposal is consistent with the requirements of the Act, MCIIm fails to place an order for such BFR Item, Bell Atlantic may treat the Bona Fide Request as canceled by MCIIm.

25.10 If a Party to a Bona Fide Request believes that the other Party is not requesting, or negotiating, or processing the Bona Fide Request in good faith, or disputes a determination, or price or cost quote, or is failing to act in accordance with Section 251 of the Act, such Party may seek mediation or arbitration by the Commission, including the use of any available expedited procedures, after giving the other Party written notice at least ten (10) days in advance.

Section 26. Branding

26.1 In all cases in which a Party has control over handling of services provided to customers of the other Party using services procured under this Agreement, the Party so handling such services shall brand them at the points of subscriber contact as set forth in Attachment VIII.

26.2 When Bell Atlantic technicians (including Bell Atlantic contractor technicians) have contact with a customer during a premise visit on behalf of MCIIm, the Bell Atlantic technicians shall identify themselves as Bell Atlantic employees (or Bell Atlantic contractor employees) performing services on behalf of MCIIm. When a Bell Atlantic technician leaves a status card during a premise visit on behalf of MCIIm, the card will be a standard card used for other local service providers' customers, will be in substantially the form set forth in Exhibit A of this Part A, and will include the name and telephone number of each local service provider that elects to be listed on the card and agrees to compensate Bell Atlantic for that provider's share of Bell Atlantic's cost of printing and

distributing the card. The Bell Atlantic technicians shall not leave any promotional or marketing literature for or otherwise market Bell Atlantic Telecommunications Services to the MCIIm customer during a premise visit on behalf of MCIIm, but may provide a telephone number for Bell Atlantic's customer service or sales department, in response to customer query about Bell Atlantic services.

26.3 This Section 26 shall not confer on either Party any rights to the service marks, trademarks and trade names owned by or used in connection with services by the other Party or its Affiliates, except as expressly permitted by this Section 26.

Section 27. Taxes

27.1 With respect to any purchase of services under this Agreement, if any Federal, state or local government tax, fee, duty, surcharge (including, but not limited to, any 911, telecommunications relay service, or universal service fund surcharge), or other tax-like charge (a "Tax") is required or permitted by Applicable Law to be collected from a Purchasing Party by the Providing Party, then: (i) the Providing Party shall bill the Purchasing Party for such Tax; (ii) the Purchasing Party shall timely remit such Tax to the Providing Party; and (iii) the Providing Party shall remit such collected Tax to the applicable taxing authority.

27.2 With respect to any purchase of services under this Agreement, if any Tax is imposed by Applicable Law on the receipts of the Providing Party, which Applicable Law permits the Providing Party to exclude certain receipts received from sales of services for resale by the Purchasing Party, such exclusion being based solely on the fact that the Purchasing Party is also subject to a tax based upon receipts ("Receipts Tax"), then the Purchasing Party (i) shall provide the Providing Party with notice in writing in accordance with Section 27.7 of its intent to pay the Receipts Tax, and (ii) shall timely pay the Receipts Tax to the applicable taxing authority.

27.3 With respect to any purchase of services under this Agreement, that are resold by the Purchasing Party to a subscriber of the Purchasing Party, if any Tax is imposed by Applicable Law on the subscriber of the Purchasing Party in connection with its purchase of the resold Offered Services which the Purchasing Party is required to impose and/or collect from the subscriber, then the Purchasing Party (i) shall impose and/or collect such Tax from the subscriber, and (ii) shall timely remit such Tax to the applicable taxing authority.

27.3.1 If the Providing Party has not received an exemption certificate from the Purchasing Party and fails to collect any Tax as required by Section 27.1, then, as between the Providing Party and the Purchasing Party, (i) the Purchasing Party shall remain liable for such uncollected Tax, and (ii) the Providing Party shall be liable for any interest and/or penalty assessed on the uncollected Tax by the applicable taxing authority.

27.3.2 If the Providing Party properly bills the Purchasing Party for any Tax but the Purchasing Party fails to remit the Tax to the Providing Party as required by Section 27.1, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for such uncollected Tax and any interest and/or penalty assessed on the uncollected Tax by the applicable taxing authority. The Providing Party shall give timely notice to the Purchasing Party if any proposed assessment of Taxes, interest or penalties by the applicable taxing authority so as to afford the Purchasing Party an opportunity to cure any defect or inadequacy with its exemption certificate before assessment of any additional Taxes, interest or penalties is made by the taxing authority.

27.3.3 If the Providing Party does not collect a Tax because the Purchasing Party has provided the Providing Party with an exemption certificate which is later found to be inadequate by the applicable taxing authority, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for such uncollected Tax and any interest and/or penalty assessed on the uncollected Tax by the applicable taxing authority.

27.3.4 Except as provided in Section 27.3.5, if the Purchasing Party fails to pay the Receipts Tax as required by Section 27.2, then, as between the Providing Party and the Purchasing Party, (i) the Providing Party shall be liable for any Tax imposed on the Providing Party's receipts, and (b) the Purchasing Party shall be liable for any Tax imposed on the Purchasing Party's receipts and any interest and/or penalty assessed by the applicable taxing authority on either the Purchasing Party or the Providing Party with respect to the Tax on the Providing Party's receipts.

27.3.5 If any discount or portion of a discount in price provided to the Purchasing Party under this Agreement (including, but not limited to, the discount provided for in Attachment I) represents Tax savings to the Providing Party which it was assumed the Providing Party would receive, because it was anticipated that receipts from sales of services (that would otherwise be subject to a Tax on such receipts) could be excluded from such Tax under Applicable Law, because the services would be sold to a Telecommunications Services provider, and the Providing Party is, in fact, required by Applicable Law to pay such Tax on receipts from sales of services to the Purchasing Party, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for any such Tax and any interest and/or penalty assessed by the applicable taxing authority on either the Purchasing Party or the Providing Party with respect to the Tax on the Providing Party's receipts.

27.3.6 With respect to any Tax imposed on subscribers of the Purchasing Party that the Purchasing Party is required to collect, as between the Providing Party and the Purchasing Party, the Purchasing Party shall remain liable for such Tax and any interest and/or penalty assessed on such Tax by the applicable taxing authority.

27.4 If either Party is audited by a taxing authority, the other Party agrees to reasonably cooperate with the Party being audited in order to respond to any audit inquiries in a proper and timely manner so that the audit and/or any resulting controversy may be resolved expeditiously.

27.5 If Applicable Law clearly exempts a purchase of services under this Agreement from a Tax, and if such Applicable Law also provides an exemption procedure, such as an exemption certificate requirement, then, if the Purchasing Party complies with such procedure, the Providing Party shall not collect such Tax during the effective period of the exemption. Such exemption shall be effective upon receipt of the exemption certificate or affidavit in accordance with Section 27.7.

27.6 If Applicable Law appears to exempt a purchase of services under this Agreement from a Tax, but does not also provide an exemption procedure, then the Providing Party shall not collect such Tax if the Purchasing Party (i) furnishes the Providing Party with a letter signed by an officer of the Purchasing Party requesting an exemption and citing the provision in the Applicable Law which appears to allow such exemption, and (ii) supplies the Providing Party with an indemnification agreement, reasonably acceptable to the Providing Party, which holds the Providing Party harmless on an after-tax basis with respect to forbearing to collect such Tax.

27.7 All notices, affidavits, exemption certificates or other communications required or permitted to be given by either Party to the other under this Section 27, shall be made in writing and shall be delivered personally or sent by prepaid overnight express service, and sent to the addresses stated in Section 14 and to the following:

To Bell Atlantic: Tax Administration
 Bell Atlantic Network Services, Inc.
 1717 Arch Street, 30th Floor
 Philadelphia, PA 19103

To MCI: MCI Carrier Group
 MCI Telecommunications Corporation
 1133 19th Street, NW
 Washington, DC 20036

Either Party may from time-to-time designate another address or addressee by giving notice in accordance with the terms of this Section 27.7. Any notice or other communication shall be deemed to be given when received.

Section 28. Responsibility for Environmental Contamination

28.1 MCI shall in no event be liable to Bell Atlantic for any costs whatsoever resulting from a violation of a federal, state or local environmental law by Bell Atlantic, its contractors or agents arising out of this Agreement (a "Bell Atlantic Environmental

Violation”). Bell Atlantic shall, at MCIIm’s request, indemnify, defend, and hold harmless MCIIm, each of its officers, directors and employees from and against any losses, damages, claims, demands, suits, liabilities, fines, penalties and expenses (including reasonable attorneys fees) that are caused by a Bell Atlantic Environmental Violation.

28.2 Bell Atlantic shall in no event be liable to MCIIm for any costs whatsoever resulting from a violation of a federal, state or local environmental law by MCIIm, its contractors or agents arising out of this Agreement (an “MCIIm Environmental Violation”). MCIIm shall, at Bell Atlantic’s request, indemnify, defend, and hold harmless Bell Atlantic, each of its officers, directors and employees from and against any losses, damages, claims, demands, suits, liabilities, fines, penalties and expenses (including reasonable attorneys fees) that are caused by an MCIIm Environmental Violation.

28.3 In the event any suspect materials within Bell Atlantic-owned, operated or leased facilities are identified to be asbestos-containing, MCIIm will ensure that to the extent any activities which it undertakes in the facility disturb such suspect materials, such MCIIm activities will be in accordance with applicable local, state and federal environmental and health and safety statutes and regulations. Except for abatement activities undertaken by MCIIm or equipment placement activities that result in the generation or placement of asbestos containing material, MCIIm shall not have any responsibility for managing, nor be the owner of, not have any liability for, or in connection with, any asbestos containing material at Bell Atlantic-owned, operated or leased facilities. Bell Atlantic agrees to immediately notify MCIIm if Bell Atlantic undertakes any asbestos control or asbestos abatement activities that potentially could affect MCIIm equipment or operations, including, but not limited to, contamination of equipment.

Section 29. Facilities

29.1 A providing Party or its suppliers shall retain all right, title and interest in, and ownership of, all facilities, equipment, software, and wiring, used to provide the providing Party’s services. During the period in which services are provided, the providing Party shall have access at all reasonable times to the purchasing Party’s and the purchasing Party’s customers’ locations for the purpose of installing, maintaining, repairing, and inspecting all facilities, equipment, software, and wiring, used to provide the services. At the conclusion of the period in which services are provided, the providing Party shall have access at the purchasing Party’s and the purchasing Party’s customers’ locations at all reasonable times to remove all facilities, equipment, software, and wiring used to provide the services. The purchasing Party shall, at the purchasing Party’s expense, obtain any rights and authorizations necessary for such access.

29.2 Except as otherwise stated in this Agreement or agreed to in writing by a providing Party, a providing Party shall not be responsible for the installation, maintenance, repair or inspection, of facilities, equipment, software, or wiring furnished by the purchasing Party or the purchasing Party’s customers for use with the providing Party’s services.

Section 30. Option to Obtain Services Under Other Agreements

30.1 In accordance with the requirements of 47 U.S.C. § 252(i), each Party shall, upon written request by the other Party, make available to the requesting Party any interconnection, service, or network element provided under an agreement with a third party, and which is approved by the Commission pursuant to 47 U.S.C. § 252, upon the same terms and conditions (including prices) provided in the agreement with the third party. This Agreement shall thereafter be amended to incorporate the terms and conditions (including prices) from the third party agreement applicable to the interconnection, service, or network element that the requesting Party has elected to purchase pursuant to the terms and conditions of the third party agreement. The amended rates, terms and conditions from the third party agreement shall be effective upon: (i) amendment by the Parties, or (ii) sixty (60) days after the date of written request, whichever is earlier.

30.2 To the extent the exercise of the foregoing option requires a rearrangement of facilities by the providing Party, the requesting Party shall be liable for the non-recurring charges associated therewith, as well as for any termination charges, if any, associated with the termination of existing facilities or services.

Section 31. Other Services

31.1 This Agreement applies only to “services” as defined in this Agreement. To the extent that services subscribed to under this Agreement by a purchasing Party are interconnected to or used with other services, facilities, equipment, software, or wiring, provided by the providing Party or by other persons, such other services, facilities, equipment, software, or wiring, shall not be construed to be provided under this Agreement. Any providing Party services, facilities, equipment, software, or wiring, to be used by the purchasing Party which are not subscribed to by the purchasing Party under this Agreement must be subscribed to by the purchasing Party separately, pursuant to other written agreements (including, but not limited to, applicable providing Party Tariffs).

31.2 Without in any way limiting Section 31.1, the Parties agree that this Agreement does not apply to the following Bell Atlantic services and products: Bell Atlantic Answer Call, Bell Atlantic Answer Call Plus, Bell Atlantic Basic Mailbox, Bell Atlantic Voice Mail, and other Bell Atlantic voice mail and voice messaging services; Bell Atlantic Optional Wire Maintenance Plan, Bell Atlantic Guardian Enhanced Maintenance Service, Bell Atlantic Sentry I Enhanced Maintenance Service, Bell Atlantic Sentry II Enhanced Maintenance Service, Bell Atlantic Sentry III Enhanced Maintenance Service, and other inside wire maintenance services; customer premises equipment; Telephone Directory advertisements (except as stated in Attachment VIII); and any service that incorporates the payphone station equipment.

31.3 Without in any way limiting Section 31.1 or Section 31.2, the Parties also agree that this Agreement does not apply to the installation, maintenance, repair, inspection, or use

of any facilities, equipment, software, or wiring, located on the purchasing Party's side of the Network Rate Demarcation Point applicable to the purchasing Party and does not grant to the purchasing Party a right to installation, maintenance, repair, inspection, or use, of any such facilities, equipment, software, or wiring. Installation, maintenance, repair, inspection, or use of facilities, equipment, software, or wiring, located on the purchasing Party's side of the Network Rate Demarcation Point applicable to the purchasing Party must be contracted for by the purchasing Party separately, pursuant to other written agreements, at rates stated in such other written agreements.

Section 32. Provision and Use of Services

32.1 A Party may fulfill its obligations under this Agreement itself or may cause an Affiliate of the Party to take the action necessary to fulfill the Party's obligations; provided that a Party's use of an Affiliate to perform this Agreement shall not release the Party from any liability or duty to fulfill its obligations under this Agreement.

32.2 Except as otherwise expressly stated in this Agreement, each Party, at its own expense, shall be responsible for obtaining from governmental authorities, property owners, other Telecommunications Carriers, and any other persons or entities, all rights and privileges (including, but not limited to, Rights of Way, space and power), which are necessary for the Party to provide its services pursuant to this Agreement.

32.3 Except as otherwise provided in this Agreement, this Agreement does not prevent a purchasing Party from using the services provided by a providing Party pursuant to this Agreement in connection with other technically compatible services provided by the providing Party pursuant to this Agreement or with any services provided by the purchasing Party or a third party, provided, however, that unless otherwise provided herein, interconnection services, call transport and termination services, and unbundled Network Elements shall be available under the terms and conditions (including prices) set forth in this Agreement and shall be used by the purchasing Party solely for purposes consistent with obligations set forth in the Act and any rules, regulations or orders thereunder.

Section 33. Selection of IntraLATA Telecommunications Service Provider

33.1 The Parties agree to apply the principles and procedures set forth in Sections 64.1100 and 64.1150 of the FCC Rules, 47 C.F.R. §§ 64.1100 and 64.1150, to the process for end user selection of an IntraLATA Telecommunications Service provider; provided that if the FCC or the Commission adopts rules governing the process for end user selection of an IntraLATA Telecommunications Service provider, the Parties shall apply such rules rather than the principles and procedures set forth in §§ 64.1100 and 64.1150.

33.2 In the event a Party ("Requesting Party") which requests the other Party to change an end user's Telecommunications Service (including, but not limited to, an end user's selection of an IntraLATA Telecommunications Service provider): (a) fails to provide documentary evidence of the end user's IntraLATA Telecommunications Service provider selection upon

request; or (b) requests changes in the end user's Telecommunications Service without having obtained authorization for such change from the end user pursuant to the principles and procedures set forth in Sections 64.1100 and 64.1150 or other applicable FCC or Commission rules, the Requesting Party shall indemnify, defend and hold harmless the other Party for any resulting Claims. In addition, the Requesting Party shall be liable to the other Party for all charges that would be applicable to the end user for the initial change in the end user's Telecommunications Service and any charges for restoring the end user's Telecommunications Service to its end user authorized condition, including to the appropriate IntraLATA Telecommunications Service provider.

33.3 A Providing Party shall not require the Purchasing Party to produce a letter of authorization, disconnect order, or other writing, from the Purchasing Party's subscriber as a pre-condition to processing an Order from the Purchasing Party.

Section 34. Service Standards

34.1 Bell Atlantic shall provide service to MCIIm at a level of performance that Bell Atlantic is required by Applicable Law (including 47 U.S.C. § 251) to meet in providing service to MCIIm.

34.2 Bell Atlantic shall offer premium service (services provided at a higher level than that required by Section 34.1) to MCIIm, if MCIIm requests premium service in accordance with Section 25 and MCIIm compensates Bell Atlantic for the incremental cost of providing such premium service.

34.3 Upon MCIIm's request, Bell Atlantic shall provide to MCIIm reports on all material measures of service Parity. MCIIm may request a report on all measures that are reasonably related to establishing the Parity level and whether MCIIm is receiving services at Parity. Such reports shall indicate for each material measure the service and performance level provided by Bell Atlantic to itself, its Affiliates, MCIIm, and other CLECs. The reports required by this Section 34 are identified in Attachment X of this Agreement.

34.4 To the extent Bell Atlantic through its Tariffs provides credits for substandard performance, Bell Atlantic shall provide MCIIm such credits for substandard performance of services provided under this Agreement.

34.5 Pursuant to Section 23 of this Part A, MCIIm shall have the right, at its expense, to conduct reasonable audits or other verifications of information and reports provided by Bell Atlantic under this Section 34.

Section 35. Subcontracting

35.1 If any obligation under this Agreement is performed through a subcontractor, the subcontracting Party shall remain fully responsible for the performance of this Agreement in accordance with its terms, including any obligations it performs through

the subcontractor. The subcontracting Party shall be solely responsible for payments due its subcontractors. No subcontractor shall be deemed a third party beneficiary for any purposes under this Agreement.

Section 36. Amendments and Modifications

36.1 No provision of this Agreement shall be deemed waived, amended or modified by either Party unless such a waiver, amendment or modification is in writing, dated, and signed by both Parties.

Section 37. Severability

37.1 If any term, condition or provision of this Agreement is held to be invalid or unenforceable for any reason, such invalidity or unenforceability shall not invalidate the entire Agreement (unless such construction would be unreasonable), and the Agreement shall be construed as if it did not contain the invalid or unenforceable provision or provisions, and the rights and obligations of each Party construed and enforced accordingly.

Section 38. Headings Not Controlling

38.1 The headings of Articles and Sections of this Agreement are for convenience of reference only, and shall in no way define, modify or restrict the meaning or interpretation of the terms or provisions of this Agreement.

Section 39. Entire Agreement

39.1 This Agreement constitutes the entire agreement between the Parties on the subject matter hereof, and supersedes any prior or contemporaneous agreement, understanding, or representation on the subject matter hereof. Except as otherwise provided in this Agreement, the terms in this Agreement may not be waived or modified except by a written document which is signed by the Parties.

Section 40. Counterparts

40.1 This Agreement may be executed in any number of counterparts, each of which shall be deemed an original; but such counterparts shall together constitute one and the same instrument.

Section 41. Successors and Assigns

41.1 This Agreement shall be binding upon, and inure to the benefit of, the Parties hereto and their respective successors and permitted assigns.

Section 42. Good Faith Performance

42.1 In the performance of their obligations under this Agreement, the Parties shall cooperate fully and act in good faith and consistently with the intent of the Act. Where notice, approval or similar action by a Party is permitted or required by any provision of this Agreement (including, without limitation, the obligation of the Parties to further negotiate the resolution of new or open issues under this Agreement), such action shall not be unreasonably delayed, withheld or conditioned.

Section 43. Joint Work Product

43.1 This Agreement is the joint work product of the representatives of the Parties. For convenience, this Agreement has been drafted in final form by one of the Parties. Accordingly, in the event of ambiguities, no inferences shall be drawn against either Party solely on the basis of authorship of this Agreement.

IN WITNESS WHEREOF, each of the Parties has caused this Agreement to be executed by its duly authorized representatives.

**MCImetro Access Transmission
Services, Inc.**

Bell Atlantic-Pennsylvania, Inc.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPENDIX I

TECHNICAL REFERENCE SCHEDULE

Bell Atlantic Technical References

- TR72565, Issue 1, 1996, Bell Atlantic Technical Reference - Basic Unbundled Loop Services - Technical Specifications (as set forth in Exhibit A, Attachment III).
- TR72570, Issue 1, 1996, Bell Atlantic Technical Reference - Analog Unbundled Loop Services with Customer Specified Signaling - Technical Specifications (as set forth in Exhibit B, Attachment III).
- TR72575, Issue 1, 1996, Bell Atlantic Technical Reference - Digital Unbundled Loop Services - Technical Specifications (as set forth in Exhibit C, Attachment III).
- TR72580, Issue 1, 1997, Bell Atlantic Technical Reference - Analog Unbundled Port Services - Technical Specifications (as set forth in Exhibit F, Attachment III).
- TR72585, Issue 1, 1997, Bell Atlantic Technical Reference - Digital Unbundled Port Services - Technical Specifications (as set forth in Exhibit G, Attachment III).
- BA905, Bell Atlantic Supplement Common Channel Signaling Network Interface Specification.

Local Loop

- ANSI/IEEE 743-1995, Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice Frequency Circuits.
- ANSI T1.102-1993, American National Standard for Telecommunication - Digital Hierarchy - Electrical Interfaces.
- ANSI T1.401-1993, American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling.
- ANSI T1.403-1995, Network to Customer Installation - DS1 Metallic Interface.
- ANSI T1.405-1996, Network-to-Customer Installation Interfaces - Direct-Inward-Dialing Analog Voice Grade Switched Access Using Loop Reverse-Battery Signaling.
- ANSI T1.601-1992, American National Standard for Telecommunications - ISDN - Basic Access Interface for Use on Metallic Loops for Application at the Network Side of NT, Layer 1 Specification.
- Bellcore TR-NWT-000057, Functional Criteria for Digital Loop Carrier Systems, Issue 2, January 1993.

Local Switching

- Bellcore FR-64-LATA, LATA Switching Systems Generic Requirements (“LSSGR”), 1996 Edition, Issue 1, January 1996.
- Bellcore TR-NWT-000008, Digital Interface Between the SLC®96 Digital Loop Carrier System and a Local Digital Switch, Issue 2, August 1987; and Revision 1, September 1993; and Bulletin 1, October 1994.
- Bellcore GR-303-CORE, Integrated Digital Loop Carrier System Generic Requirements, Objectives, and Interface, Issue 1, September 1995; and Revision 2, December 1996.
- Bellcore TR-NWT-000393, Generic Requirements for ISDN Basic Access Digital Subscriber Lines, Issue 2, January 1991.

Tandem Switching and Operator Services

- Bellcore TR-TSY-000540, LSSGR: Tandem Supplement, Section 20, Issue 2, July 1987; and Revision 1, December 1988; and Revision 2, June 1990.
- Bellcore GR-1149-CORE, OSSGR Section 10: System Interfaces, Issue 1, October 1995.
- Bellcore GR-1158-CORE, OSSGR Section 22.3: Line Information Database, Issue 2, October 1995.

SS7

- ANSI T1.110-1992, American National Standard Telecommunications - Signaling System Number 7 (“SS7”) - General Information.
- ANSI T1.111-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Message Transfer Part (“MTP”).
- ANSI T1.111A-1994, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Message Transfer Part (“MTP”) Supplement.
- ANSI T1.112-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Signaling Connection Control Part (“SCCP”).
- ANSI T1.113-1995, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Integrated Services Digital Network (“ISDN”) User Part.
- ANSI T1.114-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Transaction Capabilities Application Part (“TCAP”).
- ANSI T1.115-1990, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Monitoring and Measurements for Networks.
- ANSI T1.116-1990, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Operations, Maintenance and Administration Part (“OMAP”).
- ANSI T1.118-1992, American National Standard for Telecommunications - Signaling System Number 7 (“SS7”) - Intermediate Signaling Network Identification (“ISNI”).

- Bellcore GR-246-CORE, Bell Communications Research Specification of Signaling System Number 7, Issue 1, December 1994; and Revision 1, December 1995; and Revision 2, December 1996.
- Bellcore GR-317-CORE, Switching System generic requirements for Call Control Using the Integrated Services Digital Network User Part (“ISDNUP”), Bellcore, February, 1994
- Bellcore GR-394-CORE, Switching System generic requirements for Interexchange Carrier Interconnection Using the Integrated Services Digital Network User Part (“ISDNUP”), Bellcore, February, 1994
- Bellcore GR-905-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Network Interconnection, Message Transfer Part (“MTP”), and Integrated Services Digital Network User Part (“ISDNUP”), Issue 2, December 1996.
- Bellcore GR-954-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Line Information Database (“LIDB”) Services, Issue 1, June 1994; and Revision 1, October 1995.
- Bellcore GR-1428-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Toll-Free Service, Issue 2, May 1995.
- Bellcore GR-1429-CORE, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Call Management Services, Issue 1, August 1994.
- Bellcore GR-1432-CORE, CCS Network Interface Specification (“CCSNIS”) Supporting Signaling Connection Control Part (“SCCP”) and Transaction Capabilities Application Part (“TCAP”), March 1994.
- Bellcore SR-TSV-002275, BOC Notes on the LEC Networks, Issue 2, April 1994.

AIN

- Bellcore GR-1280-CORE, Advanced Intelligent Network (“AIN”) Service Control Point (“SCP”) Generic Requirements, Issue 1, August 1993.
- Bellcore TR-NWT-001284, Advanced Intelligent Network (“AIN”) 0.1 Switching System Generic Requirements, Issue 1, August 1992, and Bulletin 1, March 1993.
- Bellcore GR-1298-CORE, AINGR: Switching System, Issue 3, July 1996, and Revision 1, November 1996.
- Bellcore GR-1299-CORE, AINGR: Switch Service Control Point (“SCP”) Adjunct Interface, Issue 3, July 1996, and revision 1, November 1996.
- Bellcore GR-2863-CORE, CCS Network Interface Specification Supporting Advanced Intelligent Network (“AIN”), Issue 2, December 1995.
- Bellcore GR-2902-CORE, CCS Network Interface Specification (“CCSNIS”) Supporting Toll-Free Service Using AIN, Issue 1, May 1995.

Dedicated and Shared Transport

- ANSI T1.101-1994, American National Standard for Telecommunications - Synchronization Interface Standard Performance and Availability.
- ANSI T1.102-1993, American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces.
- ANSI T1.105-1995, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Basic Description including Multiplex Structure, Rates and Formats.
- ANSI T1.105.01-1995, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Automatic Protection Switching.
- ANSI T1.105.02-1995, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Payload Mappings.
- ANSI T1.105.03-1994, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Jitter at Network Interfaces.
- ANSI T1.105.03a-1995, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”): Jitter at Network Interfaces - DS1 Supplement.
- ANSI T1.105.04-1995, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Data Communication Channel Protocols and Architectures.
- ANSI T1.105.05-1994, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Tandem Connection.
- ANSI T1.105.06-1996, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Physical Layer Specifications.
- ANSI T1.106-1988, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (Single Mode).
- ANSI T1.107-1988, American National Standard for Telecommunications - Digital Hierarchy - Formats Specifications.
- ANSI T1.107a-1990, American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications (DS3 Format Applications).
- ANSI T1.107b-1991, American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications.
- ANSI T1.117-1991, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (“SONET”) (Single Mode - Short Reach).
- ANSI T1.119-1994, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Operations, Administration, Maintenance, and Provisioning (“OAM&P”) Communications.
- ANSI T1.119.01-1995, American National Standard for Telecommunications - Synchronous Optical Network (“SONET”) - Operations, Administration, Maintenance, and Provisioning (“OAM&P”) Communications Protection Switching Fragment.
- ANSI T1.231-1993, American National Standard for Telecommunications - Digital Hierarchy - Layer 1 In-Service Digital Transmission performance monitoring.

- ANSI T1.404-1994, Network-to-Customer Installation - DS3 Metallic Interface Specification.
- Bellcore GR-253-CORE, Synchronous Optical Network ("SONET"): Common Generic Criteria, Issue 2, December 1995.
- Bellcore GR-334-CORE, Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994.
- Bellcore GR-342-CORE, High-Capacity Digital Special Access Service-Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995.
- Bellcore GR-499-CORE, Transport Systems Generic Requirements ("TSGR"): Common Requirements, Issue 1, December 1995.
- Bellcore TR-NWT-000776, Network Interface Description for ISDN-1 Customer Access, Issue 2, February 1993.
- Bellcore GR-820-CORE, OTGR Section 5.1: Generic Transmission Surveillance, Issue 1, November 1994.

Network Interface Device

- Bellcore GR-49-CORE, Generic Requirements for Outdoor Telephone Network Interface Devices, Issue 1, December 1994.
- Bellcore TA-TSY-000120, Customer Premises or Network Ground Wire, Issue 1, March 1986.
- Bellcore TR-NWT-000239, Generic Requirements for Indoor Telephone Network Interfaces, Issue 2, December 1993.
- Bellcore TR-NWT-000937, Generic Requirements for Building Entrance Terminals, Issue 1, January 1993.

Collocation

- ANSI/NFPA-1996, National Electrical Code ("NEC"), and any standard imposed by the appropriate governing authority having jurisdiction.
- ANSI C2-1997, National Electrical Safety Code.
- Bellcore GR-63-CORE, Network Equipment-Building System ("NEBS") Requirements: Physical Protection, Issue 1, October 1995.
- Bellcore TR-EOP-000151, Generic Requirements for 24-, 48-, 130- and 140- Volt Central Office Power Plant Rectifiers, Issue 1, May 1985.
- Bellcore TR-NWT-000154, General Requirements for 24-, 48-, 130-, and 140- Volt Central Office Power Plant Control and Distribution Equipment, Issue 2, January 1992.
- Bellcore TR-NWT-000295, Isolated Ground Planes: Definition and Application to Telephone Central Offices, Issue 2, July 1992.
- Bellcore TR-NWT-000840, Supplier Support Generic Requirements ("SSGR"), (A Module of LSSGR, FR-NWT-000064), Issue 1, December 1991.
- Bellcore GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 1, November 1996.

Bellcore TR-NWT-001275 Central Office Environment Installations/Removal Generic Requirements, Issue 1, January 1993.

PART B -- DEFINITIONS

“911 Service” or “911” means a universal telephone number which gives the public direct access to the Public Safety Answering Point (PSAP). Basic 911 service collects 911 calls from one or more local exchange switches that serve a geographic area. The calls are then sent to the correct authority designated to receive such calls.

“Access Service Request” (ASR) means the industry standard forms and supporting documentation used for ordering Access Services. The ASR may be used to order trunking and facilities between MCI and Bell Atlantic for local interconnection.

“Access Services” refers to interstate and intrastate switched access and private line transport services.

“Act” means the Communications Act of 1934, as amended.

“Adjunct Equipment” is peripheral equipment housing a database that interfaces with a switch and provides the switch with call processing instructions.

“Advanced Intelligent Network” (AIN) is a network functionality that permits specific conditions to be programmed into a switch which, when met, directs the switch to suspend call processing and to receive special instructions for further call handling in order to enable carriers to offer advanced features and services.

“Affiliate” is an entity that directly or indirectly owns or controls, is owned or controlled by, or is under common ownership or control with, another entity. In this paragraph, “own” means to own an equity interest (or equivalent) of more than ten percent (10%), and “control” means the right to control the business decisions, management and policy of another entity.

“Applicable Law” means all applicable laws and government regulations and orders, including, but not limited to, the regulations and orders of the Federal Communications Commission and the Commission.

“Automated Message Accounting” (AMA) means the structure inherent in switch technology that initially records telecommunication message information. AMA format is contained in the Automated Message Accounting document, published by Bellcore as GR-1100-CORE, which defines the industry standard for message recording.

“Automatic Location Identification” (ALI) is a proprietary database developed for E911 systems that provides for a visual display of the caller’s telephone number, address and the names of the emergency response agencies that are responsible for that address. MCI will provide ALI record information in National Emergency Number Association (NENA) Version #2 format. The ALI also shows an Interim Number Portability (INP) number, if applicable.

“Automatic Location Identification/Data Management System” (ALI/DMS) means the emergency service (E911/911) database containing subscriber location information (including name, address, telephone number, and sometimes special information from the local service provider) used to determine to which PSAP to route the call.

“Automatic Number Identification” (ANI) is a feature that identifies and displays the number of a telephone that originates a call.

“Automatic Route Selection” (ARS) is a CENTREX service feature that provides for automatic selection of the least expensive or most appropriate toll transmission facility for each call based on criteria programmed into the system.

“Bell Atlantic” means Bell Atlantic - Pennsylvania, Inc.

“Bona Fide Request” shall have the meaning set forth in Part A, Section 25.

“CAP” means a competitive access provider.

“CLEC” means a competitive local exchange carrier.

“Calling Party Number” (CPN) is a CCS parameter which refers to the number transmitted through the network identifying the calling party.

“Carrier Access Billing System” (CABS) is defined in a document prepared under the direction of the Billing Committee of the OBF. The Carrier Access Billing System document is published by Bellcore in Volumes 1, 1A, 2, 3, 3A, 4 and 5 as Special Reports SR-OPT-001868, SR-OPT-0011869, SR-OPT-001871, SR-OPT-001872, SR-OPT-001873, SR-OPT-001874, and SR-OPT-001875, respectively, and contains the recommended guidelines for the billing of access and other connectivity services.

“Central Office” or “Central Office Switch” means a switching entity within the public switched network, including, but not limited to, End Office Switches and Tandem Office Switches. Central Office Switches may be employed as combination End Office/Tandem Office Switches (Combination Class 5/Class 4).

“CENTREX” means a Telecommunications Service that uses Central Office switching equipment for call routing to handle direct dialing of calls, and to provide numerous private branch exchange-like features.

“Charge Number” is a CCS parameter which refers to the number transmitted through the network identifying the billing number of the calling party.

“CLASS” (Bellcore Service Mark) -- Set of call-management service features that utilize the capability to forward a calling party’s number between end offices as part of call setup. Features include automatic callback, automatic recall, caller ID, call trace, and distinctive ringing.

“Collocation” means the right of MCIIm to place equipment as specified in Attachment V in Bell Atlantic’s Central Offices, or other Bell Atlantic locations pursuant to a Bona Fide Request. MCIIm equipment may be placed via either a physical or virtual collocation arrangement. With physical collocation, MCIIm obtains dedicated space to place and maintain its equipment. With virtual collocation, Bell Atlantic will install and maintain equipment that MCIIm provides to Bell Atlantic.

“Combinations” means provision by Bell Atlantic of two or more connected Network Elements ordered by MCIIm to provide its Telecommunication Services in a geographic area or to a specific subscriber and that are placed on the same order by MCIIm.

“Commission” means the Pennsylvania Public Utility Commission.

“Common Channel Signaling” (CCS) means a method of digitally transmitting call set-up and network control data over a digital signaling network fully separate from the public switched telephone network that carries the actual call.

“Common Transport” is as defined in Attachment III, Section 9.

“Conduit” means a tube or protected pathway that may be used to house communication or electrical cables. Conduit may be underground or above ground (for example, inside buildings) and may contain one or more inner ducts.

“Confidential Information” has the meaning set forth in Section 22 (Confidentiality) of Part A.

“Control Office” is an exchange carrier center or office designated as its company’s single point of contact for the provisioning and maintenance of its portion of local interconnection arrangements.

“Dedicated Transport” is as defined in Attachment III, Section 10.

“Directory Assistance” (DA) or “Directory Assistance Services” provides Directory Listings to callers. Directory Assistance Services may include the option to complete the call at the caller’s direction.

“Directory Assistance Database” refers to the database containing subscriber records that is used by Bell Atlantic in its provision of live or automated operator-assisted directory assistance including 411, 555-1212, NPA-555-1212.

“Directory Listings” (DL) refers to subscriber information, including name, address and phone numbers, that is published in any media, including traditional white/yellow page directories, specialty directories, CD ROM, and other electronic formats.

“Discloser” means that Party which has disclosed Confidential Information to the other Party.

“Effective Date” is the date indicated in Part A on which the Agreement shall become effective.

“End Office Switch” or “End Office” is a Central Office Switch (Class 5) used to connect subscriber station loops for the purpose of connecting to each other and to trunks.

“Enhanced 911 Service” (E911) means a telephone communication service which will automatically route a call dialed “911” to a designated PSAP attendant and will provide to the attendant the calling party’s telephone number and, when possible, the address from which the call is being placed and the emergency response agencies responsible for the location from which the call was dialed.

“Exchange Access” means the offering of access to Telephone Exchange Services or facilities for the purpose of the origination or termination of telephone toll services.

“Exchange Message Record System” (EMR) means the system used among ILECs for exchanging telecommunications message information for billable, non-billable, sample, settlement and study data. EMR format is contained in BR-010-200-010 CRIS Exchange Message Record, published by Bellcore and which defines the industry standard for exchange message records.

“FOC” means firm order confirmation.

“ITC” means an independent telephone company.

“Including” means “including, but not limited to.”

“Interconnection Point” (IP) is as defined in Attachment IV.

“Interim Number Portability” (INP) is an interim service arrangement whereby subscribers who change local service providers may retain existing telephone numbers without impairment of quality, reliability, or convenience when remaining at their current location or changing their location within the geographic area served by the initial carrier’s serving End Office Switch. INP is provided by the means identified in Attachment VII, Section 2.

“Interexchange Carrier” (IXC) means a provider of interexchange Telecommunications Services.

“Line Information Database” (LIDB) is a SCP database that provides for such functions as calling card validation for telephone line number cards issued by ILECs and other entities and validation for collect and billed-to-third services.

“Line Status Verification/Verification and Call Interrupt” (LSV/VCI) means an operator-to-operator call in which the originating operator, on behalf of an end user, inquires as to the busy status of, or requests an interruption of, a call on a Telephone Exchange Service.

“Local Interconnection” is the interconnection of the networks of the Parties for the exchange of Local Traffic and other traffic, in accordance with the requirements of 47 U.S.C. Section 251, and other Applicable Law.

“Local Resale” is as defined in Attachment II.

“Local Switching” is as defined in Attachment III, Section 7.

“Local Traffic” means traffic that is originated by an end user subscriber of one Party on that Party’s network and terminates to an end user subscriber of the other Party on that other Party’s network within a given local calling area, or expanded area service (“EAS”) area, as defined in Bell Atlantic’s Tariffs, or, if the Commission has defined local calling areas applicable to all Local Exchange Carriers, then as so defined by the Commission.

“MCIIm” means MCIImetro Access Transmission Services LLC.

“Master Street Address Guide” (MSAG) is a database defining the geographic area of an E911 service. It includes an alphabetical list of the street names, high-low house number ranges, community names, and emergency service numbers provided by the counties or their agents to Bell Atlantic.

“Multiple Exchange Carrier Access Billing” (MECAB) refers to the document prepared by the Billing Committee of the OBF, which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS). The MECAB document, published by Bellcore as Special Report SR-BDS-000983, contains the recommended guidelines for the billing of an access service provided by two or more LECs (including a LEC and a CLEC), or by one LEC in two or more states within a single LATA.

“Multiple Exchange Carriers Ordering and Design” (MECOD) refers to the guidelines for Access Services - Industry Support Interface, a document developed by the Ordering/Provisioning Committee under the auspices of the OBF, which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS). The MECOD document, published by Bellcore as Special Report SR STS-002643, establishes recommended guidelines for processing orders for access service which is to be provided by two or more LECs (including a LEC and a CLEC). It is published by Bellcore as SRBDS 00983.

“National Emergency Number Association” (NENA) is an association with a mission to foster the technological advancement, availability and implementation of 911 nationwide.

“Network Element” means a facility or equipment used in the provision of a Telecommunications Service, including features, functions and capabilities that are provided by means of such facility or equipment.

“Network Interface Device” (NID) is as defined in Attachment III, Section 5.

“Network Rate Demarcation Point” shall have the same meaning as “demarcation point” in 47 C.F.R. § 68.3.

“Non-Discriminatory” or “Non-Discriminatory Basis” means that the Party shall perform the obligation or provide the service in question on a non-discriminatory basis for all other Telecommunications Carriers as defined in Section 202(a) of the Act, and/or Section 251 of the Act as applicable.

“North American Numbering Plan” (NANP) means the system or method of telephone numbering employed in the United States, Canada, and certain Caribbean countries. It denotes the three digit Numbering Plan Area code and a seven digit telephone number made up of a three digit Central Office code plus a four digit station number.

“Number Portability” (NP) is a long-term service arrangement whereby users of Telecommunications Services may retain, at the same location, existing Telecommunications numbers without impairment of quality, reliability, or convenience when switching from one Telecommunications Carrier to another.

“Numbering Plan Area” (NPA) (sometimes referred to as an area code) is the three digit indicator which is designated by the first three digits of each 10-digit telephone number within the NANP. Each NPA contains 800 possible NXX Codes. There are two general categories of NPA, “Geographic NPAs” and “Non-Geographic NPAs.” A “Geographic NPA” is associated with a defined geographic area, and all telephone numbers bearing such NPA are associated with services provided within that Geographic area. A “Non-Geographic NPA,” also known as a “Service Access Code (SAC Code)” is typically associated with a specialized telecommunications service which may be provided across multiple geographic NPA areas; 500, 800, 900, 700, and 888 are examples of Non-Geographic NPAs.

“NXX” or “NXX Code” is the three digit switch entity indicator which is defined by the fourth, fifth and sixth digits of a 10-digit telephone number within the NANP.

“OCN” means operating company number.

“Operator Services” provides (1) operator handling for call completion (*e.g.*, collect calls); (2) operator or automated assistance for billing after the subscriber has dialed the called number (*e.g.*, credit card calls); and (3) special services (*e.g.*, LSV/VCI, Emergency Agency Call).

“Operator Systems” is the Network Element that provides operator and automated call handling with billing, special services, subscriber telephone listings, and optional call completion services.

“Ordering and Billing Forum” (OBF) means the entity which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS).

“Parity” means the following: (i) with respect to a performance requirement for interconnection, that Bell Atlantic will provide interconnection at a level of quality that is equal to that which it provides itself, a subsidiary, an Affiliate, or any other party; (ii) with respect to Local Resale, Bell Atlantic must provide services for resale that are equal in quality, subject to the same conditions, and provided with the same provisioning time intervals that Bell Atlantic provides

these services to others, including end users; (iii) with respect to a performance requirement for the provision of a Network Element, that the quality of a Network Element, as well as the quality of the access to such Network Element be the same in quality that Bell Atlantic provides for all Telecommunications Carriers requesting access to that Network Element, and to the extent technically feasible, the quality of a Network Element, as well as the quality of the access to such Network Element, be at least equal in quality to that which Bell Atlantic provides to itself; and (iv) with respect to operational support systems (OSS), Bell Atlantic shall furnish Non-Discriminatory access to OSS functions, and provide access to OSS via electronic interfaces equivalent to that electronic access that Bell Atlantic provides to itself, its Affiliates and its subscribers.

“Party” means a party to this Agreement, either Bell Atlantic or MCIIm.

“Percent Interstate Usage” (PIU) is a calculation which represents the ratio of the interstate toll minutes to the sum of interstate and intrastate toll minutes between exchange carriers sent over Local Interconnection Trunks.

“Percent Local Usage” (PLU) is a calculation which represents the ratio of the Local Traffic minutes to the sum of Local Traffic and intrastate toll minutes between exchange carriers sent over Local Interconnection Trunks. Directory Assistance, LSV/VCI, 900, 976, transiting calls from other carriers and switched access calls are not included in the calculation of PLU.

“Point of Interconnection” (POI) is as defined in Attachment IV.

“Proprietary Information” shall have the same meaning as Confidential Information.

“Public Safety Answering Point” (PSAP) is the public safety communications center where 911 calls placed by the public for a specific geographic area will be answered.

“RAO” means revenue accounting office.

“Rate Center” means the geographic point and corresponding geographic area which are associated with one or more particular NPA-NXX codes which have been assigned to Bell Atlantic (or MCIIm) for its provision of Telephone Exchange Service. The “Rate Center point” is the finite geographic point identified by a specific V&H coordinate, which is used to measure distance-sensitive end user traffic to/from the particular NPA-NXX designations associated with the specific Rate Center. The “Rate Center area” is the exclusive geographic area identified as the area within which Bell Atlantic (or MCIIm) will provide Telephone Exchange Services bearing the particular NPA-NXX designations associated with the specific Rate Center. The Rate Center point must be located within the Rate Center area.

“Recipient” means that Party to this Agreement (a) to which Confidential Information has been disclosed by the other Party or (b) who has obtained Confidential Information in the course of providing services under this Agreement.

“Reciprocal Compensation” refers to a reciprocal compensation arrangement between two carriers in which each of the two carriers receives compensation from the other carrier for the

transport and termination on each carrier's network facilities of Local Traffic that originates on the network facilities of the other carrier.

"Remote Switching Module" (RSM) is a switch with the limited capability of switching calls that can be completed between two (2) customers who are each served by unbundled local loops that are provided through the same RSM, *i.e.*, line-to-line switching. A call between a customer who is served by the RSM and a customer who is not served by the RSM must be sent to the host switch.

"Reseller" is a category of local exchange service providers who obtain dial tone and associated Telecommunications Services from another provider through the purchase wholesale priced services for resale to their end user subscribers.

"Right of Way" (ROW) means the right to use the land or other property of another party to place poles, conduits, cables, other structures and equipment, or to provide passage to access such structures and equipment. A ROW may run under, on, or above public or private property (including air space above public or private property) and may include the right to use discrete space in buildings, building complexes or other locations, but does not include inside wire space or structures past the network demarcation point.

"STP" means signaling transfer point.

"Selective Routing" is a service which automatically routes an E911 call to the PSAP that has jurisdictional responsibility for the service address of the telephone that dialed 911, irrespective of telephone company exchange or Wire Center boundaries.

"Service Area Concept" (SAC) is the box where Bell Atlantic cross-connects the Loop Feeder and the Loop Distribution.

"Service Control Point" (SCP) is as defined in Attachment III, Section 13.

"Small Exchange Carrier Access Billing" (SECAB) means the document prepared by the Billing Committee of the OBF. The Small Exchange Carrier Access Billing document, published by Bellcore as Special Report SR OPT-001856, contains the recommended guidelines for the billing of access and other connectivity services.

"Specialized Routing" is as defined in Attachment III, Section 7.2.2.

"Specialized Routing Node" is device that, based on the incoming ANI and the called number, will determine the proper routing for the call and either switch the call to the appropriate Bell Atlantic Operator Services platform or to a designated Point of Interconnection in the originating LATA.

"State" means the Commonwealth of Pennsylvania.

"Switch" -- See Central Office Switch.

“Tandem Office Switches” are Class 4 switches, which are used to connect and switch trunk circuits between and among End Office switches and other tandems.

“Tandem Switching” is as defined in Attachment III, Section 14.

“Tariff” means any generally available schedule of terms, conditions, prices and fees by which Bell Atlantic or MCIIm offers Telecommunication Services for sale to individuals, including subscriber agreements, special offerings and the like.

“Technically Feasible” is as defined in the FCC Interconnection Order. Interconnection, access to unbundled Network Elements, Collocation, and other methods of achieving interconnection or access to unbundled Network Elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a Telecommunications Carrier for such interconnection, access, or methods. A determination of technical feasibility does not include consideration of economic, accounting, billing, space, or site concerns, except that space and site concerns may be considered in circumstances where there is no possibility of expanding the space available. The fact that an ILEC must modify its facilities or equipment to respond to such request does not determine whether satisfying such request is technically feasible. An ILEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts.

“Telecommunications” means the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.

“Telecommunications Carrier” means any provider of Telecommunications Services, except that such term does not include aggregators of Telecommunications Services (as defined in Section 226 of the Act). A Telecommunications Carrier shall be treated as a common carrier only to the extent that it is engaged in providing Telecommunications Services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage. This definition includes Commercial Mobile Radio Service providers, IXCs and, to the extent they are acting as Telecommunications Carriers, companies that provide both Telecommunications and information services. Private mobile radio service providers are Telecommunications Carriers to the extent they provide domestic or international Telecommunications for a fee directly to the public.

“Telecommunications Service” means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.

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“Telephone Exchange Service” means (a) service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (b) comparable service

provided through a system of Switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a Telecommunications Service.

“Unbundled Local Loop” (ULL) is as defined in Attachment III, Section 4.

“Voluntary Federal Subscriber Financial Assistance Programs” are Telecommunications Services provided to low-income subscribers, pursuant to requirements established by the appropriate state regulatory body.

“Wire Center” denotes a building or space within a building which serves as an aggregation point on a given carrier’s network, where transmission facilities and circuits are connected or switched. Wire Center can also denote a building in which one or more Central Offices, used for the provision of Telephone Exchange Services and exchange Access Services, are located. However, for purposes of collocation service, Wire Center shall mean those points eligible for such connections as specified in the FCC Docket No. 91-141, and rules adopted pursuant thereto.

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ATTACHMENT I
PRICE SCHEDULE

Section 1. General Principles

1.1 Subject to Part A, Section 2, all rates and discounts provided under this Agreement shall remain in effect for the term of this Agreement unless modified by order of the FCC or Commission as the case may be, unless otherwise provided herein. The rates and discounts set by the Commission are permanent rates; however, such rates are not set in perpetuity and may be subject to re-examination and investigation by the Commission pursuant to its Final Opinion and Order in the MFS - Phase III Proceeding. To the extent that the rates set forth in Table 1 below reference existing Bell Atlantic or MCIIm Tariffs, those rates shall follow the referenced Tariffs for the term of the Agreement. The rates or discounts set forth in Table 1 below may be subject to change and shall be replaced on a prospective basis (unless otherwise ordered by the FCC, the Commission, or the reviewing court(s)) by such revised rates or discounts as may be ordered approved, or permitted to go into effect by the FCC, the Commission, or a court of applicable jurisdiction, as the case may be. Such new rates or discounts shall be effective immediately upon the legal effectiveness of the court, FCC, or Commission order requiring such new rates or discounts. Within ten (10) days after the legal effectiveness of the court, FCC, or Commission order establishing such new rates or discounts and regardless of any intention by any entity to further challenge such order, the Parties shall sign a document revising Table 1 and setting forth such new rates or discounts, which revised Table 1 the Parties shall update as necessary in accordance with the terms of this Section.

1.2 Rates for Exchange Access Services purchased by either Party for use in the provision of toll service to end user customers are not affected by this Agreement.

1.3 Unless otherwise agreed, MCIIm shall pay only the rates set forth in Table 1 for the services it purchases under this Agreement. Bell Atlantic shall pay for all of the development, modification, technical installation and maintenance of any systems or other infrastructure which it requires to provide the services set forth in this Agreement and priced in Table 1, and shall recover all such costs through the rates set forth in Table 1. Rates for services not yet identified in Table 1, but subsequently developed pursuant to the Bona Fide Request process or services identified in Table 1, but modified by regulatory requirements, shall be added as revisions to Table 1 when agreed between the Parties.

Section 2. Network Elements and Call Transport and Termination

2.1 On the Effective Date, the rates and discounts listed in Table 1 below, including those for: (i) Network Elements; and (ii) call transport and/or termination for Local Traffic purchased for the provision of Telephone Exchange Service or Exchange Access Service, are permanent rates, except as specifically noted herein or in Table 1. These rates may be changed as set forth in Section 1 of this Attachment I.

Section 3. Local Service Resale

3.1 The rates that MCIIm shall pay to Bell Atlantic for Local Resale shall be an amount equal to Tariff rates for each retail Telecommunications Service subject to wholesale pricing, as reduced by the applicable percentage discount set forth in Table 1, if such services are tariffed by Bell Atlantic for sale to subscribers who are not "Telecommunications Carriers" under the Act. If Bell Atlantic revises such tariffed rates during the term of this Agreement, the applicable percentage discount shall be applied to the revised tariffed rates. Unless otherwise specifically agreed between the Parties, no discount shall apply to Bell Atlantic Telecommunications Services that are tariffed by Bell Atlantic for sale to subscribers who are "Telecommunications Carriers" under the Act, which shall be available for resale, or to any Bell Atlantic services other than Telecommunications Services that it may, in its sole discretion, choose to offer for resale.

Section 4. Interconnection and Reciprocal Compensation

4.1 MCIIm may choose to deliver both Local Traffic and toll traffic over the same trunk group(s), pursuant to the provisions of Attachment IV. In the event MCIIm chooses to deliver both types of traffic over the same traffic exchange trunks, and desires application of the local call transport and termination rates, it will provide Percent Local Usage ("PLU") information to Bell Atlantic as set forth in Attachment IV. In the event MCIIm includes both interstate and intrastate toll traffic over the same trunk, it will provide Percent Interstate Usage ("PIU") to Bell Atlantic as set forth in Attachment IV. Bell Atlantic shall have the same options, and to the extent it avails itself of them, the same obligation, to provide PIU and PLU information to MCIIm. To the extent feasible, PLU and PIU information shall be based on the actual end-to-end jurisdictional nature of each call sent over the trunk. If actual PLU and PIU information cannot reasonably be determined, then the reporting Party shall estimate PLU and PIU, and, upon demand, explain the basis for the estimate. The basis for the PLU and PIU are subject to audits in accordance with the provisions of Part A.

4.2 Reciprocal Compensation for the exchange of Local Traffic is set forth in Table 1 of this Attachment and shall be assessed on a per minute-of-use basis for the transport and termination of such traffic.

4.3 MCIIm may choose to establish trunking to any given End Office for calls to numbers served out of that End Office, when there is sufficient traffic to route calls directly to such End Office. If MCIIm leases non-shared trunks from Bell Atlantic, MCIIm will pay

the transport charges for dedicated transport. For shared trunks the charges will be shared by both Parties in proportion to their respective use of the shared trunk facility.

4.4 When the Bell Atlantic Interconnection Point is at a Bell Atlantic Tandem Office Switch, MCI shall pay Bell Atlantic the rates for Tandem Switching, a transport rate and a termination rate as set forth in Table 1. When the Bell Atlantic Interconnection Point is at the Bell Atlantic End Office, for calls terminating to Bell Atlantic subscribers served out of the End Office to which the traffic is delivered, MCI will pay Bell Atlantic call termination compensation based on End Office termination only.

4.5 Bell Atlantic will pay MCI a termination rate for termination of traffic at an MCI switch based upon the average rate paid by MCI to Bell Atlantic during the prior calendar quarter for the termination of all calls (including both switching and transport).

4.6 Compensation for the termination of toll traffic and the origination of 800 traffic between the interconnecting Parties shall be based on the applicable exchange access charges in accordance with FCC Rules and Regulations.

4.7 Where a toll call is completed through one Party's INP arrangement (e.g., remote call forwarding, flexible DID, etc.) to the second Party's subscriber, the second Party shall be entitled to access charges applicable to the functions performed by the second Party in accordance with FCC Rules and Regulations and as set forth in Attachment VIII, Section 3. Until such time as such access traffic can be measured directly, this access charge pass-through shall be based upon reasonable estimates of the proportion of traffic subject to such pass-through.

4.8 MCI shall pay a transit rate as set forth in Table 1 of this Attachment when MCI uses a Bell Atlantic Tandem Office to terminate a call to a third party Telecommunications Carrier. Bell Atlantic shall pay MCI an equivalent transit rate when Bell Atlantic uses an MCI Tandem Office (or functional equivalent) to terminate a call to a third party Telecommunications Carrier.

4.9 Each Party shall exercise all reasonable efforts to enter into reciprocal local traffic exchange arrangements (either via written agreement or mutual tariffs) with any wireless carrier, ITC, or other LEC or CLEC to which it sends, or from which it receives, local traffic that transits Bell Atlantic facilities over traffic exchange trunks. If Party A fails to enter into such an arrangement as quickly as commercially reasonable in a LATA and to provide written notification of such agreement, including the relevant rates therein, to Party B, but continues to utilize Party B's transit service for the exchange of local traffic with such wireless carrier, ITC, or other LEC or CLEC, Party A shall, in addition to paying the rate set forth in this Attachment I for said transit service, pay Party B any charges or costs such terminating third party carrier imposes or levies on Party B for the delivery or termination of such traffic, including any switched access charges, plus all reasonable expenses incurred by Party B in delivering or terminating such traffic and/or resulting from Party A's failure to secure said reciprocal local traffic exchange arrangement. The Parties will, upon request, provide each other with all reasonable

cooperation and assistance in obtaining such arrangements. The Parties agree to work cooperatively in appropriate industry fora to promote the adoption of reasonable industry guidelines relating to transit traffic.

Section 5. Network Elements

The charges that MCI shall pay to Bell Atlantic for Network Elements are set forth in Table 1 of this Attachment I.

TABLE 1
BELL ATLANTIC-PENNSYLVANIA, INC. AND MCIIm
DETAILED SCHEDULE OF ITEMIZED CHARGES¹

A. Bell Atlantic Services, Facilities, and Arrangements:

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
I.a.	Entrance facilities, and transport per Section 4, as appropriate, for Interconnection at Bell Atlantic End Office, Tandem Office, Serving Wire Center, or other Point of Interconnection Channel Termination	DS-1: Initial Facility: \$668.37 Service Order: \$1.05 Add'l Facility (if purchased at the time of Initial Facility order): \$331.87 DS-3: Initial Facility: \$668.37 Service Order: \$1.05 Add'l Facility (if purchased at the time of Initial Facility order): \$331.87	DS-1: \$180.59/facility/month DS-3: \$1059.65/facility/month

¹ Unless a citation is provided to a generally applicable BA tariff, all listed rates and services available only to MCIIm when purchasing these services for use in the provision of Telephone Exchange Service, and apply only to Local Traffic and local ancillary traffic, such as LSV/VCI, Directory Assistance, 911/E911, and Operator Services IntraLATA Call Completion. BA rates and services for use by MCIIm in the carriage of Toll Traffic shall be subject to BA's tariffs for Exchange Access service. Adherence to these limitations is subject to a reasonable periodic audit by BA.

As applied to wholesale discount rates, unbundled Network Elements or call transport and/or termination of Local Traffic purchased for the provision of Telephone Exchange Service or Exchange Access, the rates and charges set forth in Table 1 shall apply until such time as they are replaced by new rates as may be approved or allowed into effect by the Commission from time to time pursuant to the FCC Regulations, subject to a stay or other order issued by any court of competent jurisdiction. At such time(s) as such new rates have been approved or allowed into effect by the Commission, the Parties shall amend Table 1 to reflect the new approved rates.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
1.f.	Operator Services (call completion) Interconnection	Per 7.c. below	
2.a. ²	Poles	Application and Engineering Survey Fee: Actual Full Cost Recovery	Annual Fee: Per BA-PA Tariff 303 Section C Illustrative: Vertical Attachment \$3.98/attachment/year
2.b.	Duct/Innerduct	Application and Engineering Survey Fee: Actual Full Cost Recovery	Annual Fee: As per BA-PA Tariff 303 Section C Illustrative: Per Duct run: \$5.45/foot/year per innerduct: \$3.25/foot/year
2.c.	Conduits	Application and Engineering Survey Fee: Actual Full Cost Recovery	Annual Fee: As per BA-PA Tariff 303 Section C Illustrative: Conduit: \$5.45/foot/year
2.d.	Right of Way	Application and Engineering Survey Fee: Right of Way (determined on a case-by-case basis)	Annual Fee: Right of Way (determined on a case-by-case basis as mutually agreed by the Parties)
3.a.	Local loop transmission Unbundled Local Loop Element and cross-connect to Basic Links ³		

² The rates set forth in 2.a, 2.b, 2.c, and 2.d of this Table are subject to revision by the FCC and/or the Commission in accordance with Section 224 of the Act.

³ Installation charges not applicable when MCI orders both loop and port elements together where BA does not perform an installation function.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	2 Wire Analog Loops (POTS Loops) and 2-Wire Customer-Specified Signaling	<p>Line Install, if premises visit not required: Initial loop: \$2.97 Each additional loop: \$2.97</p> <p>Service Order: \$1.05</p> <p>Line Install, if premises visit required: Initial loop: \$66.85 Each additional loop: \$22.59</p> <p>Disconnect: \$1.32/loop</p> <p>Coordinated Cut-Over (only applicable for 2-Wire Customer-Specified Signaling) If premises visit not required: \$3.24/order If premises visit required: \$12.10/order</p> <p>CSS Design (only applicable for 2-Wire Customer-Specified Signaling): \$40.93/order</p>	<p>Density Cell:⁴ 1 - \$11.52/loop/month 2 - \$12.71/loop/month 3 - \$16.12/loop/month 4 - \$23.11/loop/month</p>
	4-Wire Customer-Specified Signaling	<p>Line Install, if premises visit not required: Initial loop: \$2.97 Each additional loop: \$2.97</p> <p>Service Order: \$1.05</p> <p>Install, if premises visit required: Initial loop: \$66.85 Each additional loop: \$22.59</p> <p>Disconnect: \$1.32/loop</p> <p>Coordinate Cut-Over If premises visit not required: \$3.24/order If premises visit required: \$12.10/order</p> <p>CSS Design: \$40.93/order</p>	<p>Density Cell: 1 - \$22.40/month 2 - \$26.36/month 3 - \$33.03/month 4 - \$45.47/month</p>

⁴ References to Density Cells in 3.a. as per BA-PA Tariffs 1, Section 12A.4, 180A Paragraphs B.4 & B.5, and Paragraph E.2 of Tariffs 182, 182A, 185B, and 185C.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	ISDN Loops	<p>Line Install, if premises visit not required: Initial loop: \$12.91 Each additional loop: \$12.91</p> <p>Service Order: \$1.05</p> <p>Line Install, if premises visit required: Initial loop: \$76.78 Each additional loop: \$32.52</p> <p>Disconnect: \$1.32/loop</p>	<p>Density Cell: 1 - \$13.16/month 2 - \$14.35/month 3 - \$17.75/month 4 - \$24.74/month</p>
	DS-1 Loops	<p>Line Install, if premises visit not required: Initial loop: \$2.97 Each additional loop: \$2.97</p> <p>Service Order: \$1.05</p> <p>Line Install, if premises visit required: Initial loop: \$66.85 Each additional loop: \$22.59</p> <p>Disconnect: \$1.32/loop</p> <p>Coordinate Cut-Over If premises visit not required: \$3.24/order If premises visit required: \$12.10/order</p> <p>CSS Design: \$40.93/order</p>	<p>Density Cell: 1 - \$132.51/month 2 - \$139.37/month 3 - \$168.59/month 4 - \$252.46/month</p>
	2-Wire ADSL Loops ⁵	TBD	TBD
	2-Wire and 4-wire HDSL Loops ⁶	TBD	TBD

⁵ These rates are subject to approval by the Commission.

⁶ These rates are subject to approval by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	Collocation Cross-Connect System		
	Voice Grade Loop Cross-Connect	Physical DS0: CO side to equipment: Not Applicable Virtual DS1 w/EDSX ⁷ : Initial Line Install: \$544.36 Service Order: \$1.05 Add'l Line Install: \$210.46 Virtual DS1 w/CFA: Initial Line Install: \$544.36 Service Order: \$1.05 Add'l Line Install: \$210.46 Virtual DS0 w/RFT: Not Applicable	Physical DS0: CO side to equipment: \$0.41/month Virtual DS1 w/EDSX: \$60.21/month Virtual DS1 w/CFA: \$44.08/month Virtual DS0 w/RFT: \$1.20/month
	Other Cross-Connect	Physical DS3: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71 Physical DS1: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71 Virtual DS3: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71 Virtual DS1: Initial Line Install: \$481.36 Service Order: \$1.05 Add'l Line Install: \$194.71	Physical DS3: \$84.27/month Physical DS1: \$15.72/month Virtual DS3: \$88.81/month Virtual DS1: \$16.12/month

⁷ A Virtual DS1 element with EDSX consists of one (1) DS1 plus twenty-four (24) DS0 with an IDLC.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	Digital Cross-Connect System	Service Establishment: \$1890.82 Database Modification: \$148.68/modification request Reconfiguration by BA Personnel: \$31.98/programming charge/30-minute increment DS0 Cross-Connect: \$26.17/port DS1 Cross-Connect: \$32.71/port	Not Applicable Not Applicable Not Applicable DS0 Cross-Connect: \$20.54/port/month DS1 Cross-Connect: \$71.92/port/month
3.b.	Special Construction Charges	As applicable per Bell Atlantic-BA-PA PUC 1 sec. 9	
3.c.1.	Service Technician Charges (Maintenance Service Charges) (service technician work on unbundled loops outside of the central office)	Service Call-Dispatch and 15 min. labor: \$26.24/premise visit Labor: \$12.10/15-minute increment after first quarter hour Service Order: \$1.05	Not Applicable
3.c.2.	Central Office Technician Charges	Labor: \$10.42/15-minute increment or fraction thereof Service Order: \$1.05	Not Applicable
4.a.	Unbundled Dedicated Transport DS-1	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$37.66/facility/month \$0.66/facility/mile/month
4.b.	Unbundled Dedicated Transport DS-3	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$526.72/facility/month \$18.66/facility/mile/month
4.c.	Unbundled Dedicated Transport Voice Grade/DS-0	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$10.37/facility/month \$0.03/facility/mile/month

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
4.d.	Unbundled Dedicated Transport DDS	Initial Facility: \$353.70 Service Order: \$1.05 Add'l Facility (if purchased at time of Initial Facility): \$24.00	\$10.74/facility/month \$0.04/facility/mile/month
4.e.	Mid-Span Meet Arrangements	On a case-by-case basis in accordance with Attachment IV.	
4.f.	Common or Shared Transport Tandem Switching Transport Fixed Transport per mile	Not Applicable Not Applicable Not Applicable	\$0.000836/mou \$0.000152/mou \$0.000004/mile/mou
5.a.	Local switching Unbundled Ports POTS/PBX/CENTREX ISDN PRI ISDN BRI Public/Semi-Public DID	Installation: \$2.97/port Service Order: \$1.05/port ⁸ Disconnect: \$1.32/port Installation: \$113.36/port Service Order: \$1.05/port ⁹ Disconnect: \$1.32/port Installation: \$2.97/port Service Order: \$1.05/port ¹⁰ Disconnect: \$1.32/port Installation: \$2.97/port Service Order: \$1.05/port ¹¹ Disconnect: \$1.32/port Installation: \$692.07/port Service Order: \$1.05/port ¹² Disconnect: \$1.32/port	\$2.67/port/month \$135.13/port/month \$10.28/port/month \$3.52/port/month \$5.98/port/month

⁸ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
5.b.	Local switching Unbundled Switching	Not Applicable	Originating (with Vertical Features): \$0.011067/mou Terminating (with Vertical Features): \$0.006143/mou
5.c.	Tandem Switching	Not Applicable	\$0.0008360/mou, plus tandem switched transport as needed
6.	Network Interface Device	Not Applicable	\$0.68/NID/month ¹³
7.a.	911 service (data entry; database maintenance)	No charge	
7.b.	Directory Assistance Data	Per Section 6.1.7 of Attachment VIII of this Agreement.	Per Section 6.1.7 of Attachment VIII of this Agreement.
7.c.	Directory Assistance Services/Operator Services		
	Directory Assistance Service	Not Applicable	\$0.3664/call
	Directory Transport ¹⁴ Tandem Switching	Not Applicable	\$0.000730/call
	Tandem Switched Transport	Not Applicable	\$0.000132/call and \$0.000003/mile/call
	Operator Services Live	Not Applicable	\$0.0128/operator work second
	Automated ¹⁵	Not Applicable	\$0.00158/automated work second
	Branding ¹⁶	\$1,358.62/branding message	Not Applicable
	Carrier-to-Carrier LSV/VCI Requests	Not Applicable	\$0.01280/operator work second

⁹ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹⁰ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹¹ Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹² Not applicable when MCI orders both loop and switching elements together where Bell Atlantic does not perform an installation function.

¹³ Not applicable when MCI order a loop element.

¹⁴ These rates are interim rates until permanent rates are established by the Commission.

¹⁵ This rate is an interim rate until a permanent rate is established by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
8.a.	White Pages and Yellow Pages directory listings ¹⁷	Not Applicable	Not Applicable
8.b.	Books & delivery (annual home area directories only)	No charge for normal numbers of books delivered to end users; bulk deliveries to MCIIm per separate arrangement	
8.c.	Additional listings, changes to listings, non-listed, non-published	<p>Per tariff [Bell Atlantic-BA-PA PUC 1 sec. 5.B] less wholesale discount</p> <p>Illustrative (non-discounted rates):</p> <p>Additional listing: \$12.00 residence; \$15.00 (1st), \$9.00 (additional) business</p> <p>Change to listing: \$12.00 residence; \$15.00 (1st), \$9.00 (additional) business</p> <p>Non-list: \$15.00 residence or business</p> <p>Non-published: \$15.00 residence or business</p>	<p>Per tariff [Bell Atlantic-BA-PA PUC 1 sec. 5.B] less wholesale discount</p> <p>Illustrative (non-discounted rates):</p> <p>\$1.25/mo residence \$2.05/mo business</p> <p>\$1.25/mo residence or business \$1.75/mo residence or business</p>
9.	Access to telephone numbers (NXX codes issued per ICCF Code Administration Guidelines)	No Charge	
10.a.	SS7 Interconnection		
	STP Port - Termination:	\$94.15/port	\$640.02/port/month
	STP Port – Access: ¹⁸	Service Order: \$1.05/order	\$0.47/mile/month
		Initial Facility: \$274.06/facility Add'l Facility: \$24.01/facility	

¹⁶ This rate is an interim rate until a permanent rate is established by the Commission.

¹⁷ These listings refer to primary listings on initial UNE order or resale order. For each residence telephone number, two (2) listings in the White Page directory are provided. For each business telephone number listed (except numbers of CENTREX or CENTREX-like services or indialing service station lines) one (1) listing is provided in the White Page Directory and one (1) listing in the Yellow Page directory of the type provided to BA-PA end user business customers for which no specific charge applies.

¹⁸ These rates are interim rates until permanent rates are established by the Commission.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
10.b.	LIDB Interconnection LIDB Point Codes ¹⁹ Calling Card Billed Number Screening Storage of MCIIm's Data in LIDB Database ²⁰	\$85.84/point code Not Applicable Not Applicable \$1,469.92/service establishment	Not Applicable \$0.015542/query \$0.015542/query Not Applicable
10.c.	800/888 data base Interconnection	Not Applicable	Basic Query: \$0.000835/query Vertical Query: \$0.000343/query
11.a.	Interim Number Portability	"Track and True-up" - Once the Commission establishes a rate and cost recovery method, there will be a retroactive true-up with interest charges at the appropriate Commission-determined rate.	
11.b.	Pass-through of access charges under INP arrangement	In accordance with Attachment VIII, Section 3.1.5	
12.	Local Dialing Parity	No Charge	
13.a.	Reciprocal call termination Local traffic delivered to Bell Atlantic Interconnection Point	Not Applicable	Termination at BA Tandem: \$0.002902/mou Termination at End Office: \$0.001864/mou
13.b.	Access charges for termination of intrastate and interstate toll traffic	Per Bell Atlantic's interstate and intrastate access tariffs (charged in conjunction with Local Traffic, using PLU and PIU, as appropriate)	
14.a.	Local Resale ²¹	Percentage discount from price in retail Tariff ²²	

¹⁹ This rate is an interim rate until a permanent rate is established by the Commission.

²⁰ This rate is an interim rate until a permanent rate is established by the Commission.

²¹ The wholesale discounts for the resale of retail telecommunications services excludes Telecommunications Services designed primarily for wholesale, such as switched and special Exchange Access service, and, subject to Attachment II of the Agreement, the following additional arrangements that are not subject to resale: limited duration (90 days or less) promotional offerings, public coin telephone service, and technical and market trials. Taxes shall be collected and remitted by the reseller and BA in accordance with legal requirements and as agreed between the Parties. Surcharges (e.g., 911, telecommunications relay service, universal service fund) shall be collected by the reseller and either remitted to the recipient agency or NECA, or passed through to BA for remittance to the recipient agency or NECA, as appropriate and agreed between the Parties. End user common line charges shall be collected by the reseller and remitted to BA.

²² Pending establishment of mechanized billing procedures adapted to resale, BA will apply the wholesale discount for resale as a "bottom-of-the-bill" discount rate and will utilize a "true-up" process to correct possible inadvertent application of the wholesale discount to the exclusions identified herein and to reflect other adjustments as the Companies agree.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
14.b.	Resale of retail Telecommunications Services where MCI does not use Bell Atlantic's Operator Services	20.69%	
14.c.	Resale of retail Telecommunications Services where MCI uses Bell Atlantic's Operator Services	18.43%	
14.d.	Pennsylvania Gross Receipts Tax discount	Equal to Pennsylvania Gross Receipts Tax (currently 5%) in addition to 14.b or 14.c above	
15.a.	Access to Pre-Ordering OSS	Not Applicable	\$0.22/query
15.b.	Access to Ordering OSS	Not Applicable	\$3.34/transaction
15.c.	Access to Provisioning OSS	Not Applicable	No Charge - Included in Ordering
15.d.	Access to Maintenance & Repair OSS	Not Applicable	ECG Access: \$0.22/query EB/OSI Access: \$1.16/trouble ticket
15.e.1.	Access to Billing OSS; CD-ROM	Not Applicable	\$246.59/CD-ROM
15.e.2.	Access to Billing OSS; Daily Usage File Existing Message Recording Existing Message Recording	Not Applicable	\$0.000258/message
15.e.3.	Access to Billing OSS; Daily Usage File Delivery Data Tape Network Data Mover CMDS	\$61.39/programming hour Not Applicable \$61.39/programming hour	\$17.18/tape \$0.000094/message \$0.000094/message
15.e.4.	Access to Billing OSS; Daily Usage File Transport ²³ 9.6 kb Communications Port 56 kb Communications Port 256 kb Communications Port T1 Communications Port	Installation: \$7,437.36/port Installation: \$30,778.91/port Installation: \$51,236.88/port Installation: \$182,827.99/port	\$10.24/port/month \$28.29/port/month \$28.29/port/month \$359.31/port/month

²³ Not applicable to MCI if Network Data Mover connectivity has previously been established, and existing facilities are adequate to support transmission of Daily Usage File Data. If additional facilities are required to support transmission of Daily Usage File data, rates TBD.

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
	Line Installation	\$61.39/programming hour/port	Not Applicable
	Port Set-up	\$9.85/port	Not Applicable
	Network Control Programming Coding	\$61.39/programming hour/port	Not Applicable
16.	Customized Routing		
	To MCIIm Platform	\$3.84/line	\$0.142360/line/month
	To Bell Atlantic Platform for Re-Branding ²⁴	\$3.84/line	\$0.08330/call
	Customized Routing Transport	See sections 1 & 4 of Table 1 above.	See sections 1 & 4 of Table 1 above.

²⁴ These rates are interim rates until permanent rates are established by the Commission.
MCIIm-BELL ATLANTIC INTERCONNECTION AGREEMENT - PENNSYLVANIA
(LAST REVISED 12/17/98: Amendment Number 1)

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
17.	AIN Service Creation		
	Developmental Charges Service Establishment:	\$884.08	Not Applicable
	Service Creation Access Port:	Not Applicable	\$123.86/port/month
	Service Creation Usage Remote Access:	Not Applicable	\$1328.47/day
	On-Premise:	Not Applicable	\$1328.47/day
	Certification and Testing	Not Applicable	\$76.99/hour
	Help Desk Support	Not Applicable	\$81.48/hour
	Service Charges		
	Subscription Charges:	Not Applicable	\$5.44/month
	Database Queries		
	Network Query:	Not Applicable	\$0.0007/query
	MCIIm Network Query:	Not Applicable	\$0.0007/query
	MCIIm Switch Query:	Not Applicable	\$0.0007/query
	Trigger Charges		
	Line-Based:	Not Applicable	\$0.0010/query
	Office-Based	Not Applicable	\$0.0010/query
	Utilization Element:	Not Applicable	\$0.0003/query
	Service Activation Charge		
	Network Service Activation:	\$8.37/service activated/line	Not Applicable
	MCIIm Network Service Activation:	\$8.37/service activated/line	Not Applicable
	MCIIm Switch Service Activation:	\$8.37/service activated/line	Not Applicable
	Service Modification		
	DTMF Update:	Not Applicable	\$0.1080/occurrence
	Switch-Based Announcement:	Not Applicable	\$0.005/announcement

	<u>Bell Atlantic Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
18.	Rebundling of Unbundled Services	Pre-existing BA-PA end user: applicable port service order charge (see Section 5 above) Other end users: applicable service order charge for port and installation charges for loop and port (see Sections 3 and 5 above)	See Sections 3 and 5 above
19.	Network Element Recombination Service ²⁵	TBD	TBD

²⁵ These rates are subject to approval by the Commission.

B. MCIIm Services, Facilities, and Arrangements:

	<u>MCIIm Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
1.a	Interim Number Portability through co-carrier call forwarding	“Track and True-up” - Once the Commission establishes a rate and cost recovery method, there will be a retroactive true-up with interest charges at the appropriate Commission-determined rate.	
1.b	Pass-through of access charges under INP arrangement	In accordance with Attachment VIII, Section 3.1.5.	
2.	Local Dialing Parity	No charge	
3.a	Reciprocal call termination Local Traffic delivered to MCIIm Interconnection Point	Not Applicable	Average rate paid by BA to MCIIm in the previous calendar quarter ²⁶
3.b	Access charges for termination of intrastate and interstate Toll Traffic	Per MCIIm’s interstate and intrastate access Tariffs (charged in conjunction with Local Traffic, using PLU and PIU, as appropriate)	
4.a	Trunk Side transport for Local Interconnection DS-1 trunks	Same rates as set forth in 4.a of Part A. of this Table 1 as may be amended from time to time pursuant to footnote 1 above	
4.b	Trunk Side transport for Local Interconnection DS-3 trunks	Same rates as set forth in 4.b of Part A. of this Table 1 as may be amended from time to time pursuant to footnote 1 above	
5.	All other MCIIm services available to Bell Atlantic	Available at MCIIm’s tariffed or otherwise generally available rates or as agreed to by the Parties.	

²⁶ MCIIm’s rates for the termination of BA’s Local Traffic shall be recalculated once each year on each anniversary of the Effective Date (the “Rate Determination Date”). The methodology for recalculating the rates is as follows:

Access Tandem Minutes = Total minutes of use of Local Traffic delivered by MCIIm to the BA Access Tandem for most recent billed quarter.

End Office Minutes = Total minutes of use Local Traffic delivered by MCIIm directly to the terminating BA End Office for most recent billed quarter.

Total Minutes = Total minutes of use of Local Traffic delivered by MCIIm to BA for most recent billed quarter.

MCIIm Charge at the MCIIm-IP =

$$\frac{(\textit{Access Tandem Minutes} \times \textit{BA Tandem Termination Rate} (\$0.002902)) + (\textit{End Office Minutes} \times \textit{BA End Office Termination Rate} (\$0.001864))}{\textit{Total Minutes}}$$

For the first year after the Effective Date, the MCIIm charge shall be calculated based on the traffic data of the quarter immediately preceding such Effective Date, or if no such traffic exists, on the proportion of local call termination trunks to BA End Offices and to BA Access Tandems.

	<u>MCIIm Service</u>	<u>Non-recurring</u>	<u>Recurring</u>
6.	Entrance facilities, and transport, as appropriate, for Local Interconnection at MCIIm End Office/Tandem Office, Serving Wire Center, or other Point of Interconnection	Same rates as set forth in 1.a. of Part A of this Table 1 as may be amended from time to time pursuant to footnote 1 above)	

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LOCAL RESALE**

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ATTACHMENT II

LOCAL RESALE

Section 1. Telecommunications Services Provided for Resale

1.1 In accordance with and subject to the requirements of Applicable Law, Bell Atlantic shall make available to MCIIm for resale any Telecommunications Service that Bell Atlantic currently provides or may offer hereafter, including the service functions described in Section 3 below. Such Telecommunications Services and service functions are collectively referred to as "Local Resale."

1.2 To the extent that this Attachment describes services which Bell Atlantic shall make available to MCIIm for resale pursuant to this Agreement, this list of services is neither all inclusive nor exclusive. All Telecommunications Services which are to be offered for resale are subject to the terms herein.

1.3 Bell Atlantic shall make all of its Telecommunications Services available for resale to MCIIm on terms and conditions that are reasonable and Non-Discriminatory.

1.4 Bell Atlantic will provide services to MCIIm for resale that are equal in quality, subject to the same conditions, and provided within the same provisioning time intervals that Bell Atlantic provides itself, including end users. To the extent applicable, Bell Atlantic shall also conform to the specific requirements of Attachment VIII.

1.5 The specific business process requirements and systems interface requirements are set forth in Attachment VIII.

1.6 Notwithstanding any other provision of this Attachment II, Bell Atlantic shall be entitled to change its Telecommunications Services offerings, subject to the notice provisions of Attachment VIII, Section 1.

1.7 MCIIm acknowledges that it has a duty under Section 251(b)(1) of the Act not to prohibit, and not to impose unreasonable and discriminatory conditions or limitations on the resale of its Telecommunications Services. MCIIm will develop its services with the knowledge that when they are available, Bell Atlantic may request negotiations with MCIIm for the resale of such services. MCIIm will negotiate in good faith the terms and conditions necessary for Bell Atlantic to purchase such services for resale from MCIIm.

Section 2. General Terms and Conditions for Resale

2.1 **Pricing.** The prices regarding Local Resale are set forth in Attachment I of this Agreement.

2.2 **Restrictions on Resale**

2.2.1 Local Resale services may be purchased by MCIIm under this Agreement solely for the purpose of resale by MCIIm. Local services to be purchased for other purposes (including, but not limited to, MCIIm's own use) must be purchased pursuant to separate written agreements, including, but not limited to, applicable Tariffs of Bell Atlantic. MCIIm may purchase Local Resale services under this Agreement for resale to its Affiliates if MCIIm resells such services as a Telecommunications Carrier pursuant to terms and conditions that comply with all applicable Commission rules, including non-discrimination rules.

2.2.2 MCIIm shall not resell Bell Atlantic's residential Local Resale services to customers who are ineligible to subscribe to such Local Resale services from Bell Atlantic.

2.2.3 MCIIm shall not resell Lifeline or any other means-tested service offerings to customers not eligible to subscribe to such service offerings from Bell Atlantic.

2.2.4 MCIIm shall not resell grandfathered Local Resale services to customers who are ineligible to subscribe to such Local Resale services from Bell Atlantic.

2.2.5 The Parties agree to negotiate the applicability of any category-to-category restriction on the resale of Bell Atlantic's Local Resale services that may be offered by Bell Atlantic in the future. If the Parties are unable to reach agreement, the Parties will submit the dispute to the Commission under the dispute resolution procedures of Part A, Section 24 (Dispute Resolution Procedures), and Bell Atlantic shall bear the burden of proving that the category-to-category restriction is reasonable and nondiscriminatory.

2.3 Requirements for Specific Services

2.3.1 CENTREX Requirements

2.3.1.1 MCIIm may purchase CENTREX features (including system management, call forwarding, digital facility termination and ARS), in accordance with applicable Tariffs.

2.3.1.2 All service levels and features of CENTREX service provided by Bell Atlantic for resale by MCIIm shall conform to Bell Atlantic's prevailing service requirements and be at Parity with the service and features provided to its end user customers.

2.3.1.3 MCIIm may aggregate multiple MCIIm subscribers on dedicated access facilities. Any aggregation of multiple location subscribers may have the effect of changing the retail CENTREX service offered under applicable Tariff, in which case MCIIm must purchase the appropriate tariffed service or, if such changed service is not available under Tariff,

the Parties shall attempt to negotiate a separate agreement for such service.

2.3.2 Federal and State Programs

When a Bell Atlantic subscriber eligible for the Voluntary Federal Subscriber Financial Assistance Program or other similar state programs, including Life Line and Link-Up services, chooses to obtain Local Resale from MCIIm, MCIIm shall be responsible for obtaining the necessary information for its records regarding such subscriber's eligibility.

2.3.3 Grandfathered Services. Bell Atlantic shall offer for resale to MCIIm all grandfathered services eligible for resale hereunder. For purposes of this Agreement, a grandfathered service is a service that Bell Atlantic offers to continue for existing retail subscribers of that service, but not to new subscribers.

2.3.4 N11 Service. Bell Atlantic agrees to offer for resale to MCIIm any N11 Telecommunications Service it offers under Tariff.

2.3.5 Contract Service Arrangements, Special Arrangements, and Promotions. Bell Atlantic shall offer for resale Telecommunications Services, including but not limited to contract service arrangements, special arrangements, and promotions, as required by Applicable Law.

2.3.6 Inside Wire Maintenance Service. [RESERVED]

2.3.7 Voice Mail Service

2.3.7.1 [RESERVED]

2.3.7.2 Bell Atlantic shall make available SMDI-E (Station Message Desk Interface-Enhanced) features where available, or SMDI (Station Message Desk Interface) features where SMDI-E is not available. Bell Atlantic shall make available the MWI (Message Waiting Indicator), stutter dialtone, and message waiting light feature capabilities. Bell Atlantic shall make available CF-B/DA (Call Forward on Busy/Don't Answer), CF/B (Call Forward on Busy), and CF/DA (Call Forward/Don't Answer) feature capabilities allowing for voice mail services.

2.3.8 Hospitality Service

2.3.8.1 Bell Atlantic shall provide all blocking, screening, and all other applicable functions available for hospitality (*e.g.*, hospitals, hotels and the like) lines, pursuant to Tariff.

2.3.9 Telephone Line Number Calling Cards. Bell Atlantic shall maintain customer information for MCIIm customers who subscribe to resold Bell Atlantic

Local Service residential or business dial tone lines in Bell Atlantic's Line Information Database ("LIDB") in the same manner that it maintains information in LIDB on its own similarly situated end user customers. Bell Atlantic shall update and maintain, on the same schedule that it uses for its own similarly situated end user customers, the MCIIm customer information in LIDB.

Section 3. Service Functions

3.1 When Bell Atlantic converts one of its subscribers to MCIIm's service, Bell Atlantic shall inform MCIIm, to the extent such information is available through Bell Atlantic's electronic interfaces for CLECs, whether such subscriber is currently participating in any program of reduced or exempt charges, including those for the indigent, the handicapped, governmental bodies and public institutions.

3.2 Each Party will work cooperatively with the other Party with respect to practices and procedures for handling of law enforcement and service annoyance calls.

3.3 The Parties will cooperate in the development of an industry standard of "700" number test lines.

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ATTACHMENT III

NETWORK ELEMENTS

Section 1. Introduction

1.1 Bell Atlantic shall provide unbundled Network Elements in accordance with this Agreement and Applicable Law. The price for each Network Element is set forth in Attachment I of this Agreement. Except as otherwise set forth in this Attachment, MCIIm may order Network Elements as of the Effective Date. The obligations set forth in this Attachment III shall apply to such Network Elements: (i) available when this Agreement becomes effective; (ii) that subsequently become available; and (iii) in all cases to those features, functions, Combinations, and capabilities, the provision of which is Technically Feasible at such time as they are incorporated in unbundled Network Elements offered by Bell Atlantic.

Section 2. Unbundled Network Elements

2.1 Bell Atlantic shall offer Network Elements to MCIIm on an unbundled basis on rates, terms and conditions that are just, reasonable, and Non-Discriminatory in accordance with the terms and conditions of this Agreement.

2.2 Bell Atlantic shall permit MCIIm to connect MCIIm's facilities or facilities provided to MCIIm by third-parties with each of Bell Atlantic's unbundled Network Elements at those generic points within Bell Atlantic's network, designated within this Agreement or as a result of the Bona Fide Request ("BFR") process.

2.3 MCIIm may use one or more Network Elements to provide features, functions, or, capabilities that such Network Element(s) provide as of the date hereof in Bell Atlantic's network, or as may otherwise be agreed upon through the BFR process.

2.3.1 MCIIm may, at its option, select methods of access to unbundled elements, as described in this Agreement, or as may otherwise be agreed upon through the BFR process.

2.4 Bell Atlantic shall offer each Network Element individually and in Combinations (where Technically Feasible), solely in order to permit MCIIm to provide Telecommunications Services to its subscribers.

2.5 For each Network Element, Bell Atlantic shall provide connectivity at a point which is agreeable to both Parties. However, where Bell Atlantic provides combined Network Elements at MCIIm's request, no connectivity point between the Parties shall exist between such contiguous Network Elements.

2.6 This Attachment describes the initial set of Network Elements which MCIIm and Bell Atlantic have identified as of the Effective Date of this Agreement:

Loop
 Network Interface Device
 Local Switching
 Operator Systems
 Common Transport
 Dedicated Transport
 Signaling Link Transport
 Signaling Transfer Points
 Service Control Points/Databases
 Tandem Switching
 Directory Assistance

2.6.1 MCIIm and Bell Atlantic agree that the Network Elements identified in this Attachment may prove not to be all possible Network Elements.

2.6.2 MCIIm may identify additional or revised Network Elements as necessary to provide Telecommunications Services to its subscribers, to improve network or service efficiencies or to accommodate changing technologies, subscriber demand, or other requirements.

2.6.2.1 MCIIm will request any such Network Elements in accordance with the BFR process described in Section 25 (BFR Process for Further Unbundling) of Part A. Additionally, if Bell Atlantic provides any Network Element that is not identified in this Agreement to another CLEC pursuant to an approved Interconnection Agreement, Bell Atlantic shall make available the same Network Element to MCIIm under the same terms, and conditions, as required by 47 U.S.C. Section 252(i).

Section 3. Technical Standards and Technical Specifications for Network Elements

3.1 Each Network Element shall be furnished at the service levels included in this Agreement and in accordance with the performance standards required in this Agreement.

3.2 Each Network Element provided by Bell Atlantic to MCIIm, unless identified differently in this Agreement, shall be provided at Parity and in a Non-Discriminatory manner in the areas of: quality of design, performance, features, functions, capabilities and other characteristics, including but not limited to levels and types of redundant equipment and facilities for power, diversity and security, that Bell Atlantic provides to itself (where applicable and Technically Feasible), Bell Atlantic's own subscribers (where applicable and Technically Feasible), to a Bell Atlantic Affiliate, or to any other entity, as set forth in the FCC Rules and Regulations, as the same may be amended from time to time.

3.2.1 Bell Atlantic shall provide to MCIIm, upon reasonable request, reasonably available engineering, design, performance and other network data sufficient for MCIIm to determine that the requirements of this Section 3 are being met. In the event that such data indicates that the requirements of this Section 3 are not being met, the Parties shall in good faith endeavor to address the issue at the network

operations supervisor level, and if necessary, employ the escalation procedure of Section 15.1.2.

3.2.2 Bell Atlantic agrees to work cooperatively with MCIIm to ensure that the Network Elements that are provided pursuant to this Agreement will meet MCIIm's reasonable needs in providing services to its subscribers.

3.3 Unless otherwise requested by MCIIm, each Network Element and the connections between Network Elements provided by Bell Atlantic to MCIIm shall be made available to MCIIm at Parity and in a Non-Discriminatory manner at the points identified in this Agreement, or additional points made available through the BFR process.

Section 4. Loop

4.1 Definition:

4.1.1 Unbundled Local Loop ("ULL") means a transmission path that extends from the vertical side of a main distribution frame, DSX-panel, or functionally comparable piece of equipment in the subscriber's serving End Office to the Network Rate Demarcation Point (or Network Interface Device ("NID") if installed) in or at a subscriber's premises. The actual loop transmission facilities used to provide a ULL may utilize any of several technologies.

4.1.2 Subject to Part A, Section 29 (Facilities), Bell Atlantic shall allow MCIIm access to the following ULLs (in addition to those ULLs available under applicable Tariffs) including without limitation unbundled from Local Switching and local transport in accordance with the terms and conditions set forth in this Section 4.

4.1.2.1 2-wire analog voice grade ULL or analog 2W provides an effective 2-wire channel with 2-wire interfaces at each end that is suitable for the transport of analog voice grade (nominal 300 to 3000 Hz) signals and loop-start signaling. The service is more fully described at Exhibit A of this Attachment III.

4.1.2.2 4-wire analog voice grade ULL or analog 4W provides an effective 4-wire channel with 4-wire interfaces at each end that is suitable for the transport of analog voice grade (nominal 300 to 3000 Hz) signals. The service will operate with one of the following signaling types that may be specified when the service is ordered: loop-start, ground-start, loop-reverse-battery, duplex, and no signaling. The service is more fully described in Exhibit B of this Attachment III.

4.1.2.3 2-wire ISDN digital grade ULL or BRI ISDN provides a channel with 2-wire interfaces at each end that is suitable for the transport of 160

kbps digital services using the ISDN 2B1Q line code. The service is more fully described in Exhibit C of this Attachment III.

4.1.2.4 4-wire DS-1 compatible ULL provides a channel with 4-wire interfaces at each end. Each 4-wire channel is suitable for the transport of 1.544 mbps digital signals simultaneously in both directions using PCM line code. DS-1 compatible ULLs will be available where existing copper facilities can meet the specifications. The service is more fully described in Exhibit C of this Attachment III.

4.1.2.5 ULLs will be offered on the terms and conditions specified herein and on such other terms in applicable Tariffs that are not inconsistent with the terms and conditions set forth herein.

4.1.3 If Bell Atlantic uses integrated digital loop carrier ("DLC") systems to provide the local loop, Bell Atlantic will make alternate arrangements if available, meeting the requirements of this Section 4, to permit MCIIm to order an existing contiguous ULL with the same provisioning intervals at no additional cost to MCIIm. These arrangements may, at Bell Atlantic's option, include the following: provide MCIIm with copper facilities or universal DLC that are acceptable to MCIIm. Additional arrangements, such as deployment of Virtual Remote Terminals, or allowing MCIIm to purchase the entire DLC, are subject to the BFR procedures of Section 25 of Part A of this Agreement.

4.2 Loop Components

MCIIm may, at its option, raise the issue of subloop unbundling (other than NID unbundling, which is addressed in Section 5 of this Attachment III) either through the BFR procedure set forth in Section 25 of Part A of this Agreement, or by cooperating with Bell Atlantic in the design and implementation of a subloop unbundling technical and operational trial. Loop components may include, but are not limited to, the following:

4.2.1 Loop Concentrator/Multiplexer

4.2.2 Loop Feeder

4.2.3 Loop Distribution

Section 5. Network Interface Device

5.1 Definition:

5.1.1 "Network Interface Device" or "NID" means the Bell Atlantic provided interface terminating Bell Atlantic's Telecommunications network on the

property where the subscriber's service is delivered at a point determined by Bell Atlantic. The NID contains a FCC Part 68 registered jack from which inside wire may be connected to Bell Atlantic's network.

5.1.2 Bell Atlantic shall permit MCIIm to connect MCIIm's loop to the inside wiring of a subscriber's premises through Bell Atlantic's NID in the manner set forth in Section 5.2 herein.

5.2 Access to Network Interface Device

5.2.1 Due to the wide variety of NIDs utilized by Bell Atlantic (based on subscriber size and environmental considerations), MCIIm may access the subscriber's inside wire by any of the following means:

5.2.1.1 Bell Atlantic shall allow MCIIm to connect its loops directly to Bell Atlantic's multi-line residential NID enclosures that have additional space and are not used by Bell Atlantic or any other Telecommunications Carrier to provide service to the premise. MCIIm agrees to install compatible protectors and test jacks, to maintain the protection system and equipment and to indemnify Bell Atlantic pursuant to Part A of this Agreement.

5.2.1.2 In all other cases, MCIIm must establish the connection to Bell Atlantic's NID through an adjoining NID deployed by MCIIm.

5.2.1.2.1 Where an adequate length of inside wire is present and environmental conditions permit, and with the subscriber authorization required by this Agreement and Applicable Law, either Party may remove the inside wire from the other Party's NID and connect that wire to that Party's own NID; or

5.2.1.2.2 Enter the subscriber access chamber or "side" of "dual chamber" NID enclosures for the purpose of extending a connectorized or spliced jumper wire from the inside wire through a suitable "punch-out" hole of such NID enclosures; or

5.2.1.2.3 Request Bell Atlantic to make other rearrangements to the inside wire terminations or terminal enclosure on a time and materials cost basis to be charged to the requesting Party (*i.e.*, MCIIm, its agent, the building owner or the subscriber). Such charges will be billed to the requesting Party.

5.2.1.3 In no case shall MCIIm remove or disconnect Bell Atlantic's loop facilities from Bell Atlantic's NIDs, enclosures, or protectors.

5.2.1.4 In no case shall MCIIm remove or disconnect ground wires from Bell Atlantic's NIDs, enclosures, or protectors.

5.2.1.5 In no case shall MCIIm remove or disconnect NID modules, protectors, or terminals from Bell Atlantic's NID enclosures.

5.2.1.6 Maintenance and control of premises wiring (inside wire) is the responsibility of the subscriber. Any conflicts between service providers for access to the subscriber inside wire must be resolved by the subscriber.

5.2.1.7 Due to the wide variety of NID enclosures and outside plant environments, Bell Atlantic will work with MCIIm to develop specific procedures to establish the most effective means of implementing this Section 5.2.

5.3 Technical Requirements

5.3.1 The NID shall provide an accessible point of connection for the subscriber-owned inside wiring, for Bell Atlantic's facilities, for the distribution media and/or cross connect to MCIIm's NID, and shall maintain a connection to ground.

5.3.2 The NID shall be capable of transferring electrical analog or digital signals between the subscriber's inside wiring and the distribution media and/or cross connect to MCIIm's NID, consistent with the NID's function at the Effective Date of this Agreement.

5.3.3 Where a Bell Atlantic NID exists, it is provided in its "as is" condition. MCIIm may request Bell Atlantic do additional work to the NID in accordance with Section 5.2.1.2.3.

5.4 Interface Requirements

5.4.1 Where an existing Bell Atlantic NID is installed, the NID shall be the interface to subscribers' premises wiring for the existing loop technology at that premises.

Section 6. Distribution

MCIIm may, at its option, raise the issue of distribution unbundling through the BFR procedure set forth in Section 25 of Part A of this Agreement.

Section 7. Local Switching

7.1 Definition:

7.1.1 Local Switching is the Network Element that provides MCIIm the ability to use switching functionality in a Bell Atlantic end office switch, including all vertical services and/or features that Bell Atlantic already provides, or provides in the future pursuant to the BFR process set forth in Part A, Section 25, out of that switch. MCIIm may request modifications to the switching functionality,

including the vertical services and/or features, available in a Bell Atlantic end office switch pursuant to the BFR process set forth in Part A, Section 25. Local Switching will be provisioned with a port element, which provides line or trunk side access to Local Switching.

7.1.2 Port element or port means a line card (or equivalent) and associated peripheral equipment on an end office switch which serves as the interconnection between individual loops or individual subscriber trunks and the switching components of an end office switch and the associated switching functionality in that end office switch. Each port is typically associated with one (or more) telephone number(s) which serves as the subscriber's network address. The port element is part of the provision of Local Switching.

7.1.3 Local Switching includes line side and trunk side facilities plus the features, functions, and capabilities of the switch, as set forth in Section 7.1.1. It consists of the line-side port (including connection between a loop termination and a switch line card, telephone number assignment, one primary Directory Listing, presubscription, and access to 911, Operator Services, basic intercept, and Directory Assistance), line and line group features (including appropriate vertical features and line blocking options), usage (including the connection of lines to lines, lines to trunks, trunks to lines, and trunks to trunks), and trunk features (including the connection between the trunk termination and a trunk card). Components of Local Switching, to the extent that they are separately charged, shall be charged at the rates set forth in Attachment I.

7.1.4 Bell Atlantic shall offer, as an optional chargeable feature, daily usage tapes that include the "to and from" number, start time, and stop time, by line port, for all recorded local, access, and toll usage. MCIIm may request activation or deactivation of features on a per port basis at any time, and shall compensate Bell Atlantic for the non-recurring charges associated with processing the order.

7.2. Technical Requirements

7.2.1 Bell Atlantic shall route calls to the appropriate trunk or lines for call origination or termination.

7.2.2 Where Technically Feasible, Bell Atlantic will offer Specialized Routing for Local Switching lines and for lines provided to MCIIm under Local Resale. Bell Atlantic's initial deployment of Specialized Routing will route Directory Assistance and Operator Services calls (*i.e.*, 411, 555-1212, 0-, 0+local) to: (i) Bell Atlantic provided platforms; (ii) MCIIm designated platforms; or (iii) third-party platforms. Due to the constraints of the various switches in place in the Bell Atlantic service region, Bell Atlantic will implement a hybrid network solution for Specialized Routing. The hybrid solution encompasses three different technologies: Bell Atlantic's Common Channel Signaling Network/Advanced Intelligent Network (CCSN/AIN) and, for those

office and call types not supported by AIN, Specialized Routing Nodes and/or line class codes. The Combinations of switch types, call types, and technology solutions currently available are identified in Exhibit D of this Attachment III. Exhibit D is subject to modification upon reasonable prior notification to MCIIm. The following terms and conditions apply to Specialized Routing service:

7.2.2.1 If MCIIm elects the wholesale discount for Local Resale which does not include Bell Atlantic Directory Assistance and Operator Services, MCIIm must request Specialized Routing for all End Offices where they elect to resell Bell Atlantic retail Telecommunications Services using this wholesale discount.

7.2.2.2 Specialized Routing will be activated for all MCIIm Local Resale and Local Switching end user lines and for all applicable call types (*i.e.*, 411, 555-1212, 0-, 0+local) in a requested End Office.

7.2.2.3 MCIIm is responsible for establishing the necessary transport to carry the rerouted calls to its Operator Services platform(s). Trunks will be required for traffic rerouted from the originating End Office and for traffic rerouted from the Specialized Routing Node. Bell Atlantic-supplied Dedicated Transport is available for use with Specialized Routing, where facilities are available, in which case rates and charges for such transport will apply in addition to the rates and charges for Specialized Routing.

7.2.2.4 If the necessary trunks are not in place once a subscriber has been converted to MCIIm's local service, then the end user customer will receive a re-order tone.

7.2.2.5 Traffic rerouted via the Specialized Routing Nodes will be handed-off to MCIIm at a Point of Interconnection in the originating LATA.

7.2.2.6 Implementation of Specialized Routing will begin in the requested End Offices in the State no later than ninety (90) days after the beginning of the implementation interval, and will be finished for all requested End Offices in a State within one hundred eighty (180) days after the beginning of the implementation interval. The implementation interval for Specialized Routing will begin upon receipt by Bell Atlantic of a list of the End Offices from which MCIIm wishes to purchase Specialized Routing service.

7.2.2.7 Certain classes of service and/or line types are not supported by AIN-based Specialized Routing. These exceptions, identified in Exhibit E of this Attachment III, will be addressed by Bell Atlantic on a case-by-

case BFR basis at MCI's request. Additional charges will apply for the development and implementation of the network solution(s) used to address these exceptions. Exhibit E of this Attachment III is subject to modification upon reasonable prior notification to MCI.

7.2.2.8 Due to the use of AIN technology for Specialized Routing, some existing and future AIN-based services may not work with Local Resale lines that employ Specialized Routing. Exhibit E of this Attachment III lists AIN services that are currently known to conflict with Specialized Routing.

7.2.3 Bell Atlantic shall provide standard recorded announcements at Parity.

7.2.4 Where requested by MCI, Bell Atlantic will attempt to change a subscriber from Bell Atlantic's services to MCI's services without loss of feature availability and functionality. However, dependent on the technical arrangements MCI chooses to use to provide their end user services, some feature interaction conflicts and resulting loss of feature availability and functionality may result.

7.2.5 For unbundled Bell Atlantic switching in Combination with an unbundled Bell Atlantic loop, Bell Atlantic shall perform routine testing (e.g., mechanized loop tests ("MLT")) at Parity upon receipt of a trouble report from MCI.

7.2.6 Bell Atlantic shall repair, restore and maintain Bell Atlantic provided equipment that has produced trouble conditions, at Parity and in a Non-Discriminatory manner, to minimize recurrence of trouble conditions in MCI's use of Local Switching.

7.2.7 Bell Atlantic shall control congestion points such as mass calling events, and network routing abnormalities, using capabilities such as automatic call gapping, automatic congestion control, and network routing overflow at Parity and in a Non-Discriminatory manner.

7.2.8 Bell Atlantic shall record billable events, involving usage of the element, and send the appropriate recording data to MCI as outlined in Attachment VIII.

7.2.9 Unbundled switching will include 911 access on the same basis as such access is provided in Bell Atlantic's network.

7.2.10 Bell Atlantic shall provide switching service point ("SSP") capabilities and signaling software to interconnect the signaling links destined to Bell Atlantic STPs at Parity. In the event that Local Switching is provided out of a switch without SS7 capability, and Bell Atlantic unbundled Common Transport is purchased for use with Bell

Atlantic's unbundled switching, Bell Atlantic's Tandem Office Switches shall provide this capability at Parity.

- 7.2.11 Bell Atlantic shall provide interfaces to Adjunct Equipment, which interfaces are identified in this Agreement, at Parity. Bell Atlantic shall provide interfaces to any other Adjunct Equipment at Parity pursuant to the BFR process.
- 7.2.12 From time to time MCI may request that Bell Atlantic provide unique reports of reasonable performance data regarding a subscriber line, traffic characteristics, or other reasonable elements. To the extent that such reports exceed that which Bell Atlantic provides itself or its subscribers, MCI shall pay reasonable charges for such reports.
- 7.2.13 Bell Atlantic shall assign each MCI subscriber line an unbundled switching class of service. MCI may request and Bell Atlantic will provide call blocking options (e.g., 900, 976) at Parity.

7.3 Interface Requirements:

- 7.3.1 Bell Atlantic shall provide the following unbundled switching interfaces:

Analog Basic (POTS) - line side, loop start or ground start signaling
 Analog CENTREX - line side, loop start or ground start signaling
 Analog PBX - line side, loop start or ground start signaling

Analog DID - trunk side, loop reverse-battery signaling, associated with a PBX
 DS1 (DID) - trunk side, associated with a PBX
 DS1 (IOF) - trunk side, associated with dedicated unbundled transport

These services will be more fully described in Exhibits F and G of this Attachment III. Additional interfaces may be developed in accordance with the BFR process set forth in Section 25 of Part A of this Agreement.

- 7.3.2 Bell Atlantic shall offer access to the following at Parity:

7.3.2.1 SS7 signaling or multi-frequency trunking;

7.3.2.2 Interface to MCI or Bell Atlantic Operator Services systems through the use of Specialized Routing, as appropriate;

7.3.2.3 Interface to MCI or Bell Atlantic Directory Assistance Services through the use of Specialized Routing, as appropriate; and

7.3.2.4 Access to other third-party carriers.

7.4 Integrated Services Digital Network ("ISDN")

Implementation of the first customer application of unbundled ISDN switching will require technical and operational coordination and testing by MCI and Bell Atlantic to ensure that the requirements set forth in this section can be met. Should any of these requirements prove technically infeasible, the Parties shall cooperate to determine the requirements applicable to the unbundled service.

7.4.1 Technical Requirements — ISDN

7.4.1.1 Bell Atlantic shall offer data switching providing ISDN that, at a minimum:

7.4.1.1.1 Provides integrated packet handling capabilities at Parity;

7.4.1.1.2 Allows for full 2B+D channel functionality for BRI at Parity; and

7.4.1.1.3 Allows for full 23B+D channel functionality for PRI at Parity.

7.4.1.1.4 Each B channel shall allow for voice, 64 Kbps CSD, and PSD of 128 logical channels at minimum speeds of 19 Kbps throughput of each logical channel up to the total capacity of the B channel.

7.4.1.1.5 Each B channel shall provide capabilities for alternate voice and data on a per call basis.

7.4.1.1.6 The BRI D channel shall allow for call associated signaling, non-call associated signaling and PSD of 16 logical channels at minimum speeds of 9.6 Kbps throughput of each logical channel up to the total capacity of the D channel.

7.4.1.1.7 The PRI D channel shall allow for call associated signaling.

7.4.2 Interface Requirements — ISDN

7.4.2.1 Bell Atlantic shall provide the BRI U interface using 2-wire copper loops in accordance with TR-NWT-000393, January 1991, *Generic Requirements for ISDN Basic Access Digital Subscriber Lines*.

7.4.2.2 Bell Atlantic shall provide the BRI interface using digital subscriber loops adhering to Bellcore TR-NWT-303 specifications to interconnect DLCs.

7.4.2.3 Bell Atlantic shall offer PSD interfaces adhering to the X.25, X.75 and X.75' ANSI and Bellcore requirements.

7.4.2.4 Bell Atlantic shall offer PSD trunk interfaces operating at 56 kbps.

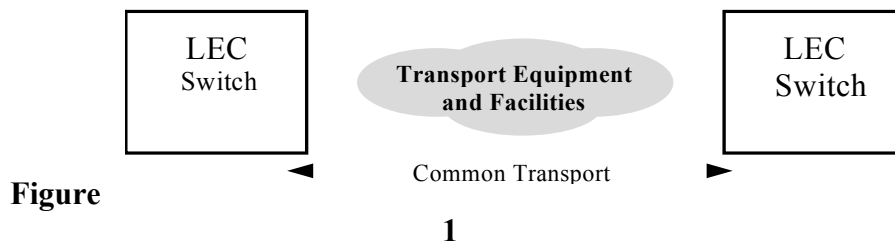
Section 8. Operator Systems

See Attachment VIII, Section 6.1.3 Directory Assistance Service and 6.1.4 Operator Service.

Section 9. Common Transport

9.1 Definition:

9.1.1 Common Transport consists of interoffice transmission paths between Bell Atlantic Network Elements (illustrated in Figure 1) shared by carriers. Common Transport consists of Bell Atlantic inter-office transport facilities and is distinct and separate from Local Switching. Common Transport routes the call between two Bell Atlantic switches using the existing route(s) that are used by the Bell Atlantic network for Bell Atlantic's end users.



Figure

1

9.2 Technical Requirements

9.2.1 Bell Atlantic shall be responsible for the engineering, provisioning, and maintenance of the underlying equipment and facilities that are used to provide Common Transport.

Section 10. Dedicated Transport

10.1 Definition:

10.1.1 Dedicated Transport is an interoffice transmission path of a fixed capacity between MCI designated locations to which MCI is granted exclusive use. Such locations may include Bell Atlantic Central Offices, other Telecommunication Carrier locations, subscriber premises, or other mutually agreed locations. Dedicated Transport is depicted below in Figure 2.

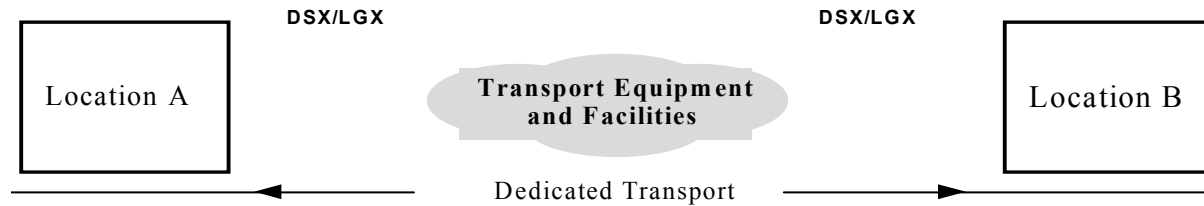


Figure 2

10.1.2 Bell Atlantic shall offer Dedicated Transport as a circuit (e.g., DS0 (voice grade), DS1, STS1 (when available) and DS3) dedicated to MCI.

10.1.3 When Dedicated Transport is provided as a circuit, it will have available (as appropriate):

10.1.3.1 Optional multiplexing functionality;

10.1.3.2 Grooming functionality in accordance with Section 10.3 herein; and,

10.1.3.3 Redundant equipment and facilities necessary to support protection and restoration at Parity and in a Non-Discriminatory manner.

10.2 Technical Requirements

This Section sets forth technical requirements for all Dedicated Transport.

10.2.1 Dedicated Transport shall provide physical diversity at Parity.

10.2.2 MCI may request that Bell Atlantic provide additional physical diversity. Bell Atlantic will provide such physical diversity where it is available, at Bell Atlantic's prevailing additional charge, if any. If physical diversity is not reasonably available in response to MCI's request, then MCI may order such additional physical diversity by submitting a request for special construction.

10.2.3 Dedicated Transport shall include DSX terminations at one or both ends, as applicable, in Bell Atlantic's Central Office location.

10.2.4 Bell Atlantic shall offer DCS and multiplexing, both together with and separately from Dedicated Transport.

10.3 Digital Cross Connect System ("DCS")

10.3.1 Definition:

10.3.1.1 DCS is a device which provides electronic cross-connection of digital signal level 0 ("DS0") or higher transmission bit rate digital

channels within physical interface facilities. Types of DCSs include but are not limited to DCS 1/0s, where the nomenclature 1/0 denotes interfaces typically at the DS1 rate or greater with cross-connection typically at the DS0 rate.

10.3.2 DCS Technical Requirements

10.3.2.1 DCS shall provide cross connection of the channels designated by MCIIm, either through service orders or by using Bell Atlantic's Intellimux capabilities.

10.3.2.2 Bell Atlantic shall continue to administer and maintain DCS, including updates to the control software to current available releases, at Parity.

10.3.2.3 Bell Atlantic shall provide various types of Digital Cross Connect Systems including:

10.3.2.3.1 DS0 cross connects (typically termed DCS 1/0).

10.3.2.3.2 Additional DCS types shall be requested in accordance with the BFR process set forth in Section 25 of Part A of this Agreement.

10.3.2.4 Through Bell Atlantic's Intellimux service capabilities, Bell Atlantic shall provide immediate and continuous configuration and reconfiguration of the channels between the physical interfaces (*i.e.*, Bell Atlantic shall establish the processes to implement cross connects on demand, or permit MCIIm control of such configurations and reconfigurations).

10.3.2.5 Through Bell Atlantic's Intellimux service capabilities, Bell Atlantic shall provide scheduled configuration and reconfiguration of the channels between the physical interfaces (*i.e.*, Bell Atlantic shall establish the processes to implement cross connects on the schedule designated by MCIIm, or permit MCIIm to control such configurations and reconfigurations).

10.3.2.6 DCS shall continuously monitor protected circuit packs and redundant common equipment at Parity.

10.3.2.7 DCS shall automatically switch to a protection circuit pack on detection of a failure or degradation of normal operation at Parity.

10.3.2.8 The equipment used to provide DCS shall be equipped with a redundant power supply or a battery back-up at Parity.

10.3.2.9 Bell Atlantic shall make available for DCSs handling MCIIm services spare facilities and equipment at Parity, necessary for provisioning repairs.

10.3.2.10 Through Bell Atlantic's Intellimux service capabilities, at MCIIm's option, Bell Atlantic shall provide MCIIm currently available performance monitoring and alarm data.

10.3.2.11 At MCIIm's option, Bell Atlantic shall provide MCIIm with the ability to initiate tests on DCS equipment. This will require MCIIm to provide additional facilities from the DCS, back to MCIIm's test center. The DCS can then be used to connect MCIIm's test center ports to other MCIIm circuits.

10.3.2.12 Where available, DCS shall provide multipoint bridging of multiple channels to other DCSs. MCIIm may designate multipoint bridging to be one-way broadcast from a single master to multiple tributaries, or two-way broadcast between a single master and multiple tributaries.

10.3.2.13 DCS shall multiplex lower speed channels onto a higher speed interface and demultiplex higher speed channels onto lower speed interfaces as designated by MCIIm.

Section 11. Signaling Link Transport

11.1 Definition:

- 11.1.1 Bell Atlantic's CCS Access Service ("CCSAS") allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path. The transport portion of CCSAS is provided via a discreetly rated dedicated 56 kbps out of band signaling connection between the carrier's Signaling Point of Interconnection ("SPOI") and Bell Atlantic's STP.
- 11.1.2 Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps. The connection to Bell Atlantic's STP pair can be made from either the carrier's signaling point ("SP"), which requires a minimum of two 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.
- 11.1.3 STP locations are set forth in National Exchange Carrier Association ("NECA") Tariff F.C.C. No. 4. Carriers ordering CCSAS are subject to the technical requirements specified in Bell Atlantic Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9). Testing and

certification reference documentation shall be pursuant to Bell Atlantic Tariff F.C.C. No. 1, Section 6.4.3 (A).

- 11.1.4 Each Party shall provide the other Party with access to databases and associated signaling necessary for call routing and completion by providing SS7 CCS interconnection in accordance with existing Tariffs, and interconnection and access to toll free databases, LIDB, and any other necessary databases in accordance with existing Tariffs and/or agreements with other unaffiliated carriers. Alternatively, either Party may secure CCS Interconnection from a commercial SS7 hub provider, and in that case the other Party will permit the purchasing Party to access the same databases as would have been accessible if the purchasing Party had connected via SS7 CCS directly to the other Party's CCS network.
- 11.1.5 Bell Atlantic shall permit MCIIm to access Bell Atlantic's LIDB to validate calling card numbers and requests for bill-to-third-party or collect billing. Bell Atlantic shall provide LIDB access at Parity and in a Non-Discriminatory manner by a SS7 formatted data query before call completion to determine the validity of the billing method requested by the caller. LIDB will respond with a SS7 formatted confirmation of validity or denial of the requested billing option.
- 11.1.6 The Parties will provide CCS Signaling to one another, where and as available, in conjunction with all local traffic, toll traffic, meet point billing traffic, and transit traffic. The Parties will cooperate on the exchange of TCAP messages to facilitate interoperability of CCS-based features between their respective networks, including all CLASS features and functions, to the extent each Party offers such features and functions to its subscribers. All CCS signaling parameters will be provided upon request (where available), including called party number, Calling Party Number, originating line information, calling party category, and Charge Number. All privacy indicators will be honored. The Parties will follow all relevant OBF adopted standards pertaining to CIC/OZZ codes. Where CCS Signaling is not available, in-band multi-frequency ("MF") wink start signaling will be provided. Any such MF arrangement will require a separate local trunk circuit between the Parties' respective Switches. In such an arrangement, each Party will output the full ten-digit telephone number of the called party to the other party with appropriate call set-up and ANI where available, at Parity.
- 11.1.7 The following publications describe the practices, procedures and specifications generally utilized by Bell Atlantic for signaling purposes and is listed herein to assist the Parties in meeting their respective interconnection responsibilities related to signaling:

11.1.7.1 Bellcore GR-905-CORE, Issue 1, March 1995, and subsequent issues and revisions;

11.1.7.2 Bell Atlantic Supplement Common Channel Signaling Network Interface Specification, Bell Atlantic-905, December 1990; Issue, Supplement 1, June 1992; Supplement 2, August 1992; Supplement 3, January 1993; and

11.1.7.3 Bell Atlantic AIN SMS Network Disclosure (Date: December 1996, on Bell Atlantic World Wide Web site).

11.1.8 Each Party shall charge the other Party mutual and reciprocal rates for CCS Signaling as follows: Bell Atlantic shall charge MCI in accordance with Attachment I hereto and applicable Tariffs; MCI shall charge Bell Atlantic rates equal to the rates Bell Atlantic charges MCI, unless MCI's Tariffs for CCS signaling provide for lower generally available rates, in which case MCI shall charge Bell Atlantic such lower rates.

11.1.9 MCI must meet interconnection certification testing requirements of the SS7 network before interconnection is permitted, and also before changes occur within the MCI SS7 network.

Section 12. Signaling Transfer Points ("STPs")

12.1 Definition:

12.1.1 Bell Atlantic's CCSAS allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path. The discretely rated network termination point where this interconnection takes place is called the Bell Atlantic STP port termination. Figure 3 depicts STPs.

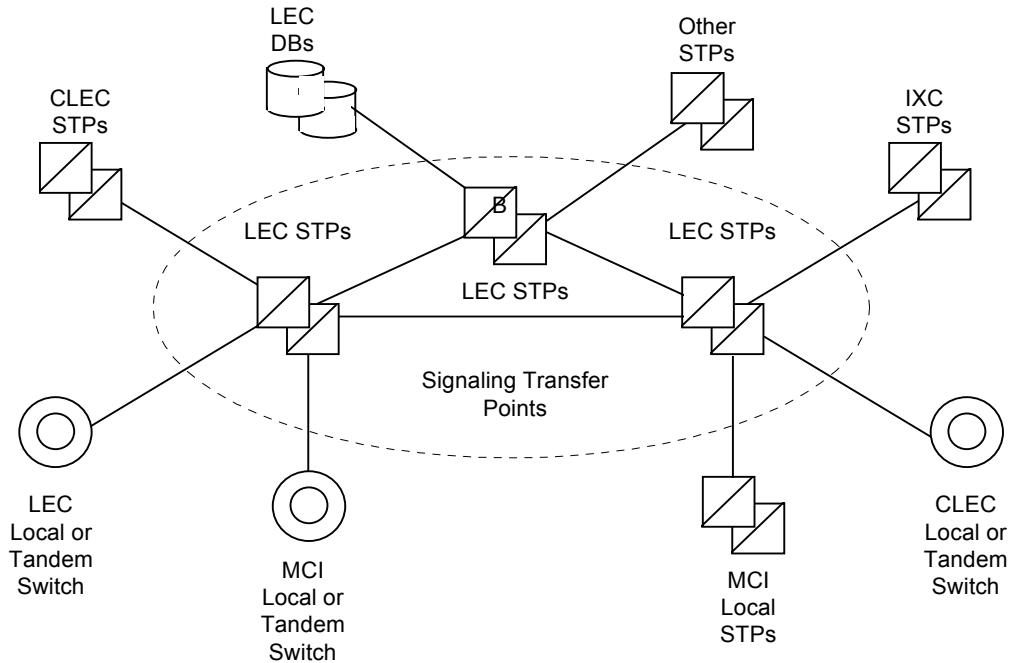


Figure 3

12.1.2 Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps. The connection to Bell Atlantic's STP pair can be made from either the carrier's STP, which requires a minimum of two (2) 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.

12.1.3 STP locations are set forth in National Exchange Carrier Association ("NECA") Tariff F.C.C. No. 4. Carriers ordering CCSAS are subject to the technical requirements specified in Bell Atlantic Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9). See Bell Atlantic Tariff F.C.C. No. 1, Section 6.4.3 (A) for testing and certification reference documentation).

12.2 Technical Requirements

12.2.1 STPs shall provide access to all other Network Elements connected to the Bell Atlantic network. These include:

12.2.1.1 Bell Atlantic Local Switching or Tandem Switching;

12.2.1.2 Bell Atlantic Service Control Points/databases;

12.2.1.3 Third-party local or Tandem Switching systems; and

12.2.1.4 Third-party-provided STPs.

- 12.2.2 The connectivity provided by STPs shall fully support the functions of all other Network Elements connected to the Bell Atlantic SS7 network. This explicitly includes the use of the Bell Atlantic SS7 network to convey messages which neither originate nor terminate at a signaling end point directly connected to the Bell Atlantic SS7 network (*i.e.*, transit messages). When the Bell Atlantic SS7 network is used to convey transit messages, there shall be no alteration of the integrated services digital network user part ("ISDNUP") or Transaction Capabilities Application Part ("TCAP") user data that constitutes the content of the message.
- 12.2.3 If a Bell Atlantic Tandem Switch routes calling traffic, based on dialed or translated digits, on SS7 trunks between an MCI local Switch and third-party local Switch, Bell Atlantic's SS7 network shall convey the TCAP messages that are necessary to provide call management features (automatic callback, automatic recall, and screening list editing) between the MCI local STPs and the STPs that provide connectivity with the third-party local Switch, even if the third-party local Switch is not directly connected to Bell Atlantic's STPs, providing that the third-party Switch is located in the same LATA.
- 12.2.4 In cases where the destination signaling point is a Bell Atlantic local or Tandem Switching system or database, or is an MCI or third-party local or Tandem Switching system directly connected to Bell Atlantic's SS7 network, Bell Atlantic STPs shall perform final GTT of messages to the destination and SCCP Subsystem Management of the destination. In all other cases, STPs shall perform intermediate GTT of messages to a gateway pair of STPs in an SS7 network connected with the Bell Atlantic SS7 network, and shall not perform SCCP subsystem management of the destination.

12.3 Interface Requirements

- 12.3.1 Bell Atlantic shall provide the following STPs options to connect MCI or MCI-designated Local Switching systems or STPs to the Bell Atlantic SS7 network:

12.3.1.1 An A-link interface from MCI Local Switching systems; and,

- 12.3.2 Each type of interface shall be provided by one or more sets (layers) of signaling links, as follows:

12.3.2.1 An A-link layer shall consist of two links, as depicted in Figure 4.

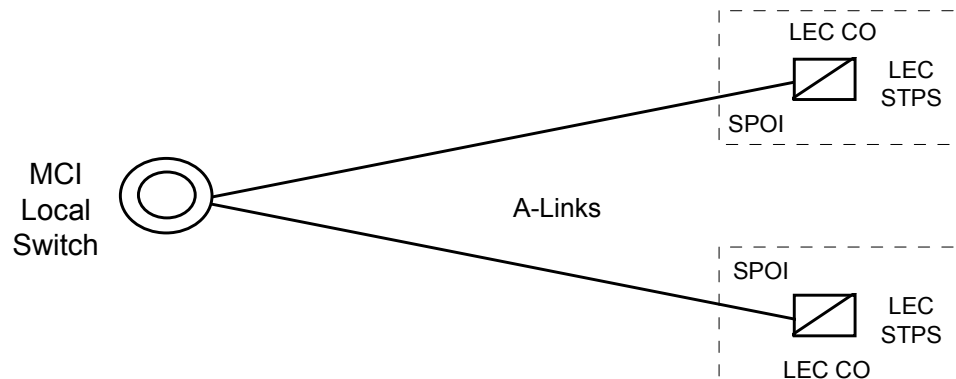


Figure 4. A-Link Interface

12.3.3 The Signaling Point of Interconnection (“SPOI”) for each link shall be located at a cross-connect element, such as a DSX-1, in the Central Office where the Bell Atlantic STP is located. There shall be a DS1 or higher rate transport interface at each of the SPOIs. Each signaling link shall appear as a DS0 channel within the DS1 or higher rate interface.

12.4 Message Screening

12.4.1 Bell Atlantic shall set message screening parameters so as to accept messages from MCI local or tandem switching systems destined to any signaling point in the Bell Atlantic SS7 network with which the MCI switching system has a legitimate signaling relation.

12.4.2 Bell Atlantic shall set message screening parameters so as to accept messages from MCI local or tandem switching systems destined to any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCI switching system has a legitimate signaling relation.

12.4.3 Bell Atlantic shall set message screening parameters so as to accept messages destined to an MCI local or tandem switching system from any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCI switching system has a legitimate signaling relation.

12.4.4 Bell Atlantic shall set message screening parameters so as to accept and send messages destined to an MCI SCP from any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCI SCP has a legitimate signaling relation, provided

Bell Atlantic receives proper notification and agreement from the owner of such other networks.

12.5 STP Requirements

12.5.1 Bell Atlantic shall provide MTP and SCCP protocol interfaces in accordance with sections relevant to the MTP or SCCP in the following specifications:

12.5.1.1 Bellcore GR-905-CORE, Issue 1, March 1, Common Channel Signaling Network Interface Specification (“CCSNIS”) Supporting Network Interconnection, Message Transfer Part (“MTP”), and Integrated Services Digital Network User Part (“ISDNUP”); and

Section 13. Call Related Databases and AIN

13.1 Definition:

13.1.1 “Call Related Databases” are the Network Elements that provide the functionality for storage of, and access to, information required to route and complete a particular call. Call Related Databases include, but are not limited to: LIDB, Toll Free Number Database, and AIN databases.

13.1.2 A Service Control Point (“SCP”) is a specific type of database Network Element deployed in a Signaling System 7 (“SS7”) network that executes service application logic in response to SS7 queries sent to it by a switching system also connected to the SS7 network.

13.2 Technical Requirements for Call Related Databases

Requirements for Call Related Databases within this section address storage of information, access to information (*e.g.*, signaling protocols, response times), and administration of information (*e.g.*, provisioning, administration, and maintenance). All Call Related Databases shall be provided to MCI in accordance with the following requirements, except where such a requirement is superseded by specific requirements set forth in Subsections 13.3 through 13.5:

13.2.1 Bell Atlantic shall provide physical interconnection to SCPs through the SS7 network and protocols, as specified in Section 12 of this Attachment, with TCAP as the application layer protocol.

13.2.2 Bell Atlantic shall provide physical interconnection to databases via existing interfaces and industry standard interfaces and protocols (*e.g.*, 56 Kb TCP/IP).

- 13.2.3 The reliability of interconnection options shall be consistent with requirements for diversity and survivability as specified in Section 12 of this Attachment (which applies to both SS7 and non-SS7 interfaces).
- 13.2.4 Call Related Database functionality shall be available at Parity. If, based on information available through the process set forth in Section 3, MCIIm believes the functionality is inadequate to meet its needs, it may initiate a BFR.
- 13.2.5 Bell Atlantic shall complete database transactions (*i.e.*, add, modify, delete) for MCIIm subscriber records stored in Bell Atlantic databases at Parity.
- 13.2.6 Bell Atlantic shall provide database maintenance consistent with the maintenance requirements as specified in this Agreement (*e.g.*, notification of Bell Atlantic network affecting events, testing).
- 13.2.7 Bell Atlantic shall provide billing and recording information to track database usage consistent with connectivity billing and recording requirements for Call Related Databases as specified in this Agreement (*e.g.*, recorded message format and content, timeliness of feed, data format and transmission medium).
- 13.2.8 Bell Atlantic shall provide Call Related Databases in accordance with the physical security requirements specified in this Agreement.
- 13.2.9 Bell Atlantic shall provide Call Related Databases in accordance with the logical security requirements specified in this Agreement.

13.3 Line Information Database (“LIDB”)

This Subsection 13.3 defines and sets forth additional requirements for the Line Information Database. This Subsection 13.3 supplements the requirements of Subsection 13.2 and 13.5.

13.3.1 Definition:

LIDB is a transaction-oriented database accessible through CCS networks. It contains records associated with subscriber line numbers and special billing numbers (in accordance with the requirements in the technical reference in GR-1158-CORE OSSGR, Section 22.3). LIDB accepts queries from other Network Elements, or MCIIm’s network, and provides appropriate responses. The query originator need not be the owner of LIDB data. LIDB queries include functions such as screening billed numbers that provides the ability to accept collect or third number billing calls and validation of

telephone line number based non-proprietary calling cards. The interface for the LIDB functionality is the interface between the Bell Atlantic CCS network and other CCS networks. LIDB also interfaces to administrative systems. The administrative system interface provides Bell Atlantic work centers with an interface to LIDB for functions such as provisioning, auditing of data, access to LIDB measurements and reports.

13.3.2 Technical Requirements

13.3.2.1 Prior to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number record, (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) whether ported or not, for which the NPA-NXX or NXX-0/1XX group is supported by that LIDB.

13.3.2.2 Prior to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) record, whether ported or not, and NPA-NXX and NXX-0/1XX Group Records, belonging to an NPA-NXX or NXX-0/1 XX assigned to MCIIm.

13.3.2.3 Subsequent to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) record, whether ported or not, regardless of the number's NPA-NXX or NXX-0/1XX.

13.3.2.4 Bell Atlantic shall perform the following LIDB functions (*i.e.*, processing of the following query types as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3) for MCIIm's subscriber records in LIDB:

13.3.2.4.1 Billed number screening (provides information such as whether the billed number may accept collect or third number billing calls); and

13.3.2.4.2 Calling card validation.

13.3.2.5 Bell Atlantic shall process MCIIm's subscriber records in LIDB at least at Parity with Bell Atlantic subscriber records, with respect to other LIDB functions (as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3). Bell Atlantic shall indicate to MCIIm what

additional functions (if any) are performed by LIDB in Bell Atlantic's network.

13.3.2.6 Within two (2) weeks after a request by MCIIm, Bell Atlantic shall provide MCIIm with a list of the subscriber data items which MCIIm would have to provide in order to support billed number screening and calling card validation. The list shall indicate which data items are essential to LIDB function, and which are required only to support certain services. For each data item, the list shall show the data formats, the acceptable values of the data item and the meaning of those values.

13.3.2.7 Bell Atlantic shall provide LIDB systems with rates of operating deficiencies at Parity. If, based on information available through the process set forth in Section 3, MCIIm believes that the rate of deficiencies is inadequate to meet its needs, it may initiate a BFR.

13.3.2.8 Bell Atlantic shall provide MCIIm with the capability to provision (*e.g.*, to add, update, and delete) NPA-NXX and NXX-0/IXX group records, and line number and special billing number records, associated with MCIIm subscribers, directly into Bell Atlantic's LIDB provisioning process.

13.3.2.9 As directed by MCIIm or the new local service provider, in the event that end user subscribers change their local service provider, Bell Atlantic shall maintain subscriber data (for line numbers, card numbers, and for any other types of data maintained in LIDB), as mutually agreed by the Parties, so that such subscribers shall not experience any interruption of service, except for any interruption associated with a LIDB-only service order transaction at Parity.

13.3.2.10 All additions and updates of MCIIm data to the LIDB shall be solely at the direction of MCIIm. Bell Atlantic will process orders from other CLECs or from Bell Atlantic for subscribers that choose to migrate from MCIIm to another provider.

13.3.2.11 Bell Atlantic shall provide priority updates to LIDB for MCIIm data upon MCIIm's request (*e.g.*, to support fraud protection) at Parity.

13.3.2.12 Bell Atlantic shall accept queries to LIDB associated with MCIIm subscriber records, and shall return responses in accordance with the requirements of this Section 13.

13.4 Toll Free Number Database

The "Toll Free Number Database" is an SCP that provides functionality necessary for toll free (*e.g.*, 800 and 888) number services by providing routing information and additional

features during call set-up in response to queries from SSPs. This Subsection 13.4 supplements the requirements of Subsection 13.2 and 13.5. Bell Atlantic shall provide the Toll Free Number Database in accordance with the following:

13.4.1 Technical Requirements

13.4.1.1 Bell Atlantic shall make the Bell Atlantic Toll Free Number Database available for MCIIm to query, from MCIIm's designated switch including Local Switching, with a toll-free number and originating information.

13.4.1.2 The Toll Free Number Database shall return carrier identification and, where applicable, the queried toll free number, translated numbers and instructions as it would in response to a query from a Bell Atlantic switch.

13.4.2 Interface Requirements

The signaling interface between the MCIIm or other local switch and the Toll Free Number Database shall use the TCAP protocol as specified in Part A, Section 15 (Technical References), together with the signaling network interface as specified in Part A, Section 15 (Technical References).

13.5 Advanced Intelligent Network ("AIN") Access, Service Creation Environment and Service Management System ("SCE/SMS") Advanced Intelligent Network Access

13.5.1 Bell Atlantic shall provide access to any and all Bell Atlantic service applications resident in Bell Atlantic's SCP. Such access may be from MCIIm's switch or Bell Atlantic's unbundled local switch.

13.5.2 SCE/SMS AIN access shall provide MCIIm the ability to create service applications in the Bell Atlantic SCE and deploy those applications via the Bell Atlantic SMS to the Bell Atlantic SCP. This interconnection arrangement shall provide MCIIm access to the Bell Atlantic development environment in a manner at least at Parity with Bell Atlantic's ability to deliver its own AIN-based services. SCE/SMS AIN Access is the creation and provisioning of AIN services in the Bell Atlantic network. See Figure 5 below.

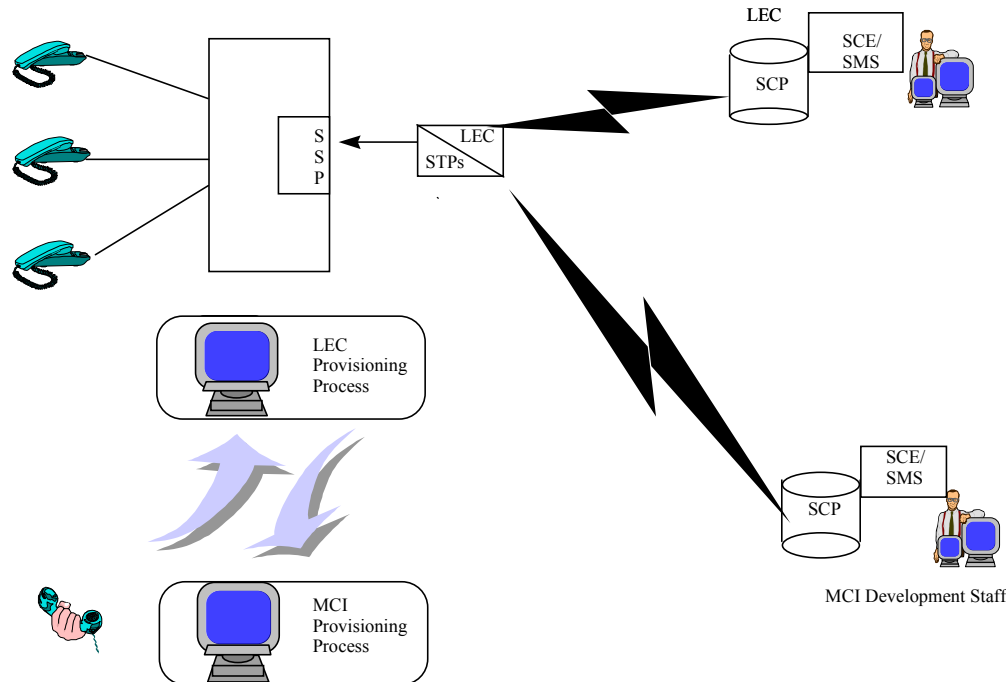


Figure 5

- 13.5.3 Bell Atlantic shall make SCE hardware, software, testing and technical support (e.g., help desk, system administrator) resources available to MCI. Scheduling of SCE resources shall allow MCI at least equal priority to Bell Atlantic.
- 13.5.4 The Bell Atlantic SCE/SMS shall allow for multi-user access. Source code (i.e., AIN service applications and process flow design developed by an MCI service designer/creator to provide AIN based services) management and other logical security functions will be provided.
- 13.5.5 Bell Atlantic shall provide reasonable protection to MCI service logic and data from unauthorized access, execution or other types of compromise.
- 13.5.6 Bell Atlantic or a designated vendor shall provide for service creation training, documentation, and technical support of MCI development staff at Parity with that provided to Bell Atlantic's own development staff. Training sessions shall be "suitcased" to MCI facilities or delivered at Bell Atlantic facilities at MCI's cost, at MCI's discretion, subject to vendor's requirements.
- 13.5.7 When MCI selects SCE/SMS AIN access, Bell Atlantic shall provide for a secure, controlled access environment on-site as well as via remote data connections (i.e., ISDN circuit switched data).

- 13.5.8 When MCIIm selects SCE/SMS AIN access, Bell Atlantic shall allow MCIIm to transfer data forms and/or tables to the Bell Atlantic SCP via the Bell Atlantic SMS (e.g., service customization and subscriber subscription) in a manner consistent with how Bell Atlantic provides that capability to itself.
- 13.5.9 When MCIIm selects SCE/SMS AIN access for providing services on MCIIm's network, the Parties will work cooperatively to resolve technical and provisioning issues.

Section 14. Tandem Switching

14.1 Definition:

- 14.1.1 Tandem Switching includes trunk-connect facilities, the basic switching function of connecting trunks to trunks, and the functions that are centralized in tandem switches. Tandem Switching creates a temporary transmission path between interoffice trunks that are interconnected at a Bell Atlantic access tandem switch for the purpose of routing a call or calls.

14.2 Technical Requirements

14.2.1 Tandem Switching shall provide:

14.2.1.1 Signaling to establish a tandem connection;

14.2.1.2 Screening and routing at Parity;

14.2.1.3 To the extent Technically Feasible and at Parity, Tandem Switching shall provide recording of billable events;

14.2.1.4 Tandem Switching shall provide AIN triggers supporting AIN features at Parity with its provision of such triggers for Bell Atlantic subscribers;

14.2.1.5 Bell Atlantic's Tandem Switching shall provide access to toll free and Number Portability databases in the same manner as it provides such access to itself and its Bell Atlantic subscribers;

14.2.1.6 Tandem Switching shall provide all trunk interconnections, where available, in Bell Atlantic's access tandems; and

14.2.1.7 Tandem Switching shall accept connections (including the necessary signaling and trunking interconnections) between end offices, IXCs, ITCs, CAPs and CLEC switches that subtend/interconnect at the same tandem.

- 14.2.2 Tandem Switching shall provide local tandeming functionality between two End Offices that subtend/interconnect at the same tandem, including two offices belonging to different CLECs (e.g., between an MCI end office and the end office of another CLEC).
- 14.2.3 Tandem Switching shall preserve CLASS/LASS features and Caller ID as traffic is processed on SS7 trunk groups at Parity. Additional signaling information and requirements are provided in Section 12.
- 14.2.4 Bell Atlantic shall perform routine testing and fault isolation on the underlying switch that is providing Tandem Switching and all its interconnections at Parity with its performance of such testing for its own subscriber services. When commonly available, the results of the testing shall be made immediately available to MCI.
- 14.2.5 Tandem Switching shall control congestion using capabilities such as automatic congestion control and network routing overflow. Congestion control provided or imposed on MCI traffic shall be at Parity with controls being provided or imposed on Bell Atlantic traffic for itself and its subscribers.
- 14.2.6 Tandem Switching shall route calls to Bell Atlantic or MCI endpoints or platforms for which Tandem Switching is provided. For Tandem Switching with unbundled Common Transport, call routing including overflow is accomplished as Bell Atlantic's network normally routes the calls. For Tandem Switching with unbundled Dedicated Transport, specific routing may be requested through the BFR process.
- 14.2.7 Tandem Switching shall process originating toll-free traffic received from an MCI local switch.
- 14.2.8 In support of AIN triggers and features, Tandem Switching shall provide SSP capabilities at Parity with Bell Atlantic's provision of these capabilities for its own subscribers under the same circumstances when these capabilities are not available from Local Switching.
- 14.2.9 The Local Switching and Tandem Switching functions may be combined in an office. If this is done, both Local Switching and Tandem Switching shall provide all of the functionality required of each of those Network Elements in this Agreement.

14.3 Interface Requirements

- 14.3.1 Tandem Switching shall interconnect, with direct trunks, to all carriers with which Bell Atlantic interconnects.

14.3.1.1 Transit traffic that is originated by an ITC or wireless carrier shall be settled in accordance with the terms of an appropriate IntraLATA Telecommunications Services Settlement Agreement between the Parties substantially in the form appended hereto as Exhibit H. Meet-Point Billing compensation arrangements as described in Section 3 of Attachment VIII shall be utilized for compensation for the joint handling of toll traffic.

14.3.1.2 Bell Atlantic expects that most networks involved in transit traffic will deliver each call to each involved network with CCS and the appropriate TCAP message to facilitate full interoperability of those services supported by Bell Atlantic and billing functions. In all cases, each Party shall follow the Exchange Message Record ("EMR") standard and exchange records between the Parties and with the terminating carrier to facilitate the billing process to the originating network.

14.3.1.3 Transit traffic to and from MCIIm shall be routed over the traffic exchange trunks.

14.3.2 Bell Atlantic shall provide signaling necessary to provide Tandem Switching with feature functionality impacts and effects at Parity.

Section 15. Additional Requirements

This Section 15 of Attachment III sets forth the additional requirements for Network Elements which Bell Atlantic agrees to offer to MCIIm under this Agreement.

15.1 Cooperative Testing

15.1.1 Definition:

"Cooperative Testing" means that both Bell Atlantic and MCIIm shall cooperate with reasonable requests from the other to (i) ensure that the Network Elements and ancillary functions and additional requirements being provided to MCIIm by Bell Atlantic are in compliance with the requirements of this Agreement, (ii) test the overall functionality of various Network Elements and ancillary functions provided by Bell Atlantic to MCIIm in Combination with each other or in Combination with other equipment and facilities provided by MCIIm or third-parties, (iii) test the overall functionality of services provided by third-parties involving or combining Network Elements provided by Bell Atlantic and services provided by MCIIm, and (iv) ensure that billing data can be provided to MCIIm and Bell Atlantic.

15.1.2 Requirements

Within forty-five (45) days after the Effective Date of this Agreement, MCI and Bell Atlantic will agree upon a process to resolve technical issues relating to interconnection of MCI's network to Bell Atlantic's network and Network Elements and ancillary functions. The agreed upon process shall include procedures for escalating disputes and unresolved issues up through higher levels of each Party's management. If MCI and Bell Atlantic do not reach agreement on such a process within forty-five (45) days, any issues that have not been resolved by the Parties with respect to such process shall be submitted to the procedures set forth in Part A, Section 24 (Dispute Resolution Procedures) of this Agreement unless both Parties agree to extend the time to reach agreement on such issues.

15.1.2.1 Where mutually agreed (*e.g.*, POT bays in the common area associated with physical Collocation), Bell Atlantic shall provide MCI access for testing MCI facilities at interfaces between a Bell Atlantic Network Element, or at interfaces between a Bell Atlantic Combination, and MCI equipment or facilities. This access shall be available seven (7) days per week, twenty-four (24) hours per day.

15.1.2.2 When mutually agreed, Bell Atlantic shall temporarily provision MCI designated Local Switching features (*e.g.*, customized routing) for testing. MCI and Bell Atlantic shall mutually agree on the procedures to be established between Bell Atlantic and MCI to expedite such provisioning processes for feature testing.

15.1.2.3 Upon reasonable request, Bell Atlantic and MCI shall provide technical staff to meet with each other to provide required support for Cooperative Testing.

15.1.2.4 Dedicated Transport and ULL may experience alarm conditions due to in-progress tests. When an entire Bell Atlantic facility is dedicated to MCI services, Bell Atlantic shall not remove such facility from service without obtaining MCI's prior approval.

15.1.2.5 Bell Atlantic shall provide to MCI electronic access to 105 type responders, 100-type test lines, or 102-type test lines associated with any circuits under test.

15.1.2.6 MCI and Bell Atlantic shall endeavor to complete Cooperative Testing as stated in Attachment VIII.

15.1.2.7 MCI may accept or reject the Network Element ordered by MCI if, upon completion of cooperative acceptance testing, the tested Network Element does not meet the requirements stated in applicable

technical references included in Appendix 1 (Technical Reference Schedule) of Part A.

15.2 Protection, Restoration, and Disaster Recovery

15.2.1 Scope

This Section refers specifically to requirements on the use of redundant network equipment and facilities for protection, restoration, and disaster recovery.

15.2.2 Requirements

15.2.2.1 Bell Atlantic shall provide protection, restoration, and disaster recovery capabilities at Parity with those capabilities provided for their own services, facilities and equipment (*e.g.*, equivalent circuit pack protection ratios, facility protection ratios).

15.2.2.2 Bell Atlantic shall provide Network Elements equal priority in protection, restoration, and disaster recovery as provided to their own services, facilities and equipment.

15.2.2.3 Bell Atlantic shall provide Network Elements equal priority in the use of spare equipment and facilities as provided to their own services, facilities and equipment.

15.2.2.4 Bell Atlantic shall restore Network Elements which are specific to MCI end user subscribers on a priority basis as MCI may designate at Parity.

15.3 Synchronization

15.3.1 Definition:

“Synchronization” is the function which keeps all digital equipment in a communications network operating at the same average frequency. With respect to digital transmission, information is coded into discrete pulses. When these pulses are transmitted through a digital communications network, all synchronous Network Elements are traceable to a stable and accurate timing source. Network synchronization is accomplished by timing all synchronous Network Elements in the network to a stratum 1 source so that transmission from these network points have the same average line rate.

15.3.2 Technical Requirements

The following requirements are applicable to the case where Bell Atlantic provides synchronization services to equipment that MCIIm owns and operates within a Bell Atlantic location. In addition, these requirements apply to synchronous equipment that is owned by Bell Atlantic and is used to provide a Network Element to MCIIm. Synchronization services by Bell Atlantic shall be subject to rates and charges to be determined.

15.3.2.1 The synchronization of clocks within digital networks is divided into two parts: intra-building and inter-building. Within a building, a single clock is designated as the building integrated timing supply ("BITS"), which provides all of the DS1 and DS0 synchronization references required by other clocks in such building. This is referred to as intra-building synchronization. The BITS receives synchronization references from remotely located BITS. Synchronization of BITS between buildings is referred to as inter-building synchronization.

15.3.2.2 To implement a network synchronization plan, clocks within digital networks are divided into four stratum levels. All clocks in strata 2, 3, and 4 are synchronized to a stratum 1 clock, that is, they are traceable to a stratum 1 clock. A traceable reference is a reference that can be traced back through some number of clocks to a stratum 1 source. Clocks in different strata are distinguished by their free running accuracy or by their stability during trouble conditions such as the loss of all synchronization references.

15.3.2.2.1 **Intra-Building**

15.3.2.2.1.1 Within a building, there may be different kinds of equipment that require synchronization at the DS1 and DS0 rates. Synchronization at the DS1 rate is accomplished by the frequency synchronizing presence of buffer stores at various DS1 transmission interfaces. Synchronization at the DS0 rate is accomplished by using a composite clock signal that phase synchronizes the clocks. Equipment requiring DS0 synchronization frequently does not have adequate buffer storage to accommodate the phase variations among different equipment. Control of phase variations to an acceptable level is accomplished by externally timing all interconnecting DS0 circuits to a single clock source and by limiting the interconnection of DS0 equipment to less than 1,500 cable feet. Therefore, a BITS shall provide DS1 and composite clock signals when the appropriate composite signal is a 64-kHz 5/8th duty cycle, return to zero with a bipolar violation every eighth pulse ("B8RZ").

15.3.2.2.2 Inter-Building

15.3.2.2.2.1 Bell Atlantic shall provide inter-building synchronization at the DS1 rate, and the BITS shall accept the primary and secondary synchronization links from BITS in other buildings. From hierarchical considerations, the BITS shall be the highest stratum clock within the building and Bell Atlantic shall provide operations capabilities (this includes, but is not limited to: synchronization reference provisioning; synchronization reference status inquiries; timing mode status inquiries; and alarm conditions).

15.3.3 Synchronization Distribution Requirements

15.3.3.1 Central Office BITS shall contain redundant clocks meeting or exceeding the requirements for a stratum 3 enhanced clock as specified in ANSI T1.101-1994 and Bellcore *GR-1244 Clocks for the Synchronized Network: Common Genetic Criteria*.

15.3.3.2 Central Office BITS shall be powered by primary and backup power sources.

15.3.3.3 If both reference inputs to the BITS are interrupted or in a degraded mode (meaning off frequency greater than twice the minimum accuracy of the BITS, loss of frame, excessive bit errors, or in alarm indication signal), then the stratum clock in the BITS shall provide the necessary bridge in timing to allow the network to operate without a frame repetition or deletion (slip free) with better performance than 1 frame repetition or deletion (slip) per week.

15.3.3.4 DS1s multiplexed into a SONET synchronous payload envelope within an STS-n (where n is defined in ANSI T1.105-1995) signal shall not be used as reference facilities for network synchronization.

15.3.3.5 The total number of Network Elements cascaded from the stratum 1 source shall be minimized.

15.3.3.6 A Network Element shall receive the synchronization reference signal only from another Network Element that contains a clock of equivalent or superior quality (stratum level).

15.3.3.7 Bell Atlantic shall select for synchronization those facilities shown to have the greatest degree of availability (absence of outages).

15.3.3.8 Where possible, all primary and secondary synchronization facilities shall be physically diverse (this means the maximum feasible physical separation of synchronization equipment and cabling).

15.3.3.9 No timing loops shall be formed in any combination of primary and secondary facilities.

15.3.3.10 An operations support system ("OSS") shall continuously monitor the BITS for synchronization related failures or degradation.

15.3.3.11 An OSS shall continuously monitor all equipment transporting synchronization facilities for synchronization related failures or degradation.

15.3.3.12 For non-SONET equipment, Bell Atlantic shall provide synchronization facilities which, at a minimum, comply with the standards set forth in ANSI T1.101-1994.

15.3.3.13 All equipment approved for deployment in Bell Atlantic's network shall meet Bellcore GR-253 and GR-1244 requirements.

Section 16. Basic 911 and E911

See Attachment VIII, Section 6.1.1.

Section 17. Directory Assistance Data

See Attachment VIII, Section 6.1.7.

EXHIBIT A

TR 72565
Issue 2, December 1996

Bell Atlantic Technical Reference

**Basic Unbundled Loop Services
Technical Specifications**

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Printed in U.S.A.

July 2, 1997

ATTACHMENT III

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR-72565
Issue 2, December 1996**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of Basic Unbundled Loop Services. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

Bell Atlantic reserves the right to revise this technical reference for any reason including, but not limited to, changes in tariffs, laws, or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to herein. Liability for difficulties arising from technical limitations or changes herein is disclaimed.

Bell Atlantic reserves the right not to offer any or all of these services and to withdraw any or all of them at any future time. In addition, the services described herein are based on available facilities and equipment and may not be universally available.

With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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EXHIBIT A

Bell Atlantic Network Services, Inc.
Technical Reference

TR 72565
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1. General

1.01 This document provides the technical specifications for the Basic Unbundled Loop Services (BULS) offered by Bell Atlantic in the co-carrier section of local exchange tariffs.

1.02 This technical reference has been reissued to provide a revised leakage specification and to provide interface code information. In addition, several editorial changes have been made.

1.03 BULS enable Other Telephone Companies (OTC) collocated in a Bell Atlantic (BA) Central Office (CO) to connect to analog subscriber loops to provide loop-start switched access services to end-user locations.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the BULS loop. In the future, Bell Atlantic may offer transport services for analog unbundled loops, however such transport will not be available for BULS. In instances where an OTC desires transport for a loop-start analog unbundled loop, the OTC must order Analog Unbundled Loop Service with Customer Specified Signaling (AULSCSS) and specify loop-start signaling. The technical specifications for AULSCSS may be found in BA TR72570.

2. Service Description

A. General

2.01 The description, terms and conditions, rates, regulations, and Universal Service Order Codes (USOCs) for Basic Unbundled Loop Services are contained in applicable tariffs or contracts.

2.02 Basic Unbundled Loop Services (BULS) provide the customer with a voice grade transmission channel suitable for loop-start signaling and the transport of analog voice grade signals. The channel is between the Central Office Distributing Frame (CODF) termination of OTC equipment in a BA Central Office (CO) and the Rate Demarcation Point (RDP) at an end-user customer location.

2.03 BULS is provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

B. Physical Characteristics

2.04 The interface at the CODF termination is 2-wire and the interface at the RDP is 2-wire. At each interface one conductor is called tip and the other conductor is called ring. A typical BULS configuration is shown in Figure 2-1.

RDP

OTC-POT

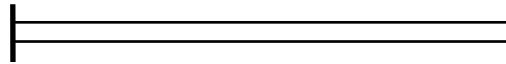


Figure 2-1: Typical BULS configuration

2.05 The transmission channel between the BULS 2-wire interfaces is effective 2-wire. An effective 2-wire channel may be entirely 2-wire or it may contain a 4-wire facility portion (such as a Digital Loop Carrier) with a 2-wire metallic extension to the end-users RDP. The transmission channel is suitable for the transport of analog voice grade signals between approximately 300 and 3000 Hz.

2.06 BULS may be provided using a variety of loop transmission technologies, including but not limited to, metallic cable, metallic cable based digital loop carrier, and fiber optic digital loop carrier systems.

2.07 When digital loop carrier (DLC) is used to provide BULS, the DLC will provide loop-start signaling at the RDP that meets the network requirements in ANSI T1.401-1993 [1].

C. Service Elements

2.08 BULS ordinarily consists of two elements:

(1) the CODF wire and tie cable(s) between the CODF termination of the collocated OTC equipment and the CODF termination of a subscriber loop; and,

(2) a subscriber loop facility between the CODF and the end-user customer's RDP. The loop is either:

(a) a metallic facility consisting of cable and wire between the CODF and the RDP; or,

(b) a universal DLC channel with loop start (LS) signaling capability. The DLC channel consists of:

- CO cabling between the CODF and a DLC Central Office Terminal (COT) equipped with a LS open-end channel unit;

- a fiber or metallic facility from the DLC COT to the DLC Remote Terminal (RT) equipped with a LS closed-end channel unit; and,

- cable and wire between the DLC RT and the RDP.

D. Compatibility Considerations

2.09 BULS utilizes subscriber loop facilities that have been designed for Plain Ordinary (analog) Telephone Service (POTS). In most cases, BULS should be suitable for loop-start single line residential service and loop-start single line business service. POTS qualified loops may not be suitable for data or other special services however.

2.10 Bell Atlantic does not guarantee that BULS will be suitable for analog data (e.g., V.32, V.32bis, V.34, etc.). If a customer is able to send and receive data, Bell Atlantic will not guarantee a data rate.

2.11 Special services such as Centrex, Foreign Exchange, Secretarial, and Wide Area Telephone Service lines may have service requirements that are more stringent than POTS. If such services are provided using BULS and electronic transmission and signaling enhancement equipment is required to meet the more stringent requirements, the OTC will be responsible for providing such enhancement equipment.

2.12 Bell Atlantic will work with the OTC to resolve facility problems should the BULS loop facility require enhancement equipment to support loop-start POTS voice service.

3. Element Specifications

A. General

3.01 Two elements are always used with Basic Unbundled Loop Services. They are: CODF wire and tie cable(s), and subscriber loop facilities. A third element, electronic transmission and signaling enhancement equipment, is sometimes used with BULS. The following sections contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of co-located OTC equipment to the CODF termination of metallic subscriber loops, DLC COTs, and electronic transmission and signaling enhancement equipment.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 1500 feet.

3.04 The direct-current resistance between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

3.05 The 1kHz loss measured on the CODF wiring and tie cables when measured between 900 ohm impedances should be .5 dB or less.

3.06 The C-message noise measured on the CODF wiring and tie cables shall be 20 dBnC or less.

C. Subscriber Loop Facilities

3.07 Subscriber loop facilities consist of feeder and distribution plant between the CODF and the end-user customer's RDP. Feeder plant uses a variety of transmission technologies, including but not limited to, twisted-pair metallic cables, twisted-pair metallic cable based digital loop carrier, and fiber optic based digital loop carrier. Distribution plant usually consists of multipair metallic cables. Additional information about subscriber loops may be found in Bellcore SR-TSV-002275 [2] and appendix A of this document.

3.08 A twisted-pair metallic loop facility consists entirely of metallic cable and wire between the CODF and the end-user customer's RDP. Most metallic loops consist of multipair cables, laid out on aerial, underground, or buried routes to suit the needs of a particular community. The metallic loop facility may be loaded or non-loaded. It may also have bridged-tap. Loaded bridged-tap and bridged tap between load coils are not permitted.

3.09 A universal DLC facility consists of CO cabling between the CODF and a DLC COT, OSP fiber or metallic cable facilities from the DLC COT to the DLC RT, and cable and wire between the DLC RT and the end-user customer's RDP. Some DLC may not support enhanced services such as distinctive ringing, forward disconnect, caller ID, etc.

3.10 Subscriber loop facilities have been designed on a global basis primarily to accommodate POTS and guarantee that loop transmission loss is statistically distributed and that no single loop exceeds the signaling range of the CO.

3.11 Prior to 1980, loops were designed using one of the following design plans: Resistance Design (RD), Long Route Design (LRD), or Unigauge Design (UD). From 1980 to 1986, the Modified Resistance Design (MRD), Modified Long Route Design (MLRD), and Concentrated Range Extension with Gain (CREG) plans were applied on a going-forward basis (i.e., retroactive redesign was not implemented). In 1986, the Revised Resistance Design (RRD) plan was applied on a going-forward basis. Appendix A provides a summary of the various loop design plans.

3.12 Most metallic loop facilities (98%) were designed using the RD, MRD, or RRD design rules. The RRD design rules currently in use limit the loop resistance to the design range of the CO switch (1300 or 1500 ohms) or 1500 ohms whichever is less. The 1 kHz loss of RRD loops is 8.5 dB or less.

3.13 A small number of loops have been designed using the LRD, MLRD, UD, and CREG design plans. These loops are long (15+kft) and have high resistance (up to 2800 or 3600 ohms) and high loss (up to 13 dB without gain). Such loops require electronic transmission and signaling range enhancement equipment to accommodate POTS. The LRD and MLRD design plans use Range Extension with Gain (REG) equipment that is either dedicated to each loop or hard-wired to the BA CO line equipment. In the latter case, the hard-wired REG is not available for use with BULS.

3.14 The REG equipment used with CREG designed loops is implemented behind a stage of switching concentration in the associated CO switch. This permits REG equipment to be shared

with other loops working out of the same CO switch. For this reason, the REG associated with CREG designed loops is not available for use with BULS. Bell Atlantic will work with the OTC to explore available options when an LRD, MLRD, or CREG designed loop requires enhancement to support BULS.

3.15 The direct-current resistance of a metallic loop facility measured between the CODF and the RDP shall be 1520 ohms or less if the facility was designed using RD, MRD, or RRD rules. The resistance will be 2500 ohms or less if the facility was designed using UD rules, 2800 ohms or less if the facility was designed using CREG or MLRD rules, and 3600 ohms or less if the facility was designed using LRD rules.

3.16 The 1kHz loss of a metallic loop facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8.5 dB or less if the loop was designed using RD, MRD, or RRD rules. The loss will be 10 dB or less if the loop was designed using LRD or MLRD rules, and 13 dB or less if the loop was designed using UD or CREG rules.

3.17 The C-message noise measured on a metallic subscriber loop at the RDP shall be less than 30 dBrnC.

3.18 The leakage resistance between the tip conductor and ground and the ring conductor and ground shall each be greater than 100 K ohms.

3.19 The longitudinal noise or power influence (PI) measured per IEEE Std 743-1984 [3] on the metallic portion of a loop should be less than 90 dBrnC.

3.20 The longitudinal balance of a metallic subscriber loop is defined as the longitudinal noise (in dBrnC) minus the C-message noise (in dBrnC). The longitudinal balance shall be >50 dB.

3.21 DLC facilities shall provide a battery feed to the RDP. When the RDP is terminated by a direct-current resistance of 430 ohms or less, the loop current shall be 20 mA or greater.

3.22 The 1kHz loss of a DLC facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8 dB or less.

3.23 The C-message noise measured on a DLC facility shall be 23 dBrnC or less.

3.24 The C-Notched noise measured on a DLC facility shall be 36 dBrnC or less with a -13 dBm0 1004 Hz holding tone.

3.25 The impulse noise measured on a DLC facility shall be no more than 15 counts in 15 minutes with a threshold of 59 dBrnC.

3.26 Subscriber loop facilities shall meet all applicable design specifications. (See appendix A)

3.27 The echo return loss and singing return loss of a subscriber loop facility measured with a 900 ohm + 2.16 uf reference at the CODF and a 600 ohm + 2.16 uf termination at the RDP shall be equal to or greater than 5.5 dB and 2.5 dB respectively.

D. Transmission and Signaling (T&S) Enhancement Equipment

3.28 Transmission and signaling (T&S) enhancement equipment is sometimes used with BULS. Several different types of T&S equipment can be used. Examples are: transmission repeaters; loop signaling repeaters; and signaling battery boost equipment.

3.29 T&S equipment is often used with BULS loops designed to LRD, MLRD, UD, and CREG rules. Such devices are often called Range Extenders with Gain (REGs).

3.30 The impedance of T&S equipment shall be a nominal 900 ohms when used in the CO and a nominal 600 ohms when used at or near the RDP.

3.31 T&S equipment shall provide 20 mA or more of loop current when the RDP is terminated by a direct-current resistance of 430 ohms or less.

3.32 The C-message noise measured on T&S equipment shall be 20 dBmC or less.

3.33 The C-Notched noise measured on T&S equipment shall be 36 dBmC or less with a -13 dBm0 1004 Hz holding tone.

4. Service Specifications

4.01 The overall end-to-end BULS service is from the CODF termination of the OTC equipment to the end-user customer's RDP. The compatible BULS Network Channel Interface (NCI) code combination is shown in Figure 4-1.

Figure 4-1: Compatible BULS NCI Code Combinations

EU-POT	OTC-POT
02LS2	02QC3.OOD

4.02 Parameters are tested at the RDP in response to trouble reports or when additional testing is purchased.

4.03 Acceptance Limits (AL) and Immediate Action Limits (IAL) are shown in Figure 4-2 for loops designed to RD, MRD, and RRD rules. The resistance and loss parameters of loops designed to LRD, MLRD, UD, and CREG rules are in Appendix A.

Figure 4-2: BULS Acceptance Limits (AL) and Immediate Action Limits (IAL)

PARAMETER	AL	IAL
1004 Hz Loss	< 8.5 dB	> 10.0 dB

Resistance	< 1520 ohms	> 1520 ohms
Leakage	> 100 kilohms	< 100 kilohms
C-Message Noise	< 30 dBmC	> 30 dBmC
Power Influence	< 90 dB	> 90 dB
Loop Current (DLC only)	> 20 mA	< 20 mA

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Co-located OTC equipment used for interconnection with BULS shall meet all of the applicable generic equipment requirements in Bellcore GR-63-CORE [4] and Bellcore GR-1089-CORE [5].

5.02 Co-located OTC equipment used for interconnection with BULS shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Requirements that are not specified in this document, contractual technical requirements, or other applicable documents, shall meet the manufacturer's requirements consistent with industry standards.

5.03 The open circuit tip-to-ring dc voltage that collocated OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Co-located OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

5.05 Co-located OTC equipment shall not deliver more than 150 mA of loop current to any load via BA VF cable.

5.06 The noise limits for BULS require collocated OTC equipment to have a longitudinal balance of >60 dB.

5.07 The loss and noise limits for BULS require collocated OTC equipment to have a nominal impedance of 900 ohms.

5.08 The applied power level of any transmitted signal on BULS averaged over 3 seconds shall not exceed -13 dBm0.

5.09 Loops may be exposed to electrical surges from lightning and commercial power system disturbances. Despite protective devices on the CODF, some of these disturbances are likely to reach OTC equipment. OTC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

5.10 The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. This device has an upper 3c limiting voltage of 1000 volts peak under surge conditions and 600 volts rms

(800 peak) at 60 Hz. OTC equipment connected to BULS loops protected by carbon blocks may be subjected to voltages up to these levels. Unexposed COs may not have primary protection, and OTC equipment not coordinating with carbon blocks may need protection in these locations.

5.11 If the subscriber loop facility is exposed to commercial ac power, the CO protector may also include 350 mA heat coils for limiting the current that is permitted to flow to CO equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

B. OTC Equipment CO Cabling Requirements

5.12 The voice grade CO cabling used to terminate OTC equipment on the CODF shall use twisted-pair conductors.

5.13 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.14 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [6] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.15 All CO cabling between OTC equipment and the CODF shall be equipped with connectors at each end. The type of connectors shall be specified by the BA CO Engineer.

5.16 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

5.17 The C-message noise measured on the CO cabling between the OTC equipment and the CODF shall be 20 dBmC or less.

6. References

A. Definitions

Basic Unbundled Loop Services (BULS)

A basic unbundled loop service is a service that provides a basic untreated or unconditioned loop-start channel between the Bell Atlantic central office distributing frame termination of collocated equipment belonging to an OTC and the rate demarcation point at a customer location.

Battery Boost

A series aiding battery source that extends the signaling range of current sensing equipment.

Bridged tap

Any branch section of a cable pair, or any extension of a cable pair beyond the point where it is used, in which no direct current flows when customer equipment is connected and used.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and end-user annoyance to tones as a function of frequency.

C-Notched Noise

The C-message frequency-weighted noise on a channel with a holding tone that is removed at the measuring end through a notch (very narrow band) filter.

Channel

An electrical, or photonic communications path between two or more points of transmission.

Closed End

The end of a switched access service that receives ringing and dial tone and transmits address signals.

dBm

A unit for expression of power level in decibels relative to one milliwatt.

dBm0

Power level referred to, or measured at, a zero transmission level point (0TLP).

dBm

A unit used to express noise power relative to one picowatt (-90 dBm).

dBmC

Noise power measured with C-message weighting expressed in dBm.

dBmC0

Noise power in dBmC referred to, or measured at, a zero transmission level point (0TLP).

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Facilities

Any cable, poles, conduit, microwave, or carrier equipment, central office distributing frames, central office switching equipment, computers (both hardware and software), business machines, etc., utilized to provide the services offered by a telephone company.

Impulse Noise

Any momentary occurrence of noise on a channel that significantly exceeds the normal noise peaks. Impulse noise is analyzed by counting the number of occurrences that exceed a threshold.

Leakage

The resistance between the conductors of an insulated metallic pair or the resistance between each conductor of an insulated metallic pair and ground.

Loop

A transmission channel between a end-user customer location and a BA CO that is used as a transmission channel for telephone company services.

Loop-start (LS) Signaling

A type of switched access line signaling in which the network provides a battery source. To initiate a call, customer premises equipment will provide a loop closure that causes dc loop current to flow which the network will detect.

Open End

The end of a switched access service that transmits ringing and dial tone and receives address signaling.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Plain Ordinary Telephone Service (POTS)

The basic single line switched access service offered by local exchange carriers to residential and business customers. POTS uses loop-start signaling.

Power Influence (PI)

The power of a longitudinal signal induced in a metallic loop by an electromagnetic field emanating from a conductor or conductors of a power system. PI is also called longitudinal noise or noise-to-ground.

Rate Demarcation Point (RDP)

The point at which Bell Atlantic network access recurring charges and responsibility stop and beyond which customer responsibility begins. The RDP is the point of demarcation and/or interconnection between a Bell Atlantic subscriber loop facility and end-user premises cabling or terminal equipment. Bell Atlantic facilities at, or constituting, the rate demarcation point shall consist of wire or a jack conforming to Subpart F of Part 68 of FCC rules.

Signaling Repeater

Loop enhancement equipment that detects and regenerates signaling states.

Transmission Repeater

Loop enhancement equipment that amplifies and equalizes voice frequency signals.

Unbundled Business Loop Service

The product name for a basic unbundled loop service offered in BA-MD.

Unbundled Loop

A transmission channel between a end-user customer location and a LEC CO that is not a part of, or connected to, other LEC services.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ANSI	American National Standards Institute
BA	Bell Atlantic
BULS	Basic Unbundled Loop Service
CO	Central Office
CODF	Central Office Distributing Frame
COT	Central Office Terminal
CREG	Concentrated Range Extension with Gain
DLC	Digital Loop Carrier
EU	End User
EU-POT	End User Point Of Termination
FCC	Federal Communications Commission
IEEE	International Electrical and Electronic Engineers
LRD	Long Route Design
LS	Loop-Start
MLRD	Modified Long Route Design
MRD	Modified Resistance Design
NEC	National Electric Code
OTC	Other Telephone Company
OTC-POT	Other Telephone Company Point Of Termination
PI	Power Influence
POTS	Plain Ordinary Telephone Service
RD	Resistance Design
RDP	Rate Demarcation Point
REG	Range Extender with Gain
RRD	Revised Resistance Design
RT	Remote Terminal
T&S	Transmission and Signaling
UD	Unigauge Design
UL	Underwriter's Laboratory
USDL	United States Department of Labor

July 2, 1997

ATTACHMENT III

VF Voice Frequency
VG Voice Grade

7. **Bibliography**

1- ANSI T1.401-1993, American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling.

2- Special Report SR-TSV-002275, Issue 2, BOC Notes on the LEC Networks - 1990. Bellcore; 1991.

3- IEEE Std 743-1984, IEEE Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice frequency Circuits.

4- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 2, (Bellcore, October 1995).

5- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 2 (Bellcore, November 1994).

6- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

Appendix A: Loop Design Rules

- 1- Resistance Design (RD): (96% of loops designed prior to 1980)
 - 0 - 1300 ohms, 8.5 dB max
 - Max BT on NL cable = 6 kft
 - POTS = No loading to 18 kft, H88 loading beyond 18 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Max end section plus BT = 15 kft
 - No loaded BT, No BT between load coils.

- 2- Long Route Design (LRD): (3% of loops designed prior to 1980)
 - 1301 - 3600 ohms, 10 dB max
 - Applicable > 18 kft, full H88 loading
 - Gain required for loops over 1600 ohms
 - Max end section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 3- Uniguage Design (UD): (1% of loops designed prior to 1980)
 - 0 - 2500 ohms, 13 dB max
 - No loading to 24 kft, partial H88 loading beyond 24 kft
 - Gain applied to loops > 15 kft
 - Max BT on NL cable = 6 kft
 - End section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 4- Modified Resistance Design (MRD): (1980 - 1986)
 - 0 - 1500 ohms, 8.5 dB max
 - Max BT on NL cable = 6 kft
 - Total NL cable plus BT = 15 kft
 - POTS = No loading to 15 kft, full H88 loading beyond 15 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 5- Modified Long Route Design (MLRD): (1980 - 1986)
 - 1501 - 2000 ohms = Res Zone 18
 - 2001 - 2800 ohms = Res Zone 28
 - RZ 18 = Range Extension plus 3 dB of gain, 10 dB max
 - RZ 28 = Range Extension plus 6 dB of gain, 10 dB max
 - Full H88 loading
 - End section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 6- Concentrated Range Extension with Gain (CREG): (1980 - 1986, 1A & 2A ESS Only)
 - 0 - 2800 ohms, 13 dB max
 - No loading to 15 kft, full H88 loading beyond 15 kft
 - Range extension with gain (REG) required for all loops over 1500 ohms
 - REG provided behind a stage of switching concentration
 - Total NL cable plus BT = 15 kft max
 - Max NL cable BT = 6 kft
 - Loaded end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 7- Revised Resistance Design: (after 1986)
 - 0 - 18 kft = 1300 ohms max
 - 18 - 24 kft = 1500 ohms max (CO permitting)
 - No loading to 18 kft, full H88 loading between 18 - 24 kft
 - Max NL cable plus BT = 18 kft
 - Max BT on NL cable = 6 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

EXHIBIT B

72570
Issue 1, December 1996

Bell Atlantic Technical Reference

**Analog Unbundled Loop Service with
Customer Specified Signaling
Technical Specifications**

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July 2, 1997

ATTACHMENT III

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR-72570
Issue 1, December 1996**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of Analog Unbundled Loop Service with Customer Specified Signaling. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

Bell Atlantic reserves the right to revise this technical reference for any reason including, but not limited to, changes in tariffs, laws, or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to herein. Liability for difficulties arising from technical limitations or changes herein is disclaimed.

Bell Atlantic reserves the right not to offer any or all of these services and to withdraw any or all of them at any future time. In addition, the services described herein are based on available facilities and equipment and may not be universally available.

With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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EXHIBIT B

Bell Atlantic Network Services, Inc.
Technical Reference

TR-72570
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Bell Atlantic
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1. General

1.01 This technical reference provides the technical specifications associated with the Analog Unbundled Loop Service with Customer Specified Signaling that is offered by Bell Atlantic. The service may not be universally available.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Analog Unbundled Loop Services with Customer Specified Signaling (AULSCSS) enable Other Telephone Companies (OTC) collocated in a Bell Atlantic Central Office (CO) to connect to analog subscriber loops to provide switched access services to end-user locations. AULSCSS provides a 2-wire or 4-wire channel that is suitable for the transport of analog services that use various types of signaling.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the AULSCSS service. In the future, Bell Atlantic may offer transport services for AULSCSS. In that case, the technical specifications associated with the transport service should be consulted.

2. Service Description

A. General

2.01 The description, terms, conditions, rates, regulations, and Universal Service Order Codes (USOCs) for AULSCSS are contained in applicable tariffs or contracts.

2.02 AULSCSS provides the customer with a voice grade transmission channel between the Central Office Distributing Frame (CODF) termination of OTC equipment in a Bell Atlantic CO and the Rate Demarcation Point (RDP) at an end-user customer location.

2.03 AULSCSS channels are suitable for the transport of analog voice grade signals between 300 and 3000 Hz.

2.04 A 2-Wire AULSCSS channel will support either loop-start, ground-start, loop reverse-battery, or customer-provided inband signaling. A 4-wire AULSCSS channel will support either loop-start, ground-start, loop reverse-battery, customer-provided inband, or duplex signaling.

2.05 AULSCSS is provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

B. Physical Characteristics

2.06 AULSCSS channels can be effective 2-wire or 4-wire. When the OTC or RDP interface is 2-wire, one conductor is called tip and the other conductor is called ring. When the OTC or RDP interface is 4-wire the conductors of the OTC or End-User transmit pair are called tip and ring and the conductors of the OTC or End-User receive pair are called tip 1 and ring 1.

2.07 An effective 2-wire AULSCSS channel has 2-wire interfaces at both the OTC POT and the RDP. In addition, an effective 2-wire AULSCSS channel consists entirely of 2-wire facilities or a combination of 2-wire and 4-wire facilities. A typical 2-wire AULSCSS configuration is shown in Figure 2-1.

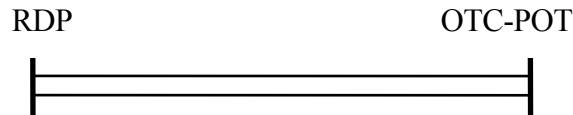


Figure 2-1: Typical 2-Wire AULSCSS configuration

2.08 A 4-wire AULSCSS channel has 4-wire interfaces at both the OTC POT and the RDP. In addition, the 4-wire AULSCSS channel consists entirely of 4-wire facilities with no 2-wire segments. A typical 4-wire AULSCSS configuration is shown in Figure 2-2.

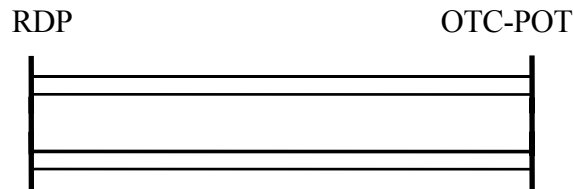


Figure 2-2: Typical 4-Wire AULSCSS configuration

2.09 AULSCSS channels may be provided using a variety of subscriber loop transmission technologies, including but not limited to, metallic cable, metallic cable based digital loop carrier, and fiber optic digital loop carrier systems.

C. Service Elements

2.10 AULSCSS ordinarily consists of two elements:

- (1) the CODF wire and tie cable(s),
- (2) a subscriber loop facility between the CODF and the end-user customer's RDP. The loop facility is either;

(a) a metallic facility consisting of cable and wire between the CODF and the RDP;
or,

(b) a DLC facility channel with loop start (LS), ground start (GS), loop reverse battery (RV), or duplex (DX) signaling capability, or transmission-only (TO) capability for customer inband signaling applications, that consists of,

- CO cabling between the CODF and a DLC COT that is equipped with an LS, GS, RV, DX, or TO channel unit,
- a fiber or metallic facility from the DLC COT to the DLC RT that is equipped with an LS, GS, RV, DX, or TO channel unit, and,
- cable and wire between the DLC RT and the RDP.

D. Compatibility Considerations

2.11 Electronic transmission and signaling (T&S) enhancement equipment is not ordinarily used with AULSCSS. Examples of T&S are:

- (a) a transmission repeater, or
- (b) a transmission repeater with a signaling repeater, or
- (c) a transmission repeater with signaling battery boost equipment.

2.12 If the OTC needs T&S equipment with AULSCSS to accommodate an OTC service, the OTC will be responsible for providing any such T&S equipment.

3. Service Element Design Criteria

A. General

3.01 Two elements are always used with AULSCSS. They are: CODF wire and tie cable(s), and subscriber loop facilities. The sections which follow contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of OTC equipment to the CODF termination of metallic subscriber loops, DLC COTs, and electronic transmission and signaling enhancement equipment.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 1500 feet.

3.04 The direct-current resistance between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 125 ohms. This is equal to 1500 or less feet of 26 gauge cable.

3.05 The 1kHz loss between the CODF termination of the OTC equipment and the CODF termination of a subscriber loop in the same CO, when measured between 900 ohm impedances, should be less than .85 dB.

3.06 The C-message noise measured on the wiring and tie cables between the CODF termination of the OTC equipment and the CODF termination of a subscriber loop in the same CO shall be 20 dBrnC or less.

C. Subscriber Loop Facilities

3.07 Subscriber loop facilities consist of feeder and distribution plant between the CODF and the end-user customer's RDP. Feeder plant uses a variety of transmission technologies, including but not limited to, twisted-pair metallic cables, twisted-pair metallic cable based digital loop carrier, and fiber optic based digital loop carrier. Distribution plant usually consists of multipair metallic cables. Additional information about subscriber loops may be found in Bellcore SR-TSV-002275 [1].

3.08 A twisted-pair metallic loop facility consists entirely of metallic cable and wire between the CODF and the end-user customer's RDP. Most metallic loops consist of multipair cables, laid out on aerial, underground, or buried routes to suit the needs of a particular community. The metallic loop facility may be loaded or non-loaded. It may also have bridged-tap. Loaded bridged-tap and bridged tap between load coils are not permitted.

3.10 A universal DLC facility consists of CO cabling between the CODF and a DLC COT, OSP fiber or metallic cable facilities from the DLC COT to the DLC RT, and cable and wire between the DLC RT and the end-user customer's RDP. Some universal DLC will not support enhanced services such as distinctive ringing, forward disconnect, caller ID, etc.

3.11 Subscriber loop facilities have been designed on a global basis primarily to accommodate POTS and guarantee that loop transmission loss is statistically distributed and that no single loop exceeds the signaling range of the CO.

3.12 Prior to 1980, loops were designed using one of the following design plans: Resistance Design (RD), Long Route Design (LRD), or Unigauge Design (UD). From 1980 to 1986, the Modified Resistance Design (MRD), Modified Long Route Design (MLRD), and Concentrated Range Extension with Gain (CREG) plans were applied on a going-forward basis (i.e., retroactive redesign was not implemented). In 1986, the Revised Resistance Design (RRD) plan was applied on a going-forward basis. Appendix A provides a summary of the various loop design plans.

3.13 Most metallic loop facilities (98%) were designed using the RD, MRD, or RRD design rules. The RRD design rules currently in use limit the loop resistance to the design range of the CO switch or 1500 ohms whichever is less. CO switches have a range of either 1300 or 1500 ohms. The 1 kHz loss of RRD loops is 8.5 dB or less.

3.14 A small number of loops have been designed using the LRD, MLRD, UD, and CREG design plans. These loops are long (15+kft) and have high resistance (up to 2800 or 3600 ohms) and high loss (up to 13 dB without gain). Such loops require electronic transmission and signaling range enhancement equipment to accommodate AULSCSS. The LRD and MLRD design plans use Range Extension with Gain (REG) equipment that is either dedicated to each loop or hard-wired to the BA CO line equipment. In the latter case, the hard-wired REG is not available for use on AULSCSS.

3.15 The REG equipment used with CREG designed loops is implemented behind a stage of switching concentration in the associated CO switch. This permits REG equipment to be shared with other loops working out of the same CO switch. For this reason, the REG associated with CREG designed loops is not available for use on AULSCSS.

3.16 Bell Atlantic will work with the OTC to explore available options when an LRD, MLRD, or CREG designed loop requires enhancement to support AULSCSS.

3.17 The direct-current resistance of a metallic loop facility measured between the CODF and the RDP shall be 1520 ohms or less if the facility was designed using RD, MRD, or RRD rules. The resistance will be less than 2500 ohms if the facility was designed using UD rules, less than 2800 ohms if the facility was designed using CREG or MLRD rules, and less than 3600 ohms if the facility was designed using LRD rules.

3.18 The 1kHz loss of a metallic loop facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8.0 dB or less if the loop was designed using RD, MRD, or RRD rules. The loss will be 10 dB or less if the loop was designed using LRD or MLRD rules, and 13 dB or less if the loop was designed using UD or CREG rules.

3.19 The C-message noise measured on a metallic subscriber loop at the RDP shall be less than 30 dBrnC.

3.20 The leakage resistance between the tip conductor and ground, the ring conductor and ground, and tip and ring conductors of a loop should each be greater than 100 K ohms.

3.21 The Power Influence (PI) measured per IEEE Std 743-1984 [2] on the metallic portion of a loop should be less than 90 dBrnC.

3.22 For LS and GS signaling, the DLC facilities provide a battery feed to the RDP. When the RDP is terminated by a direct-current resistance of 430 ohms or less, the loop current supplied by the DLC in such cases shall be 20 mA or greater.

3.23 The 1kHz loss of a DLC facility when measured with a 900 ohm impedance at the CODF and a 600 ohm impedance at the RDP shall be 8 dB or less.

- 3.24** The C-message noise measured on a DLC facility shall be 23 dBmC or less.
- 3.25** The C-Notched noise measured on a DLC facility shall be 36 dBmC or less with a -13 dBm0 1004 Hz holding tone.
- 3.26** The impulse noise measured on a DLC facility shall be no more than 15 counts in 15 minutes with a threshold of 59 dBmC.
- 3.27** The echo return loss and singing return loss of a subscriber loop facility measured with a 900 ohm + 2.16 uf reference at the CODF and a 600 ohm + 2.16 uf termination at the RDP shall be equal to or greater than 5.5 dB and 2.5 dB respectively.
- 3.28** Subscriber loop facilities shall meet all applicable design specifications. (See appendix A)

4. Service Specifications

A. General

4.01 The overall end-to-end AULSCSS service is from the CODF appearance of the collocated OTC equipment to the end-user customer's RDP. AULSCSS service will use the TXNU service code.

B. Performance

4.02 Loss and C-Message noise will be measured during acceptance testing of new services at turn-up. Services that reuse existing working loops are only tested for continuity at turn-up.

4.03 Other parameters are tested in response to trouble reports or when additional testing is purchased.

4.04 The acceptance limits and immediate action limits in Table 4-1 apply to AULSCSS channels.

4.05 When a AULSCSS channel is provided using DLC, the transmission performance of the channel is evaluated by measuring performance parameters on the overall end-to-end service.

Table 4-1
Acceptance Limits (AL) and Immediate Action Limits (IAL)
for AULSCSS channels

PARAMETER	AL	IAL
Loss	< 8.5 dB	> 10.0 dB
Resistance	< 1520 ohms	> 1520 ohms
Three-Tone Slope*	-1.5 to +5.5 dB	-2.0 to +6.5 dB
C-Message Noise	< 30 dBrnC0	> 30 dBrnC0
C-Notched Noise	< 36 dBrnC0	> 36 dBrnC0
Leakage	> 100 kohms	< 100 kohms
Echo Return Loss	> 5.5 dB	< 5.5 dB
Singing Return Loss	> 2.5 dB	< 2.5 dB
Power Influence	< 90 dB	> 90 dB
LS/GS Loop Current (DLC)	> 20 mA	< 20 mA

* Minus (-) means less loss and plus (+) means more loss.

C. Available Signaling

4.06 The following 2-wire signaling capability is available where facilities and equipment permit:

- No signaling (includes inband signaling furnished by the OTC).
- Loop-start closed-end at end-user RDP and loop-start open-end at the OTC-POT.
- Loop-start open-end at end-user RDP and loop-start closed-end at the OTC-POT.
- Ground-start closed-end at end-user RDP and ground-start open-end at the OTC-POT.
- Ground-start open-end at end-user RDP and ground-start closed-end at the OTC-POT.
- Loop reverse-battery terminating at the end-user RDP and loop reverse-battery originating at the OTC-POT.
- Loop reverse-battery originating at the end-user RDP and loop reverse-battery terminating at the OTC-POT.

4.07 The following 4-wire signaling capability is available where facilities and equipment permit:

- No signaling (includes inband signaling furnished by the OTC).
- Loop-start closed-end at end-user RDP and loop-start open-end at the OTC-POT.
- Loop-start open-end at end-user RDP and loop-start closed-end at the OTC-POT.
- Ground-start closed-end at end-user RDP and ground-start open-end at the OTC-POT.
- Ground-start open-end at end-user RDP and ground-start closed-end at the OTC-POT.
- Loop reverse-battery terminating at the end-user RDP and loop reverse-battery originating at the OTC-POT. This signaling capability is not available on a 4-wire basis when the loop facility includes DLC.
- Loop reverse-battery originating at the end-user RDP and loop reverse-battery terminating at the OTC-POT. This signaling capability is not available on a 4-wire basis when the loop facility includes DLC.

- Duplex (DX) signaling at EU-POT and OTC-POT.

4.08 The signaling associated with 4-wire interfaces can be derived from the associated simplex leads. BA provides the standard simplex sense for all 4-wire interfaces, that is, the B-lead or Ring conductor can be derived from the OTC and EU receive pair and the A-lead or Tip conductor can be derived from the OTC and EU transmit pair.

4.09 AULSCSS Network Channel (NC) codes and Network Channel Interface (NCI) codes are shown in the following figures: Figure 4-2 shows NC codes; Figure 4-3 shows OTC-POT NCI codes; and Figure 4-4 shows compatible NCI code combinations. Additional information concerning NC/NCI codes may be found in Bellcore SR-ST5-000307 [3].

Figure 4-2: AULSCSS NC Codes

NC Code	Character 3	Character 4
LX	-	-

Figure 4-3: AULSCSS OTC-POT NCI Codes

NCI Code	Description
02QC3.OOB	2-Wire Ground-start signaling - Open End
02QC3.OOC	2-Wire Ground-start signaling - Closed End
02QC3.OOD	2-Wire Loop-start signaling - Open End
02QC3.OOE	2-Wire Loop-start signaling - Closed End
02QC3.OOF	2-Wire Transmission Only - No Signaling
02QC3.RVO	2-Wire Reverse-Battery - OTC Originating
02QC3.RVT	2-Wire Reverse-Battery - OTC Terminating
04QC2.DXO	4-Wire Duplex Signaling
04QC2.OOB	4-Wire Ground-start signaling - Open End
04QC2.OOC	4-Wire Ground-start signaling - Closed End
04QC2.OOD	4-Wire Loop-start signaling - Open End
04QC2.OOE	4-Wire Loop-start signaling - Closed End
04QC2.OOF	4-Wire Transmission Only - No Signaling
04QC2.RVO	4-Wire Reverse-Battery - OTC Originating
04QC2.RVT	4-Wire Reverse-Battery - OTC Terminating

Figure 4-4: Compatible AULSCSS NCI Code Combinations

EU-POT	OTC-POT
02GO2	02QC3.OOC
02GS2	02QC3.OOB
02LO2	02QC3.OOE
02LS2	02QC3.OOD
02NO2	02QC3.OOF
02RV2.T	02QC3.RVO
02RV2.O	02QC3.RVT
04GO2	04QC2.OOC
04GS2	04QC2.OOB
04LO2	04QC2.OOE
04LS2	04QC2.OOD
04NO2	04QC2.OOF
04RV2.T*	04QC2.RVO
04RV2.O*	04QC2.RVT
04DX2	04QC2.DXO

* 04RV2.T and 04RV2.O are not available when DLC facilities are used.

D. Available Options

4.09 No options are available for AULSCSS channels.

E. Compatible TLP Ranges

4.10 Compatible TLP ranges are shown in Figures 4-5 and 4-6.

Figure 4-5: Compatible TLP Ranges at the EU-POT and OTC-POT for 2-Wire AULSCSS Channels

Specified Protocol Code	EU/OTC Transmit TLP	EU/OTC Receive TLP
GO, GS, LO, LS, NO, RV	0	0 to -8.5 #

In general, the receive TLP is a function of the cable loss.

Figure 4-6: Compatible TLP Ranges at the EU-POT and OTC-POT for 4-Wire AULSCSS Channels

Specified Protocol Code	EU/OTC Transmit TLP	EU/OTC Receive TLP
DX, GO, GS, LO, LS, NO, RV	0	0 to -8.5 #

In general, the receive TLP is a function of the cable loss.

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Several different types of OTC equipment can connect to AULSCSS. The equipment can be collocated in a BA CO or located at the end-user premises. Examples are: transport equipment; transmission repeaters; transmission repeaters with loop signaling repeaters; transmission repeaters with signaling battery boost equipment; and special service channel units.

5.02 Co-located OTC equipment used for interconnection with AULSCSS shall meet all applicable requirements including those in this document as well as applicable generic equipment requirements in Bellcore documents GR-63-CORE [4] and GR-1089-CORE [5].

5.03 Co-located OTC equipment shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Where requirements are not specified in this document, contractual technical requirements or other applicable documents, the manufacturer's requirements consistent with industry standards shall be met.

5.04 The open circuit tip-to-ring dc voltage that OTC equipment applies to BA cabling shall be less than 80 Vdc.

5.05 OTC equipment shall not deliver more than 2.5 watts of power to any load via BA cable.

5.06 OTC equipment shall not deliver more than 150 mA of loop current to any load via BA cable.

5.07 The noise limits for AULSCSS are predicated on the OTC equipment having a longitudinal balance of > 60 dB.

5.08 The impedance of OTC equipment shall be a nominal 900 ohms when collocated in a BA CO and a nominal 600 ohms when used on the end-user premises at or near the RDP.

5.09 The applied power level of any signal transmitted on AULSCSS averaged over 3 seconds shall not exceed -13 dBm0.

5.10 AULSCSS loops may be exposed to electrical surges from lightening and commercial power system disturbances. Despite protective devices on the CODF, some of these disturbances are likely to reach OTC equipment. OTC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

5.11 The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. This device has an upper 3c limiting voltage of 1000 volts peak under surge conditions and 600 volts rms (800 peak) at 60 Hz. OTC equipment connected to AULSCSS subscriber loop facilities protected by carbon blocks may be subjected to voltages up to these levels. Unexposed COs may not have

primary protection, and OTC equipment not coordinating with carbon blocks may need protection in these locations.

5.12 If the AULSCSS subscriber loop facility is exposed to commercial ac power, the CO protector may also include 350 mA heat coils for limiting the current that is permitted to flow to CO equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

B. OTC CO Cabling Requirements

5.13 The voice grade CO cabling used to terminate collocated OTC equipment on the CODF shall use twisted-pair conductors.

5.14 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.14 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [6] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.15 All CO cabling between OTC equipment and the CODF shall be connected as specified by the BA CO Engineer.

5.16 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

5.17 The C-message noise measured on the CO cabling between the OTC equipment and the CODF shall be 20 dBmC or less.

6. References

A. Definitions

Acceptance Limit (AL)

The maximum value of, or deviation, that is allowed at service turnup or IC acceptance.

Analog Unbundled Loop Service with Customer Specified Signaling (AULSCSS)

A service that provides an analog facility between a BA CO and a customer location that is capable of supporting signaling specified, at the time the service is ordered, by the customer.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and end-user annoyance to tones as a function of frequency.

C-Notched Noise

The C-message frequency-weighted noise on a channel with a holding tone that is removed at the measuring end through a notch (very narrow band) filter.

Channel

An electrical, or photonic communications path between two or more points of transmission.

Closed End

The end of a switched access service that receives ringing and dial tone and transmits address signals.

dBm

A unit used to express power level in decibels relative to one milliwatt.

dBm0

A unit used to express power level referred to, or measured at, a zero transmission level point (0TLP).

dB_{rn}

A unit used to express noise power relative to one picowatt (-90 dBm).

dB_{rnC}

A unit used to express noise power relative to one picowatt measured with C-message weighting.

dB_{rnC0}

A unit used to express noise power in dB_{rnC} referred to, or measured at, a zero transmission level point (0TLP).

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Duplex Signaling

A type of dc signaling that employs symmetrical and balanced signaling equipment at each end of the loop. One simplex conductor of the 4-wire loop is used for signaling and the other simplex conductor is used for ground potential compensation.

Echo Return Loss (ERL)

A frequency-weighted measure of return loss over the middle of the voiceband (approximately 560 to 1965 Hz), where talker echo is most annoying. (See Table 9 of IEEE Std. 743-1984)

End User (EU)

The term "end user" denotes any customer of a telecommunications service that is not a carrier, except that a carrier shall be deemed to be an "end user" to the extent that such a carrier uses a telecommunications service for administrative purposes, without making such a service available to others, directly, or indirectly.

End-User Point Of Termination (EU-POT)

The rate demarcation point (RDP) on an end user's premises at which Bell Atlantic's responsibility for the provision of the services described in this document ends.

Facilities

Any cable, poles, conduit, microwave, or carrier equipment, central office distributing frames, central office switching equipment, computers (both hardware and software), business machines, etc., utilized to provide the services offered by a telephone company.

Immediate Action Limit (IAL)

The bound of acceptable performance and the threshold beyond which BA will accept a customer's trouble report and take immediate corrective action.

Impulse Noise

Any momentary occurrence of noise on a channel that significantly exceeds the normal noise peaks. Impulse noise is analyzed by counting the number of occurrences that exceed a threshold.

Leakage

The resistance between the conductors of an insulated metallic pair or the resistance between each conductor of an insulated metallic pair and ground.

Loop Reverse-Battery Signaling

A type of switched access line dc signaling that uses loop-open and loop-closure signals to indicate on-hook and off-hook signals in one direction and normal battery polarity and reverse battery polarity to indicate on-hook and off-hook signals in the other direction. The end of the service that generates loop open and loop closure signals is called the originating end and the other end which generates the normal battery polarity and reverse battery polarity signals is called the terminating end.

Loop-start (LS) Signaling

A type of switched access line signaling in which the network provides a battery source. To initiate a call, customer premises equipment will provide a loop closure that causes dc loop current to flow which the network will detect.

Open End

The end of a switched access service that transmits ringing and dial tone and receives address signaling.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Plain Ordinary Telephone Service (POTS)

The basic single line switched access service offered by local exchange carriers to residential and business customers. POTS uses loop-start signaling.

Power Influence (PI)

The power of a longitudinal signal induced in a metallic OSP facility by an electromagnetic field emanating from a conductor or conductors of a power system. PI is also called longitudinal noise or noise-to-ground.

Protocol Code

In general, a component of the Network Channel Interface (NCI) code that identifies the basic electrical function of the interface. For AULSCSS, the protocol codes (i.e., DX, GO, GS, LO, LS, NO and RV) identify the type of signaling if any.

Rate Demarcation Point (RDP)

The point at which Bell Atlantic network access recurring charges and responsibility stop and beyond which customer responsibility begins. The RDP is the point of demarcation and/or interconnection between a Bell Atlantic subscriber loop facility and end-user premises cabling or terminal equipment. Bell Atlantic facilities at, or constituting, the rate demarcation point shall consist of wire or a jack conforming to Subpart F of Part 68 of FCC rules.

Return Loss (RL)

A measure of the similarity between the two impedances at a junction. The higher the return loss, the higher the similarity. It is the ratio (in decibels) of the power incident upon the junction to the power reflected from the junction. If the two impedances at the junction are Z_1 and Z_2 , then:

$$\text{return loss} = 20 \log \frac{|Z_1 + Z_2|}{|Z_1 - Z_2|} \text{dB}$$

Signal-to-Noise Ratio (S/N Ratio)

The ratio of the signal power to the noise power at a given point in a given system (usually expressed in decibels).

Singing Return Loss (SRL)

The frequency-weighted measure of return loss at the edges of the voiceband (SRL Low, 260 to 500 Hz and SRL High, 2200 to 3400 Hz), where singing (instability) problems are most likely to occur.

Signaling Repeater

Loop enhancement equipment that detects and regenerates signaling states.

Three-Tone Slope

The loss at 404 Hz and 2804 Hz relative to the loss at 1004 Hz.

Transmission Level Point (TLP)

A point in a transmission system at which the ratio, usually expressed in decibels, of the power of a test signal at that point to the power of the test signal at a reference point, is specified.

Transmission Repeater

Loop enhancement equipment that amplifies and equalizes voice grade signals.

Unbundled Loop

A transmission channel between a end-user customer location and a LEC CO that is not a part of, or connected to, other LEC services.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ANSI	American National Standards Institute
AULSCSS	Analog Unbundled Loop Service with Customer Specified Signaling
BA	Bell Atlantic
CO	Central Office
CODF	Central Office Distributing Frame
COT	Central Office Terminal
CREG	Concentrated Range Extension with Gain
DLC	Digital Loop Carrier
GS	Ground-Start
LRB	Loop Reverse-Battery
LRD	Long Route Design
LS	Loop-Start
MLRD	Modified Long Route Design
MRD	Modified Resistance Design
OTC	Other Telephone Company
PI	Power Influence
POTS	Plain Ordinary (analog) Telephone Service
RD	Resistance Design

RDP	Rate Demarcation Point
REG	Range Extender with Gain
RRD	Revised Resistance Design
RT	Remote Terminal
TO	Transmission Only
T&S	Transmission and Signaling
UD	Unigauge Design
VF	Voice Frequency
VG	Voice Grade

7. Bibliography

1- Special Report SR-TSV-002275, Issue 2, *BOC Notes on the LEC Networks*, Bellcore, April 1994.

2- IEEE Std 743-1984, *IEEE Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice Frequency Circuits*.

3- Special Report SR-STS-000307, Issue 3, *Industry Support Interface (ISI): NC/NCI Code Dictionary*, Bellcore, January 1992.

4- Generic Requirements GR-63-CORE, *Network Equipment-Building System (NEBS) Requirements: Physical Protection*, Issue 1, (Bellcore, October 1995).

5- Generic Requirements GR-1089-CORE, *Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment*, issue 1 (Bellcore, November 1994).

6- Technical Reference FR-NWT-000064, *LATA Switching Systems Generic Requirements (LSSGR)*, (Bellcore, 1994).

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

Appendix A: Historical Loop Design Rules

- 1- Resistance Design (RD): (96% of loops designed prior to 1980)
 - 0 - 1300 ohms
 - Max BT on NL cable = 6 kft
 - POTS = No loading to 18 kft, H88 loading beyond 18 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Max end section plus BT = 15 kft
 - No loaded BT, No BT between load coils.

- 2- Long Route Design (LRD): (3% of loops designed prior to 1980)
 - 1301 - 3600 ohms
 - Applicable > 18 kft, full H88 loading
 - Gain required for loops over 1600 ohms
 - Max end section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 3- Unigauged Design (UD): (1% of loops designed prior to 1980)
 - 0 - 2500 ohms
 - No loading to 24 kft, partial H88 loading beyond 24 kft
 - Gain applied to loops > 15 kft
 - Max BT on NL cable = 6 kft
 - End section plus BT = 12 kft
 - No loaded BT, No BT between load coils.

- 4- Modified Resistance Design (MRD): (1980 - 1986)
 - 0 - 1500 ohms
 - Max BT on NL cable = 6 kft
 - Total NL cable plus BT = 15 kft
 - POTS = No loading to 15 kft, H88 loading beyond 15 kft
 - CENTREX = No loading to 11 kft, H88 loading beyond 11 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 5- Modified Long Route Design (MLRD): (1980 - 1986)
 - 1501 - 2000 ohms = Res Zone 18
 - 2001 - 2800 ohms = Res Zone 28
 - RZ 18 = Range Extension plus 3 dB of gain
 - RZ 28 = Range Extension plus 6 dB of gain
 - Full H88 loading
 - End section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 6- Concentrated Range Extension with Gain (CREG): (1980 - 1986, 1A & 2A ESS Only)
 - 0 - 2800 ohms
 - No loading to 15 kft, full H88 loading beyond 15 kft
 - Range extension with gain (REG) required for all loops over 1500 ohms
 - REG provided behind a stage of switching concentration
 - Total NL cable plus BT = 15 kft max
 - Max NL cable BT = 6 kft
 - Loaded end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

- 7- Revised Resistance Design: (after 1986)
 - 0 - 18 kft = 1300 ohms max
 - 18 - 24 kft = 1500 ohms max (CO permitting)
 - No loading to 18 kft, full H88 loading between 18 - 24 kft
 - Max NL cable plus BT = 18 kft
 - Max BT on NL cable = 6 kft
 - Loaded cable end section plus BT = 3 to 12 kft
 - No loaded BT, No BT between load coils.

EXHIBIT C

TR 72575
Issue 1, October 1996

Bell Atlantic Technical Reference

**Digital Unbundled Loop Services
Technical Specifications**

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July 2, 1997

ATTACHMENT III

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR-72575
Issue 1, October 1996**

Notice

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EXHIBIT C

Bell Atlantic Network Services, Inc.
Technical Reference

TR 72575
Issue 1, October 1996

Bell Atlantic
Digital Unbundled Loop Services
Technical Specifications

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1. General

1.01 This technical reference provides the technical specifications associated with the Digital Unbundled Loop Services offered by Bell Atlantic (BA) in the co-carrier section of local exchange tariffs. All of the services described in this document may not be available in every jurisdiction.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Digital unbundled loop services enable Other Telephone Companies (OTC) that are co-located in a BA Central Office to connect to BA subscriber loops that are designed to support digital services including Integrated Services Digital Network (ISDN) services.

1.04 The following digital unbundled loop services are defined: ISDN Basic Rate and DS1. HDSL and ADSL unbundled loop services are under study.

1.05 The technical specifications in this document assume that the OTC is co-located in the same CO as the digital unbundled loop service. In the future, BA may offer transport services for digital unbundled loop services. In that case, the technical specifications associated with the transport service should be consulted.

2. Service Description

A. General

2.01 The description, terms and conditions, rates, regulations, and Universal Service Order Codes (USOCs) for digital unbundled loop services are contained in applicable tariffs or contracts.

2.02 Digital unbundled loop services are provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

2.03 Digital unbundled loop services provide the OTC with a transmission channel suitable for the transport of certain digital services. The channel is between the Central Office Distributing Frame (CODF) or DSX-1 termination of OTC equipment in a BA Central Office (CO) and the Rate Demarcation Point (RDP) at an End User (EU) customer location.

B. ISDN Basic Rate Unbundled Loop Service (IBRULS)

2.04 IBRULS provides the OTC with an effective 2-wire channel that is suitable for the transport of 160 kbps digital signals in both directions simultaneously using the 2B1Q line code.

2.05 The interface at the OTC CODF termination is 2-wire and the interface at the EU-RDP is 2-wire. At each interface one conductor is called tip and the other conductor is called ring.

2.06 The transmission channel between the IBRULS 2-wire interfaces is effective 2-wire. An effective 2-wire channel may be entirely 2-wire or it may contain a 4-wire facility portion (such as a

Digital Loop Carrier) with a 2-wire metallic extension to the EU-RDP. A typical IBRULS configuration is shown in Figure 2-1.

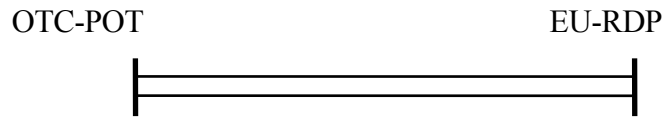


Figure 2-1: Typical 2-Wire IBRULS configuration

2.07 IBRULS supports full duplex 160 kbps digital transmission. The 160 kbps ISDN Basic Rate supports a 16 kbps overhead channel for performance monitoring, framing, synchronization, and maintenance. In addition, the line rate supports 144 kbps of payload data which is divided into three channels, two 64 kbps "B" (Bearer) channels and one 16 kbps "D" (Data) channel.

2.08 IBRULS supports the standard ISDN Basic Rate Two-Binary One-Quaternary (2B1Q) line code. Vendor-specific, non-standard line codes are not supported and Bell Atlantic spectrum management rules do not permit their deployment.

2.09 IBRULS may be provided using a variety of loop transmission technologies, including but not limited to, metallic cable, metallic cable based digital loop carrier, and fiber optic digital loop carrier systems.

2.10 When digital loop carrier (DLC) is used to provide IBRULS, the DLC will provide an ISDN Basic Rate interface at the RDP that meets the network requirements in ANSI T1.601-1992 [1].

2.11 It is currently known that the 2B1Q line code is incompatible with a number of embedded services. These services include CO-LAN, 15 kHz Program Audio Service, and analog carrier systems.

2.12 Analog carrier systems are extremely susceptible to interference from the 2B1Q line code and separation into separate cable sheaths is required.

2.13 Program audio services are also susceptible to interference from the 2B1Q line code on the loop. In order for the program audio and the IBRULS services to coexist, binder group separation is necessary. Separation to non-adjacent binder groups is preferred but adjacent binder groups may provide adequate margin.

2.14 Data-Voice Multiplexers (DVM) are also incompatible with IBRULS depending upon the range at which the DVMs are deployed. If DVMs are operated at less than 80% of the manufacturer's maximum specified range, including CO and customer wiring, they may be compatible with the 2B1Q line code. If DVMs are operated at or above the 80% range and occupy the same cable sheath as a 2B1Q service, then the two services are considered to be incompatible. In this case binder group separation is necessary. If this is not possible, an alternate means of providing the 2B1Q service must be sought.

2.15 IBRULS utilizes subscriber loop facilities that were originally designed for Plain Ordinary (analog) Telephone Service (POTS). For this reason, some loops, such as loaded metallic facilities or analog carrier systems, may not be suitable for IBRULS.

2.16 Bell Atlantic will work with the OTC to resolve facility problems should the IBRULS loop facility require enhancement equipment to support BRI service.

2.17 If an OTC service is provided using IBRULS and electronic transmission enhancement equipment is required to meet OTC requirements that are more stringent than IBRULS and Basic Rate ISDN, the OTC will be responsible for providing such enhancement equipment.

C. DS1 (1.544 Mbps) Unbundled Loop Service (DS1ULS)

2.18 DS1ULS provides the OTC with a 4-wire transmission channel that is suitable for the transport of 1.544 Mbps (DS1) digital signals in both directions simultaneously.

2.19 The interface at the OTC DSX-1 termination in the BA CO is 4-wire and the interface at the EU-RDP is 4-wire. The conductors of the OTC or EU transmit pair are called tip and ring and the conductors of the OTC or EU receive pair are called tip 1 and ring 1.

2.20 The transmission channel between the DS1ULS interfaces consists of 4-wire facilities. DS1ULS may be provided using a variety of loop transmission technologies, including but not limited to, metallic cable, metallic cable with regenerators, metallic cable with High-Bit-Rate Digital Subscriber Line (HDSL) technology, or fiber optic transport systems. A typical DS1ULS configuration is shown in Figure 2-2.

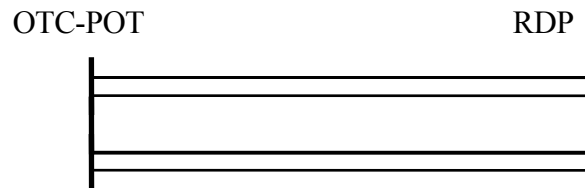


Figure 2-2: Typical 4-Wire DS1ULS configuration

2.21 DS1ULS enables full duplex 1.544 Mbps digital transmission. The 1.544 Mbps line rate supports an 8 kbps framing format and 1.536 Mbps of payload data. DS1ULS will support either the Superframe (SF) or Extended Superframe (ESF) framing formats as specified in ANSI T1.403-1995 [4].

2.22 DS1ULS is available with either the AMI or B8ZS line codes as specified in ANSI T1.403-1995 [4].

2.23 DS1ULS shall provide an electrical DS1 interface at the RDP that meets the network requirements in ANSI T1.403-1995 [4].

2.24 The DS1 interface provided by BA does not deliver direct-current power to the NI via the simplex leads of the transmit and receive pairs. When BA employs metallic facilities and no loopback device is deployed, direct-current power could appear at the NI on the simplex leads of the transmit and receive pairs however. In such cases, the OTC or EU equipment shall provide a direct-current connection between the simplexes of the transmit and receive pairs.

2.25 Direct-current power shall not be delivered to the EU-POT by customer equipment. In addition, customer equipment shall not apply voltages to the EU-POT other than those described in ANSI T1.403-1995.

2.26 The OTC will be responsible for providing synchronization timing for the DS1ULS.

2.27 Subscriber loop facilities were originally designed for Plain Ordinary (analog) Telephone Service (POTS). For this reason, some loops may not be suitable for DS1ULS.

D. High-Bit-Rate Digital Subscriber Line Unbundled Loop Service (HDULS)

2.28 HDULS is under study.

E. Asymmetrical Digital Subscriber Line (ADSL) Unbundled Loop Service

2.29 ADSL Unbundled Loop Service (ADULS) is under study.

F. Service Elements

2.30 IBRULS ordinarily consists of two elements:

(1) The CODF wire and tie cable(s) between the CODF termination of the co-located OTC equipment and the CODF termination of a subscriber loop; and,

(2) a subscriber loop facility between the CO and the EU-RDP. The loop is either:

(a) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with no intermediate electronics; or,

(b) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with transmission enhancement equipment; or,

(c) a universal digital loop carrier (DLC) facility with 2B+1D ISDN Basic Rate transport capability via three DS0 channels. The DLC facility consists of:

- CO cabling between the CODF and a DLC Central Office Terminal (COT) equipped with an ISDN Basic Rate Interface Terminal Equipment (BRITE) channel unit with NT functionality;

- a fiber or metallic facility from the DLC COT to the DLC Remote Terminal (RT) equipped with an ISDN BRITE channel unit with LT functionality; and,
- cable and wire between the DLC RT and the RDP.

2.31 DS1ULS ordinarily consist of two elements:

- (1) The DSX-1 wire and repeatered tie cable(s) between the DSX-1 termination of the co-located OTC equipment and the DSX-1 termination of subscriber loop facilities; and
- (2) a subscriber loop facility between the CO and the EU-RDP. The loop is either:
 - (a) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with no intermediate electronics; or,
 - (b) a metallic non-loaded facility consisting of cable and wire between the CODF and the RDP wire with transmission enhancement equipment such as regenerators or DSL technology; or,
 - (c) a fiber facility from the CO to a Remote Terminal (RT) location with cable and wire between the DLC RT and the RDP.

2.32 HDULS is under study.

2.33 ADULS is under study.

3. Element Specifications

A. General

3.01 Two elements are always used with digital unbundled loop services. They are: CODF wire and tie cable(s), and subscriber loop facilities. A third element, electronic transmission enhancement equipment, is sometimes used with digital unbundled loop services. The following sections contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of co-located OTC equipment to the CODF termination of metallic subscriber loops, DLC COTs, and electronic transmission enhancement equipment.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 1500 feet. No bridged tap is permitted in the CO.

3.04 The direct-current resistance between the CODF termination of the OTC equipment and the CODF termination of any subscriber loop in the same CO should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

3.05 The 1 kHz loss measured on the CODF wiring and tie cables when measured between 900 ohm impedances should be .85 dB or less.

C. Subscriber Loop Facilities

3.07 Subscriber loop facilities consist of feeder and distribution plant between the CODF and the EU customer's RDP. Feeder plant uses a variety of transmission technologies, including but not limited to, twisted-pair metallic cables, twisted-pair metallic cable based digital loop carrier, and fiber optic based digital loop carrier. Distribution plant usually consists of multipair metallic cables. Additional information about subscriber loops may be found in Bellcore SR-TSV-002275 [2].

3.08 Subscriber loop facilities have been designed on a global basis primarily to accommodate POTS and guarantee that loop transmission loss at 1 kHz is statistically distributed and that no single loop exceeds the signaling range of the CO.

3.09 Prior to 1980, loops were designed using one of the following design plans: Resistance Design (RD), Long Route Design (LRD), or Unigauge Design (UD). From 1980 to 1986, the Modified Resistance Design (MRD), Modified Long Route Design (MLRD), and Concentrated Range Extension with Gain (CREG) plans were applied on a going-forward basis (i.e., retroactive redesign was not implemented). In 1986, the Revised Resistance Design (RRD) plan was applied on a going-forward basis.

3.10 Most metallic loop facilities (98%) were designed using the RD, MRD, or RRD design rules. The RRD design rules currently in use limit the loop resistance to the design range of the CO switch (1300 or 1500 ohms) or 1500 ohms whichever is less. The vast majority of non-loaded loops, designed using these rules, will support IBRULS without the need for additional transmission enhancement.

3.11 An IBRULS qualified metallic loop facility is non-loaded and meets the following ISDN Basic Rate design parameters:

- (1) The length shall be 18 kft or less;
- (2) The direct-current resistance measured between the CODF and the EU-RDP shall be 1300 ohms or less;
- (3) Loaded bridged-tap is not permitted;
- (4) Bridged tap is limited to 6 kft;
- (5) The 40 kHz loss of a metallic loop facility when measured with a 135 ohm impedance at the CODF and a 135 ohm impedance at the RDP shall be 40.0 dB or less;

(6) Metallic loops with a 40 kHz loss between 40 and 76 dB will require transmission enhancement equipment.

3.12 The leakage resistance between the tip conductor and ground and the ring conductor and ground on an IBRULS metallic loop shall each be greater than 100 K ohms.

3.13 The longitudinal noise or power influence (PI) measured per IEEE Std 743-1984 [3] on an IBRULS metallic loop should be less than 90 dBrnC.

3.14 The longitudinal balance of a metallic IBRULS loop is defined as the longitudinal noise (in dBrnC) minus the C-message noise (in dBrnC). The longitudinal balance shall be >50 dB.

3.15 Qualification for IBRULS, may require the placement of a mid-span repeater or similar device. Bell Atlantic does not place more than one mid-span repeater per loop. If a loop will not operate with one repeater, construction of DLC will be necessary.

3.16 When a metallic IBRULS loop has a mid-span repeater, the metallic facility between the CODF and the mid-span repeater and the metallic facility between the mid-span repeater and the EU-RDP shall each meet the requirements in section 3.11.

3.17 IBRULS will not operate properly on non-staggered twist cable (installed prior to 1923) or on flat ribbon cables, such as those used for some CPE interconnections. Such cable may need to be replaced to accommodate IBRULS.

3.18 The HDULS loop facility is under study.

3.19 The ADULS loop facility is under study.

D. Transmission Enhancement Equipment

3.20 Transmission enhancement equipment is sometimes used with IBRULS. Such equipment can consist of a CO span power module, a mid-span repeater, or BRI extended range system equipment.

3.21 The span power module is located in the CO and provides power to a mid-span repeater. A mid-span repeater regenerates the 2B1Q line code. The repeater has NT functionality that faces the OTC equipment and LT functionality that faces the RDP. A mid-span repeater is deployed when the calculated loss of the non-repeated loop at 40 kHz (excluding BT) is > 40.0 < 76.0 dB.

3.22 BRI extended range systems consist of a unit located in the CO that has NT functionality and a 2B1Q line code that faces the OTC equipment and a remote unit near the RDP that has LT functionality and delivers a 2B1Q line code to the EU customer. The CO unit uses a line code that is spectrum compatible with BA services. The line code permits operation with a remote unit that is connected via a metallic cable that could have a 40 kHz loss of up to 60 dB.

3.23 The impedance of transmission enhancement equipment shall be a nominal 135 ohms.

3.24 Transmission enhancement equipment shall provide loop current when the RDP is terminated by a direct-current resistance of 135 ohms.

4. Service Specifications

A. General

4.01 Parameters are tested at the RDP in response to trouble reports or when additional testing is purchased.

4.02 Network Channel (NC) and Network Channel Interface (NCI) codes are used for providing channel and interface information to customers. The NC/NCI code set facilitates the identification of network channel requirements and associated interface specifications for services described in tariffs.

4.03 For switched services, the NC code is an encoded representation of the channel that is provided by from the OTC Point Of Termination (POT) to the BA CO. By varying the NC code, the customer is allowed to further specify the type of service.

4.04 The NCI code is an encoded representation used to identify five interface elements located at a POT. The five elements reflect the following physical and electrical characteristics: number of physical conductors, protocol, impedance, protocol options, and transmission levels points (if applicable).

4.05 Examples of the most common NC and NCI codes are given each service described in this section. The complete set of codes may be found in SR-STS-000307 [2].

4.06 Valid NCI code combinations are shown for each service described in this section. Complete NC/NCI compatibility information may be found in SR-STS-000323 [3].

B. IBRULS

4.07 The overall end-to-end IBRULS service is from the CODF termination of the OTC equipment to the EU customer's RDP.

4.08 IBRULS NC code information is shown in Figure 4-1 and IBRULS NCI code combinations are shown in Figure 4-2.

4.09 IBRULS Acceptance Limits (AL) and Immediate Action Limits (IAL) are shown in Table 4-3.

Figure 4-1: IBRULS NC Codes

NC CODE	Character 3	Character 4
UB	-	-

Figure 4-2: IBRULS NCI Code Combinations

OTC-POT	EU-POT
02QC5.OOS	02IS5

Figure 4-3: IBRULS Acceptance Limits (AL) and Immediate Action Limits (IAL)

Parameter	AL	IAL
40 kHz loss	< 40.0 dB	> 42.0 dB
Resistance	< 1300 ohms	> 1300 ohms
Leakage	> 100 kilohms	< 100 kilohms
Power Influence	< 90 dB	> 90 dB

C. DS1ULS

4.10 The overall end-to-end DS1ULS service is from the DSX-1 termination of the OTC equipment to the EU customer's RDP.

4.11 DS1ULS NC code information is shown in Figure 4-8, and DS1ULS NCI code combinations are shown in Figure 4-9.

4.12 DS1ULS performance objectives are shown in Figure 4-10 and DS1ULS test limits are shown in Figure 4-11.

4.13 Availability is a measure of the relative amount of time that a service is "usable" by the customer. Unavailability begins when the Bit Error Ratio (BER) in each second is worse than 10^{-3} for a period of 10 consecutive seconds. The DS1ULS objective is 99.925 percent availability in any twelve consecutive months. Availability equals the total time minus the outage time divided by the total time.

4.14 Accuracy denotes the error performance and is usually specified in terms of errored seconds (ES), or conversely, error-free seconds (EFS). EFS are the primary measure of error performance for DS1ULS. An EFS is any second that an error does not occur.

4.15 A Severely Errored Second (SES) is any one second interval that has a BER of less than (worse than) 10^3 .

Figure 4-4: DS1ULS NC Codes

NC CODE	Character 3	Character 4
HC	- (SF and AMI)	-
HC	D (ESF and AMI)	-
HC	E (ESF and B8ZS)	-

HC	Z (SF and B8ZS)	-
HC	E (ESF and B8ZS)	I (ISDN PRA)

Figure 4-5: DS1ULS NCI Code Combinations

OTC-POT	EU-POT
04QB9.11	04DU9-BN (SF and AMI)
04QB9.11	04DU9-DN (SF and B8ZS)
04QB9.11	04DU9-1KN (ESF and AMI)
04QB9.11	04DU9-1SN (ESF and B8ZS)

Figure 4-6: DS1ULS Performance Objectives

Parameter	Objective
Accuracy	0.25 % errored seconds long-term (30 days or more)
Availability	99.925 % per year

Figure 4-7: DS1ULS Test Limits

Test Duration	Errored Seconds	Severely Errored Seconds
15 min	0	0
30 min	3	0
45 min	5	2
24 hours	150	7

4.16 Acceptance testing for DS1ULS should be performed with a Quasi Random Signal Source (QRSS), on an OTC-POT to EU-POT basis, using ES performance parameters.

4.17 If BA has installed a loopback device on the DS1ULS, a dispatch for “cooperative testing” will not ordinarily be made and testing will be performed remotely. Normally, a technician will be dispatched by BA in the following instances:

- The DS1ULS is not equipped with a loopback device;
- The loopback device is inoperable;
- Test results do not meet applicable limits;
- The OTC requests a dispatch.

4.18 At the request of the OTC, BA will provide the remote test results to the OTC.

4.19 Other tests may be performed in response to trouble reports or when additional testing is purchased. The 3/24, 1/8, and All Ones patterns are acceptable diagnostic stress tests for DS1ULS when used in accordance with Figure 4-8.

4.20 The patterns in Figure 4-8 may not detect all possible troubles. Additional tests may be required using other patterns designed to detect specific problems (e.g., bridged tap, etc.).

4.21 If errors are detected using the QRSS, 3/24, or 1/8 patterns, it is recommended that the DS1ULS line code options (AMI/B8ZS) be verified using the procedures outlined in the Bell Atlantic Network Services Reference Manual Series 72710 & NS6050. These tests make use of the Framed 2/8 and Framed 1/8 patterns.

Figure 4-8: AMI and B8ZS Test Matrix (1)

TEST PATTERN (2)	TEST DURATION	ACCEPTANCE LIMIT	MAINTENANCE LIMIT
3/24 (AMI only)	5 minutes	7	60
1/8 (B8ZS only)	5 minutes	7	60
All Ones	5 minutes	7	60
QRSS	15 minutes	20	60
Framed All Zeros (3) (B8ZS only)	30 seconds	0	0

Notes:

(1) Test patterns should be framed.

(2) If compatible test equipment is not available to perform these tests, loopback testing should be utilized.

(3) WARNING: This pattern may cause DS1 failures if DS3 equipment is not optioned properly.

D. HDULS

4.22 HDULS service is under study.

E. ADULS

4.25 ADULS service is under study.

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Co-located OTC equipment used for interconnection with digital unbundled loop services shall meet all of the applicable generic equipment requirements in Bellcore GR-63-CORE [4] and Bellcore GR-1089-CORE [5].

5.02 Co-located OTC equipment used for interconnection with digital unbundled loop services shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Requirements that are not specified in this document, contractual technical requirements, or other applicable documents, shall meet the manufacturer's requirements consistent with industry standards.

5.03 The open circuit tip-to-ring dc voltage that co-located OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Co-located OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

5.05 Co-located OTC equipment shall not deliver more than 150 mA of loop current to any load via BA VF cable.

5.06 The noise limits for digital unbundled loop services require co-located OTC equipment to have a longitudinal balance of >60 dB.

5.07 The loss and noise limits for IBRULS requires co-located OTC equipment to have a nominal impedance of 135 ohms.

5.08 The maximum power level of any transmitted signal on IBRULS shall not exceed ANSI T1.601-1992 [1].

5.09 OTC equipment used with Digital Unbundled Loop Services shall be synchronized to a stratum 1 clock.

5.10 Loops may be exposed to electrical surges from lightning and commercial power system disturbances. Despite protective devices on the CODF, some of these disturbances are likely to reach OTC equipment. OTC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

5.11 The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. This device has an upper 3c limiting voltage of 1000 volts peak under surge conditions and 600 volts rms (800 peak) at 60 Hz. OTC equipment connected to digital unbundled loop services with loops protected by carbon blocks may be subjected to voltages up to these levels. Unexposed COs may not have primary protection, and OTC equipment not coordinating with carbon blocks may need protection in these locations.

5.12 If the subscriber loop facility is exposed to commercial ac power, the CO protector may also include 350 mA heat coils for limiting the current that is permitted to flow to CO equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to

coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

B. OTC Equipment CO Cabling Requirements

5.13 The CO cabling used to terminate OTC equipment on the CODF shall use twisted-pair conductors.

5.14 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.15 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [6] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.16 All CO cabling between OTC equipment and the CODF shall be connected as specified by the BA CO Engineer.

5.17 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

5.18 The C-message noise measured on the CO cabling between the OTC equipment and the CODF shall be 20 dBmC or less.

6. References

A. Definitions

Asymmetrical Digital Subscriber Line (ADSL)

A system that is capable of transmitting digital signals up to 6 Mbps toward the EU-POT and up to 640 kbps from the EU-POT.

ADSL Unbundled Loop Service (ADULS)

A service that provides an effective 2-wire channel, suitable for the transport of ADSL that uses using Carrierless AM/PM (CAP) technology, between the Bell Atlantic central office distributing frame termination of co-located equipment belonging to an OTC and the rate demarcation point at a customer location.

Basic Rate Integrated Services Digital Network Interface (BRI)

The BRI is a 2-wire ISDN interface that uses the two-binary one-quaternary line code at a 160 kilobit per second rate to transport overhead and up to two B channels and one D channel.

B Channel

The B channel is a 64 kilobit per second channel used for information transfer between users.

Bridged tap

Any branch section of a cable pair, or any extension of a cable pair beyond the point where it is used, in which no direct current flows when customer equipment is connected and used.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for EU customer loops, switching system ports, and inter-office facilities.

Channel

An electrical, or photonic communications path between two or more points of transmission.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and EU annoyance to tones as a function of frequency.

dBm

A unit for expression of power level in decibels relative to one milliwatt.

dBm

A unit used to express noise power in decibels relative to one picowatt (-90 dBm).

dBm0

A unit used to express power level in decibels relative to one milliwatt referred to, or measured at, a zero transmission level point (0TLP). A unit used to express noise power in decibels relative to one picowatt measured with C-message weighting.

dBmC0

Noise power in dBmC referred to, or measured at, a zero transmission level point (0TLP).

D Channel

The D Channel is a 16 kilobit per second packet-switched channel that carries signaling and control for the B channels and also supports customer packet data traffic at speeds up to 9.6 kilobits per second.

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Digital Signal Level One (DS1)

A digital signal transmitted at the nominal rate of 1.544 Mbit/s.

Facilities

Any cable, poles, conduit, microwave, or carrier equipment, central office distributing frames, central office switching equipment, computers (both hardware and software), business machines, etc., utilized to provide the services offered by a telephone company.

High-Bit-Rate Digital Subscriber Line (HDSL)

A system that is capable of transmitting bi-directional DS1 (1.544 Mbps) signals or bi-directional half DS1 (768 kbps) signals over metallic twisted-pair cables to provide access to digital telecommunications services.

HDSL Unbundled Loop Service (HDULS)

A service that provides a 2-wire or 4-wire metallic channel, suitable for the transport of HDSL, between the Bell Atlantic central office distributing frame termination of co-located equipment belonging to an OTC and the rate demarcation point at a customer location.

Integrated Services Digital Network (ISDN)

ISDN describes the end-to-end digital telecommunications network architecture which provides for the simultaneous access, transmission, and switching of voice, data, and image services. These functions are provided via channelized transport facilities over a limited number of standard user-network interfaces.

ISDN Basic Rate Unbundled Loop Service (IBRULS)

An unbundled loop service that provides an ISDN basic rate channel between the Bell Atlantic central office distributing frame termination of co-located equipment belonging to an OTC and the rate demarcation point at a customer location.

Leakage

The resistance between the conductors of an insulated metallic pair or the resistance between each conductor of an insulated metallic pair and ground.

Loop

A transmission channel between a EU customer location and a BA CO that is used as a transmission channel for telephone company services.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Plain Ordinary Telephone Service (POTS)

The basic single line switched access service offered by local exchange carriers to residential and business customers. POTS uses loop-start signaling.

Power Influence (PI)

The power of a longitudinal signal induced in a metallic loop by an electromagnetic field emanating from a conductor or conductors of a power system. PI is also called longitudinal noise or noise-to-ground.

Rate Demarcation Point (RDP)

The point at which Bell Atlantic network access recurring charges and responsibility stop and beyond which customer responsibility begins. The RDP is the point of demarcation and/or interconnection between a Bell Atlantic subscriber loop facility and EU premises cabling or terminal equipment. Bell Atlantic facilities at, or constituting, the rate demarcation point shall consist of wire or a jack conforming to Subpart F of Part 68 of FCC rules.

Transmission Enhancement Equipment

In general, any equipment that improves the characteristics of a transmitted signal. In this document, transmission enhancement equipment is any equipment that regenerates a digital signal.

Unbundled Loop

A transmission channel between a EU customer location and a LEC CO that is not a part of, or connected to, other LEC services.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ADSL	Asymmetrical Digital Subscriber Line
ADULS	ADSL Unbundled Loop Service
ANSI	American National Standards Institute
BA	Bell Atlantic
BRI	Basic Rate Interface
BRITE	Basic Rate Interface Terminal Equipment
CO	Central Office
CODF	Central Office Distributing Frame
COT	Central Office Terminal
DLC	Digital Loop Carrier
DS0	Digital Signal Level Zero
DS1	Digital Signal Level One
DVM	Data-Voice Multiplexer
HDSL	High-Bit-Rate Digital Subscriber Line
HDULS	High-Bit-Rate Digital Unbundled Loop Service
IBRULS	ISDN Basic Rate Unbundled Loop Service
ISDN	Integrated Services Digital Network
LT	Line Terminating
NT	Network Terminating
OTC	Other Telephone Company
PI	Power Influence
POTS	Plain Ordinary Telephone Service
RD	Resistance Design
RDP	Rate Demarcation Point
RT	Remote Terminal

July 2, 1997

ATTACHMENT III

USOC	Universal Service Order Code
VF	Voice Frequency
VG	Voice Grade
2B1Q	Two-Bit One-Quaternary

7. Bibliography

- 1- ANSI T1.601-1992, American National Standard for Telecommunications - ISDN - Basic Access Interface for Use on Metallic Loops for Application at the Network Side of NT, Layer 1 Specification.
- 2- Special Report SR-TSV-000307
- 3- Special Report SR-TSV-000323
- 3- IEEE Std 743-1984, IEEE Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice frequency Circuits.
- 4- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 1, (Bellcore, October 1995).
- 5- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 1 (Bellcore, November 1994).
- 6- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).
- 7- Committee T1 Technical Report No.28, *High-Bit-Rate Digital Subscriber Line (HDSL)*, February, 1994.

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

EXHIBIT D

**Specialized Routing Solution For
Operator & DA Calls**

CALL TYPE	5ESS	DMS-100	EWSD	1AESS	DMS-10
0-	AIN	AIN	AIN	SRN	SRN
0+ local	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)	LCC (cocot coin) SRN (non-coin)
0+ IntraLATA toll	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)	LCC (coin) SRN/2PIC ¹ (non-coin)
411	AIN	AIN	AIN	AIN	SRN
555-1212	AIN	AIN	AIN	AIN	SRN

¹After 2 PIC implementation, these calls will be routed to the IntraLATA toll provider.

Definitions:

1. AIN = Advanced Intelligent Network
2. SRN = Specialized Routing Node
3. LCC = Line Class Code

EXHIBIT E**AIN EXCEPTION LIST**

Lucent 5ESS	Nortel DMS100	Siemens EWSD
FND – # ISDN Attendant Lines	NISDN – BRI, Including EKTS	Two-Party Lines
– Lines without Office Equipment	MDC Attendant Consoles Data Units	Denied Origination Service
oPak Lines	MBS Data Units, Customized ISDN Lines, and functional signaling Meridian feature transparency (MFT) set. (P-phones)	Remote Call Forwarding
omized ISDN Lines	Datapath lines	
	WATS lines	

OTHER AIN-BASED SERVICE EXEPTIONS

1. CENTREX ARS
2. Easy Voice
3. Work At Home Billing Service
4. CENTREX Extend
5. Switch Redirect Service (requires special handling)

EXHIBIT F

TR 72580
Issue 1, January 1997

Bell Atlantic Technical Reference

**Analog Unbundled Port Services
Technical Specifications**

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**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR 72580
Issue 1, January 1997**

Notice

This Technical Reference is published by Bell Atlantic to provide a technical description of Analog Unbundled Port Services. To the extent feasible, the description references or duplicates existing published technical references utilized by the industry.

Bell Atlantic reserves the right to revise this technical reference for any reason including, but not limited to, changes in tariffs, laws, or regulations, conformity with updates and changes in standards promulgated by various agencies, utilization of advances in the state of technical arts, or the reflection of changes in the design of any facilities, equipment, techniques, or procedures described or referred to herein. Liability for difficulties arising from technical limitations or changes herein is disclaimed.

Bell Atlantic reserves the right not to offer any or all of these services and to withdraw any or all of them at any future time. In addition, the services described herein are based on available facilities and equipment and may not be universally available.

With respect to services offered pursuant to tariff, however, the terms and conditions of the service offering are determined by the tariff itself and applicable laws and regulations. This reference is intended to be supplemental to the tariffs. In the event of a conflict between the tariffs, laws or regulations and this reference, the tariffs, laws, and regulations shall govern.

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EXHIBIT F

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR 72580
Issue 1, January 1997**

**Bell Atlantic Technical Reference
Analog Unbundled Port Services
Technical Specifications**

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1. General

1.01 This technical reference provides the technical specifications associated with the Analog Unbundled Port Services offered by Bell Atlantic in the co-carrier section of some local exchange tariffs.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Analog Unbundled Port Services (UPS) enable Other Telephone Companies (OTC) that are collocated in a Bell Atlantic (BA) Central Office (CO) to connect to analog switch ports on BA local switching systems. The analog switch ports provide access to the functionality of the switch including supervisory signaling, digit reception and transmission, routing, rating, usage, as well as other line or trunk features.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the analog UPS. In the future, BA may offer transport services for analog UPS. In that case, the technical specifications associated with the transport service will supersede those in this document where applicable.

2. Service Description

2.01 The service description, terms and conditions, prices, and Universal Service Order Codes (USOCs) for analog UPS are contained in applicable tariffs or contracts.

2.02 Analog UPS are provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

2.03 Analog UPS vary according to the type of switch port (interface) and the services desired. This document contains the technical specifications associated with the analog switch port. The services associated with the analog switch port are described in applicable tariffs and other technical references.

2.04 Analog ports provide a local switch interface that is suitable for the transmission of analog voice grade signals between approximately 300 and 3000 Hz. Analog ports use various methods of dc supervisory signaling to control call processing.

2.05 The following analog UPS are offered: Basic, Centrex, PBX, and Direct Inward Dialing (DID). The Basic, Centrex, and PBX ports are on the line side of the local switching system and use Loop-Start or Ground-Start signaling. The DID port is on the trunk side of the local switching system and uses Loop Reverse-Battery signaling.

2.06 Basic, Centrex, PBX, and DID ports consist of a 2-wire analog interface associated with a local switching system and a 2-wire CODF cross-connect between a 2-wire OTC CODF termination and the CODF termination of the analog port. At each 2-wire interface one conductor is called tip and the other conductor is called ring. A typical analog port configuration is shown in Figure 2-1.

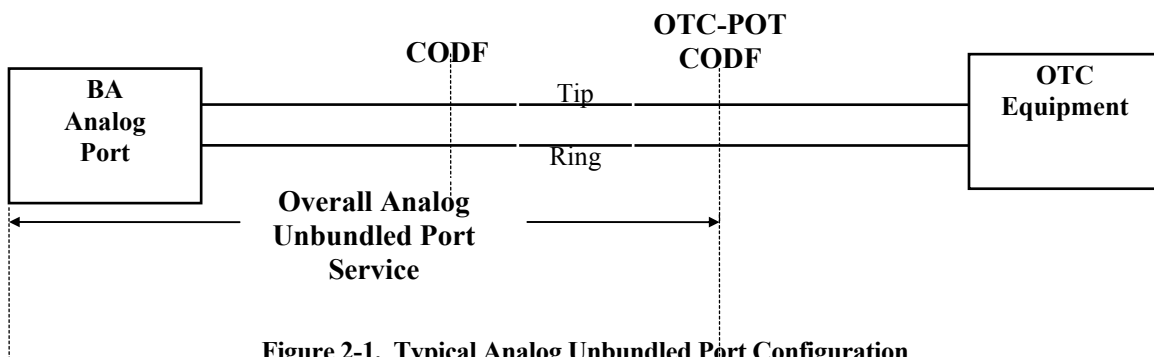
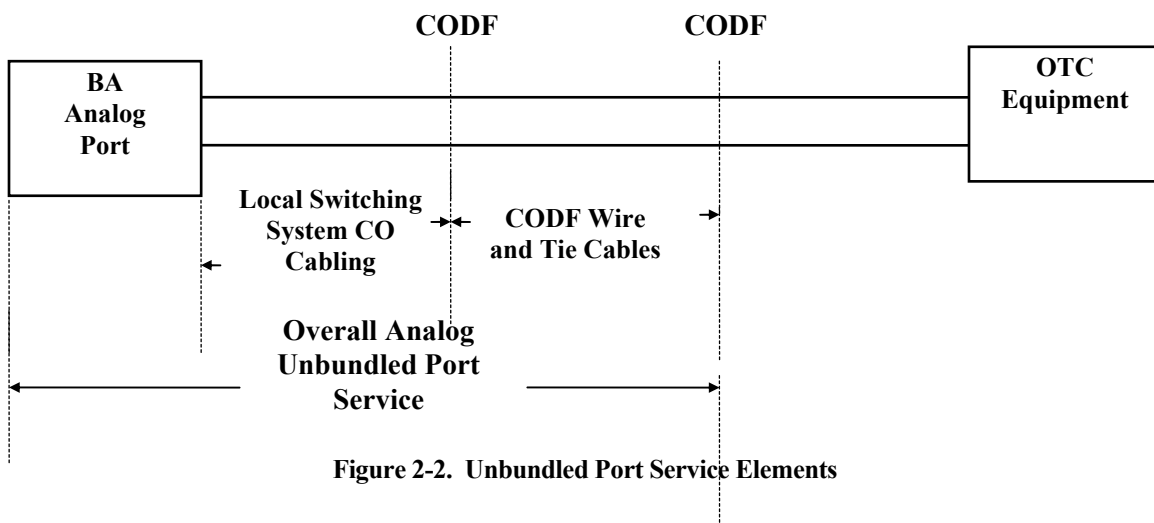


Figure 2-1. Typical Analog Unbundled Port Configuration

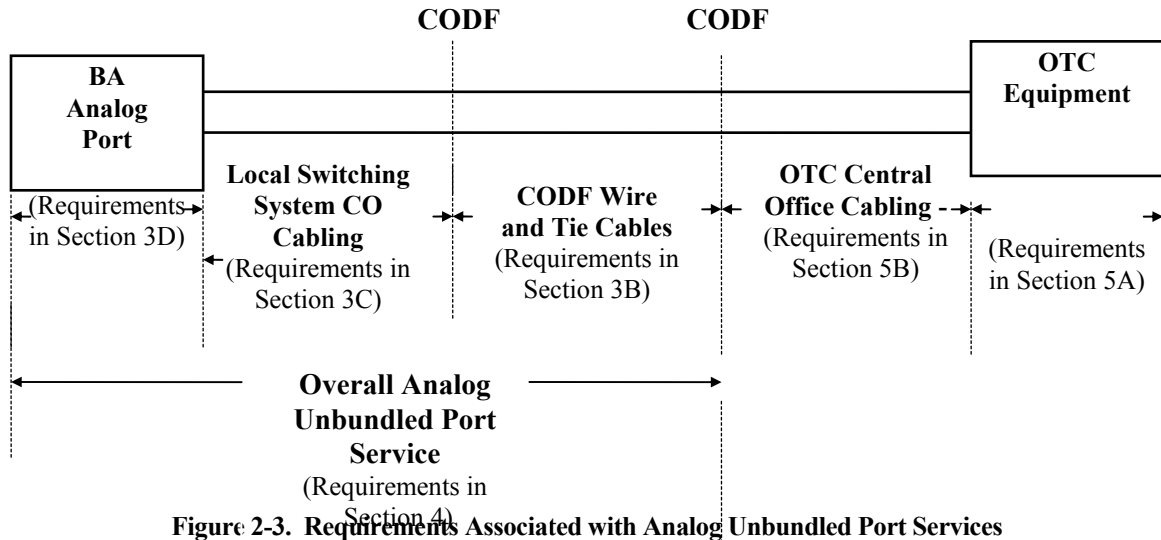
2.07 An analog UPS ordinarily consists of the following elements (see Figure 2-2):

- (1) Central Office Distributing Frame (CODF) wire and tie cable(s) between the CODF termination of the OTC equipment and the CODF termination of the BA analog switch port;
- (2) CO cabling between the CODF and the BA analog switch port; and,
- (3) an analog switch port on a BA local switching system that is either;
 - (a) a loop-start line-side port (LSLS);
 - (b) a ground-start line-side port (GSLs); or,
 - (c) a loop reverse-battery trunk-side port (LRTS). The LRTS port is either;
 - (I) an LRTS port on the trunk-side of a local switching system; or,
 - (II) an LRTS port on a digital channel bank in the same building that has a high capacity connection (such as DS1) to the local switching system.
- (4) Each LSLS or GSLs port has the following basic characteristics and capabilities:
 - (a) an associated telephone number;
 - (b) Dial Pulse (DP) or Dual Tone Multi-Frequency (DTMF) address signaling;
 - (c) access to local calling within the minimum BA-defined local calling area for each rate center;
 - (d) basic intercept;
 - (e) one primary directory listing;
 - (f) PIC1 and PIC2 access;
 - (g) access to 911;
 - (h) access to call routing, switch usage, and recording capability.
- (5) Each LRTS port has the following basic characteristics and capabilities:
 - (a) one way call routing from the BA local switching system to the OTC for associated telephone numbers;
 - (b) DP, DTMF, or MF address signaling;
 - (c) access to call routing and switch usage capabilities.



2.08 The requirements for the BA unbundled port service elements are provided in Section 3 of this technical reference. The overall service requirements are specified in Section 4. Section 5 provides OTC equipment and cabling specifications. Figure 2-3 shows the requirements associated with unbundled port services.

2.09 The Basic line-side port is suitable for single line residential or business service. Unless the OTC requests ground-start supervisory signaling or DP address signaling at the time the service is ordered, the Basic port will be provided with loop-start supervisory signaling and DTMF address signaling capabilities. DP address signaling can be used on a port that is arranged for DTMF signaling.



2.10 The Centrex port is suitable for Centrex line service. Unless the OTC requests ground-start supervisory signaling or DP address signaling at the time the port is ordered, the Centrex port will be provided with loop-start supervisory signaling and DTMF address signaling capabilities. DP address signaling can be used on a port that is arranged for DTMF signaling.

2.11 The PBX port is suitable for Private Branch Exchange (PBX) Central Office trunks. Unless the OTC requests loop-start supervisory signaling or DP address signaling at the time the port is ordered, the PBX port will be provided with ground-start supervisory signaling and DTMF address signaling. DP address signaling can be used on a port that is arranged for DTMF signaling.

2.12 The DID port is suitable for one-way Direct Inward Dialing (DID) trunks. Loop reverse battery is the only supervisory signaling available. Unless the OTC requests DTMF or MF address signaling at the time the port is ordered, the DID port will be provided with DP address signaling.

2.13 The following list of supplementary features are some of the features that are available on line-side ports where technically feasible. Detailed feature lists by switch port type will be provided by the product manager.

- Additional listings
- Operator services
- Directory assistance
- Call Blocking (customer or OTC activated)
- Caller ID (calling number delivery)
- Speed calling
- 3-Way calling
- Call Waiting
- Call Forwarding (including Call Forwarding Busy and No Answer)
- Early fraud warning
- Hunt group arrangements
- Usage recording and daily usage tapes indicating the to and from number and start and stop time by port
- Simplified Message Desk Interface data link
- Routing options

2.14 All analog UPS services use the SN network channel (NC) code. Additional NC option codes are shown in Figure 2-4.

2.15 Network Channel Interface (NCI) codes describe the type of OTC signaling. Valid analog NCI codes are shown in Figure 2-5.

2.16 Valid analog NC/NCI code combinations are shown in Figure 2-6.

Figure 2-4: UPS NC Codes

NC Code	Character 3	Character 4
SN	A (2-wire)	L (line-side port) T (trunk-side port)

Figure 2-5: UPS NCI Codes (see note)

NCI Code	Description
02QC3.OOE	Loop-start signaling - Closed End
02QC3.OOC	Ground-start signaling - Closed End
02QC3.RVT	Loop Reverse-Battery Terminating Signaling

Note: NCI codes describe the function performed by the connecting OTC equipment not the function of the unbundled port service. For example, an LSLs port performs the open end function of an access line and connecting OTC equipment performs the closed end function.

Figure 2-6: Valid analog UPS NC/NCI Code Combinations

Unbundled Port Service	NC Code	NCI Code
LSLS	SNAL	02QC3.OOE
GSLs	SNAL	02QC3.OOC
LRTS	SNAT	02QC3.RVT

3. Service Elements

A. General

3.01 Three elements are always used with analog Unbundled Port Services. They are: Central Office Distributing Frame (CODF) wire and tie cable(s), BA local switching system CO cabling, and a BA local switching system port. The following sections contain the specifications for each of these elements.

B. CODF Wiring and Tie Cable(s)

3.02 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of OTC equipment to the CODF termination of the BA local switching system port.

3.03 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables used for analog UPS should be less than 1500 feet.

3.04 The direct-current resistance of the CODF wiring and tie cable used for analog UPS should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

3.05 The 1kHz loss of the CODF wiring and tie cable used for UPS, when measured between 900 ohm impedances, should be less than .5 dB.

3.06 The C-message noise measured on the CODF wiring and tie cables used for analog UPS shall be 20 dBmC or less when measured between 900 ohm impedances..

C. Bell Atlantic Local Switching System CO Cabling

3.07 The voice grade CO cabling used to terminate BA Local Switching System ports on the CODF shall use twisted-pair conductors.

3.08 The type, gauge, and length of the BA CODF cabling shall be specified based on this specification and BA equipment vendor requirements. If the specifications in this document differ from the equipment manufacturers specifications, then the more stringent of the two shall be used.

3.09 The direct-current resistance of the CO cabling between the BA local switching system port and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [1] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

3.10 The 1kHz loss of the CO cabling between the BA local switching system port and the CODF, when measured between 900 ohm impedances, shall be less than .15 dB.

3.11 The C-message noise measured on the CO cabling between the BA local switching system port and the CODF shall be 20 dBmC or less.

D. Local Switching System Analog Ports

3.12 Bell Atlantic currently offers three different local switching system analog ports. They are: (1) the loop-start line-side (LSLS) port, (2) the ground-start line-side (GSLs) port, and (3) the loop reverse-battery terminating (LRTS) trunk-side port.

3.13 The impedance of the local switching system analog port is based on the type of local switching system. Most BA local switching system ports have a nominal 900 ohms + 2.16uF impedance, however some switching system ports have a nominal impedance of 800 ohms in parallel with 0.05 uF and 100 ohms.

3.14 Line-side analog ports shall provide 20 mA or more of loop current when terminated by a direct-current resistance of between 430 ohms and 1730 ohms.

3.15 The C-message noise measured on the analog port shall be 20 dBmC or less.

3.16 The C-Notched noise measured on the analog port shall be 45 dBmC or less with a -13 dBm0 1004 Hz holding tone.

3.17 Signaling on the LSLS (02QC3.OOE) and GSLs (02QC3.OOC) ports shall conform to the network specifications in ANSI T1.401-1993 [2].

3.18 Signaling on the LRTS (02QC3.RVT) port shall conform to the network specifications in ANSI T1.405-1996 [3].

4. Service Specifications

4.01 The overall end-to-end analog UPS service is from the CODF termination of the OTC equipment (OTC-POT) to the BA local switching system port (See Figure 2-1).

4.02 Analog UPS should meet the limits in Figure 4-1, 4-2, and 4-3 when measured at the BA local switching system test position. Parameters are usually tested in response to trouble reports or when additional testing is purchased.

Figure 4-1: Analog UPS Acceptance Limits (AL) and Immediate Action Limits (IAL)

Parameter	AL	IAL
Loss	< 1.0 dB	> 1.5 dB
Resistance	< 100 ohms	> 100 ohms
C-Message Noise	< 30 dBmC0	> 30 dBmC0
LSLS & GSLS Loop Current	> 20 mA	< 20 mA

4.03 Signaling on the LSLS (02QC3.OOE) and GSLS (02QC3.OOC) ports shall conform to the network specifications in ANSI T1.401-1993 [2]. Signaling on the LRTS (02QC3.RVT) port shall conform to the network specifications in ANSI T1.405-1996 [3].

4.04 Compatible TLP ranges are shown in Figures 4-2 and 4-3.

Figure 4-2: Compatible TLP Ranges at the OTC-POT

Specified NCI Code	OTC Transmit TLP ²⁷	OTC Receive TLP ²⁸
02QC3.OOE, 02QC3.OOC	0.0 to -8.0 [0.0]	0.0 to -1.0
02QC3.RVT	-2 to -3.5 [-3.5]	0.0 to -1.0

Figure 4-3: Compatible TLP Ranges at the BA Local Switching System

Specified NCI Code	BA Transmit TLP	BA Receive TLP
02QC3.OOE, 02QC3.OOC	0.0	0.0 to -8.0
02QC3.RVT	0.0	-2 to -4 ²⁹

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Collocated OTC equipment used for interconnection with analog UPS shall meet all of the applicable generic equipment requirements in GR-63-CORE [4] and GR-1089-CORE [5].

5.02 Collocated OTC equipment shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Where requirements are not specified in this document, contractual technical requirements, or other applicable documents, the manufacturer's requirements consistent with industry standards shall be met.

5.03 The open circuit tip-to-ring dc voltage that collocated OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Collocated OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

²⁷ The OTC transmit TLP is normally specified by the OTC. When the OTC transmit TLP is not specified, the bracketed [] value denotes the default TLP.

²⁸ The OTC receive TLP will be a function of the BA transmit TLP (0.0) and the total loss of the BA port, BA CO cabling, and BA CODF wiring. The average OTC receive TLP is -0.5 dBm and the level cannot be adjusted.

²⁹ When the LRTS port is an analog trunk circuit, the BA receive TLP will be a function of the OTC transmit TLP and the total loss of the BA CO cabling, the BA CODF wiring, and the BA LRTS port. The average total loss of the BA CO cabling, BA CODF wiring, and BA port is about 0.5 dB and the BA receive TLP cannot be adjusted by BA. When the LRTS port is on a channel bank that has a high capacity connection to the BA Local Switching System, the BA receive TLP is obtained by Local Switching System translations and is always -4.0.

5.05 Collocated OTC load equipment shall not draw more than 100 mA of loop current from LSLS and GSTS ports and shall not deliver more than 100mA of loop current to any LRTS port.

5.06 The noise limits for analog UPS are predicated on the OTC equipment having a longitudinal balance of > 60 dB when measured using the methods and equipment specified in ANSI/IEEE 455-1984 [6].

5.07 The loss and noise limits for analog UPS are predicated on collocated OTC equipment having a nominal impedance of 900 ohms when measured using the methods and equipment in ANSI/IEEE 743-1995 [7].

5.08 The applied power level of any transmitted signal averaged over 3 seconds shall not exceed -12 dBm0.

5.09 The signaling characteristics of OTC equipment associated with LSLS and GSLS ports shall conform to the loop-start and ground-start customer installation specifications in ANSI T1.401-1993 [2].

5.10 The signaling characteristics of OTC equipment associated with LRTS ports shall conform to the loop reverse battery customer installation specifications in ANSI T1.405-1996 [3].

B. OTC CO Cabling Requirements

5.11 The voice grade CO cabling used to terminate OTC equipment on the CODF for interconnection with analog UPS shall use twisted-pair conductors.

5.12 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.13 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [1] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

5.14 All CO cabling between OTC equipment and the CODF shall be equipped with connectors at each end. The type of connectors shall be specified by the CO Engineer.

5.15 The 1kHz loss of the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances using the methods and equipment specified in ANSI/IEEE 743-1995 [7], shall be less than .15 dB.

5.16 The C-message noise measured on the CO cabling between the OTC equipment and the CODF, when measured between 900 ohm impedances using the methods and equipment specified in ANSI/IEEE 743-1995 [7], shall be 20 dBmC or less.

6. References

A. Definitions

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

Closed end

The closed end of an access line is the end of the access line that is not switched. The closed end connects to CPE or OTC equipment that functions as terminal equipment.

C-Message Noise

The frequency-weighted, short-term average noise within an idle channel. The frequency weighting, called C-message, is used to account for the variations in 500-type telephone set transducer efficiency and end-user annoyance to tones as a function of frequency.

C-Notched Noise

The C-message frequency-weighted noise on a channel with a holding tone that is removed at the measuring end through a notch (very narrow band) filter.

dBm

A unit for expression of power level in decibels relative to one milliwatt.

dBm0

Power level referred to, or measured at, a zero transmission level point (OTLP).

dBm

A unit used to express noise power relative to one picowatt (-90 dBm).

dBmC

Noise power measured with C-message weighting expressed in dBm.

dBmC0

Noise power in dBmC referred to, or measured at, a zero transmission level point (OTLP).

Decibel (dB)

The logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electric, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Dial Pulse (DP)

A type of switched access line address signaling that uses rapid loop open and loop closure signals (pulses) to indicate the digit being dialed. The digits 1 through 9 are represented by the same number of pulses and the digit zero is represented by ten pulses.

Dual Tone Multi-Frequency (DTMF)

A type of switched access line address signaling that uses two tones transmitted simultaneously to indicate a digit (0 to 9) or character (* or #).

Ground-Start (GS) signaling

A type of switched access line supervisory signaling in which the network provides a battery source. To initiate a call, CPE or OTC equipment provides a ground on the ring lead. The ring ground causes dc current to flow which the local switching system will detect as a request for service. On terminating calls, CPE or OTC equipment will provide an off-hook loop closure that is recognized as an answer signal.

Line-side

That part of a local switching system that interfaces access lines.

Local switching system

A system that establishes connections between access lines and connections between access lines and interoffice trunks. Access line ports are located on the line-side of the local switching system and trunk ports are located on the trunk-side of the local switching system.

Loop reverse-battery signaling

A type of switched access line supervisory signaling that uses loop-open and loop-closure signals to indicate on-hook and off-hook signals in one direction and normal battery polarity and reverse battery polarity to indicate on-hook and off-hook signals in the other direction. The end of the service that generates loop open and loop closure signals is called the

originating end and the other end which generates the normal battery polarity and reverse battery polarity signals is called the terminating end. For LRTS and other DID-type ports, the local switching system is the originating end and the CPE or OTC equipment is the terminating end. The interface code for such applications represents the function performed by the CPE or OTC equipment (02QC3-RVT).

Loop-Start (LS) signaling

A type of switched access line signaling in which the network provides a battery source. To initiate and maintain a call, CPE or OTC equipment will provide an off-hook loop closure. The loop closure causes dc loop current to flow which the local switching system will recognize as a service request. On terminating calls, CPE or OTC equipment will provide an off-hook loop closure that is recognized as an answer signal.

Open end

The open end of an access line is the end of the access line that connects to the local switching system port. The open end can be switched to other line or trunk ports associated with the same local switching system.

Other Telephone Company (OTC)

An organization that provides telecommunications services to the public.

Trunk-side

That part of a local switching system that interfaces interoffice trunks.

Unbundled Port

A physical termination (port) on a switching system that provides access to and from the public switched telephone network.

Voice Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

AL	acceptance limit
ANSI	American National Standards Institute
BA	Bell Atlantic
CO	central office
CODF	central office distributing frame
CPE	customer premises equipment
DID	Direct Inward Dialing
DP	dial pulse
DS1	digital signal level one
DTMF	dual tone multi-frequency
GS	ground-start
GSLS	ground-start line-side
FCC	Federal Communications Commission
IAL	immediate action limit
IEEE	International Electrical and Electronic Engineers
LRB	loop reverse-battery
LRTS	loop reverse-battery trunk-side
LS	loop-start
LSLS	loop-start line-side
NC	network channel
NCI	network channel interface
NEC	National Electric Code
OTC	Other Telephone Company
PBX	Private Branch Exchange
PIC1	primary interconnect carrier one

PIC2	primary interconnect carrier two
POTS	plain ordinary (analog) telephone service
UL	Underwriter's Laboratory
UPS	Unbundled Port Service
USDL	United States Department of Labor
USOC	Universal Service Order Code
VF	voice frequency
VG	voice grade

7. Bibliography

- 1- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).
- 2- American National Standard for Telecommunications - Interface Between Carriers and Customer Installations - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground-Start Signaling, ANSI T1.401-1993.
- 3- American National Standard for Telecommunications - Network-to-Customer Installation Interfaces - Direct-Inward-Dialing Analog Voice grade Switched Access Using Loop Reverse-Battery Signaling, ANSI T1.405-1996.
- 4- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 1, (Bellcore, October 1995).
- 5- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 2 (Bellcore, November 1994).
- 6- ANSI/IEEE 455-1984 (R1993), Test Procedure for Measuring Longitudinal Balance of Telephone Equipment Operating in the Voice Band.
- 7- ANSI/IEEE 743- 1995, Standard Methods and Equipment for Measuring the Transmission Characteristics of Analog Voice Frequency Circuits.

NOTE: These documents are subject to change; references reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

EXHIBIT G

TR 72585
Issue 1, April 1997

Bell Atlantic Technical Reference

**Digital Unbundled Port Services
Technical Specifications**

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July 2, 1997

ATTACHMENT III

**Bell Atlantic Network Services, Inc.
Technical Reference**

**TR 72585
Issue 1, April 1997**

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EXHIBIT G

Bell Atlantic Network Services, Inc.
Technical Reference

TR 72585
Issue 1, April 1997

Bell Atlantic Technical Reference
Digital Unbundled Port Services
Technical Specifications

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1. General

1.01 This technical reference provides the technical specifications associated with the Digital Unbundled Port Services offered by Bell Atlantic (BA) in the co-carrier section of some local exchange tariffs or via contract.

1.02 Whenever this technical reference is reissued, the reason(s) for reissue will be provided in this paragraph.

1.03 Digital Unbundled Port Services (DUPS) enable Other Telephone Companies (OTC) that are collocated in a BA Central Office (CO) to connect to digital switch ports on BA local switching systems. The digital switch ports provide access to the functionality of the switch including supervisory signaling, digit reception and transmission, routing, rating, usage, as well as other line and trunk features.

1.04 The technical specifications in this document assume that the OTC is collocated in the same CO as the digital UPS. In the future, BA may offer transport services for DUPS. In that case, the technical specifications associated with the transport service will supersede those in this document where applicable.

2. Service Description

A. General

2.01 The service description, terms and conditions, prices, and Universal Service Order Codes (USOCs) for DUPS are contained in applicable tariffs or contracts.

2.02 DUPS are provided subject to availability on a first-come first-served basis. Special construction charges apply when appropriate facilities are not available.

2.03 DUPS vary according to the type of switch port (interface) and the services desired. This document contains the technical specifications associated with the digital switch ports. The services associated with the digital switch port are described in applicable tariffs and other technical references.

2.04 Digital ports provide a local switch interface that is suitable for the transmission of digital signals at the rates specified for each port.

2.05 The following DUPS are currently offered: Basic Rate ISDN (BRI), Centrex Basic Rate ISDN (CBRI), Primary Rate ISDN (PRI), DS1 message trunk interface (DS1MT), and DS1 Direct Inward Dialing (DS1DID). Other port types will be considered upon receipt of a bona-fide request.

2.06 DUPS ordinarily consists of the following elements:

- (1) (a) For BRI and CBRI: Central Office Distributing Frame (CODF) wire and tie cable(s) between the CODF termination of the OTC transport equipment and the CODF termination

of the BA switch port. (b) For PRI, DS1MT, and DS1DID: Digital Signal 1 Cross-Connect (DSX-1) wire and repeated tie cable between the DSX-1 termination of the OTC transport equipment and the DSX-1 termination of the BA switch port. (In some cases, an electronic digital cross-connect (EDSX) system can be substituted for the DSX-1.)

(2) CO cabling between the CODF or DSX-1 and the BA Digital switch port; and,

(3) a digital switch port on a BA local switching system that is either;

- (a) a line-side Basic Rate ISDN or Centrex Basic Rate ISDN interface;
- (b) a line-side³⁰ DS1 interface for Primary Rate ISDN; or,
- (c) a trunk-side DS1 interface for Message Trunks, or Direct Inward Dialing trunks.

2.07 Each DUPS line-side port has the following basic characteristics and capabilities:

- an associated telephone number;
- access to local calling within the minimum BA-defined local calling area for each rate center;
- basic intercept;
- PIC1 and PIC2 (where deployed) access;
- access to 911;
- access to call routing, switch usage, and recording capability.

2.08 Each DS1DID trunk-side port has the following basic characteristics and capabilities:

- One-way call routing from the BA local switching system to the OTC for associated telephone numbers;
- wink-start address control signal;
- DP, DTMF, or MF address signaling;
- access to call routing and switch usage capabilities.

2.09 Each DS1MT trunk-side port has the following basic characteristics and capabilities:

- One-way call routing from the BA local switching system to the OTC for associated telephone numbers, or,
- One-way call routing from the OTC to the BA local switching system for associated telephone numbers;
- SS7 out-of-band signaling, or,
- wink-start address control signal with MF address signaling; and ,
- access to call routing and switch usage capabilities.

³⁰ Primary Rate ISDN (PRI) services use a DS1 interface (port) on the local switching system. Depending upon the architecture of the local switching system, the port may be on the line-side or the trunk-side of the local switching system. Since the location of the port has no bearing on the functional characteristics of the port, for the purposes of this technical reference a line-side port is assumed.

2.10 The following list of supplementary features are some of the features that are available on line-side ports where technically feasible. Detailed feature lists by switch port type will be provided by the product manager.

- Additional listings
- Operator services
- Directory assistance
- Call Blocking (customer or OTC activated)
- Caller ID (calling number delivery)
- Speed calling
- 3-Way calling
- Call Forwarding (including Call Forwarding Busy and No Answer)
- Hunt group arrangements
- Visual message waiting indicator
- Usage recording and daily usage tapes indicating the to and from number and start and stop time by port

B. Basic Rate ISDN (BRI)

2.11 BRI service consists of a 2-wire line-side port associated with a local switching system and a 2-wire CODF cross-connect between a 2-wire OTC CODF termination and the BRI CODF termination. At each 2-wire interface one conductor is called tip and the other conductor is called ring. A typical BRI port configuration is shown in Figure 2-1.

2.12 The BRI interface provides Line Termination (LT) functionality and utilizes the Two-Binary One-Quaternary (2B1Q) line code operating at 160 kbps that is described in Bellcore technical reference TR-NWT-000393 [1].

2.13 BRI is available in the 2B + D configuration which provides two B channels and one D channel (for signaling). BRI also supports a maintenance channel (M channel).

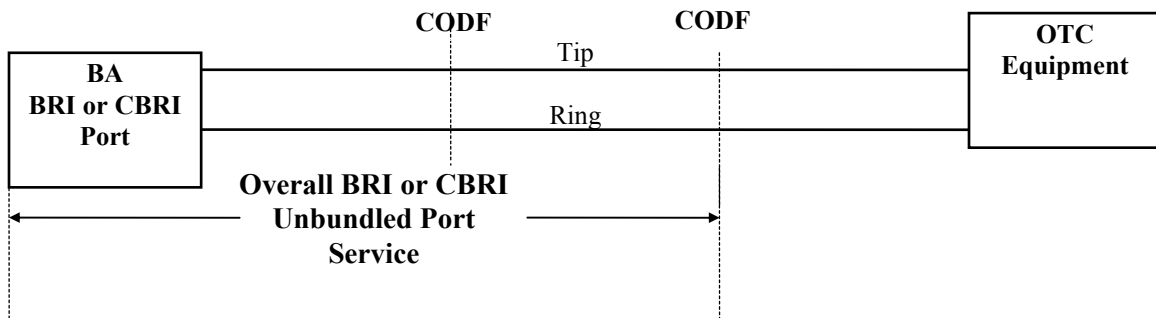


Figure 2-1. Typical BRI or CBRI Unbundled Port Configuration

C. Centrex Basic Rate ISDN (CBRI)

2.14 CBRI service consists of a 2-wire line-side port associated with a local switching system and a 2-wire CODF cross-connect between a 2-wire OTC CODF termination and the CTX BRI CODF

termination. At each 2-wire interface one conductor is called tip and the other conductor is called ring. A typical CBRI port configuration is shown in Figure 2-1.

2.15 The CBRI interface provides Line Termination (LT) functionality and utilizes the Two-Binary One-Quaternary (2B1Q) line code operating at 160 kbps that is described in Bellcore technical reference TR-NWT-000393 [1].

2.16 CBRI is available in the 2B + D configuration which provides two B channels and one D channel (for signaling). CBRI also supports a maintenance channel (M channel).

D. Reserved for future use.

E. Primary Rate ISDN (PRI)

2.17 PRI service consists of a 4-wire DSX-1 port associated with a local switching system and the 4-wire DSX-1 cross-connect between the OTC DSX-1 termination and the local switching system DSX-1 termination. A typical PRI port configuration is shown in Figure 2-2.

2.18 PRI ports are DSX-1 interfaces that meet the electrical specifications in ANSI T1.102 [3]. PRI service uses B8ZS line code and the Extended SuperFrame (ESF) Format described in ANSI T1.403 [5].

2.19 PRI is synchronized by the BA local switching system that uses timing that is traceable to a stratum one timing supply. The associated Building Integrated Timing Supply (BITS) meets the 3E specifications in ANSI T1.101 [6].

2.20 PRI is available in several configurations. The 23B + D configuration provides 23 B channels and one D channel (for signaling) that is always assigned to timeslot 24. The 24B configuration provides 24 B channels and signaling is carried over the D-channel of an associated PRI.

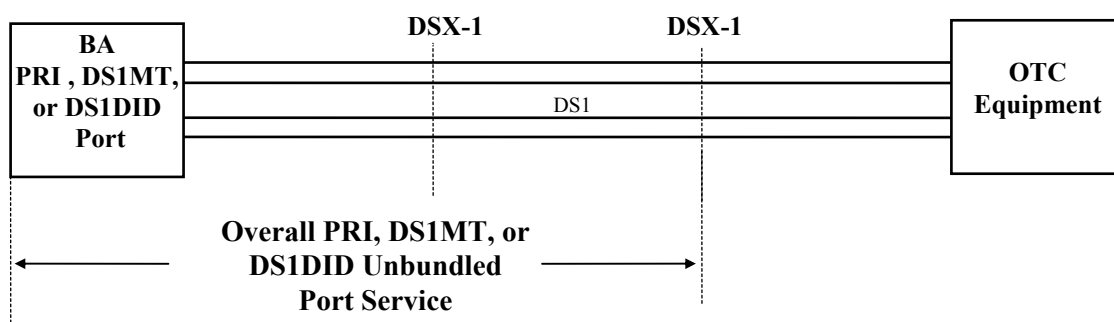


Figure 2-2. Typical PRI, DS1MT, or DS1DID Unbundled Port Configuration

2.21 Circuit Mode 3.1 kHz Audio is assumed for all calls originating from the Public Switched Telephone Network (PSTN). In addition, the analog voice grade signals on each DS0 for such calls are encoded and decoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

F. DS1 Message Trunk (DS1MT)

2.22 DS1MT service consists of a 4-wire DSX-1 port associated with the trunk-side of a local switching system and the 4-wire DSX-1 cross-connect and repeatered tie cable between the OTC DSX-1 termination and the local switching system DSX termination. A typical DS1MT port configuration is illustrated in Figure 2-2.

2.23 DS1MT ports are DSX-1 interfaces that meet the electrical specifications in ANSI T1.102 [3]. DS1MT ports use the B8ZS line code and the ESF framing format described in ANSI T1.403 [5].

2.24 DS1MT ports are synchronized by the BA local switching system that uses a timing supply that is traceable to a stratum one clock as described in ANSI T1.101 [6]. The Building Integrated Timing Supply (BITS) meets the 3E clock specifications in ANSI T1.101 [6].

2.25 DS1MT ports are channelized into 24 DS0 channels.

2.26 For out-of-band common channel signaling (CCS) applications, each DS0 can carry a 56 kbps or 64 kbps information payload. Signaling System 7 (SS7) signaling conforming to Bellcore GR-905-CORE [7] will be used in such applications.

2.27 For non-CCS/SS7 applications, robbed bit supervisory signaling conforming to ANSI T1.403 [5], wink-start call control protocol, and MF signaling will be used. When robbed bit supervisory signaling is used, each DS0 is limited to a 56 kbps payload.

2.28 Analog voice grade signals on each DS0 are encoded and decoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

G. DS1 Direct Inward Dialing (DS1DID)

2.29 DS1DID service consists of a 4-wire DSX-1 port associated with the trunk-side of a local switching system and the 4-wire DSX-1 cross-connect and repeatered tie cable between the OTC DSX-1 termination and the local switching system DSX termination. A typical DS1DID port configuration is illustrated in Figure 2-2.

2.30 DS1DID ports are DSX-1 interfaces that meet the electrical specifications in ANSI T1.102 [3]. DS1DID uses the AMI or B8ZS line code and the SF or ESF framing format described in ANSI T1.403 [5].

2.31 DS1DID ports are synchronized by the BA local switching system using a timing supply that is traceable to a stratum one clock as described in ANSI T1.101 [6]. The Building Integrated Timing Supply (BITS) meets the 3E clock specifications in ANSI T1.101 [6].

2.32 DS1DID ports are channelized into twenty-four 56 kbps DS0 channels. Each DS0 channel uses robbed bit supervisory signaling conforming to the loop reverse battery signaling (customer installation provided loop current feed) specifications in ANSI T1.403, Annex C [5].

2.33 Each DID DS0 channel uses the wink-start call control protocol and either dial pulse (DP), Dual Tone Multi-Frequency (DTMF), or Multi-Frequency (MF) address signaling. DP address

signaling is transmitted using the robbed bit supervisory signaling. DTMF and MF address signaling is transmitted along with other voiceband frequencies in the DS0 payload after being encoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

2.34 Analog voice grade signals on each DS0 are encoded and decoded using the μ 255 coding scheme described in ITU-T Recommendation G.711 [4].

H. Network Channel and Network Channel Interface Codes

2.35 Network Channel (NC) and Network Channel Interface (NCI) codes are used for communicating channel and interface information. The NC/NCI code set facilitates the identification of network channel requirements and associated interface specifications for services described in tariffs.

2.36 For switched services, the NC code is an encoded representation of the channel that is provided from the OTC Point Of Termination (POT) to the BA CO. By varying the NC code, the customer is allowed to further specify the type of service.

2.37 The most common DUPS NC codes are shown in figure 2-3. The complete set of NC codes for DUPS and other services may be found in SR-STS-000307 [9].

2.38 The NCI code is an encoded representation used to identify five interface elements located at a POT. The five elements reflect the following physical and electrical characteristics: number of physical conductors, protocol, impedance, protocol options, and transmission levels points (if applicable).

2.39 Valid DUPS NCI codes are shown in Figure 2-4.

2.40 Valid Digital NC/NCI code combinations are shown in Figure 2-5. Complete NC/NCI compatibility for DUPS and other services may be found in SR-STS-000323 [10].

Figure 2-3: DUPS NC Codes

Service	NC Code	Character 3	Character 4
BRI & CBRI	SN	A (2-Wire)	L (line side)
Primary Rate ISDN	HC	E (ANSI ESF & B8ZS)	E (PRI 24B)
			I (PRI 23B + D)
DS1 Message Trunk	SD	U	K (EO to EO SS7)
			L (EO to LT SS7)
DS1 DID	SD	-	Y (DID - DTMF)

Figure 2-4: DUPS NCI Codes

NCI Code	Description
----------	-------------

02QC5.OOS	Basic Rate ISDN
02QC5.OOS	Centrex Basic Rate ISDN
04QB9.11	Primary Rate ISDN
04QB9.11	DS1 Message Trunk
04QB9.11	DS1 Direct Inward Dialing

Figure 2-5: Valid NC/NCI Code Combinations

Service	NC Code	NCI Code
Basic Rate ISDN	SNAL	02QC5.OOS
Centrex Basic Rate ISDN	SNAL	02QC5.OOS
Primary Rate ISDN (24B)	HCEE	04QB9.11
Primary Rate ISDN (23B+D)	HCEI	04QB9.11
DS1 Message Trunk (EO to EO SS7)	SDUK	04QB9.11
DS1 Message Trunk (EO to Tandem SS7)	SDUL	04QB9.11
DS1 Direct Inward Dialing	SD-Y	04QB9.11

3. Service Elements

A. General

3.01 Three elements are always used with BRI and CBRI Unbundled Port Services. They are: CODF cross-connect wiring and tie cable(s), BA local switching system CO voice frequency (VF) cabling, and a BA local switching system port. Figure 3-1 illustrates the BRI and CBRI Unbundled Port Service elements and identifies the sections of this document that contain the requirements for each of the elements.

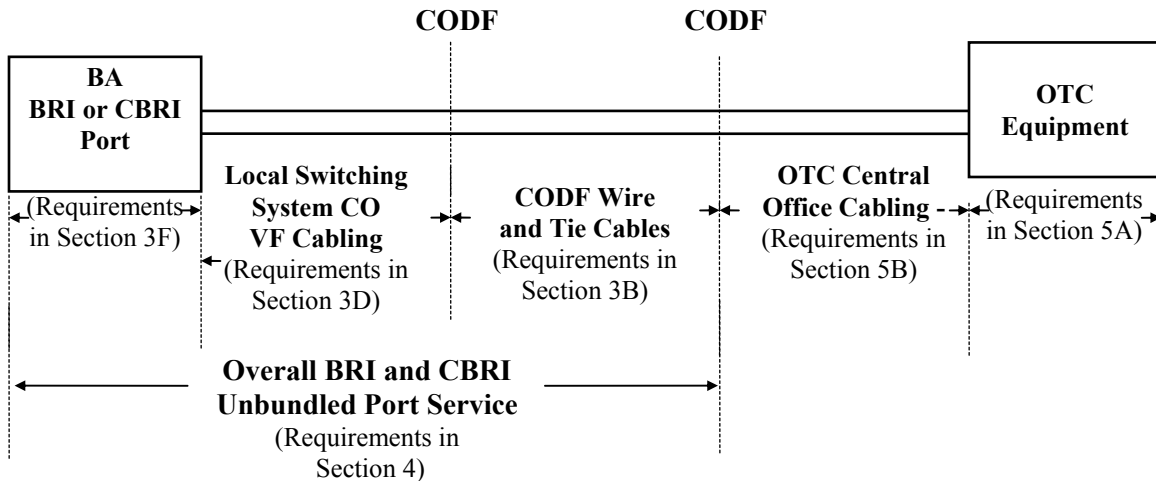


Figure 3-1. BRI and CBRI Unbundled Port Service Elements

3.02 Three elements are always used with the DS1s associated with the PRI, DS1MT, and DS1DID Unbundled Port Services. They are: DSX-1 cross-connect wiring and tie cable(s), BA local switching system CO DSX-1 cabling, and a BA local switching system DS1 port. Figure 3-2 illustrates the PRI, DS1MT, and DS1DID Unbundled Port Service elements and identifies the sections of this document that contain the specifications for each of the elements.

B. CODF Wiring and Tie Cable(s)

3.03 CODF cross-connect wiring and tie cable(s) are used to link the CODF termination of OTC transport equipment to the CODF termination of the BA BRI or CBRI port.

3.04 The total combined length of all CODF cross-connect wiring and all CODF-to-CODF tie cables used for DUPS should be less than 1500 feet.

3.05 The direct-current resistance of the CODF wiring and tie cable used for DUPS should be less than 80 ohms. This is equal to 1500 or less feet of 24 gauge cable.

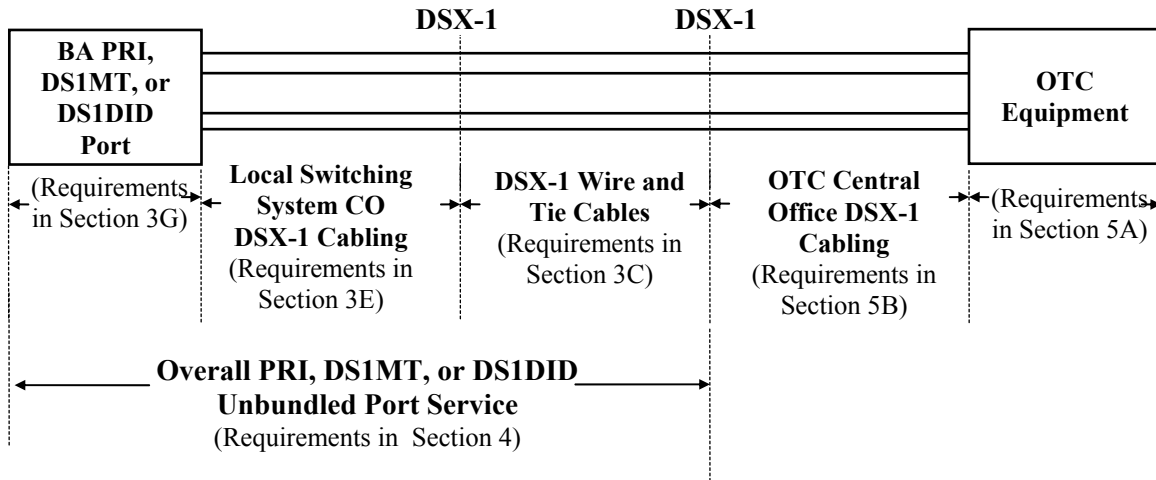


Figure 3-2. PRI, DS1MT, and DS1DID Unbundled Port Service Elements

C. DSX-1 Wiring and Repeated Tie Cable(s)

3.06 DSX-1 cross-connect wiring and tie cable(s) are used to link the DSX-1 termination of OTC equipment to the DSX-1 termination of the BA PRI, DS1MT, or DS1DID port. In some cases, an electronic digital cross-connect (EDSX) system may be substituted for the DSX-1.

3.07 The total length of all DSX-1 cross-connect wiring should be less than 185 feet.

3.08 When repeated tie cables are used to link OTC DSX-1 terminations to BA DSX-1 terminations, the cabling between the repeaters and the DSX-1 panels shall be built-out in each direction of transmission such that the overall cabling and build-out is the equivalent of 655 feet of 22 gauge ABAM cable.

D. Bell Atlantic Local Switching System CO Voice Grade Cabling

3.09 The voice-grade CO cabling used to terminate BRI or CBRI local switching system ports on the CODF shall use twisted-pair conductors.

3.10 The type, gauge, and length of the BA CODF cabling shall be specified based on this specification and BA equipment vendor requirements. If the specifications in this document differ from the equipment manufacturers specifications, then the more stringent of the two shall be used.

3.11 The direct-current resistance of the CO cabling between the BA local switching system port and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [11] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

E. Bell Atlantic Local Switching System CO DSX-1 Cabling Requirements

3.12 BA cabling between the Local Switching System and the DSX-1 panels shall be built-out in each direction of transmission such that the overall cabling and build-out is the equivalent of 655 feet of 22 gauge ABAM cable.

F. BRI and CBRI Local Switching System Ports

3.13 The BRI and CBRI line-side ports shall conform to the LT specifications in TR-NWT-000393 [1] and the network specifications in ANSI T1.601-1993 [12].

G. PRI, DS1MT, and DS1DID Local Switching System Ports

3.14 The PRI port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF requirements in ANSI T1.403 [5], the network requirements in ANSI T1.408 [13], the timing requirements in ANSI T1.101 [6], and (for PSTN calls) the μ 255 coding scheme in ITU-T Recommendation G.711 [4].

3.15 The DS1MT port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF requirements in ANSI T1.403 [5] and the μ 255 coding scheme in ITU-T Recommendation G.711 [4]. In SS7 applications, the DS1MT shall conform to the specifications in GR-905-CORE. In MF applications, the DS1MT shall conform to the robbed-bit signaling specifications in ANSI T1.403 Annex C [5] and the MF signaling requirements in FR-NWT-000064 [11].

3.16 The DS1DID port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the AMI or B8ZS and SF or ESF requirements in ANSI T1.403 [5], the robbed-bit signaling specifications in ANSI T1.403 Annex C [5], the μ 255 coding scheme in ITU-T Recommendation G.711 [4], and the DP, DTMF, or MF signaling requirements in FR-NWT-000064 [11].

4. Service Specifications

A. General

4.01 The overall end-to-end DUPS service is from the CODF or DSX-1 termination of the OTC equipment to the BA local switching system port.

4.02 DUPS should meet the limits of this section when measured at the BA local switching system port. Parameters are usually tested in response to trouble reports or when additional testing is purchased.

B. BRI and CBRI

4.03 The overall end-to-end BRI or CBRI service is from the CODF termination of the OTC equipment to the local switching system port (see figure 2-1).

4.04 BRI and CBRI Acceptance Limits (AL) and Immediate Action Limits (IAL) are shown in Table 4-1.

4.05 BRI and CBRI services shall meet the LT specifications in TR-NWT-000393 [1] and the network specifications in ANSI T1.601-1993 [12].

**Table 4-1: BRI and CBRI
Acceptance Limits (AL) and Immediate Action Limits (IAL)**

Parameter	AL	IAL
40 kHz loss	< 6.0 dB	> 6.0 dB
Resistance	< 130 ohms	> 130 ohms
Leakage	> 5 Megaohms	< 5 Megaohms

C. PRI, DS1MT, and DS1DID

4.06 The overall end-to-end PRI, DS1MT, and DS1DID service is from the DSX-1 termination of the OTC equipment to the digital port on the local switching system.

4.07 PRI service shall meet the B8ZS and ESF specifications in ANSI T1.403 [5], the network specifications in ANSI T1.408 [13], and the 3E timing requirements in ANSI T1.101 [6].

4.08 DS1MT service shall meet the B8ZS and ESF specifications in ANSI T1.403 [5]. If SS7 signaling is used, it shall conform to the specifications in GR-905-CORE [7] and BA 905 [8]. If MF signaling is used, it shall conform to the MF requirements in FR-NWT-000064 [11] and the robbed-bit signaling specifications in ANSI T1.403 Annex C [5].

4.09 DS1DID service shall meet the AMI or B8ZS and SF or ESF specifications in ANSI T1.403 [5]. The robbed-bit signaling specifications in ANSI T1.403 Annex C [5], and the DP, DTMF, or MF signaling requirements in FR-NWT-000064 [11].

4.10 The PRI, DS1MT, and DS1DID services consist of one DS1. The electrical signals of each DS1 at the OTC POT shall meet the DSX-1 specifications in ANSI T1.102 [3].

4.11 Accuracy and availability performance objectives for each PRI, DS1MT, and DS1DID are shown in Figure 4-2. DS1 performance test limits are shown in Figure 4-3.

4.12 Availability is a measure of the relative amount of time that a service is “usable” by the customer. Unavailability begins when the Bit Error Ratio (BER) in each second is worse than 1×10^{-3} for a period of 10 consecutive seconds. The DS1 objective is 99.925 percent availability in any twelve consecutive months. Availability equals the total time minus the outage time divided by the total time.

4.13 Accuracy denotes the error performance and is usually specified in terms of errored seconds (ES), or conversely, error-free seconds (EFS). EFS are the primary measure of error performance for DS1s. An EFS is any second that an error does not occur.

4.14 A Severely Errored Second (SES) is any one second interval that has a BER of less than (worse than) 1×10^{-3} .

4.15 Acceptance and maintenance tests for DS1s should be performed with a Quasi-Random Signal Source (QRSS), on an OTC-POT to local switching system basis, using the Errored Second and Severely Errored Second performance parameters in Figure 4-3.

4.16 Other tests may be performed in response to trouble reports or when additional testing is purchased. The All Ones, 3/24, and 1/8 patterns are acceptable diagnostic stress tests. The pattern sensitivity test criteria associated with these patterns is provided in Figure 4-4.

4.17 If errors are detected using the QRSS or 1/8 patterns, it is recommended that the DS1 line code options (AMI/B8ZS) be verified using the procedures outlined in the Bell Atlantic Network Services Reference Manual Series 72710 & NS6050 and the test criteria in Figure 4-4. These tests make use of the Framed 3/24 and Framed All Zeros patterns.

Figure 4-2: DS1 Performance Objectives

Parameter	Objective
Accuracy	0.25 % errored seconds long-term (30 days or more)
Availability	99.925 % per year

Figure 4-3: DS1 Acceptance and Maintenance Test Limits³¹

Test Duration	Errored Seconds	Severely Errored Seconds
15 min	0	0
30 min	3	0
45 min	5	2
24 hours	150	7

³¹ While some of the entries in this table are “0”, it should be noted that an isolated error event is not necessarily indicative of a service affecting problem.

Figure 4-4: Pattern sensitivity test criteria (see notes 1 and 2)

TEST PATTERN (see note 3)	TEST DURATION	ACCEPTANCE LIMIT
All Ones	5 minutes	0
3/24 (AMI only)	5 minutes	0
1/8	5 minutes	0
Framed All Zeros (4) (B8ZS only)	30 seconds	(see note 5)

Notes:

- (1) Test patterns should be framed.
- (2) One retest is allowed if the initial test fails.
- (3) If compatible test equipment is not available to perform these tests, loopback testing should be utilized.
- (4) WARNING: If used with the DS1 SF framing format, zeros will occur in time slot 2 of every octet (channel). Terminal equipment will display a false Remote Alarm Indication (a.k.a., yellow alarm). In addition, the use of the framed all-zeros pattern through some types of DS3 equipment may cause DS1 failure if the equipment is not properly optioned for B8ZS.
- (5) As an equipment option check, failure will typically be seen as large error counts. Very low counts (e.g., 1 or 2 errors) are not indicative of an optioning problem.

5. OTC Equipment and CO Cabling Requirements

A. OTC Equipment Requirements

5.01 Collocated OTC equipment shall meet all of the applicable generic equipment requirements in Bellcore GR-63-CORE [14] and GR-1089-CORE [15].

5.02 Collocated OTC equipment shall be manufactured in accordance with FCC, NEC, UL, and USDL requirements and orders applicable to Federal, State, and local requirements including, but not limited to, statutes, rules, regulations, orders, or ordinances, or otherwise imposed by law. Where requirements are not specified in this document, contractual technical requirements, or other applicable documents, the manufacturer's requirements consistent with industry standards shall be met.

5.03 The open circuit tip-to-ring dc voltage that collocated OTC equipment applies to BA VF cabling shall be less than 80 Vdc.

5.04 Collocated OTC equipment shall not deliver more than 2.5 watts of power to any load via BA VF cable.

5.05 Collocated OTC equipment shall not deliver more than 100 mA of loop current to any load via BA VF cable.

5.06 OTC equipment connecting to BRI and CBRI ports shall conform to the NT specifications in TR-NWT-000393 [1] and the customer installation specifications in ANSI T1.601-1993 [12].

5.07 OTC equipment connecting to PRI ports shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF specifications in ANSI T1.403 [5], the customer installation requirements in ANSI T1.408 [13], the timing requirements in ANSI T1.101 [6], and the μ 255 coding scheme in ITU-T Recommendation G.711 [4].

5.08 OTC equipment connecting to DS1MT ports shall conform to the DSX-1 specifications in ANSI T1.102 [3], the B8ZS and ESF specifications in ANSI T1.403 [5], and the μ 255 coding scheme in ITU-T Recommendation G.711 [4]. For SS7 applications, OTC equipment shall also conform to the specifications in GR-905-CORE [7] and BA 905 [8]. For MF applications, OTC equipment shall also conform to the robbed-bit signaling specifications in ANSI T1.403 Annex C [5] and the MF signaling requirements in FR-NWT-000064 [11].

5.09 OTC equipment connecting to the DS1DID port shall conform to the DSX-1 specifications in ANSI T1.102 [3], the AMI or B8ZS and SF or ESF specifications in ANSI T1.403 [5], the robbed-bit signaling specifications in ANSI T1.403, Annex C [5], and the μ 255 coding scheme in ITU-T Recommendation G.711 [4], and the DP, DTMF, or MF signaling requirements in FR-NWT-000064 [11].

B. OTC CO VF Cabling Requirements

5.10 The voice-grade CO cabling used to terminate OTC equipment on the CODF for interconnection with BRI or CBRI port services shall use twisted-pair conductors.

5.11 The type, gauge, and length of the OTC CODF cabling shall be specified based on this specification and OTC equipment requirements. If the specifications in this document differ from the OTC equipment manufacturers specifications, then the more stringent of the two shall be used.

5.12 The direct-current resistance of the CO cabling between the OTC equipment and the CODF shall meet the CO cabling requirements in the Bellcore FR-TSY-000064 [11] (i.e., 23 ohms or less). This is equivalent to 275 feet or less of 26 gauge cable, 440 feet or less of 24 gauge cable, and 700 feet or less of 22 gauge cable.

C. OTC DSX-1 Cabling Requirements

5.13 OTC DSX-1 cabling and build-out in each direction of transmission shall be the equivalent of 655 feet of 22 gauge ABAM cable.

6. References

A. Definitions

Acceptance Limit (AL)

The maximum margin, value, or deviation that is allowed at service turnup or customer acceptance.

Alternate Mark Inversion (AMI)

A DS1 line code that does not perform zero code suppression and is therefore transparent to an all zeros byte.

Basic Rate ISDN (BRI)

Basic Rate ISDN is a 2-wire line-side local switching system port that uses the two-bit one-quaternary line code at a 160 kilobit per second rate to transport overhead and up to two B channels and one D channel.

B Channel

The B channel, or bearer channel, is a 64 kbps channel used for information transfer between users.

Bipolar Eight Zero Substitution (B8ZS)

A DS1 line code that performs zero code suppression by replacing an all zeros byte with a special pattern of ones and zeros that contains two consecutive bipolar violations.

Bit Seven (BIT7)

A TR08 DS1 line code that performs zero code suppression by placing a one in bit 7 of an all zeros byte.

Central Office (CO)

A telephone company building which houses equipment and facilities used to provide switched access services.

Central Office Distributing Frame (CODF)

Framework located in a CO that holds wire cross-connects which are used to interconnect cable terminations for end-user customer loops, switching system ports, and inter-office facilities.

Channel

An electrical, or photonic communications path between two or more points of transmission.

D Channel

The D channel is a packet-switched channel that carries signaling and control for B channels. In BRI applications, it can also support customer packet data traffic at speeds up to 9.6 kilobits per second.

DS1 Message Trunk (DS1MT)

A digital trunk-side port of a local switching system that operates at 1.544 Mbps and is channelized to provide twenty-four 64 kbps or 56 kbps trunks for the message telecommunications network..

Digital Unbundled Port Services (DUPS)

A service, not bundled with a loop or transport facility, that provides digital access to the functionality of a local switching system.

Extended SuperFrame (ESF)

A type of DS1 framing format that utilizes the framing bit of twenty-four consecutive frames to provide a 2 kbps framing pattern sequence, a 4 kbps data link, and a 2 kbps cyclic redundancy check channel.

Immediate Action Limit (IAL)

The bound of acceptable performance and the threshold beyond which BA will accept a customer's trouble report and take immediate corrective action.

Integrated Services Digital Network (ISDN)

ISDN describes the end-to-end digital telecommunications network architecture which provides for the simultaneous access, transmission, and switching of voice, data, and image services. These functions are provided via channelized transport facilities over a limited number of standard user-network interfaces.

Line Termination (LT)

Equipment that terminates a BRI or Centrex BRI digital subscriber line on the network side of the network to customer (or OTC) interface.

Maintenance Limit

The maximum margin, value, or deviation associated with normal in-service performance.

Network Termination (NT)

Equipment that terminates a BRI or CTX BRI digital subscriber line on the customer (or OTC) side of the network to customer (or OTC) interface.

Other Telephone Company (OTC)

The term "Other Telephone Company" (OTC) denotes any individual, partnership, association, joint-stock company, trust, governmental entity, or corporation engaged for hire in intrastate exchange communication by wire, fiber, or radio.

Point Of Termination (POT)

The point of demarcation at which the BA's responsibility for the provision of services ends.

Protocol Code

A component of an interface code that is readily associated with the basic electrical function of the interface.

Primary Rate ISDN (PRI)

PRI is a 4-wire 1.544 Mbps (DS1) local switching system port that uses the B8ZS line code and the ESF framing format. PRI is available in a twenty-three B channel plus one D channel (23B + D) configuration or a twenty-four B channel (24B) configuration.

SuperFrame (SF)

A type of DS1 framing format that utilizes the framing bit of twelve consecutive frames to provide terminal framing and signaling framing.

Two Binary, One Quaternary (2B1Q)

A line code used for BRI and Centrex BRI where each two bits of the binary data stream are combined into a single four-level pulse amplitude modulation signal.

Unbundled Port

An interface (port) on a local switching system, that is not bundled with a loop or transport facility, that provides access to and from the public switched telephone network and the functionality of the local switching system.

Voice-Grade (VG)

A term used to describe a channel, circuit, facility, or service that is suitable for the transmission of speech, digital or Digital data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

B. Acronyms

ABAM	Cable Type
AL	Acceptance Limit
ANSI	American National Standards Institute
BA	Bell Atlantic
BRI	Basic Rate ISDN
B8ZS	Bipolar Eight Zero Substitution
OTC	Other Telephone Company
CO	Central Office
CODF	Central Office Distributing Frame
DID	Direct Inward Dialing
DSX-1	Digital Signal Cross-Connect One
DS1	Digital Signal One (1.544 Mbps)
DS1DID	DS1 Direct Inward Dialing
DS1MT	DS1 Message Trunk
DUPS	Digital Unbundled Port Services
ESF	Extended Superframe Format
FCC	Federal Communications Commission
IAL	Immediate Action Limit
IDLC	Integrated Digital Loop Carrier
IEEE	International Electrical and Electronic Engineers
LT	Line Termination
NC	Network Channel
NCI	Network Channel Interface
NEC	National Electric Code
POT	Point Of Termination
POTS	Plain Ordinary (analog) Telephone Service
RBS	Robbed-Bit Signaling
SF	Superframe Format
TR08	Technical Reference TR-NWT-000008
UL	Underwriter's Laboratory
USDL	United States Department of Labor
USOC	Universal Service Order Code

VF	Voice Frequency
VG	Voice Grade
2B1Q	Two-Bit One-Quaternary

7. Bibliography

- 1- Technical Reference TR-NWT-000393, Generic Requirements for ISDN Basic Access Digital Subscriber Lines, Issue 2, (Bellcore, April 1991).
- 2- Technical Reference TR-TSY-000008, Digital interface Between the SLC®96 Digital Loop Carrier System And A Local Digital Switch, Issue 2, (Bellcore, August 1987).
- 3- American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces, ANSI T1.102-1993.
- 4- ITU-T Recommendation G.711, Pulse Code Modulation (PCM) of Voice Frequencies, Blue Book Fasc. III.4, (ITU-TSS, 1988).
- 5- American National Standard for Telecommunications - Network-to-Customer Installation - DS1 Metallic Interface, ANSI T1.403-1995.
- 6- American National Standard for Telecommunications - Synchronization Interface Standards for Digital Networks, ANSI T1.101-1994.
- 7- Generic Requirements GR-905-CORE, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and Integrated Services Digital Network User Part (ISDNUP), Issue 2, (Bellcore, December 1996).
- 8- BA905, Bell Atlantic Supplement Common Channel Signaling Network Interface Specification.
- 9- Special Report SR-STIS-000307, Issue 3, *Industry Support Interface (ISI): NC/NCI Code Dictionary*, Bellcore, April 1992.
- 10- Special Report SR-STIS-000323, *NC/NCI Compatibility Guide*, Issue 4, (Bellcore, May 1994).
- 11- Technical Reference FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR), (Bellcore, 1994).
- 12- American National Standard for Telecommunications - ISDN Basic Access Interface for use on Metallic Loops for Application at the Network Side of NT, Layer 1 Specification, ANSI T1.601-1992.
- 13- American National Standard for Telecommunications - ISDN Primary Rate - Customer Installation Metallic Interfaces - Layer 1 Specification, ANSI T1.408 -1990.

14- Generic Requirements GR-63-CORE, Network Equipment-Building System (NEBS) Requirements: Physical Protection, Issue 2, (Bellcore, October 1995).

15- Generic Requirements GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment, Issue 1, Rev 1, (Bellcore, November 1996).

NOTE: These documents are subject to change. References reflect the most current information available at the time of printing. Readers are advised to check the status and availability of all documents.

EXHIBIT H

INTRALATA TELECOMMUNICATIONS SERVICES SETTLEMENT

This IntraLATA Telecommunications Services Settlement Agreement is made this ___ of _____, 1996, by and between Bell Atlantic - Pennsylvania, Inc. ("BA"), a Pennsylvania corporation with offices at _____, and _____ ("CLEC"), a _____ corporation with offices at _____.

SECTION I

SCOPE

This Agreement sets forth the terms and conditions for the following:

- (a) administering and processing messages in the intraLATA Toll Originating Responsibility Plan (ITORP); and
- (b) the settlement of compensation for the following telecommunications traffic within a BA LATA:
 - (1) intrastate and interstate intraLATA traffic terminated to CLEC and originated by an Independent Telephone Company or wireless carriers that transits the facilities of BA within a BA LATA, including Message Telecommunications Service and Local Exchange Service (the "ITORP Transit Service Traffic");
 - (2) intrastate and interstate intraLATA Message Telecommunications Service and Local Exchange Service traffic which originates from a Certified Local Exchange Carrier or CLEC, transits BA's network and terminates to CLEC, or a wireless carrier or an Exchange Carrier other than BA, which traffic is subject to a Meet-Point Billing arrangement (the "Meet-Point Transit Service Traffic");
 - (3) intraLATA 800/888 Service Traffic; and
 - (4) intraLATA Alternately Billed Calls billed to a line-based telephone number within the state where the call is originated.

By way of clarification, this Agreement does not cover the following: (x) traffic that does not use BA facilities (except intraLATA 800/888 Service Traffic); (y) interLATA traffic; and (z) any statewide services (whether interLATA or intraLATA) provided entirely by an Interexchange Carrier such as statewide WATS.

SECTION II

DEFINITIONS

For purposes of this Agreement, the terms set forth below shall have the following meaning:

- A. 800/888 Number Database shall mean the call management service database that provides POTS telephone number translation or routing information or both for a given 800/888 telephone number.
- B. 800/888 Number Query shall mean routing information obtained from an 800/888 Number Database for originating 800/888 calls.

- C. 800/888 Service Traffic means a toll free call originating with the Originating Company and billed to the Terminating Company's end user. 800/888 service MOUs are recorded by the Originating Company and provided to the Terminating Company so that it can bill its end user(s).
- D. Access Tandem shall mean a switching entity that is used to connect and switch trunk circuits between and among End Offices and between and among End Office switches and carriers' aggregation points, points of termination, or points of presence, which entity has billing and recording capabilities that are used to provide switched Exchange Access services.
- E. Alternately Billed Calls shall mean all intraLATA land-line Collect Calls, Calling Card Calls and Third-Number Calls that originate and terminate in the Commonwealth of Pennsylvania and are billed to a line-based number within the jurisdiction of the Commonwealth of Pennsylvania serviced by the Billing Company. Alternately Billed Calls are identified in ITORP reports as "Received Collect/Sent Collect Calls".
- F. Billing Company shall mean the Local Exchange Carrier that provides the local telephone exchange service for the number to which an Alternately Billed Call is to be billed.
- G. Calling Card Call shall mean a call billed to a pre-assigned end user line-based billing number, including calls dialed or serviced by an operator system.
- H. Carrier Common Line Facilities means the facilities from the end user's premises to the End Office used to originate or terminate Transit Service Traffic and 800/888 Service Traffic. Such carrier common line facilities are as specified in each party's Exchange Access Tariff.
- I. Category 01 shall mean the EMR/billing record for usage charges applicable to the terminating 800/888 number service subscriber.
- J. Category 08 shall mean the EMR/copy record containing the information necessary for CLEC to bill/settle intraLATA terminating charges with other carriers.
- K. Category 11 shall mean the EMR/access record containing information necessary for CLEC to bill/settle interexchange access charges.
- L. CCS/SS7 shall mean the Common Channel Signaling/Signaling System 7, which refers to the packet-switched communication, out-of-band signaling architecture that allows signaling and voice to be carried on separate facilities, and thus is a signaling network that is common to many voice channels. There are two modes of operation defined for CCS/SS7: database query mode, and trunk signaling mode.
- M. Centralized Message Distribution System (CMDSD) shall mean the message processing system which handles the distribution of Message Records from the Earning Company to the Billing Company.
- N. Competitive Local Exchange Carrier (CLEC) means a carrier certified by the Pennsylvania Public Utility Commission to provide Local Exchange or Exchange Access services within the BA operating territory in that state.
- O. Clearing House shall mean the monthly function performed by BA for a fee to collect funds owed by one Exchange Carrier or wireless carrier and the distribution of those funds to other Exchange Carriers or wireless carriers. These Clearing House funds include but are not limited to amounts owed for terminating traffic and Alternately Billed Calls. The Clearing House function will include funds due from and payable to each Independent Telephone Company, Certified Local Exchange Carrier and wireless carrier that contracts with BA to provide the Clearing House function and will not include any funds due from or payable to BA.

- P. Collect Call shall mean a non-sent paid call that is billed to the number receiving the call, including calls dialed or serviced by an operator system.
- Q. Discounted Toll Services means services in which the originating end user is charged a rate less than would normally be assessed for calls placed to similar points outside the end user's local calling area.
- R. Earning Company shall mean the Local Exchange Carrier that provides local telephone exchange service for the number from which an Alternately Billed Call originates.
- S. End Office means the end office switching and end user line termination facilities used to originate or terminate switched intraLATA telecommunications services traffic.
- T. Exchange means a geographic area established for the furnishing of local telephone service under a local tariff. It usually embraces a city, town or village and its environs. It consists of one or more wire centers together with the associated facilities used in furnishing communications service within the area.
- U. Exchange Access means the facilities and services used for the purpose of originating or terminating interexchange telecommunications in accordance with the schedule of charges, regulations and conditions specified in lawfully established Exchange Access Tariffs.
- V. Exchange Access Tariffs means the tariffs lawfully established with the Federal Communications Commission or the by an Exchange Carrier for the provision of Exchange Access facilities and services.
- W. Exchange Carrier shall mean a carrier licensed to provide telecommunications services between points located in the same Exchange area.
- X. Exchange Message Record (EMR) shall mean the standard used for exchange of telecommunications message information among Local Exchange Carriers for billable, non-billable, sample, settlement and study data. EMR format is described in BR-010-200-010 CRIS Exchange Message Record, a Bell Communications Research, Inc. document that defines industry standards for Exchange Message Records, which is hereby incorporated by reference.
- Y. ITORP Transit Service Traffic shall have the meaning set forth in Section I above titled "Scope".
- Z. Independent Telephone Company shall mean any entity other than BA which, with respect to its operations within the Commonwealth of Pennsylvania, is an incumbent Local Exchange Carrier.
- AA. Inter-Company Net Billing Statement shall mean the separate monthly financial reports issued by BA to the Exchange Carriers for settlement of amounts owed.
- BB. IntraLATA Toll Originating Responsibility Plan (ITORP) shall mean the information system owned and administered by BA for calculating charges between BA and Local Exchange Carriers for termination of intraLATA calls.
- CC. Interexchange Carrier (IXC) means a carrier that provides, directly or indirectly, interLATA or intraLATA telephone toll services.
- DD. Local Access and Transport Area (LATA) means a contiguous geographic area: (1) established before the date of enactment of the Telecommunications Act of 1996 by BA such that no Exchange area includes points within more than one metropolitan statistical area, consolidated metropolitan statistical area, or state, except as expressly permitted under the AT&T Consent

Decree; or (2) established or modified by BA after such date of enactment and approved by the Federal Communications Commission.

EE. Local Exchange Carrier (LEC) means any person that is engaged in the provision of Local Exchange Service or Exchange Access. Such term does not include a person insofar as such person is engaged in the provision of a commercial mobile service under Section 332 (c) of the Telecommunications Act of 1996, except to the extent that the Federal Communications Commission finds that such service should be included in the definition of such term.

FF. Local Exchange Service means telecommunications services provided between points located in the same LATA.

GG. Meet -Point Billing (MPB) means an arrangement whereby two or more LECs jointly provide to a third party the transport element of a switched access Local Exchange Service to one of the LECs' End Office switches, with each LEC receiving an appropriate share of the transport element revenues as defined by their effective Exchange Access tariffs.

HH. Meet-Point Transit Service Traffic shall have the meaning set forth in Section 1, "Scope".

II. Message Records shall mean the message billing record in Exchange Message Record format.

JJ. Message Telecommunications Service (MTS) means message toll telephone communications, including Discounted Toll Services, between end users in different Exchange areas, but within the same LATA, provided in accordance with the schedules of charges, regulations and conditions specified in lawfully applicable tariffs.

KK. Minutes of Use (MOU) means the elapsed time in minutes used in the recording of Transit Service Traffic and 800/888 Service Traffic.

LL. Multiple Bill/Single Tariff means the MPB method whereby each LEC prepares and renders its own Meet Point Bill in accordance with its own tariff(s) for the portion of the jointly-provided Exchange Access service which the LEC provides.

MM. Multiple Exchange Carrier Access Billing (MECAB) means the document prepared by the Billing Committee of the Ordering and Billing Forum, which functions under the auspices of the Carrier Liaison Committee of the Alliance for Telecommunications Industry Solutions, and published by Bellcore as Special Report SR-BDS-000983, which document contains the recommended guidelines for the billing of an Exchange Access service provided by two or more LECs, or by one LEC in two or more states, within a single LATA, and is incorporated herein by reference.

NN. Originating Company means the company which originates intraLATA MTS or Local Exchange Service on its system. (For compensation purposes, the Originating Company shall be considered the Terminating Company for 800/888 Service Traffic.)

OO. Terminating Company means the company which terminates intraLATA MTS or Local Exchange Service on its system where the charges for such services are collected by the Originating (or Billing) Company. (For compensation purposes, the Terminating Company shall be considered the Originating Company for 800/888 Service Traffic.)

PP. Third-Number Call shall mean a call billed to a subscriber's line-based billing number which is not the number to which the call either terminates or originates.

QQ. Transit Traffic shall refer to both ITORP Transit Service Traffic and Meet-Point Transit Service Traffic.

RR. Transiting Company shall mean a Local Exchange Carrier which transports intraLATA telecommunications traffic on its system between an Originating Company and a Terminating Company.

SS. Transport Facilities means the facilities from the End Office to an interconnection point used to originate or terminate switched intraLATA telecommunication services traffic.

SECTION III

SETTLEMENT OF TRANSIT SERVICES

(a) ITORP Transit Service Traffic.

(1) Call Routing and Recording; Billing Percentages. BA will route ITORP Transit Service Traffic over the combined local and toll trunk groups between BA and CLEC for those Independent Telephone Companies, Certified Local Exchange Carriers and wireless carriers who have either executed an IntraLATA Telecommunications Services Settlement Agreement with BA, or another agreement with BA setting forth the terms under which Transit Traffic will be exchanged. BA and CLEC agree to designate the points of interconnection for the purpose of terminating ITORP Transit Service Traffic which originates from an Independent Telephone Company or wireless carrier and terminates to CLEC. Both parties further agree to develop and mutually agree to billing percentages applicable to ITORP Transit Service Traffic, which billing percentages shall be calculated in accordance with ITORP guidelines.

(2) Exchange of Billing Data. The Originating Company will provide to BA all billing data relating to ITORP Transit Service Traffic for processing in ITORP within thirty(30) days from the date the usage occurs (to the extent usage occurs on any given day) for traffic originating from an Independent Telephone Company or wireless carrier, which traffic transits BA's facilities and terminates to CLEC.

(3) Billing. BA will, on behalf of CLEC, bill Exchange Carriers and wireless carriers for intraLATA ITORP Transit Service Traffic, and collect compensation due CLEC based on CLEC's established and legally-approved tariffed or negotiated rates utilizing ITORP. The charges set forth in Attachment A, attached hereto and incorporated herein by reference, shall apply to the billing and collection services provided by BA to CLEC hereunder. CLEC will record the ITORP Transit Service Traffic usage at its switch, and shall bill BA for this traffic in accordance with the rates set forth in the Interconnection Agreement under Section 251 and 252 of the Telecommunications Act of 1996, dated as of June 13, 1997, by and between BA and CLEC.

(b) Meet-Point Transit Service Traffic.

(1) Call Routing and Recording; Billing Percentages. BA and CLEC will route their respective Meet-Point Transit Service Traffic over the combined local and toll trunk groups between them. BA and CLEC agree to designate the points of interconnection for the purpose of terminating Meet-Point Transit Service Traffic which originates from a CLEC and terminates to CLEC, or originates from CLEC and terminates to a CLEC, Independent Telephone Company, or a wireless carrier. Both parties further agree to develop and file mutually agreed to billing percentages applicable to Meet-Point Transit Service Traffic in the National Exchange Carrier Association F.C.C. Tariff No. 4, which billing percentages shall be calculated in accordance with MECAB guidelines.

(i) End Offices Subtending BA Access Tandem. Meet-Point Transit Service Traffic will be routed over the local and toll interconnection facilities used to terminate similar traffic directly between BA and CLEC when the Originating and Terminating Company's End Office switches subtend BA's Access Tandem. BA will record this traffic at the BA Access Tandem, and forward the terminating call records to the Terminating Company for purposes of Meet-Point Billing.

(ii) End Offices That Do Not Subtend a BA Access Tandem. When the Originating and/or the Terminating Company's End Office switches do not subtend BA's Access Tandem, the Meet-Point Transit Service Traffic must be routed over interconnection facilities other than those used to terminate intraLATA MTS or Local Exchange Service to BA's end users. The Terminating Company will record this traffic at its Access Tandem and forward the terminating call records to BA for Meet-Point Billing purposes.

(iii) Special Access. Upon request, any Meet-Point Service Transit Traffic may be routed over special access interconnection facilities between CLEC, on the one hand, and a CLEC, an Independent Telephone Company, or a wireless carrier, on the other.

(2) Exchange of Billing Data. All billing data exchanged hereunder will be exchanged on magnetic tape or via electronic data transfer, to be delivered at the addresses set forth below, using the Electronic Message Record format. BA will provide to CLEC the switched-access detail usage data (category 1101XX records) on magnetic tape within thirty (30) days from the date the usage occurs (to the extent usage occurs on any given day) for traffic originating from a CLEC, transiting BA's facilities and terminating to CLEC, and CLEC will provide to BA the switched access summary usage data (category 1150XX records) on a magnetic tape on a monthly basis within thirty (30) days of receipt from BA of the switched access detail usage data referenced above.

(3) Billing. BA and CLEC will submit to CLECs separate bills under their respective tariffs for their portion of jointly-provided Meet-Point Transit Service Traffic. With respect to Meet-Point Transit Service Traffic, BA and CLEC will exchange billing data and render bills under Multiple Bill/Single Tariff arrangements in accordance with the applicable terms and conditions set forth in MECAB.

(4) Addresses. Magnetic tapes to be sent hereunder to CLEC will be sent to the following address (which address CLEC may change upon prior written notice to BA):

Magnetic tapes to be sent hereunder to BA will be sent to the following address(es), as appropriate (which address(es) BA may change upon prior written notice to CLEC):

SECTION IV

800/888 SERVICE

800/888 Service Traffic will be exchanged among BA, CLEC, Independent Telephone Companies, CLECs and wireless carriers via CCS/SS7 trunks, and all will deliver/route these calls as appropriate and provide EMRs to the Terminating Company. These EMRs will, per industry standards, include the following: Category 01 (800/888 number subscriber billing), Category 08 (copy record/local exchange charges), and Category 11 (interexchange carriers access records).

(a) Delivery of Translated 800/888 Number Queries and calls over CCS/SS7 links and trunks. BA and CLEC will launch their own 800/888 Number Query for 800/888 Service Traffic originated in their networks, and route this traffic to each other, as appropriate, utilizing existing local and toll interconnection facilities.

(b) Exchange of Records: Compensation. All 800/888 Service Traffic hereunder shall be subject to the appropriate access charges, as set forth in the applicable tariffs. In addition, for jointly provided intraLATA

800/888 Service Traffic between two Local Exchange Carriers, the Originating Company is responsible for billing its tariffed 800/888 Number Query charge to the Terminating Company. CLEC, when acting as an Originating Company, must submit to BA, via magnetic tape(s) in EMR format, (i) the information necessary to bill/settle intraLATA charges (EMR Category 110125), and (ii) the usage charges applicable to the terminating 800/888-number service subscriber (EMR Category 010125).

(c) Settlement. EMR records submitted by CLEC hereunder acting as an Originating Company, as contemplated in Paragraph (b) above, will be processed in accordance with ITORP. For purposes of calculating the access charges due Local Exchange Carriers with respect to 800/888 Service Traffic, the Originating Company shall be deemed the Terminating Company. Access charges payable hereunder shall be calculated in accordance with Section VI of this Agreement, as applicable.

(d) Payment of Amounts Outstanding. Upon receipt of the Inter-Company Net Billing Statement from BA, CLEC shall, within thirty (30) days of invoice, remit to BA full payment of amounts owed under the Inter-Company Net Billing Statement.

SECTION V

ALTERNATELY BILLED CALLS

(a) Responsibilities of the Billing Company. The Billing Company agrees to provide the Earning Company with billing services, as specified below, with respect to Alternately Billed Calls.

(1) Billing. Upon receipt of the appropriate Message Record from CMDS, the Billing Company shall include this record in the bill to be issued to the end user responsible for payment. The Earning Company shall also submit copies of these Message Records to BA, at least once a month, in order to determine monthly settlement amounts for both the Billing Company and the Earning Company which will be reflected in the Inter-Company Net Billing Statement. These amounts will reflect any and all applicable charges due the Billing Company for performing billing services hereunder. In addition, as applicable, the Inter-Company Net Billing Statement will reflect any amounts owed by CLEC to BA for administering and processing ITORP.

(2) Payment of Amounts Outstanding. Upon receipt of the Inter-Company Net Billing Statement from BA, CLEC shall, within thirty (30) days of invoice, remit to BA full payment of amounts owed under the Inter-Company Net Billing Statement.

(b) Responsibilities of the Earning Company. In connection with Alternately Billed Calls, the Earning Company shall provide Message Records to the Billing Company on a daily basis to the extent that any usage has been recorded. These Message Records will be delivered by the Earning Company to the Billing Company via the CMDS system, unless otherwise agreed to by the parties hereto.

(c) Fees for Settlement of Alternately Billed Calls. The billing services provided by the Billing Company to the Earning Company with respect to Alternately Billed Calls shall be subject to the applicable charges set forth in Attachment A, which charges will be reflected in the Inter-Company Net Billing Statement. These charges may be revised upon mutual written agreement of the parties hereto.

SECTION VI

CALCULATION OF COMPENSATION

BA and CLEC agree to compensate each other with respect to Transit Services Traffic and 800/888 Service Traffic in accordance with the terms established below, and the rate elements set forth in Attachments A and B, attached hereto and incorporated herein by reference.

(a) Compensation due to the Terminating/Transiting Company. Compensation due to the Terminating Company/Transiting Company will be determined separately for each month as follows:

(1) For Carrier Common Line facilities provided by the Terminating Company, an amount calculated as specified for Carrier Common Line Facilities in the Terminating Company's Exchange Access Tariff. Compensation will be determined by multiplying a) the Terminating Company's Carrier Common Line rate, times b) the MOU.

(2) For End Office facilities provided by the Terminating Company, an amount calculated as specified for End Office facilities in the Terminating Company's Exchange Access Tariff. Compensation will be determined by multiplying a) the Terminating Company's appropriate Exchange Access End Office rate elements, times b) the MOU.

(3) For Transport facilities, where these facilities are provided by the Terminating Company, or a Transiting and Terminating Company, an amount calculated in accordance with the following steps:

- (i) Determine the Terminating Company's airline miles from the End Office which serves the Terminating Company's end user to the Terminating Company's Access Tandem switching facility and/or to the interconnection point with the Transiting Company(ies).
 - (ii) Determine the Transiting Company's airlines miles from the interconnection point with the Terminating Company to the Transiting Company(ies) Access Tandem switching facility and/or to the interconnection point with the Originating Company.
 - (iii) Determine the sum of the total airline miles by adding (i) and (ii) above.
 - (iv) Divide the Terminating Company's airline miles determined in (i) preceding by the total airline miles determined in (iii) preceding, to determine the ratio of local transport miles provided by the Terminating Company.
 - (v) Divide the Transiting Company's airline miles determined in (ii) preceding by the total airline miles determined in (iii) preceding, to determine the ratio of local transport miles provided by the Transiting Company.
 - (vi) Identify the rates set forth in the Exchange Access Tariff for either the Terminating Company or Transiting Companies, or both, as appropriate, which rates are applicable to Transport Facilities.
 - (vii) Multiply the ratio determined in (iv) preceding, times the rate calculated in (vi) preceding, times the MOU, and add the amount set forth in (ix) below to determine the amount due the Terminating Company.
 - (viii) Multiply the ratio determined in (v) preceding, times the rate calculated in (vi) preceding, times the MOU, and add the amount set forth in (ix) below to determine the amount due the Transiting Company.
 - (ix) To the extent the Exchange Access Tariffs of the Terminating or Transiting Company, or both, provide for the payment of a fixed transport charge to be assessed with respect to a terminating location (End Office or toll switch), multiply this charge times the chargeable MOU.
- (4) For 800/888 Number Query facilities, provided by the Originating Company, an amount calculated as specified for query facilities in the Originating Company's Exchange Access Tariff. Compensation will be determined by multiplying a) the Originating Company's query rate, times b) the number of queries.
- (5) For Local Call Termination facilities, provided by the Terminating Company, an amount calculated as specified for local call termination facilities in the Terminating Company's

applicable Tariff or Agreement. Compensation will be determined by multiplying a) the Terminating Company's local call termination rate, times b) the MOU.

SECTION VII

ITORP ADMINISTRATION AND RESPONSIBILITIES

(a) Responsibilities of BA. BA shall:

1. Operate and maintain the ITORP system.
2. Provide the requirements and standards for ITORP records and tapes.
3. Inform CLEC of any proposed change in tape creation or distribution process at least sixty (60) days prior to the actual implementation of the change.
4. Develop and implement all system enhancements required to maintain the integrity of BA's ITORP system.
5. Process ITORP tapes received from CLEC, or its agent, during the next available billing cycle.
6. Review and analyze daily pre-edit reports to determine if a tape is acceptable for ITORP processing; provided, however, that CLEC is not absolved, as the Originating Company, from its responsibility to conform to ITORP input requirements.
7. Communicate with CLEC, or its agent, to resolve the problems with tapes which are identified as being unacceptable for ITORP processing.
8. Create and/or maintain all ITORP tables.
9. Include the monthly compensation due to and from CLEC as identified by ITORP on the Inter-Company Net Billing Statement. The compensation includes 800/888 Service Traffic and Alternately Billed Services traffic.
10. If requested by CLEC to perform the Clearing House function; settle with all local Exchange Carriers, via the Inter-Company Net Billing Statement, for ITORP Transit Service Traffic, 800/888 Service Traffic and Alternately Billed Calls originating from and/or terminating to CLEC.
11. Distribute monthly ITORP reports.

(b) Responsibilities of CLEC. CLEC shall:

1. Compensate BA for the administration and processing of ITORP as specified in Attachment A.
2. Notify BA Exchange Carrier Services staff in writing of any changes in its rates affecting ITORP tables, as specified in Attachment A, thirty (30) days prior to the effective date of any such changes.
3. Notify BA Exchange Carrier Services staff in writing of any network changes, such as changes in traffic routing, sixty (60) days prior to the implementation of the change in the network.

4. Conform to BA's ITORP record requirements and standards.
5. CLEC or its designated agent will forward the Exchange Message Records to BA, in a timely manner for processing.
6. Inform the BA Exchange Carrier Services staff in writing of any proposed changes in the Exchange Message Record creation or distribution process at least sixty (60) days prior to the actual implementation of the change.
7. Reimburse BA for compensating other local Exchange Carriers on behalf of CLEC, as reflected in the Inter-Company Net Billing Statement.

(c) Fees. Compensation for the administration and processing of ITORP will be due BA on a monthly basis, based on the number of messages processed in ITORP for CLEC. The processing and administrative fees are set forth in Attachment A. These fees may be revised by BA, at its discretion and upon notice to CLEC, based on periodic studies conducted by BA, and CLEC hereby agrees to be bound by such revised rates. A minimum monthly processing fee, as specified in Attachment A, will be assessed when CLEC's monthly ITORP processing charges are below the stated minimum monthly charge.

SECTION VIII

LIABILITIES

In the event of an error on the part of BA in calculating or settling any compensation amounts hereunder, CLEC's sole remedy and BA's only obligation shall be to re-calculate the compensation amount, and to the extent any amounts are owed to or owed by CLEC, such amounts will be reflected as an adjustment in the next Inter-Company Net Billing Statement. In the event any records are lost or destroyed, BA and CLEC will jointly estimate the charges due to either party hereunder as follows:

- (1) Total the compensation paid for the most recent six (6) months period preceding the month covered by the lost or destroyed tapes with respect to the following types of traffic (but only to the extent records for that particular type of traffic are lost or destroyed): ITORP Transit Service Traffic, Meet-Point Transit Service Traffic, 800/888 Service Traffic or Alternately Billed Calls.
- (2) Divide the total determined in (1) preceding, by 180 days.
- (3) Multiply the compensation per day determined in (2) preceding, by the number of days covered by the lost or destroyed tapes. The calculated amount will be included as an adjustment for lost or destroyed tapes in the next Inter-Company Net Bill Statement.

BA shall have no liability whatsoever, including any related access charges, with respect to any lost, damaged or destroyed records submitted hereunder by CLEC. In addition and to the extent applicable, BA's liability under this Agreement and/or in connection with the settlement, payment and/or calculation of any amounts due hereunder shall be limited as set forth in the applicable tariffs. BA shall have no obligation or liability with respect to any billing, settlement or calculation-of-compensation errors or omissions, including without limitation the duty to re-calculate any compensation amounts reflected in the Inter-Company Net Billing Statement, if such error or omission occurred more than two (2) years prior to the time in which it is brought to BA's attention in writing. Without limiting the foregoing, in no event shall either party hereto be liable for consequential, incidental, special or indirect damages (including without limitation loss of profit or business) hereunder whether such damages are based in tort (including, without limitation, under any theory of negligence), contract breach or otherwise, and even if said party knew or should have known of the possibility thereof.

SECTION IX

RELATIONSHIP OF THE PARTIES

Nothing herein contained will be deemed to constitute a partnership or agency relationship between the parties. Each party agrees that it will perform its obligations hereunder as an independent contractor and not as the agent, employee or servant of the other party. Neither party nor any personnel furnished by such party will be deemed employees or agents of the other party or entitled to any benefits available under any plans for such other party's employees. Each party has and hereby retains the right to exercise full control of and supervision over its own performance of the obligations under this Agreement, and retains full control over the employment, direction, compensation and discharge of all employees assisting in the performance of such obligations, including without limitation all matters relating to payment of such employees, including compliance with social security taxes, withholding taxes and all other regulations governing such matters. In addition, each party will be responsible for its own acts and those of its own subordinates, employees, agents and subcontractors during the performance of that party's obligations hereunder.

SECTION X

TERM AND TERMINATION

(a) Term - Upon execution by all parties hereto, this Agreement shall become effective as of the date first shown on Page 1 of this Agreement, and shall remain in effect until terminated by either party in accordance with paragraphs (b), (c), (d), or (e) below.

(b) Termination for Breach - Either party may, upon prior written notice to the other party, terminate this Agreement in the event the other party is in default or breach of this Agreement and such breach or default is not corrected within thirty (30) days after the breaching party has been notified of same.

(c) Termination for Convenience - Upon six (6) months written advance notice to the other party, either party may terminate this Agreement.

(d) Acts of Insolvency - Either party may terminate this Agreement or any portion thereof, effective immediately, by written notice to the other party, if said other party (1) applies for or consents to the appointment of or the taking of possession by receiver, custodian, trustee, or liquidation of itself or of all or a substantial part of its property; (2) becomes insolvent; (3) makes a general assignment for the benefit of creditors; (4) suffers or permits the appointment of a receiver for its business or assets; (5) becomes subject to any proceeding under any bankruptcy or insolvency law whether domestic or foreign, voluntarily or otherwise; or (6) fails to contest in a timely or appropriate manner, or acquiesces in writing to, any petition filed against it in an involuntary case under the Federal Bankruptcy Code or any application for the appointment of a receiver, custodian, trustee, or liquidation of itself or of all or a substantial part of its property, or its reorganization, or dissolution.

(e) Termination of Interconnection Agreement. Unless otherwise agreed to by the parties hereto in writing, in the event that the Interconnection Agreement under Sections 251 and 252 of the Telecommunications Act of 1996, dated as of June 13, 1997, by and between BA and CLEC expires without being renewed, or expires or is terminated and no other interconnection agreement has been entered into by BA and CLEC, then this Agreement shall be deemed terminated effective on the date the aforesaid Interconnection Agreement expires or is terminated.

SECTION XI

NETWORK CONFIGURATION

Each party shall provide six (6) months advance written notice to the other party of any network configuration that may affect any of the services or compensation contemplated under this Agreement, and the parties hereto agree to use reasonable efforts to avoid service interruptions during any such network change.

SECTION XII

CONSTRUCTION AND EFFECT

All services contemplated under this Agreement are provided in accordance with any and all applicable regulatory requirements and effective tariffs filed with and approved by the appropriate federal and/or state regulatory bodies, as these tariffs and requirements may be modified from time to time. To the extent there is a conflict between the terms of any said tariff or regulatory requirement and this Agreement, the terms of the tariff or the regulatory requirement shall prevail. However, to the extent not in conflict with the provisions of the applicable tariffs or regulatory requirements, this Agreement shall supplement the tariffs or regulatory requirements, and it shall be construed to the fullest extent possible in harmony with such tariffs or regulatory requirements.

SECTION XIII

MISCELLANEOUS

(a) Headings. Headings used in this Agreement are for reference only, do not constitute part of this Agreement, and shall not be deemed to limit or otherwise affect any of the provisions hereof.

(b) Notices. All notices, requests, demands, or other communications required or permitted hereunder shall be in writing, shall be deemed delivered (1) on the date of delivery when delivered by hand, (2) on the date of transmission when sent by electronic mail or facsimile transmission during normal business hours with telephone confirmation of receipt, (3) one (1) day after dispatch when sent by overnight courier maintaining records of receipt, or (4) three (3) days after dispatch when sent by registered mail, postage prepaid, return-receipt requested, all addressed as follows (or at such other addresses as shall be given in writing by either party to their other):

If to BA:	Address: 1320 N. Court House Road, 9 th Floor Arlington, VA 22201 Attn.: Manager-Local Interconnection Facsimile: 703 974 2188 Telephone: 704 974 4614
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If to CLEC:	Address: Attn: Facsimile: Telephone:
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(c) Successors; Assignment. This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns, and nothing herein shall be construed to create any rights enforceable by any other person or third party. This Agreement may not be assigned by either party (except by BA to an affiliate or successor in interest) without the prior written consent of the other party, which consent shall not be unreasonably withheld.

(d) Waiver. No waiver of any right or term hereof shall be effective unless in a writing executed by the waiving party. No waiver of any right or privilege hereunder shall operate as a waiver of any subsequent or similar right or privilege.

(e) Modifications. This Agreement may be modified or amended only by a written agreement executed by the parties hereto.

(f) Counterparts. This Agreement may be executed in counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

(g) Severability. If any term, provision, paragraph or clause of this Agreement or any application thereof shall be held invalid or unenforceable in any particular jurisdiction, the remainder of this Agreement and any other application of such term, provision, paragraph or clause shall not be affected thereby in such jurisdiction (where such remainder or application shall be construed as if such invalid or unenforceable term, provision, paragraph or clause has not been inserted), and this Agreement and such application of such term, provision, paragraph or clause shall not be affected in any other jurisdiction.

(h) Contingency. Neither party will be held liable for any delay or failure in performance of this Agreement from any cause beyond its control and without its fault or negligence including but not limited to acts of God, acts of civil or military authority, government regulations, embargoes, epidemics, wars, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, strikes, power blackouts, other major environmental disturbances, unusually severe weather conditions, inability to secure products or services of other persons or transportation facilities, or acts or omissions of transportation common carriers.

(i) Governing Law. Except as otherwise expressly provided herein, this Agreement shall be interpreted, construed and governed by the laws of the Commonwealth of Pennsylvania, without regard to conflict of law provisions.

(j) Confidentiality. Unless by mutual agreement, or except to the extent directed by a court of competent jurisdiction, neither party shall disclose this Agreement or the terms hereof to any person other than such party's affiliates or such party's officers, employees and consultants, who are similarly bound hereby. This paragraph shall not prevent the filing of this Agreement with a state or federal commission having jurisdiction over the parties hereto if such filing is required by rule or order of that commission; provided, however, that the parties hereto shall jointly request that the Agreement be treated as confidential by that commission to the extent permitted under the commission's regulations and procedures. Each party hereto must maintain the confidentiality of all message, billing, traffic, and call records, traffic volumes and all other material information and data pertaining to the traffic covered by this Agreement and the carriers and end users associated with such traffic.

(k) Remedies under Law. All remedies available to the parties hereto under the terms of this Agreement shall be in addition to, and not by way of limitation of, any other rights that said parties may have at law or equity, none of which are hereby waived.

(l) Entire Agreement. This Agreement, including all Attachments and Schedules attached hereto, contains the entire agreement, and supersedes and voids any prior understanding, between BA and CLEC regarding the subject matter hereof.

In witness whereof, the undersigned parties have caused this Agreement to be executed on their behalf this day of _____, 199_.

July 2, 1997

ATTACHMENT III

Witness:

CLEC

By:

Witness:

Bell Atlantic - Pennsylvania, Inc.

By:

ATTACHMENT A

BASIS OF COMPENSATION

CHARGES FOR ADMINISTRATION OF ITORP AND ITORP PROCESSING

A. Bell Atlantic - Pennsylvania, Inc. charges the following rates for providing ITORP services:

July 2, 1997

ATTACHMENT III

1.	Administrative Charge (monthly) (includes Clearing House function)	\$100.00
2.	Processing Charge Elements:	
a.	Terminating Traffic (per message)	\$0.00190
b.	Minute/Message (per message)	\$0.00001
c.	800/888 Message (per message)	\$0.00105
d.	Net Compensation (per message)	\$0.00001
e.	Collected Revenue Processing (per message)	\$0.00026
3.	Minimum Monthly Processing Fee (monthly)	\$100.00
4.	Alternately Billed Calls (per message)	\$0.0434

ATTACHMENT B

I.
Message Telecommunications Service - Terminating to CLEC

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	CLEC
End Office	CLEC
Transport	Based on negotiated billing percentages (BIPs)

II.
800/888 - Terminating to or originating from CLEC Customers

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	Originating Company
End Office	Originating Company
Transport	Based on negotiated billing percentages (BIPs)
Query	Originating Company

III.

July 2, 1997

ATTACHMENT III

Local Exchange - Terminating to CLEC

<u>Rate Element</u>	<u>Billing Company</u>
Local Call Termination Charge	CLEC
Transport	Based on negotiated billing percentages (BIPs)

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ATTACHMENT IV
INTERCONNECTION

Section 1. Local Interconnection Trunk Arrangement

1.1 The Parties shall terminate Local Traffic and intraLATA/interLATA toll traffic originating on each other's networks as follows:

1.1.1 Initially, the Parties shall make available to each other two-way trunks, to be used one-way, for the reciprocal exchange of combined Local Traffic, non-equal access intraLATA toll traffic, and local transit traffic to other ILECs. In quarterly joint planning meetings pursuant to Section 8.3, where mutually agreed, the Parties may combine these trunk groups on a single shared two-way trunk group.

1.1.2 Bell Atlantic shall make available to MCIIm a two-way trunk group, to Bell Atlantic's appropriate access tandem(s), to be used two-way, for the exchange of equal access traffic between MCIIm and purchasers of Bell Atlantic's switched Exchange Access Services.

1.1.3 The Parties shall make available to each other trunks, to connect the originating Party's Switch to the appropriate E911 tandem of the other Party, or to connect the originating Party's Switch to the appropriate 911 PSAP.

1.1.4 Bell Atlantic Operator Services Trunks

1.1.4.1 The Parties shall make available to each other trunks to connect the originating Party's Switch to the other Party's Operator Service center for operator-assisted Line Status Verification/Verification and Call Interrupt.

1.1.4.2 For traffic from the Bell Atlantic network to MCIIm for Operator Services, Bell Atlantic shall provide one trunk group per NPA served by Bell Atlantic.

1.1.4.3 Bell Atlantic shall provide such trunks as one-way trunks from the Bell Atlantic network to the MCIIm network.

1.1.5 Bell Atlantic shall make available to MCIIm trunks to connect MCIIm's Switch to Bell Atlantic's Directory Assistance center in instances where MCIIm is purchasing Bell Atlantic's Directory Assistance service.

1.1.6 It is recognized by the Parties that there is no technical requirement to segregate local and toll traffic from MCIIm to Bell Atlantic, or from Bell Atlantic

to MCIIm, provided that the classification of the traffic can reliably be identified by the Parties in accordance with the terms of Section 7.5 herein.

1.2 Interconnection Point

1.2.1 Definitions

1.2.1.1 "Interconnection Point" or "IP" means the switching, Wire Center, or other similar network node in a Party's network at which such Party accepts Local Traffic from the other Party. Bell Atlantic IPs include any Bell Atlantic End Office, for the delivery of traffic terminated to numbers served out of that End Office, and/or any Bell Atlantic access Tandem Office, for the delivery of traffic to numbers served out of any Bell Atlantic End Office that subtends that access Tandem Office. MCIIm IPs include any MCIIm Switch, for the delivery of traffic terminated to numbers served out of that Switch.

1.2.1.2 "Point of Interconnection" or "POI" means the physical point that establishes the technical interface, the test point, and the operational responsibility hand-off between the Parties for the Local Interconnection of their networks. Unless otherwise mutually agreed, MCIIm will be responsible for engineering and maintaining its network on its side of the POI and Bell Atlantic will be responsible for engineering and maintaining its network on its side of the POI.

1.2.2 MCIIm shall establish at Technically Feasible points in Bell Atlantic's network at least one POI in each of the Bell Atlantic access tandem service areas in which MCIIm originates Local Traffic and interconnects with Bell Atlantic; provided that Bell Atlantic may request relief from the Commission if Bell Atlantic reasonably believes that MCIIm has manipulated the designation of POIs in order to maximize the transport revenues Bell Atlantic must pay to MCIIm. The Party delivering traffic to the other Party's IP(s) shall do so by purchasing from the other Party transport between the POI(s) and the IP(s), if necessary. MCIIm shall deliver traffic to at least one IP in each Bell Atlantic access tandem serving area to which its end users have local calling; provided, however, that if MCIIm delivers traffic to only one IP in an access tandem serving area, the IP shall be the access tandem. Bell Atlantic shall deliver traffic to at least one (1) MCIIm IP in each Bell Atlantic access tandem service areas.

1.2.2.1 If and when the Parties choose to interconnect at a fiber optic mid-span meet, MCIIm and Bell Atlantic will mutually agree on the technical, operational and compensation issues associated with each specific mid-span meet implemented, and jointly provision the fiber optic facilities that connect the two networks in accordance with such agreement.

1.2.2.2 In response to a Party's request for any POI, the other Party shall provide any information in its possession or control regarding the

environmental conditions of those POIs whose location is within its possession or control. The Party controlling the POI shall notify the requesting Party of any hazardous environmental conditions of the POI, including the existence and condition of asbestos, lead paint, hazardous substance contamination, and the like. The Party controlling the POI shall respond to any such request within ten (10) business days for manned sites and within no more than thirty (30) calendar days for unmanned sites.

1.2.2.3 The Party controlling a POI shall allow the requesting Party to perform at reasonable hours, reasonable environmental site investigations, including, but not limited to, asbestos surveys, that the requesting Party deems to be necessary in support of its interconnection needs.

1.2.2.4 If interconnection is complicated by the presence of environmental contamination or hazardous materials, and an alternative route is available within the space controlled by the Party controlling an POI, then such Party shall make such alternative route available for the requesting Party's consideration.

Section 2. Compensation Mechanisms

2.1 Point of Interconnection

2.1.1 Each (originating) Party is responsible for bringing their traffic to a POI.

2.2 Compensation for Local Traffic Transport and Termination

2.2.1 The POI determines the point at which the originating carrier shall pay the terminating carrier for the Transport and Termination of local traffic. The following compensation elements shall apply:

2.2.1.1 "Transport," which includes the transmission of Local Traffic from the POI to the terminating carrier's IPs, and any necessary Tandem Switching, and any necessary transport between the terminating carrier's access Tandem Office and the terminating carrier's End Office Switch that directly serves the called end user.

2.2.1.2 "Termination," which includes the switching of Local Traffic at the terminating carrier's End Office Switch.

2.3 When an MCIIm customer places a call to a Bell Atlantic customer, MCIIm will hand off that call to Bell Atlantic at the POI. Conversely, when Bell Atlantic hands over Local Traffic to MCIIm for MCIIm to transport and terminate, Bell Atlantic must use an established POI.

2.4 MCIIm may designate as its means of delivering traffic to a POI any Technically Feasible methods, including but not limited to, Collocation using electronic or manual

cross-connect points via a digital signal access point (“DSAP”), or mutually-agreed mid-span meets. The transport and termination charges for Local Traffic delivered to POI shall be as follows:

2.4.1 When Local Traffic from MCIIm is terminating on Bell Atlantic’s network through the Bell Atlantic access Tandem Office IP, MCIIm will pay Bell Atlantic transport charges from the POI to the Tandem Office for Dedicated Transport. Alternatively, MCIIm may choose to collocate at the Bell Atlantic access Tandem Office and pay applicable Collocation and cross-connect charges. MCIIm may also choose to purchase Bell Atlantic Dedicated Transport from the POI to a Collocation site established by MCIIm or a third Party at the Bell Atlantic access Tandem Office IP. MCIIm shall also pay a charge for the tandem termination rate. The tandem termination rate includes Tandem Switching, Common Transport to the End Office, and End Office termination and will be charged at the rate set forth in Attachment I.

2.4.2 When Local Traffic from Bell Atlantic is terminating on MCIIm’s network through the POI, Bell Atlantic shall pay MCIIm transport charges from the POI to the MCIIm Switch for Dedicated Transport. This transport charge shall not exceed Bell Atlantic’s equivalent charge. Bell Atlantic shall also pay a charge symmetrical to its own charges to MCIIm for Tandem Switching, Tandem Office to End Office transport, and End Office termination, provided that the MCIIm Switch covers an area comparable to the Bell Atlantic access Tandem Office serving the same area. If the area covered by the MCIIm Switch is comparable instead to the area of an End Office, Bell Atlantic shall not pay the charges for Tandem Switching or Tandem Office to End Office transport.

2.4.3 MCIIm may choose to establish direct trunking to any given Bell Atlantic End Office from the POI. If MCIIm leases trunks from Bell Atlantic, it shall pay charges for Dedicated Transport. For calls terminating from MCIIm to subscribers served by these directly-trunked end offices, MCIIm shall also pay for Local Traffic termination at the End Office termination rate. For Bell Atlantic Local Traffic terminating to MCIIm over the direct End Office trunking, compensation payable by Bell Atlantic shall be the same as that detailed in Section 2.4.2 above.

Section 3. Signaling

3.1 Signaling protocol. The Parties will interconnect their networks using SS7 signaling as defined in Bellcore documents GR-905-CORE, Issue 1, March 1995, Bellcore Special Report SR-TSV-002275, BOC Notes on the LEC Networks-Signaling, Bellcore Generic Requirements GR-317, Issue 1, February 1994 and GR-394, Issue 1, February 1994, including ISDN User Part (“ISUP”) for trunk signaling and Transaction Capabilities Application Part (“TCAP”) for CCS-based features in the interconnection of their networks.

3.2 The Parties will provide CCS to each other in conjunction with all trunk groups supporting intraLATA, local, transit, and toll traffic. CCS will not be provided in

conjunction with trunk groups supporting Operator Services (Call Completion and Directory Assistance), 911, or where CCS has not been deployed by the originating carrier. The Parties will cooperate on the exchange of Transactional Capabilities Application Part ("TCAP") messages to facilitate full inter-operability of CCS-based features between their respective networks, including all CLASS features and functions. All CCS signaling parameters will be provided including Automatic Number Identification ("ANI"), originating line information ("OLI"), calling party category, Charge Number, *etc.* For terminating FGD, Bell Atlantic will pass CPN if it receives CPN from FGD carriers. All privacy indicators will be honored. Where available, network signaling information such as Transit Network Selection ("TNS") parameter (CCS platform) and CIC/OZZ information (non-CCS environment) will be provided by either Party wherever such information is needed for call routing or billing. The Parties will generally conform to OBF adopted guidelines pertaining to TNS and CIC/OZZ codes in accordance with Section 15.4 of Part A.

3.3 Refer to Attachment III, Section 11 for detailed terms of SS7 Network Interconnection.

3.4 Standard interconnection facilities shall be ESF with B8ZS line code. Where ESF/B8ZS is not available, both Parties will agree to use other interconnection protocols on an interim basis until the standard ESF/B8ZS is available. For specific arrangements not deployed as ESF/B8ZS, Bell Atlantic will provide anticipated dates of ESF/B8ZS availability for these facilities.

3.4.1 Where MCIIm is unwilling to utilize an alternate interconnection protocol, MCIIm will provide Bell Atlantic with a request for 64 kbps Clear Channel Capability ("64K CCC") trunk quantities consistent with the quarterly forecasting agreements between the Parties pursuant to Section 8.3. Upon receipt of this request, the Parties will begin joint planning for the engineering, procurement, and installation of the segregated 64K CCC Local Interconnection Trunk Groups, and the associated B8ZS Extended Super Frame ("ESF") facilities, for the sole purpose of transmitting 64K CCC data calls between MCIIm and Bell Atlantic. Where additional equipment or network rearrangements are required, such equipment and rearrangements will be obtained, engineered, installed, and performed on the same basis and with the same intervals as any similar subscriber specific special construction jobs for IXCs, CLECs, or Bell Atlantic internal subscriber demand for 64K CCC trunks. Such equipment and rearrangements shall be charged at Commission-approved, applicable special construction rates. Should the foregoing not be adequate, MCIIm may invoke the BFR process. Where Technically Feasible and mutually agreed, these trunks will be established as two-way.

Section 4. Network Servicing

4.1 Trunk Forecasting

4.1.1 The Parties shall work toward the development of their forecasting responsibilities for traffic utilization over trunk groups. Orders for trunks that exceed forecasted quantities for forecasted locations will be accommodated as facilities and/or equipment are available. Parties shall make all reasonable efforts and cooperate in good faith to develop alternative solutions to accommodate orders when facilities are not available. Intercompany forecast information must be provided by MCI to Bell Atlantic on a quarterly basis. The forecasts shall include:

4.1.1.1 Yearly forecasted trunk quantities to each of Bell Atlantic's End Offices and access Tandem Office(s) affected by the exchange of traffic (which include measurements that reflect actual Tandem and End Office Local Interconnection and meet point trunks and tandem-subtending Local Interconnection End Office equivalent trunk requirements for no more than two years (current plus one year)) by traffic type (local/toll, operator services, 911, etc.), Access Carrier Terminal Location ("ACTL"), interface type (e.g., DS1), and trunks in service each year (cumulative);

4.1.1.2 The use of A location/Z location Common Language Location Identifier ("CLLI-MSG"), which are described in Bellcore documents BR 795-100-100 and BR 795-400-100; and

4.1.1.3 Descriptions of major network projects that affect the other Party will be provided in the forecasts. Major network projects include, but are not limited to, trunking or network rearrangements, shifts in anticipated traffic patterns, or other activities by either Party that are reflected by a significant increase or decrease in trunking demand for the following forecasting period.

4.1.2 Parties shall meet to review and reconcile their forecasts if forecasts vary significantly.

4.1.2.1 Because each Party's trunking requirements will, at least during an initial period, be dependent on the subscriber segments to whom MCI decides to market its services, Bell Atlantic will be largely dependent on MCI to provide accurate trunk forecasts for both inbound (from Bell Atlantic) and outbound (from MCI) traffic. Bell Atlantic will, as an initial matter, and upon receipt of a forecast from MCI, order a sufficient number of trunks from MCI for Local Traffic and intraLATA toll, to MCI from Bell Atlantic, to handle the traffic forecast. Upon the establishment of any new set of trunks for traffic, each Party will monitor traffic for up to ninety (90) days, and will, as necessary, either augment trunks or disconnect trunks, based on the application of reasonable engineering criteria to the actual traffic volume experienced. If, after such ninety (90) day period, either Party has determined that the trunks are not warranted by actual traffic volumes, then, it shall inform the other in writing. Thereafter, within ten (10) business days of receipt of the written

notice, the Party receiving notice shall inform the other Party of whether it desires to keep in operation any unused trunk. Each Party may hold the other financially responsible for such trunks, installed at the request of the other Party, retroactive to the start of the ninety (90) day period until such time as they are justified by actual traffic volumes, based on the application of reasonable engineering criteria.

4.1.3 Each Party shall provide a specified point of contact for planning, forecasting, and trunk servicing purposes.

4.1.4 Trunking can be established to Tandem or End Offices or a Combination Class 5/Class 4 via either one-way or two-way trunks in accordance with the standards set forth in Section 1 above. Trunking will be at the DS-0 level, DS-1 level, or higher, as mutually agreed in accordance with the standards set forth in Section 1 of this Attachment. Initial trunking will be established between the MCIIm switching centers and Bell Atlantic's access Tandem Office(s). The Parties may use direct End Office trunking for their traffic when deemed appropriate. Requests for direct End Office trunking will not be unreasonably denied.

4.2 **Grade of Service**

4.2.1 A blocking standard of one percent (.01) during the average busy hour, as defined by each Party's standards, for final trunk groups between MCIIm and Bell Atlantic shall be maintained.

4.3 **Trunk Servicing**

4.3.1 Orders between the Parties to establish, add, change or disconnect trunks shall be processed by use of an Access Service Request ("ASR"), or another industry standard eventually adopted to replace the ASR for local service ordering.

4.3.2 As discussed in this Agreement, both Parties will manage the capacity of their Local Interconnection Trunk Groups. Bell Atlantic will issue an ASR to MCIIm to trigger changes Bell Atlantic desires to the Bell Atlantic Local Interconnection Trunk Groups based on Bell Atlantic's capacity assessment. MCIIm will issue an ASR to Bell Atlantic to trigger changes MCIIm desires to the MCIIm Local Interconnection Trunk Groups based on MCIIm's capacity assessment.

4.3.3 The standard interval used for the provisioning of local interconnection trunk groups shall be ten (10) business days for orders of fewer than ninety-six (96) DS-0 trunks. Orders beyond this amount shall be determined on an individual case basis. Where feasible, Bell Atlantic will expedite installation, upon MCIIm's request.

4.3.4 Orders that comprise a major project that directly impacts the other Party may be submitted at the same time, and their implementation shall be jointly planned and coordinated. Major projects are those that require the coordination and execution of multiple orders or related activities between and among Bell Atlantic and MCIIm work groups, including but not limited to the initial establishment of Local Interconnection or Meet Point trunk groups and service in an area, facility grooming, or network rearrangements.

4.3.5 MCIIm and Bell Atlantic agree to exchange escalation lists which reflect contact personnel including vice president-level officers. These lists shall include name, department, title, phone number, and fax number for each person. MCIIm and Bell Atlantic agree to exchange an up-to-date list promptly following changes in personnel or information.

Section 5. Network Management

5.1 Protective Protocols

5.1.1 Either Party may use protective network traffic management controls such as 7-digit and 10-digit code gaps on traffic toward the other Party's network, when required to protect the public switched network from congestion due to facility failures, Switch congestion or failure, or focused overload. MCIIm and Bell Atlantic will immediately notify each other of any protective control action planned or executed.

5.2 Expansive Protocols

5.2.1 Where the capability exists, originating or terminating traffic reroutes may be implemented by either Party to temporarily relieve network congestion due to facility failures or abnormal calling patterns. Reroutes will not be used to circumvent normal trunk servicing. Expansive controls will only be used when mutually agreed to by the Parties.

5.3 Mass Calling

5.3.1 MCIIm and Bell Atlantic shall cooperate and share pre-planning information, where available, regarding cross-network call-ins expected to generate large or focused temporary increases in call volumes, to prevent or mitigate the impact of these events on the public switched network.

Section 6. Line Status Verification And Verification With Call Interruption

6.1 Each Party shall offer Line Status Verification ("LSV") and Verification and Call Interrupt ("VCI") services to enable its subscribers to verify and/or interrupt calls of the receiving Party's subscribers. The receiving Party shall accept and respond to LSV and VCI requests from the operator bureau of the originating Party, provided that the

originating Party has ordered the requisite underlying LSV/VCI service from the receiving Party.

6.2 The receiving Party operator shall only verify the status of the line or interrupt the line to inform the called Party that there is a call waiting. The receiving Party operator will not complete the telephone call of the subscriber initiating the LSV/VCI request. The receiving Party operator will only make one LSV/VCI attempt per subscriber operator bureau telephone call, and the applicable charges apply whether or not the called Party releases the line.

6.3 Each Party's operator bureau shall accept LSV and VCI inquiries from the operator bureau of the other Party in order to allow transparent provision of LSV/VCI traffic between the Parties' networks.

6.4 Each Party shall route LSV/VCI traffic inquiries over separate direct trunks (and not the local/intraLATA/interLATA trunks) established between the Parties' respective operator bureaus. Each Party shall offer interconnection for LSV/VCI traffic at its Operator Services tandem office or other mutually agreed point in the LATA. Separate LSV/VCI trunks will be directed to the Operator Services tandem office designated by the receiving Party. The originating Party shall outpulse the appropriate NPA, ATC Code, and Routing Code (operator code) to the receiving Party.

6.5 When a LSV/VCI request for a ported number is directed to either Party's operator and the query is not successful (*i.e.*, the request yields an abnormal result), the operator shall confirm whether the number has been ported and shall direct the request to the appropriate operator. The Parties shall work cooperatively to develop this process, which does not exist as of the Effective Date.

6.6 Compensation: Each Party shall charge the other Party for LSV and VCI at rates specified in Attachment I.

Section 7. Usage Measurement

7.1 Each Party shall calculate terminating interconnection minutes of use based on standard Automatic Message Accounting ("AMA") recordings made within each Party's network, these recordings being necessary for each Party to generate bills to the other Party.

7.2 Measurement of minutes of use over Local Interconnection Trunk Groups shall be in actual conversation seconds. The total conversation seconds over each individual Local Interconnection Trunk Group will be totaled for the entire monthly bill-round and then rounded to the next whole minute.

7.3 For billing purposes, each Party shall pass Calling Party Number ("CPN") information on each call carried over the traffic exchange trunks at such time as the originating Switch is equipped for SS7 and from all switches no later than December 31, 1998. At such time as either Party has the ability, as the Party receiving the traffic, to use

such CPN information to classify on an automated basis traffic delivered by the other Party as either Local Traffic or toll traffic, such receiving Party shall bill the originating Party the Local Traffic termination rates, intrastate Exchange Access rates, or interstate Exchange Access rates applicable to each minute of traffic for which CPN is passed, as provided in Attachment I and applicable Tariffs.

7.4 If, under the circumstances set forth in Section 7.3, the originating Party does not pass CPN on up to ten percent (10%) of calls, the receiving Party shall bill the originating Party the Local Traffic termination rates, intrastate Exchange Access rates, intrastate/interstate transit traffic rates, or interstate Exchange Access rates applicable to each minute of traffic, as provided in Attachment I and applicable Tariffs, for which CPN is passed. For the remaining up to ten percent (10%) of calls without CPN information, the receiving Party shall bill the originating Party for such traffic at Local Traffic termination rates, intrastate Exchange Access rates, intrastate/interstate transit traffic rates, or interstate Exchange Access rates applicable to each minute of traffic, as provided in Attachment I and applicable Tariffs, in direct proportion to the minutes of use of calls passed with CPN information.

7.5 If the originating Party fails to pass CPN on more than ten percent (10%) of calls, either Party may require that separate trunk groups for Local Traffic and toll traffic be established. If neither Party requests such separate trunk groups, or if the receiving Party lacks the ability to use CPN information to classify on an automated basis traffic delivered by the other Party as either Local Traffic or toll traffic, and the originating Party desires to combine Local Traffic and toll traffic on the same trunk group, it will supply an auditable Percent Local Usage ("PLU") report quarterly, based on the previous three months' traffic, and applicable to the following three months. If the originating Party also desires to combine interstate and intrastate toll traffic on the same trunk group, it will supply an auditable Percent Interstate Usage ("PIU") report quarterly, based on the previous three months' terminating traffic, and applicable to the following three months. In lieu of the foregoing PLU and/or PIU reports, the Parties may agree to provide and accept reasonable surrogate measures for an agreed-upon period.

7.6 Measurement of billing minutes for purposes of determining terminating compensation shall be in conversation seconds.

Section 8. Responsibilities of the Parties

8.1 Bell Atlantic and MCIIm agree to treat each other fairly and nondiscriminatorily for all items included in this Agreement, or related to the support of items included in this Agreement.

8.2 MCIIm and Bell Atlantic agree to exchange such reports and/or data as provided in this Attachment in Section 7 to facilitate the proper billing of traffic. Either Party may request an audit of such usage reports on no fewer than ten (10) business days' written notice and any audit shall be accomplished during normal business hours at the office of the Party being audited. Such audit must be performed by a mutually agreed-to independent auditor paid for by the Party requesting the audit and may include review of

the data described in Section 7 above. Such audits may be requested within six (6) months of having received the PLU factor and usage reports from the other Party.

8.3 MCIIm and Bell Atlantic will review engineering requirements on a quarterly basis and establish forecasts for trunk and facilities utilization provided under this Agreement. Bell Atlantic and MCIIm will work together to begin providing these forecasts within thirty (30) days from the Effective Date of this Agreement. New trunk groups will be implemented as dictated by engineering requirements for either Bell Atlantic or MCIIm.

8.4 Unless otherwise mutually agreed for specific facility arrangements, Bell Atlantic shall be solely responsible for Control Office functions for local interconnection trunks and trunk groups that Bell Atlantic orders from MCIIm. In addition, Bell Atlantic shall be solely responsible for the overall coordination, installation, and maintenance responsibilities for the trunks and trunk groups that MCIIm orders from Bell Atlantic. The Parties shall agree upon the assignment of Control Office, coordination, installation, and maintenance responsibilities for shared interconnection trunks and for mid-span meet trunks at such time as the Parties agree to install each such facility.

8.5 MCIIm and Bell Atlantic shall:

8.5.1 Provide trained personnel with adequate and compatible test equipment to work with each other's technicians.

8.5.2 Notify each other when there is any change affecting the service requested, including the due date.

8.5.3 Coordinate and schedule testing activities of their own personnel, and others as applicable, to ensure its interconnection trunks/trunk groups are installed per the interconnection order, meet agreed-upon acceptance test requirements, and are placed in service by the due date.

8.5.4 Perform sectionalization to determine if a trouble is located in its facility or its portion of the interconnection trunks prior to referring the trouble to each other.

8.5.5 Advise each other's Control Office if there is an equipment failure which may affect the interconnection trunks.

8.5.6 Provide each other with a trouble reporting/repair contact number that is readily accessible and available twenty-four (24) hours/seven (7) days a week. Any changes to this contact arrangement must be immediately provided to the other Party.

8.5.7 Provide to each other test-line numbers to enable testing of interconnection trunks.

October 2, 1997

ATTACHMENT IV

8.5.8 Cooperatively plan and implement coordinated repair procedures for the meet point and local interconnection trunks and facilities to ensure trouble reports are resolved in a timely and appropriate manner.

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ATTACHMENT V

COLLOCATION

Section 1. Introduction

This Attachment sets forth the requirements for Collocation. Bell Atlantic shall provide MCI_m Collocation in accordance with the terms of its FCC and Pennsylvania Collocation Tariffs and the provisions of this Attachment V. Any conflicts between the Tariff and the provisions hereof shall be resolved as set forth in Section 1, Part A of this Agreement.

Section 2. Technical Requirements

2.1 Bell Atlantic shall provide space, as reasonably requested by MCI_m, to meet MCI_m's needs for placement of equipment. MCI_m may collocate only that equipment which is used for interconnection and access to Network Elements. Such equipment may include Remote Switching Modules ("RSMs") in Bell Atlantic's Central Offices which currently provide loops using digital loop carriers or are scheduled to provide loops using digital loop carriers.

2.1.1 To the extent practicable and consistent with the needs of Bell Atlantic and other collocators, Bell Atlantic will use reasonable efforts to place MCI_m's physically collocated interconnection space so as to permit MCI_m to expand its collocated interconnection space to a contiguous area, up to a maximum of four-hundred (400) square feet.

2.1.2 Subject to availability, physically-located interconnection will be provided on a first-come, first-served basis in a physically-located office until available Collocation space and facilities are exhausted. In such instances where two (2) or more requests for space are received at the same time for a Central Office building with limited space, a lottery will be administered to determine the order of selection of applicants.

2.1.3 If the space remaining in the portion of the Central Office in which physical Collocation is provided (the "Collocation Space") is less than one-hundred (100) square feet or otherwise configured so as to be unsuited to meet the requirements of another collocator that has requested such space, the existing collocator(s) shall have the option of applying for any portion(s) of the remaining space.

2.1.4 In the event that MCI_m withdraws its request for Collocation service prior to completion, Bell Atlantic will refund the pre-paid design and planning fee, less actual costs incurred by Bell Atlantic.

2.1.5 Upon receipt of MCI_m's first Collocation application form, Bell Atlantic will, upon request, make available to MCI_m at cost any applicable Bellcore or

Bell Atlantic-specific documentation as listed in Bell Atlantic's Tariff F.C.C. No. 1, Section 19.3.5. MCIIm is responsible for obtaining all other applications listed in Appendix 1 to Part A.

2.1.6 At the time Bell Atlantic submits contractor bids to MCIIm, Bell Atlantic shall provide any information in its possession or control regarding the environmental condition of the space provided for those sites, where the information is reasonably available. Bell Atlantic shall also notify MCIIm at such time of the following conditions of which it is aware: the existence and condition of asbestos, lead paint, hazardous substance contamination, and the like.

2.1.7 Bell Atlantic shall allow MCIIm to perform reasonable environmental site investigations within the designated Collocation Space, including, but not limited to, asbestos surveys, which MCIIm deems to be necessary in support of its Collocation needs, upon completion of Bell Atlantic's required construction work for the MCIIm Collocation space.

2.1.8 If the space provided for the placement of equipment, interconnection, or provision of service contains environmental contamination or hazardous material, particularly but not limited to asbestos or lead paint which makes the placement of such equipment or interconnection hazardous, Bell Atlantic shall offer an alternative space, if available at the same Bell Atlantic premise, for MCIIm's consideration.

2.2 Bell Atlantic shall provide intraoffice facilities (*e.g.*, DS1, DS3, DS0, OC3, OC12, OC48, and STS-1, terminations where and when available) as requested by MCIIm to meet MCIIm's need for placement and interconnection of equipment, where Technically Feasible.

2.3 Bell Atlantic agrees to allow MCIIm's employees and designated agents unrestricted access to MCIIm dedicated space in Bell Atlantic offices twenty-four (24) hours per day each day of the week. Bell Atlantic may place reasonable security restrictions on access by MCIIm's employees and designated agents to the MCIIm Collocated space in Bell Atlantic offices, in accordance with Attachment IX.

2.4 Where Technically Feasible, Bell Atlantic shall provide the connection between the equipment in the collocated spaces of two (2) or more Telecommunications Carriers permitting such Telecommunications Carrier(s) to interconnect its network with that of another collocating Telecommunications Carrier at Bell Atlantic premises, provided that the collocated equipment is used for interconnection with Bell Atlantic or for access to Bell Atlantic's Network Elements.

2.5 Bell Atlantic shall permit MCIIm to subcontract the construction of physical Collocation arrangements within the MCIIm Collocation space, to Bell Atlantic's construction specifications, with contractors approved by Bell Atlantic, provided, however, that Bell Atlantic shall not unreasonably withhold approval of contractors.

Approval by Bell Atlantic shall be based on the same criteria it uses in approving contractors for its own purposes.

2.6 MCI may order from Bell Atlantic basic business telephone service at the Collocation space, as may be required for administrative purposes.

2.7 Bell Atlantic shall provide lighting, ventilation, power, heat, air conditioning, and other environmental conditions for MCI's space and equipment in substantial conformance with Bell Communication Research ("Bellcore") Network Equipment-Building System ("NEBS") standards TR-EOP-000063. MCI may order additional lighting and AC power in accordance with Bell Atlantic's Collocation Tariffs.

2.8 Bell Atlantic shall provide access to bathrooms and drinking water within a collocated facility on a twenty-four (24) hours per day, seven (7) days per week basis for authorized MCI personnel and agents in facilities where such amenities are located in Collocation common areas. Where such amenities are not available within a Collocation common area and where Bell Atlantic has employees available on the premise, Bell Atlantic shall provide an escort for access to such facilities.

2.9 Bell Atlantic shall provide all ingress and egress of fiber and power cabling to MCI Collocated Spaces in compliance with MCI's reasonable cable diversity requirements. The specific level of diversity requested for each site or Network Element will be provided in the Collocation request. MCI shall pay Bell Atlantic any reasonable special construction charges incurred in providing MCI the requested level of diversity where said diversity is not available.

2.10 In a Collocation arrangement hereunder, Bell Atlantic shall protect MCI's Proprietary Information to the extent required by Applicable Law.

2.11 Bell Atlantic shall notify MCI's National Network Management Center at least five (5) business days prior to those instances when Bell Atlantic or its subcontractors know they will be performing work reasonably anticipated to affect MCI's service on the DC power plants which support MCI equipment. Bell Atlantic will inform MCI by telephone of any emergency related activity reasonably anticipated to affect MCI's service that Bell Atlantic or its subcontractors may be performing on the DC power plants which support MCI equipment. Notification of any emergency related activity shall be as soon as practicable so that MCI can take any action required to monitor or protect its service.

2.12 MCI shall submit a request to collocate equipment using the form attached as Exhibits A and B to this Attachment V. Promptly following MCI's submission of a Collocation application, Bell Atlantic shall review the application, and within ten (10) business days, conduct a meeting with MCI to review the details of the application to assure that it is complete.

2.12.1 Within forty-five (45) days after the application review meeting, Bell Atlantic shall tender to MCI drawings of the proposed Collocation space.

MCIIm shall review the drawings and either approve them or specify changes to the space design within thirty (30) days after receiving them. Promptly thereafter, Bell Atlantic and MCIIm shall agree on final drawings, specifications and charges for the requested space specified on MCIIm's application. Upon MCIIm's request, Bell Atlantic shall construct the Collocation space in substantial compliance with MCIIm's Collocation application.

2.13 MCIIm and Bell Atlantic will complete an acceptance walk through of the Collocated space constructed by Bell Atlantic. Exceptions from drawings and plans approved under Section 2.12 that would materially affect MCIIm's intended use of the space that are noted by MCIIm during this acceptance walk through shall be corrected, or the price otherwise adjusted, by Bell Atlantic within five (5) business days after the walk through unless otherwise agreed. The correction of these exceptions from the original Collocation application shall be at Bell Atlantic's expense.

2.14 Bell Atlantic shall provide telephone equipment drawings depicting the location, type, and cable termination requirements (*i.e.*, connector type, number and type of pairs, and naming convention) for Bell Atlantic point of termination bay(s) to MCIIm upon completion of Bell Atlantic construction of the MCIIm Collocation space.

2.15 Bell Atlantic shall provide drawings depicting available paths, with dimensions, for MCIIm outside plant fiber ingress and egress into MCIIm collocated space at the initial site implementation meeting between MCIIm and Bell Atlantic within ten (10) business days after Bell Atlantic's acceptance of MCIIm's request for collocated space. Such path and any areas around it in which MCIIm must work to perform installation shall be free of asbestos, lead paint (unless encapsulated), and other health or safety hazards to the same extent that comparable Bell Atlantic work areas in the same premises are free of such conditions.

2.16 Bell Atlantic shall provide power cabling connectivity information, including the sizes and number of power feeders, to MCIIm upon completion of Bell Atlantic construction of MCIIm Collocation space.

2.17 Bell Atlantic shall provide positive confirmation to MCIIm when its construction of MCIIm's Collocation space is fifty percent (50%) completed. This confirmation shall also include confirmation of the scheduled completion and turnover dates.

2.18 Bell Atlantic shall make commercially reasonable efforts to provide the following information to MCIIm within ten (10) business days after receipt of request from MCIIm unless otherwise agreed:

2.18.1 Work restriction guidelines.

2.18.2 Bell Atlantic or industry technical publication guidelines that impact the design of virtually collocated equipment.

2.18.3 Bell Atlantic contacts (names and telephone numbers) for the following areas:

- Engineering
- Physical & Logical Security
- Billing
- Operations
- Site and Building Managers
- Environmental and Safety

2.18.4 Escalation process for Bell Atlantic employees (names, telephone numbers and the escalation order) for any disputes or problems that might arise in connection with MCI's Collocation activities.

2.19 "Power" as referenced in this Section 2.19 refers to any electrical power source supplied by Bell Atlantic for MCI Collocation equipment. It includes necessary superstructure, infrastructure, and overhead facilities, including, but not limited to, cable, cable racks and bus bars. Bell Atlantic will supply power to support collocated MCI equipment at equipment-specific and industry standard DC and AC voltages. Bell Atlantic shall supply power to MCI at Parity with that provided by Bell Atlantic to itself or to any third party at the premises.

2.19.1 Central Office power supplied by Bell Atlantic into the MCI equipment area shall be supplied in the form of power feeders (cables) on cable racking into the designated MCI equipment area. The power feeders (cables) shall support the requested quantity and capacity of MCI equipment in accordance with the Collocation Tariff. The termination location shall be as reasonably requested by MCI.

2.19.2 Bell Atlantic shall provide power as reasonably requested by MCI to meet MCI's need for the interconnection and placement of equipment in accordance with Tariff.

2.19.3 Bell Atlantic power equipment supporting MCI's equipment shall:

2.19.3.1 Comply in material respects with applicable industry standards (*e.g.*, Bellcore, and NEBS) for equipment installation, cabling practices, and physical equipment layout;

2.19.3.2 Have redundant power feeds with physical diversity and battery back-up for MCI equipment at Parity with that provided for similar Bell Atlantic equipment at the same premises. Power requirements for remote switching equipment, if any is collocated, and physical diversity for power feeds where such diversity is not already available, may require special construction.

2.19.3.3 Upon MCIIm's request, Bell Atlantic will provide prices and specifications for unique battery and power requirements, including those for other types of equipment that can be collocated under this Agreement;

2.19.3.4 Provide Central Office ground, connected to a ground electrode in compliance with applicable industry standards. Central Office ground for remote switching equipment, if any is collocated, may require special construction; and

2.19.3.5 Provide feeder capacity and quantity to support the equipment layout for MCIIm equipment in accordance with MCIIm's Collocation application. Feeder capacity for remote switching equipment, if any is collocated, may require special construction.

2.19.4 Bell Atlantic shall use commercially reasonable efforts to, within forty-five (45) days after MCIIm's application:

2.19.4.1 Provide documentation submitted to and received from contractors for any contractor bids for any work being done on behalf of MCIIm (except for any work that is covered by a Tariffed rate);

2.19.4.2 Provide MCIIm access to its Collocation space upon completion of construction that will provide safe and secure access to the Collocation space;

2.19.4.3 Provide cabling that adheres in all material respects to Bell Communication Research ("Bellcore") Network Equipment-Building System ("NEBS") standards TR-EOP-000063; and

2.19.4.4 Provide Lock Out-Tag Out and other electrical safety procedures and devices in conformance with agreed OSHA or industry guidelines.

2.20 Bell Atlantic shall provide virtual Collocation where physical Collocation is not practical for technical reasons or because of space limitations. Bell Atlantic shall take collocator demand into account when renovating existing facilities and constructing or leasing new facilities.

2.21 Standard intervals for physical Collocation shall be one hundred twenty (120) days from the date an application is finalized and approved by the Parties. Virtual Collocation will have a standard interval of sixty (60) days from the foregoing date.

2.22 MCIIm may collocate only that equipment which is used for interconnection and access to Network Elements. MCIIm may collocate the quantity and type of such equipment it reasonably deems necessary in its Collocation space, provided that the equipment meets Bellcore specifications. Approved vendors will, at a minimum, be vendors Bell Atlantic currently approves for their own use. Bell Atlantic will not

unreasonably withhold approval of additional vendors whose equipment meets Bellcore specifications.

2.23 MCIIm may choose to lease unbundled transport from Bell Atlantic or a third carrier for the purpose of connection to MCIIm collocated equipment, rather than construct to such facilities, all in accordance with FCC Rules and Regulations.

2.24 Bell Atlantic will maintain MCIIm's virtually collocated equipment in Parity with how it maintains its own equipment. Such maintenance shall include the change out of electronic cards provided by MCIIm and per MCIIm's request.

Section 3. License

Bell Atlantic hereby grants MCIIm a license to occupy any premises or rack space which contain collocated equipment as permitted hereunder, including without limit all necessary ingress and egress, all in accordance with the terms and conditions of this Agreement including this Attachment V.

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ATTACHMENT VI

Rights of Way, Conduits, Pole Attachments

Introduction

This Attachment VI sets forth the terms and conditions applicable to MCI's access to Poles, Conduits and Rights of Way owned or controlled by Bell Atlantic pursuant to Section 224 of the Act.

Section 1. Definitions

As used solely in this Attachment VI, the following terms shall have the following meanings. All other terms defined in the Agreement, including Part B, shall continue to apply within this Attachment.

1.1 Anchor

An assembly (rod and fixed object or plate) designed to resist the pull of a Guy Strand.

1.2 Conduit

A tube structure containing one or more Ducts or Innerducts used to house communication cables, that is owned by Bell Atlantic or with respect to which Bell Atlantic has the right to authorize the occupancy of MCI's Communications Facilities.

1.3 Conduit Occupancy

Occupancy of a Conduit System by any item of MCI's Communications Facilities.

1.4 Conduit Section

Conduit between two adjacent Manholes or between a Manhole and an adjacent Pole or other structure.

1.5 Conduit System

Any combination of Ducts, Innerducts, Conduits, and Manholes joined to form an integrated whole, including Central Office and other cable vaults (excluding controlled environmental vaults).

1.6 Duct/Innerduct

An enclosed raceway for communication facilities contained in a Conduit.

1.7 Guy Strand

A metal cable attached to a Pole and Anchor (or another structure) for the purpose of increasing Pole stability.

1.8 MCIIm's Communications Facilities

All facilities, including but not limited to cables, equipment and associated hardware, owned or utilized by MCIIm in providing communication services, which are attached to a Pole or occupy a Conduit or Right of Way.

1.9 Manhole

A subsurface enclosure used for the purpose of installing, operating and maintaining communications facilities, including handholes.

1.10 Make-Ready Work

All work, including but not limited to the rearrangement and/or transfer of Bell Atlantic's existing facilities and administering the rearrangement and/or transfer of the facilities of other licensees, replacement of a Pole, or other changes required to accommodate MCIIm's Communications Facilities on a Pole, or in a Conduit or Right of Way.

1.11 Pole

A Pole with respect to which Bell Atlantic owns or has the right to authorize the attachment of MCIIm's Communications Facilities.

1.12 Pole Attachment

Any item of MCIIm's Communications Facilities affixed to a Pole.

1.12.1 Horizontal attachment is for a single Pole Attachment associated with Pole to Pole construction.

1.12.2 Vertical attachment is for single Pole construction where MCIIm's facilities are affixed along the vertical axis of the Pole.

1.13 Prelicense Survey

All work, including field inspection and administrative processing, to determine the Make-Ready Work necessary to accommodate MCIIm's Communications Facilities on a Pole, or in a Conduit or Right of Way.

1.14 Right of Way

A right possessed by Bell Atlantic to use or pass over or under the land of another, with respect to which Bell Atlantic has the right to authorize the usage or passage of MCI's Communications Facilities over or through such land. Notwithstanding the foregoing, for the purposes of this Attachment VI, Right of Way shall also include real property owned by Bell Atlantic that contain Poles or Conduit or that would typically be used for such purposes.

Section 2. Scope of Licenses

2.1 Subject to the provisions of this Agreement, for license applications granted by Bell Atlantic in accordance with Section 7 below, Bell Atlantic hereby grants to MCI, for any lawful communications purpose, a nonexclusive license authorizing the attachment of MCI's Communications Facilities to Poles, or the placement of MCI's Communications Facilities in Bell Atlantic's Conduits or Rights of Way, as specified in the pertinent application.

2.2 No use, however extended, of Poles, Conduits and/or Rights of Way, or payment of any fees or charges required, under this Agreement, shall create or vest in MCI any easements or any other ownership of property rights of any nature in such Poles, Conduits and/or Rights of Way. MCI's rights herein shall be and remain a license. Neither this Agreement nor any license granted hereunder shall constitute an assignment of any of Bell Atlantic's rights to use the public or private property at locations of such Poles, Conduits, and/or Rights of Way.

2.3 Nothing contained in this Agreement shall limit Bell Atlantic's right to locate and maintain its Poles, Conduits and Rights of Way, and to operate its facilities in conjunction therewith, in such a manner as will best enable it to fulfill its own service requirements consistent with its obligations under Applicable Law.

2.4 Bell Atlantic shall grant MCI access to Poles, Conduits and/or Rights of Way at Parity and on a Non-Discriminatory basis, except as may be otherwise permitted under Applicable Law. In cases where Bell Atlantic does not have the right to authorize such access, Bell Atlantic shall reasonably cooperate with MCI in obtaining such permission subject to Bell Atlantic's right to provide a reasonable technical evaluation of the requirements for such access to the owner or other authorizing party. Nothing shall preclude MCI from obtaining any such additional authorization without requesting Bell Atlantic's cooperation. Upon reasonable request by MCI, Bell Atlantic will provide any documentation that is not confidential or privileged in its possession supporting a claim that it does not own or have authority to grant access to a given Right of Way.

Section 3. Fees and Charges

3.1 MCI is responsible for all fees and charges applicable in connection with the attachment of its Communications Facilities to a Pole, or occupancy of a Conduit or

Right of Way, as specified in Appendix I to this Attachment VI and hereby made a part of this Agreement. Such fees and charges shall be in accordance with Section 224 of the Act.

3.2 Nonpayment of any amount due under this Attachment VI shall constitute a breach by MCIIm of this Agreement and shall be resolved in accordance with Part A, Section 21 (Default and Termination). Late payments shall be subject to fees as prescribed in Attachment VIII, Section 3.

3.3 At such time that MCIIm's "net worth" (as defined under generally accepted accounting principles, hereinafter "Net Worth") fails to exceed \$100,000,000, Bell Atlantic may require a bond in a form satisfactory to Bell Atlantic or other satisfactory evidence of financial security in such amount as Bell Atlantic from time to time may reasonably require to guarantee the performance of all MCIIm obligations hereunder. The amount of the bond or financial security shall not operate as a limitation upon the obligations of MCIIm hereunder; and if MCIIm furnishes a deposit of money pursuant to this section, such deposit may be held during the continuance of this Agreement at the option of Bell Atlantic as security for any and all amounts which are or may become due to Bell Atlantic under this Attachment VI.

3.4 On an annual basis, changes in the amount of the fees and charges specified in Appendix I may be made by Bell Atlantic upon at least sixty (60) days prior written notice to MCIIm in the form of a revised Appendix I, and MCIIm agrees to pay such changed fees and charges provided they are in accordance with Applicable Law. Notwithstanding any other provision of this Agreement, MCIIm may terminate the licenses entered into pursuant to Section 7 below at the end of such notice period if the change in fees and charges is not acceptable to MCIIm, by giving Bell Atlantic written notice of its election to terminate such licenses at least thirty (30) days prior to the end of such notice period.

Section 4. Advance Payments

4.1 At such time that MCIIm's Net Worth fails to exceed \$100,000,000, MCIIm shall be required to make an advance payment to Bell Atlantic prior to:

4.1.1 Any undertaking by Bell Atlantic of a Prelicense Survey or the administrative processing of such a survey in an amount sufficient to cover the estimated charges for completing the specific work operation required; and

4.1.2 Performance by Bell Atlantic of any Make-Ready Work required in an amount sufficient to cover the estimated charges for completing the required Make-Ready Work.

4.2 The amount of the advance payment required (Appendix II, Forms A-1, B-1 and B-4) will be credited against the payment due Bell Atlantic for performing the Prelicense Survey and/or Make-Ready Work.

4.3 Where the advance payment is less than the charge by Bell Atlantic for such work, MCIIm agrees to pay Bell Atlantic within thirty (30) days of receipt of the bill all sums due in excess of the amount of the advance deposit.

4.4 Where the advance payment exceeds the charge by Bell Atlantic for such work, Bell Atlantic shall refund the difference to MCIIm.

Section 5. Specifications

5.1 MCIIm's Communications Facilities shall be placed and maintained in accordance with the requirements and specifications of the current editions of the Bellcore Manual of Construction Procedures ("Blue Book"), the National Electrical Code ("NEC"), the National Electrical Safety Code ("NESC"), the rules and regulations of the Occupational Safety and Health Act ("OSHA"), and regulations or directives of a governing authority having jurisdiction over such subject matter. Where a difference in specifications may exist, the more stringent shall apply.

5.2 MCIIm shall correct all material safety violations within ten (10) days from receipt of written notice from Bell Atlantic. MCIIm shall correct all other non-standard conditions within thirty (30) days from receipt or written notice from Bell Atlantic. If MCIIm does not correct any violation within the aforementioned time limits, Bell Atlantic may at its option correct said conditions at MCIIm's expense.

5.3 Notwithstanding Subsection 5.2 above, when conditions created by MCIIm's Communications Facilities pose an immediate threat to the safety of Bell Atlantic's employees or the public, interfere with the performance of Bell Atlantic's service obligations, or pose an immediate threat to the physical integrity of Bell Atlantic's facilities or structures, Bell Atlantic may perform such work and/or take such action as it deems necessary without first giving written notice to MCIIm. As soon as practicable thereafter, Bell Atlantic will advise MCIIm in writing of the work performed or the action taken and will endeavor to arrange for reaccommodation of MCIIm's facilities so affected. MCIIm shall pay Bell Atlantic for all reasonable costs incurred by Bell Atlantic in performing such work.

5.4 The failure of Bell Atlantic to notify MCIIm of violations or to correct violations pursuant to Subsections 5.2 or 5.3 shall not relieve MCIIm of its responsibility to place and maintain its facilities in a safe manner and condition in accordance with the terms of this Attachment VI, and shall not relieve MCIIm of any liability imposed by this Agreement.

5.5 Bell Atlantic and MCIIm agree to resolve disputes arising under this Attachment VI as set forth in Section 24, Part A of this Agreement.

Section 6. Legal Requirements

6.1 If Bell Atlantic's authority to occupy a Pole, Conduit or Right of Way does not allow MCIIm to place its facilities thereon or therein without some additional authorization or government approval, MCIIm shall be responsible for obtaining from the appropriate public and/or private authority any such additional authorization to construct, operate and/or maintain its communication facilities on public and/or private property before it attaches its communication facilities to Poles, or occupies Conduit or Rights of Way, located on such public and/or private property. Evidence of MCIIm's having obtained such additional authority to so construct and maintain facilities shall be submitted forthwith upon demand.

6.2 No license granted under this Agreement shall extend to any Pole, Conduit or Right of Way where the attachment or placement of MCIIm's Communication Facilities would result in a forfeiture of rights of Bell Atlantic or its existing licensees to occupy the property on which such Poles, Conduits or Rights of Way are located. If the existence of MCIIm's Communication Facilities on a Pole, or in a Right of Way or Conduit, would cause a forfeiture of the right of Bell Atlantic or its existing licensees to occupy such property, Bell Atlantic shall promptly notify MCIIm in writing describing the circumstances of forfeiture with reasonable specificity. Bell Atlantic and MCIIm shall cooperate in taking reasonable and prompt action to avoid such forfeiture, which may include obtaining a stay or other equitable relief. If such actions are not successful prior to forfeiture becoming imminent, then MCIIm shall remove its Communications Facilities forthwith upon receipt of written notification from Bell Atlantic. In such case, and provided MCIIm's facilities were placed in space authorized by Bell Atlantic, Bell Atlantic shall reimburse MCIIm for the full costs of the Preliminary Survey and Make-Ready Work charges (if any, or if shared and paid by MCIIm, those charges solely attributable to MCIIm's facilities) paid by MCIIm to Bell Atlantic, plus the costs of removing MCIIm's Communications Facilities; provided that where all parties, including Bell Atlantic, must remove all communications facilities from the property, MCIIm shall remove its Communications Facilities without reimbursement by Bell Atlantic. If MCIIm fails to remove said Communication Facilities as provided above, Bell Atlantic may perform or have performed such removal after the expiration of ten (10) days after the receipt of said written notification without liability on the part of Bell Atlantic, and MCIIm agrees to pay Bell Atlantic or other licensees or both, the cost thereof and for all losses and damages that may result, including, but not limited to, relocation costs of Bell Atlantic's facilities.

Section 7. Issuance of Licenses

7.1 Before MCIIm shall attach to any Pole, or occupy any portion of a Conduit or Right of Way, MCIIm shall make written application for and have received written license from Bell Atlantic utilizing the following forms: Appendix II, Forms A-1 and A-2 and/or B-1 through B-3. Bell Atlantic shall follow the same process in attaching to, or occupying, such Poles, Conduits or Rights of Way.

7.2 Bell Atlantic shall process all completed license applications, including the performance of a Preliminary Survey, on a first-come, first-serve basis (including all

license applications pertaining to itself) in accordance with the provisions of Sections 7 and 8 of this Attachment VI. Bell Atlantic shall make all access determinations in accordance with the requirements of Applicable Law, considering such factors as capacity, safety, reliability and general engineering considerations to the degree allowed by Section 224 of the Act, or, in the alternative, applicable state law. Bell Atlantic shall inform MCIIm in writing as to whether an application has been granted or denied (stating the reasons for such denial in reasonable detail) within forty-five (45) days after receipt of such application. Where an application involves an increase in capacity by Bell Atlantic, Bell Atlantic shall take reasonable steps to accommodate requests for access in accordance with Applicable Law, including making such determinations in the same manner as it would for itself. Before denying MCIIm access based on lack of capacity, Bell Atlantic shall explore potential accommodations in good faith with MCIIm. MCIIm shall bear the costs associated with any such expansion performed by Bell Atlantic in accordance with Applicable Law, provided that MCIIm shall be entitled to recover costs from subsequent licensees (including Bell Atlantic) that attach to or occupy such expanded capacity as provided by Applicable Law. Bell Atlantic shall provide reasonably detailed information on any environmental contamination or other environmental hazards of which it is aware for the specified route within twenty (20) days of the date of the application.

7.3 In order to facilitate MCIIm's completion of an application, Bell Atlantic shall make commercially reasonable efforts to, within ten (10) business days of a legitimate request identifying the specific geographic area and types and quantities of required structures, provide MCIIm such maps, plats or other relevant data reasonably necessary to complete the applications described above. All such materials and information shall be treated as Confidential Information by MCIIm in accordance with the provisions of Part A, Section 22. Such requests shall be processed by Bell Atlantic on a "first-come, first-serve" basis. Bell Atlantic shall also make commercially reasonable efforts to meet with or respond to MCIIm's inquiries regarding the information supplied to it under this Section 7.3 within five (5) business days following the receipt of such a request for a meeting or inquiry from MCIIm. Bell Atlantic shall also notify MCIIm of any environmental contamination or other environmental hazards of which it is aware that would make the placement of facilities within pathways specified by MCIIm hazardous.

7.4 License applications received by Bell Atlantic from two (2) or more applicants for the same Pole, Conduit Section or Right of Way will be processed by Bell Atlantic according to the order in which the applications are received by Bell Atlantic. Once any additional applicants file an application, Bell Atlantic shall use commercially reasonable efforts to, within twenty (20) days of receipt of the additional application, notify the additional applicant of the following: 1) that a previous application had been received for some or all of the same structures or property; 2) the name and address of the initial applicant; and 3) that the additional applicant may wish to share make ready costs with the initial applicant. The responsibility for arranging for the sharing of make ready costs shall be on the additional applicant. However, the responsibility for transmitting to Bell Atlantic any make ready changes resulting from the additional applicant shall be on the initial applicant, provided that the initial applicant is not obligated to share Make-Ready

Work or make ready costs with any subsequent applicant, unless required by Applicable Law. Bell Atlantic shall bill the initial applicant for the entire cost of all work necessary to accommodate both the initial and additional applicants, pursuant to executed Form B-4, Appendix II.

7.5 If within twelve (12) months from the date a license is granted by Bell Atlantic, MCI shall not at a minimum have initiated material construction or similar activity related to its attachment or occupation, MCI's license for the applicable Poles, Conduits or Rights of Way shall automatically terminate and MCI shall remove any communications facilities installed as of such date in accordance with Section 9.10 of this Attachment VI. MCI and any other attacher or occupier (including Bell Atlantic) shall be liable for attachment or occupancy charges commencing on the date that the license is granted if no Make-Ready Work is required, or on the date that any required Make-Ready Work is completed.

7.6 Where Bell Atlantic has available ducts or inner ducts, Bell Atlantic shall make available ducts or inner ducts to MCI for MCI's use in accordance with Applicable Law. No more than one full-sized duct (or one full-sized and one inner duct if both copper and fiber cable are used in the Conduit) shall be assigned as an emergency duct in each Conduit Section. If Bell Atlantic or any other service provider, including MCI, utilizes the last unoccupied full-sized duct in the applicable cross-section, that provider shall promptly, at its expense, reestablish a clear, full-sized duct for emergency restoration or immediately upon the occurrence of an emergency requiring such space.

Section 8. Pre-License Survey and Make-Ready Work

8.1 When an application for attachment to, or occupation of, a Pole, Conduit or Right of Way is submitted by MCI, a Prelicense Survey will be required to determine the existing adequacy of such structures or property to accommodate MCI's Communication Facilities.

8.1.1 The field inspection portion of the Prelicense Survey, which requires the visual inspection of such structures or property, shall be performed by Bell Atlantic (with participation by MCI at its option, for which Bell Atlantic shall provide at least twenty-four (24) hours advance notice). Bell Atlantic shall also perform the administrative processing portion of the Prelicense Survey which includes the processing of the application and the preparation of the Make-Ready Work orders (if necessary), including the notification of other attachers of Bell Atlantic's Make-Ready Work schedule and the provision to MCI of a list of such other attachers.

8.1.2 Bell Atlantic shall make commercially reasonable efforts to advise MCI in writing of the estimated charges that will apply for its Prelicense Survey work as soon as practicable after receipt of MCI's application but no later than ten (10) days from receipt thereof. Bell Atlantic shall receive written authorization from MCI before undertaking such work (Appendix II, Form B-1).

Alternatively, MCIIm may pay Bell Atlantic the estimated charges that will apply for a Preliminary Survey with its submission of an application provided that Bell Atlantic has advised MCIIm that standard estimated charges exist for the type of application that is being submitted.

8.2 In the event Bell Atlantic determines that a Pole, Conduit or Right of Way which MCIIm desires to utilize is inadequate or otherwise needs rearrangement or expansion of the existing structures or property to accommodate MCIIm's Communication Facilities, Bell Atlantic will advise MCIIm in writing of the estimated Make-Ready Work charges that would apply to any modifications or expansions of capacity that Bell Atlantic proposes to undertake (Appendix II, Form B-4). The estimated Make-Ready Work charges and completion date shall be given to MCIIm at the time that the application is accepted and access is granted. Bell Atlantic shall complete the steps described in paragraphs 8.1 through 8.2 within forty-five (45) days of the date the application is submitted, excluding the time taken by MCIIm to respond to Bell Atlantic's proposals in paragraph 8.1.2, if applicable.

8.3 MCIIm shall have thirty (30) days after the receipt of said Form B-4 to indicate its written authorization for completion of the required Make-Ready Work and acceptance of the resulting charges. If during such period MCIIm presents Bell Atlantic with a proposal from a Bell Atlantic-authorized subcontractor to complete such Make-Ready Work at a cost and/or time that is materially less than that estimated by Bell Atlantic, Bell Atlantic agrees to use such subcontractor to perform the Make-Ready Work. Bell Atlantic shall use commercially reasonable efforts to provide written notice to existing attachers or occupiers of the affected structures or property of the proposed Make-Ready Work within ten (10) days after receipt of MCIIm's authorization to perform such work. Such attachers or occupiers will be given sixty (60) days after such notice to indicate whether they desire to participate in the proposed modification or expansion.

8.4 If approved by MCIIm, Make-Ready Work will be initiated by Bell Atlantic no earlier than sixty (60) days after notice to existing attachers or occupiers, and Bell Atlantic shall use commercially reasonable efforts to complete such work as soon as practicable thereafter, depending upon the size of the job and the cooperation of necessary third parties. MCIIm shall pay Bell Atlantic for all Make-Ready Work performed by it in accordance with the provisions of this Agreement, and make arrangements with attachers or occupiers participating in the modification or expansion (including Bell Atlantic, if applicable), and with future attachers or occupiers who benefit from the modification or expansion, to reimburse MCIIm for their share of the make ready costs as required by Applicable Law.

Section 9. Construction, Maintenance and Removal of Communications Facilities

9.1 MCIIm shall, at its own expense, construct and maintain its Communications Facilities on Poles or in Conduits or Rights of Way covered by this Attachment VI, in a safe condition and in a manner acceptable to Bell Atlantic, so as not to physically conflict

or electrically interfere with the facilities attached thereon or placed therein by Bell Atlantic or other authorized licensees.

9.2 Bell Atlantic shall specify the point of attachment on each Pole to be occupied by MCI's Communications Facilities. Where communications facilities of more than one licensee are involved, Bell Atlantic will attempt, to the extent practical, to designate the same relative position on each Pole for MCI's Communications Facilities.

9.3 Subject to Section 9.10 of this Attachment VI, MCI shall secure Bell Atlantic's written consent, not to be unreasonably withheld or delayed, before adding to, relocating, replacing or otherwise modifying its facilities attached to a Pole where additional space or holding capacity may be required on either a temporary or permanent basis. No such modifications shall be made by MCI that would affect the placement or operations of attachments of Bell Atlantic or existing licensees, except through application to Bell Atlantic in accordance with the provisions of Sections 7 and 8 of this Attachment VI.

9.4 MCI must obtain prior written authorization from Bell Atlantic approving the work and the party performing such work before MCI shall install, remove, or provide maintenance of its Communications Facilities in any of Bell Atlantic's Conduit Systems. Bell Atlantic shall not withhold such authorization without good cause.

9.5 In each instance where MCI's Communications Facilities are to be placed in Bell Atlantic's Conduits, MCI and Bell Atlantic shall discuss the placement of MCI's Communications Facilities. Bell Atlantic shall designate the particular Duct(s) to be occupied, the location and manner in which MCI's Communications Facilities will enter and exit Bell Atlantic's Conduit System, and the specific location and manner of installation for any associated equipment which is permitted by Bell Atlantic to occupy the Conduit System. Bell Atlantic will attempt, to the extent practicable and consistent with its non-discrimination obligations, to designate the same relative position in each Conduit bank for each MCI facility.

9.6 Whenever Bell Atlantic intends to modify or alter any Poles, Conduits or Rights of Way which contain MCI's facilities, Bell Atlantic shall provide written notification to MCI at least sixty (60) days prior to taking such action so that MCI may have a reasonable opportunity to add to or modify MCI's facilities. If MCI adds to or modifies MCI's facilities according to this paragraph, MCI shall bear a proportionate share of the costs incurred by Bell Atlantic in making such facilities accessible in accordance with Applicable Law.

9.7 MCI shall be notified in writing at least sixty (60) days prior to any modification that will result in the rearrangement or replacement of its facilities. Subject to Section 9.6 above, MCI shall not be required to bear any of the costs of rearranging or replacing its facilities, if such rearrangement or replacement is required as a result of an additional attachment or the modification of an existing attachment sought by any entity other than MCI, including Bell Atlantic. MCI agrees to make such rearrangements or

replacements that are reasonably requested by Bell Atlantic to accommodate the attachment or placement of the facilities of other licensees on the applicable structures.

9.8 Bell Atlantic shall not attach, nor permit other entities to attach facilities on, within or overlashed to existing MCI facilities without MCI's prior written consent.

9.9 Bell Atlantic's Manholes shall be opened only as permitted by Bell Atlantic's authorized employees or agents. MCI shall be responsible for obtaining any necessary authorization from appropriate authorities to open Manholes and conduct work operations therein. Except in emergency situations provided that MCI makes reasonable efforts to give prior notice to Bell Atlantic, MCI's employees, agents or contractors will be permitted to enter or work in Bell Atlantic's Manholes only when an authorized employee or agent of Bell Atlantic is present or prior written authorization waiving this requirement is granted by the Bell Atlantic. Bell Atlantic's said employee or agent shall have the authority to suspend MCI's work operations in and around Bell Atlantic's Manholes if, in the reasonable judgment of said employee or agent any hazardous conditions arise or any unsafe practices are being followed by MCI's employees, agents, or contractors. MCI agrees to pay Bell Atlantic the charges, as determined in accordance with the terms and conditions of Appendix I of this Attachment VI, for having one Bell Atlantic employee or agent present when MCI's work is being done in and around Bell Atlantic's Manholes. The presence of Bell Atlantic's authorized employee or agent shall not relieve MCI of its responsibility to conduct all of its work operations in and around Bell Atlantic's Manholes in a safe and workman-like manner, in accordance with the terms of this Agreement.

9.10 Bell Atlantic shall maintain its Poles, Conduits and Rights of Way without additional charge to MCI beyond the charges provided for in this Attachment VI. MCI shall maintain its own facilities installed on or within Bell Atlantic's Poles, Conduits and Rights of Way at its sole cost. In the event of an emergency, Bell Atlantic shall use commercially reasonable efforts to begin repair of its structures containing MCI's facilities within two (2) hours of notification by MCI. If Bell Atlantic cannot begin repair within such two (2) hour period, MCI may, using qualified personnel and reasonable care, begin such repairs without the presence of Bell Atlantic personnel. MCI may climb Poles and enter the Manholes, handholes, Conduits and equipment spaces containing Bell Atlantic's facilities in order to perform such emergency maintenance, but only until such time as qualified personnel of Bell Atlantic arrives ready to continue such repairs. For emergency and non-emergency repairs, MCI may use spare Innerduct or Conduits, including the Innerduct or Conduit designated by Bell Atlantic as emergency spare for maintenance purposes; however, MCI may only use such spare Conduit or Innerduct until its repairs are completed but in no event for a period of greater than ninety (90) days, and shall terminate any non-emergency use immediately upon notification of an emergency warranting the use of such spare by Bell Atlantic or other licensees. The Parties agree to cooperate with one another with respect to the use of spare Innerduct or Conduit during any emergency affecting MCI, Bell Atlantic or other licensees.

9.11 Upon reasonable request, Bell Atlantic will provide MCIIm with space in its Manholes for racking and storage of cable and other materials of the type that Bell Atlantic stores in its Manholes.

9.12 MCIIm, contracting with Bell Atlantic or a contractor approved by Bell Atlantic, shall be permitted to add Conduit parts to Bell Atlantic's manholes or to add branches to Conduits when existing Conduits do not provide the connectivity required by MCIIm, provided that the structural integrity of the manhole is maintained and sound engineering judgment is employed.

9.13 If practicable and if additional space is required, Bell Atlantic shall within a reasonable period of time remove any retired cable from Poles or Conduit Systems to allow for the efficient use of Poles or Conduit space. Bell Atlantic will give MCIIm prior notice of its cable removal effort and MCIIm may have a representative present.

9.14 MCIIm, at its expense, will remove its Communications Facilities from Poles, Conduits or Rights of Way within sixty (60) days after:

9.14.1 Termination of the license covering such attachment or Conduit Occupancy in accordance with the terms of this Agreement; or

9.14.2 The date MCIIm replaces its existing facilities on a Pole with the placement of substitute facilities on the same Pole or another Pole or replaces its existing facilities in one Duct with the placement of substitute facilities in another Duct.

9.15 MCIIm shall remain liable for, and pay to Bell Atlantic, all fees and charges pursuant to provisions of this Agreement until all of MCIIm's facilities are physically removed from such Poles, Conduits or Rights of Way. If MCIIm fails to remove its facilities within the specified period, Bell Atlantic shall have the right to remove such facilities at MCIIm's expense and without any liability on the part of Bell Atlantic for damage to such facilities unless caused by the negligent or intentional acts of Bell Atlantic.

9.16 When MCIIm's Communications Facilities are removed from a Pole, Conduit or Right of Way, no reattachment to the same Pole, or occupancy of Conduits or Rights of Way, shall be made until:

9.16.1 MCIIm has first complied with all of the provisions of this Agreement as though no such Pole Attachment or Conduit or Right of Way occupancy had previously been made; and

9.16.2 All outstanding charges due Bell Atlantic for such previous attachment and/or occupancy have been paid in full.

9.17 MCIIm shall advise Bell Atlantic in writing as to the date on which the removal of its Communications Facilities from each Pole, Conduit or Right of Way has been completed.

Section 10. Termination of Licenses

10.1 Any license issued under this Agreement shall automatically terminate when MCIIm ceases to have authority to construct and operate its Communications Facilities on public or private property at the location of the particular Pole, Conduit or Right of Way covered by the license, but shall automatically revive for the balance of any unexpired term upon restoration of such authority within six (6) months of cessation thereof provided MCIIm pays all applicable charges in the interim period. Notwithstanding the foregoing, MCIIm shall be allowed to seek a stay or other equitable relief in order to prevent such automatic termination.

10.2 MCIIm may at any time terminate its license with respect to the attachment to a Pole, or occupancy of a Conduit or Right of Way, and remove its communications facilities by giving Bell Atlantic written notice of such intention (Appendix II, Forms C & D). Once MCIIm's Communications Facilities have been removed they shall not be reattached to such Pole, or occupy the same portion of such Conduit System or Right of Way, until MCIIm has complied with all provisions of this Agreement as though no previous license has been issued.

Section 11. Inspection of Licensee's Communications Facilities

11.1 Bell Atlantic reserves the right to make reasonable periodic inspections of any part of MCIIm's Communications Facilities attached to Poles, or occupying Bell Atlantic's Conduits or Rights of Way, to confirm adherence to the provisions of this Attachment VI.

11.2 Bell Atlantic will give MCIIm advance written notice of such inspections, except in those instances where Bell Atlantic determines that safety considerations justify the need for such an inspection without the delay of waiting until a written notice has been forwarded to MCIIm. In such cases and if practicable, Bell Atlantic shall provide telephonic notice to MCIIm.

11.3 The making of periodic inspections or the failure to do so shall not operate to impose upon Bell Atlantic any liability of any kind whatsoever nor relieve MCIIm of any responsibility, obligations or liability assumed under this Agreement.

Section 12. Unauthorized Attachment, Utilization or Occupancy

12.1 If any of MCIIm's Communications Facilities shall be found attached to Poles, or occupying Conduit or Right of Way, for which no license has been granted, Bell Atlantic without prejudice to its other rights or remedies under this Agreement may require MCIIm to submit an application pursuant to Section 7 of this Attachment within sixty (60) days after receipt of written notification from Bell Atlantic of the unauthorized attachment or

occupancy. If such application is not received by Bell Atlantic within the specified time period, MCIIm may be required to remove its unauthorized attachment or occupancy, or Bell Atlantic may, at Bell Atlantic's option, remove MCIIm's facilities at MCIIm's sole expense and risk and without liability to Bell Atlantic. In addition, MCIIm shall pay any unauthorized attachment or occupancy charge as specified in Appendix I of this Attachment.

12.2 No act or failure to act by Bell Atlantic with regard to said unlicensed use shall be deemed as a ratification of the unlicensed use; and if any license should be subsequently issued, said license shall not operate retroactively or constitute a waiver by Bell Atlantic of any of its rights or privileges under this Agreement or otherwise; provided, however, that MCIIm shall be subject to all liabilities, obligations and responsibilities of this Agreement in regard to said unauthorized use from its inception.

Section 13. Security Interest

At such time that MCIIm's Net Worth fails to exceed \$100,000,000, MCIIm shall grant Bell Atlantic a security interest in all of MCIIm's Communications Facilities now or hereafter attached to Poles, or placed in Conduit Systems or Rights of Way pursuant to this Agreement, and MCIIm agrees to perform all acts necessary to perfect Bell Atlantic's security interest under the terms of the Uniform Commercial Code, or applicable lien or security laws then in effect. If the terms of MCIIm's loan agreements and debentures preclude the grant of liens or security interests to Bell Atlantic, MCIIm shall grant to Bell Atlantic, upon Bell Atlantic's request, other permissible assurance of security for performance, satisfactory to Bell Atlantic, to cover any amounts due Bell Atlantic under this Agreement. Nothing in this Section shall operate to prevent Bell Atlantic from pursuing, at its option, any other remedies under this Agreement or in law or equity, including public or private sale of facilities under security interest or lien.

Section 14. Liability and Damages

14.1 Bell Atlantic shall exercise reasonable caution to avoid damaging MCIIm Communications Facilities and shall make an immediate report to MCIIm of the occurrence of any such damage caused by its employees, agents or contractors, and Bell Atlantic assumes all responsibility for any and all direct loss from such damage caused by Bell Atlantic's employees, agents or contractors. Bell Atlantic shall not be liable to MCIIm for any interruption of MCIIm's service or for interference with the operation of MCIIm's Communications Facilities.

14.2 MCIIm shall exercise reasonable caution to avoid damaging the facilities of Bell Atlantic and of others attached to Poles, or occupying Conduits or Rights of Way, and shall make an immediate report to the owner of facilities so damaged and MCIIm assumes all responsibility for any and all direct loss from such damage caused by MCIIm's employees, agents or contractors. MCIIm shall not be liable to Bell Atlantic for any interruption of Bell Atlantic's service or for interference with the operation of Bell Atlantic's communications facilities.

14.3 MCI shall promptly advise Bell Atlantic of all claims relating to damage of property or injury to or death of persons, arising or alleged to have arisen in any manner by the erection, maintenance, repair, replacement, presence, use or removal of MCI's facilities. Copies of all accident reports and statements made to MCI's insurer by MCI or others shall be furnished promptly to Bell Atlantic. Similarly, Bell Atlantic shall promptly advise MCI of all claims relating to damage of property or injury to or death of persons, arising or alleged to have arisen in any manner by the erection, maintenance, repair, replacement, presence, use or removal of Bell Atlantic's facilities where MCI Communication Facilities are involved in such claim. Copies of all related accident reports and statements made to Bell Atlantic's insurer by Bell Atlantic or others shall be furnished promptly to MCI.

14.4 Except as expressly provided in this Attachment VI, the Parties indemnification and liability obligations with respect to the use of Poles, Conduits and Rights of Way shall be as provided for in Part A of the Agreement.

Section 15. Insurance

15.1 MCI shall obtain and maintain insurance issued by an insurance carrier authorized to conduct business in Bell Atlantic's operating region and having an A.M. Best rating of not less than A-VII to protect Bell Atlantic and other authorized user of transport structures from and against all claims, demands, causes of actions, judgments, costs, including attorneys' fees, expenses and liabilities of every kind and nature which may arise or result from or by reason of any negligent or wrongful act of MCI related to activities covered by this Attachment VI.

15.2 The amounts of such insurance:

15.2.1 against liability due to damage to property shall be not less than \$2,000,000 as to any one occurrence and \$2,000,000 aggregate, and

15.2.2 against liability due to injury or death of persons shall be not less than \$2,000,000 as to any one person and \$2,000,000 as to any one occurrence.

15.3 MCI shall name Bell Atlantic as an additional insured and shall provide certificates by each company insuring MCI to the effect that it has insured MCI for all liabilities of MCI covered by this Agreement and that it will not cancel any such policy of insurance issued to MCI except after thirty (30) days written notice to Bell Atlantic.

15.4 All insurance required in accordance with Subsections 15.1 and 15.2 above must be effective before Bell Atlantic will authorize attachment to a Pole, or occupancy of Conduit or Rights of Way, and shall remain in force until such MCI's facilities have been removed from all such Poles, Conduits or Rights of Way. In the event that MCI shall fail to maintain the required insurance coverage, Bell Atlantic may pay any

premium thereon falling due, and MCIIm shall forthwith reimburse Bell Atlantic for any such premium paid.

15.5 Notwithstanding the foregoing, if MCIIm's net worth exceeds \$100,000,000, MCIIm may elect to self-insure in lieu of obtaining any of the insurance required by this Section 15. If MCIIm self insures, MCIIm shall furnish to Bell Atlantic, and keep current, evidence of such net worth. If MCIIm self insures, MCIIm shall release, indemnify, defend, and hold Bell Atlantic harmless against all losses, costs (including reasonable attorney's fees), damages, and liabilities resulting from claims that would otherwise have been covered by the foregoing insurance requirements (including without limitation claims alleging negligence or breach of contract).

Section 16. Authorization Not Exclusive

Nothing herein contained shall be construed as a grant of any exclusive authorization, right or privilege to MCIIm. Subject to the provisions of this Agreement, Bell Atlantic shall have the right to grant, renew and extend rights and privileges in a Non-Discriminatory manner to others not parties to this Agreement, by contract or otherwise, to use any Pole, Conduit or Right of Way covered by this Attachment VI.

Section 17. Assignment of Licenses

MCIIm shall not assign or transfer any license or any authorization granted under this Attachment VI, and such licenses shall not inure to the benefit of MCIIm's successors or assigns, without the prior written consent of Bell Atlantic unless such transfer of rights is made pursuant to an assignment of this Agreement pursuant to the provisions of Part A, Section 5 (Assignment). Bell Atlantic shall not unreasonably withhold such consent. In the event such consent or consents are granted by Bell Atlantic, then prior to such assignment becoming effective the assignee shall be required to execute Bell Atlantic's generally available license agreement covering the affected licenses.

Section 18. Additional Terminations

18.1 Subject to provisions of Section 17 of this Attachment, should MCIIm cease to provide its Telecommunications Services in or through the area covered by any license under this Attachment VI on other than a demonstrably temporary basis not to exceed six (6) months, then MCIIm's rights, privileges and authorizations under any such license issued hereunder shall automatically terminate as of the date following the final day that such Telecommunications Services are provided.

18.2 Subject to Section 18.3 below and the Force Majeure provisions of Part A of the Agreement, Bell Atlantic shall have the right to terminate any license issued hereunder whenever MCIIm is in default of any material term of this Agreement, including, but not limited to, the following conditions, as applicable to the affected facilities:

18.2.1 If MCIIm uses its Communications Facilities or maintains such facilities in violation of any Applicable Law or in aid of any unlawful act or undertaking; or

18.2.2 Subject to Section 10.1 of this Attachment, if any authorization which may be required of MCIIm by any governmental or private authority for the construction, operation, and maintenance of MCIIm's Communications Facilities is denied or revoked; or

18.2.3 If MCIIm's insurance carrier shall at any time notify Bell Atlantic or MCIIm that the policy or policies of insurance, required under Section 15 hereof, will be canceled or if Bell Atlantic reasonably determines that the requirements of Section 15 of this Attachment will no longer be satisfied.

18.3 Bell Atlantic will promptly notify MCIIm in writing of any condition(s) applicable to 18.1 and 18.2 above specifying the license and facilities in question. MCIIm shall take immediate corrective action to eliminate any such condition(s) and shall confirm in writing to Bell Atlantic within thirty (30) days following receipt of such written notice that the cited condition(s) has ceased or been corrected. If MCIIm fails to discontinue or correct such condition(s) and fails to give the required confirmation, Bell Atlantic shall so notify MCIIm and thereafter may immediately terminate MCIIm's licenses for the affected facilities under this Attachment VI. Notwithstanding the foregoing, in the event that such corrective action is incapable of correction within thirty (30) days, MCIIm shall initiate such corrective action within the thirty (30) day period referred to above and shall be allowed a reasonable time to complete such correction before MCIIm is considered in default under this Section 18. MCIIm shall use its best efforts to complete such correction as soon as possible.

18.4 In the event of termination of this Agreement, MCIIm shall remove its Communications Facilities from the affected Poles, Conduits and Rights of Way within six (6) months from the date of such termination; provided, however, that MCIIm shall be liable for and pay all fees and charges pursuant to terms of this Attachment VI to Bell Atlantic until MCIIm's Communications Facilities are actually removed from Bell Atlantic's Poles, Conduits and Rights of Way.

18.5 If MCIIm does not remove its Communications Facilities from Bell Atlantic's Poles, Conduits and Rights of Way within the applicable time periods specified in this Attachment VI, Bell Atlantic shall have the right to remove them at the expense of MCIIm and without any liability on the part of Bell Atlantic to MCIIm therefor.

Section 19. Term of Licenses

19.1 All licenses issued hereunder shall continue in effect until the Agreement expires or is terminated, unless earlier terminated by MCIIm in accordance with this Attachment VI.

19.2 Termination of licenses shall not affect MCIIm's liabilities and obligations incurred with respect thereto prior to the Effective Date of such termination.

July 2, 1997

ATTACHMENT VI

APPENDIX I

SCHEDULE OF FEES AND CHARGES

THIS APPENDIX I, effective as of _____, is an integral part of the License Agreement between Bell Atlantic - Pennsylvania, Inc. (Bell Atlantic) and MCImetro Access Transmission Services LLC (MCIIm), dated _____ and contains the fees and charges governing the use of Bell Atlantic's Poles, Conduits and Rights of Way by MCIIm's Communications Facilities.

1. Attachment, Utilization, and Occupancy Fees

1.1 General

- a) Attachment, utilization, and occupancy fees commence on the date set forth in Section 7.5 of the License Agreement. Subject to clause c) below, such fees cease as of the final day on which the attachment or occupancy is physically removed or is discontinued.
- b) A one (1) month minimum charge is applicable for all attachment, and occupancy accommodations.
- c) Fees shall be payable semi-annually in advance on the first day of January and July. No fees shall be refunded for any licenses terminated and attachments or occupancies removed during any period for which such advance payments have been made.
- d) The total attachment, and occupancy fees due hereunder, shall be based upon the number of Poles and Duct feet of Conduit for which licenses have been issued before the first day of January and the first day of July each year. Each semi-annual payment shall include a proration of the monthly attachment, and occupancy charges applicable for attachments, or occupancy initially authorized by Bell Atlantic during the preceding six (6) month period. Any such fees shall be computed in accordance with Applicable Law.

2. Fees

2.1 Application and Engineering Survey Fee

- a) Per Pole attached \$
- b) Per Manhole/per Duct run \$
- c) Right of Way (determined on a case by case basis)

2.2 Annual Fee

- a) Horizontal Attachment
Per attachment \$
- b) Vertical Attachment
Per Pole attached (\$/Vertical foot of occupancy) \$
- c) Per foot of cable placed in the
Conduit \$
- d) Right of Way (determined on a case by case basis as mutually agreed by the parties)

2.3 Other Charges

Computation

Charges for all work performed by Bell Atlantic or by its authorized representative in connection with the furnishing of Pole, Conduit and Right of Way accommodations as covered by this Agreement shall be based upon the cost to Bell Atlantic for performance of such work in accordance with Applicable Law, if any. Such charges will apply for, but not be limited to, Prelicense Survey; Make-Ready Work; inspection and removal of MCIIm’s Communications Facilities, where applicable; and supervision by one (1) employee, at the option of the Bell Atlantic, of MCIIm-performed work in and around the immediate vicinity of a Conduit System limited to one (1) employee.

2.4 In the event that it is determined that MCIIm has made attachment in or on any Pole, Conduit or Right of Way of Bell Atlantic for which a License has not been executed, MCIIm shall be obliged to: a) apply for such license immediately; and b) pay to Bell Atlantic fees for said attachment for the entire period of time which can be reasonably established as the date of MCIIm’s attachment, but in no case less than one (1) year prior to date of discovery.

APPENDIX II

ADMINISTRATIVE FORMS AND NOTICES

THIS APPENDIX II, effective as of _____, is an integral part of the License Agreement between Bell Atlantic - Pennsylvania, Inc. (Bell Atlantic), and MCImetro Access Transmission Services LLC (MCIm), dated _____ and contains the administrative forms governing the use of Bell Atlantic's Poles and Conduit by MCIm's Communications Facilities.

INDEX OF ADMINISTRATIVE FORMS

Application and Pole Attachment License

A-1

Pole Details

A-2

Application and Conduit Occupancy License

B-1

Conduit System Diagram

B-2

Cable to occupy Conduit and Equipment to be placed in Manholes

B-3

Authorization for Make-Ready Work

B-4

Notification of Removal of Pole Attachments

C

Notification of Removal of Conduit Occupancy

D

APPLICATION AND POLE ATTACHMENT LICENSE

Bell Atlantic - Pennsylvania, Inc.

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19 ____ , application is hereby made for a nonexclusive license to attach communication facilities to _____ Poles as indicated on Form A-2. This request will be designated:

Pole Application # _____

Enclosed is a check in the amount of \$ _____ to cover the cost of the Pre-License Survey. (Appendix I)

MCIIm: _____

Signed: _____

Dated: _____

Tel. No: _____

.....
Permission is hereby granted to attach communication facilities to _____ Poles as indicated on the attached Form A-2.

Atlantic)

Bell Atlantic - Pennsylvania, Inc. (Bell

Signed: _____

Dated: _____

Tel. No: _____

Applications shall be numbered in sequential ascending order by MCIIm. Bell Atlantic will process applications in ascending order according to the applications numbers assigned by MCIIm.

(MCIIm)

(Central Office Area)
#)

(Pole Application

POLE DETAILS

	Telephone Pole #	Power Pole #	Location	Type Attach		Make Ready
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

APPLICATION AND CONDUIT OCCUPANCY LICENSE

Bell Atlantic - Pennsylvania, Inc.

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19_____, application is hereby made for a license to occupy the Conduit system shown on Form B-2, with the cable and equipment detailed on Forms B-3 and B-4. This request will be designated:

Conduit Application # _____

Enclosed is a check in the amount of \$ _____ to cover the cost of the Pre-License Survey. (Appendix I)

(MCIIm)
Signed: _____
Dated: _____
Tel. No: _____

.....
Permission is hereby granted to occupy Bell Atlantic's Conduit system, as indicated on the attached Form B-2, with cable equipment and facilities specified on the attached Forms B-3. The Duct footage for this License is _____

Bell Atlantic - Pennsylvania, Inc.
(Bell Atlantic)
Signed: _____
Dated: _____
Tel. No: _____

Applications shall be numbered in sequential ascending order by MCIIm. Bell Atlantic will process applications in ascending order according to the applications numbers assigned by MCIIm.

(MCIIm)

(Area)

(Conduit Application #)

SAMPLE CONDUIT SYSTEM DIAGRAM

CONDUIT SYSTEM DIAGRAM

(MCIIm)

(Area)

(Conduit Application #)

CABLE TO OCCUPY CONDUIT

	Type Cable		Weight Per Ft.	Maximum Voltage to Ground AC/ DC	Maximum Current in a Conductor	Type Sheath
1						
2						
3						
4						
5						

EQUIPMENT TO BE PLACED IN MANHOLES

	Location	Type	Height	Width	Depth	Weight
1						
2						
3						
4						
5						

AUTHORIZATION FOR MAKE-READY WORK

Following is a summary of the estimated charges for the following application:

Pole attachment application number _____
 or
 Conduit occupancy application number _____
 or
 Right of Way occupancy application number _____

Estimated cost \$ _____

Note that in the event that an advance payment is required, actual costs will be billed at the conclusion of the work.

(Bell Atlantic)

By: _____
(Signature of authorized person)

Its: _____
(Title of authorized person)

Date: _____

Telephone Number: _____

Order Number: _____

I hereby acknowledge and agree to pay all charges, as above, and authorize work to begin.

(MCIIm)

By: _____
(Signature of authorized person)

Its: _____
(Title of authorized person)

Date: _____

Telephone Number: _____

NOTIFICATION OF REMOVAL OF POLE ATTACHMENTS

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19____, notice is hereby given that the following Pole attachments have been removed.

	Telephone Co. Pole	Joint Use Pole	Location	Date Removed
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

SUBMITTED:

APPROVED:

(MCIIm)

Bell Atlantic - Pennsylvania, Inc.
(Bell Atlantic)

Signed: _____

Signed: _____

Dated: _____

Dated: _____

NOTIFICATION OF REMOVAL OF CONDUIT OCCUPANCY

In accordance with the terms and conditions of the License Agreement between us, dated _____, 19____, notice is hereby given that the occupancy of the following Conduit has been removed.

	Conduit Location	Conduit Application #	Date Removed
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

SUBMITTED:

APPROVED:

(MCIIm)

Bell Atlantic - Pennsylvania, Inc.
(Bell Atlantic)

Signed: _____

Signed: _____

Dated: _____

Dated: _____

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Attachment VII

NUMBER PORTABILITY

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ATTACHMENT VII

NUMBER PORTABILITY

Section 1. Provision of Number Portability

1.1 Each Party shall provide Number Portability in accordance with Applicable Law. Currently available Interim Number Portability (“INP”) shall also be provided by each Party to the other in accordance with Applicable Law. Each Party shall use commercially reasonable efforts to provide INP with a minimum impairment of functionality, quality, reliability and convenience to subscribers of each other’s services.

1.2 The donor Party will provide the porting Party INP and NP for subscribers moving to a different location (where Technically Feasible for INP), or staying at the same location, within the same Rate Center area. INP and NP are not available for other purposes, such as the creation of new vanity numbers.

Section 2. Interim Number Portability (“INP”)

2.1 Each Party shall make available INP by Remote Call Forwarding (“RCF”), Flex Direct Inward Dialing (“FLEX-DID”) or LERG reassignment (in full NXX codes only). The porting Party must order the appropriate services and facilities (e.g., trunk groups) from the donor Party.

2.1.1 Remote Call Forwarding: RCF is an INP method to provide subscribers with service-provider portability by redirecting calls within the telephone network. When RCF is used to provide INP, calls to the ported number will first route to the Party’s Switch to which the ported number was previously assigned. Such Switch will then forward the call to a number associated with the porting Party’s designated Switch to which the number is ported. Each Party may order additional paths to handle multiple simultaneous calls to the same ported telephone number.

2.1.2 FLEX-DID is an INP method that makes use of direct inward dialing trunks. Each FLEX-DID trunk group used for INP is dedicated to carrying traffic between the donor Party’s Switch and the porting Party’s Switch. Traffic on these trunks cannot overflow to other trunks, so the porting Party must order a trunk group size it believes results in conservative engineering. Also, inter-Switch signaling is usually limited to multi-frequency (“MF”). This precludes passing calling line identification to the porting Party’s Switch.

2.1.3 LERG Reassignment: Portability for an entire NXX of numbers shall be provided, when mutually agreed, by utilizing reassignment of the block to the porting Party through the Local Exchange Routing Guide (“LERG”). Updates to translations in the donor Party’s switching offices from which the NXX code is

reassigned will be made by the donor Party by the date on which national LERG changes become effective.

2.2 Other Currently Available Number Portability Provisions:

2.2.1 Each Party shall exchange with the other Party SS7 TCAP messages as required for the implementation of Custom Local Area Signaling Services ("CLASS") or other features available in their respective networks, as are Technically Feasible to exchange.

2.2.2 Promptly following receipt of an INP order for a number served by a particular End Office Switch, each Party shall disclose to the other any technical or capacity limitations that would prevent use of a requested INP method in a particular switching office.

2.2.2.1 In all cases in which installation or removal of INP is to be coordinated with the installation, modification, or removal of another service (*e.g.*, an Unbundled Local Loop), the Parties shall follow the coordination procedures set forth in Attachment VIII, Section 2.2.3.

2.2.3 When any INP method available hereunder is used to port a subscriber, the donor Party must maintain the LIDB record for that number to reflect appropriate conditions as reported to it by the porting Party and to provide such LIDB information in accordance with any LIDB agreement subsequently entered between the Parties.

2.2.4 The donor Party shall send a CARE transaction 2231 to notify the appropriate IXC that access is now provided by the porting Party for that number.

2.2.5 The INP service offered herein shall not initially apply to NXX Codes 555, 915, 950, or 976, or for Feature Group A or coin telephone service, because of the special billing characteristics of such services. Upon a Bona Fide Request from either Party, the provisions of INP for these services will be mutually negotiated between the Parties and provided to the extent feasible under negotiated rates, terms, and conditions. INP shall not apply for any arrangement that would render the forwarded call toll traffic.

Section 3. Number Portability ("NP")

3.1 The Parties acknowledge that they disagree on the form of NP that should be adopted and prescribed by the FCC, and accordingly hereby reserve their rights to advocate their respective positions before legislative, judicial, and regulatory bodies, notwithstanding any other provisions of this Agreement. To the extent that this Agreement includes provisions regarding the implementation of the Location Routing Number ("LRN") method of NP, such provisions shall apply only if it is ordered that LRN shall be deployed in Pennsylvania, and only to the extent required by FCC Rules and Regulations, and the presence of such provisions in this Agreement shall not be deemed a waiver of

Bell Atlantic's position that LRN should not be deployed in Pennsylvania. If another NP methodology is adopted for Pennsylvania, the Parties shall promptly modify any provisions of this Agreement that refer to or assume the implementation of LRN to replace it with such other methodology.

3.2 The requirements for NP, when available, shall include the following:

3.2.1 Notwithstanding any other provision of this Agreement, each Party shall provide NP service in accordance with FCC Rules and Regulations.

3.2.2 To the extent required by FCC Rules and Regulations and to the extent Technically Feasible, the donor Party's NP network architecture shall not subject the porting Party to any degradation of service compared to the donor Party in any material measure, including switching and transmission quality, call set-up time and post-dial delay, and the porting Party shall not be required to rely on the donor Party's network for calls completing to its ported subscribers; provided, however, that a Query On Release system may be used by donor Party if expressly permitted under Applicable Law.

3.2.3 After an office is equipped with NP, and after an NXX is defined as portable, translations will be changed in the donor's LNP-capable switches which trunk directly to such office to open the NXX(s) for database queries. Any NXX with at least one ported number in the NXX shall be defined as portable.

3.2.4 Upon introduction of LRN in a metropolitan statistical area/county, the associated tandems (local and access) shall be among the first converted, with no unreasonable delay. All portable NXXs shall be recognized in these tandems as portable, with queries launched from these switches.

3.2.5 During the process of porting a subscriber, the donor Party shall implement the 10-digit trigger feature when Technically Feasible. When the donor Party receives the porting request, it shall use reasonable efforts to apply the 10-digit trigger to the subscriber's line at least twenty-four (24) hours prior to the order due date in order to facilitate the smooth transitioning of the subscriber to the new provider.

3.3 Joint Cooperation

3.3.1 At such time that NP is available, both MCI and Bell Atlantic shall:

3.3.1.1 Support emergency and Operator Services in a manner to be mutually agreed.

3.3.1.2 Use commercially reasonable efforts to use scarce numbering resources efficiently and administer such resources in a competitively neutral manner.

3.3.1.3 Cooperate with each other so that each carrier shall be able to rate and bill different types of calls.

3.3.1.4 Cooperate with each other to apply NP consistently.

3.3.1.5 Upon the agreement of the Parties or issuance of applicable FCC and/or Commission order(s) or regulations mandating the adoption of a NP arrangement, the Parties will commence migration from INP to the agreed upon or mandated NP arrangement as quickly as practically possible (and in any event no later than the migration dates set forth in the applicable FCC and/or Commission order(s) or regulations) while minimizing interruption or degradation of service to their respective subscribers. Once NP is implemented, either Party may withdraw, at any time and at its sole discretion, its INP offerings, subject to advance notice to the other Party and coordination to allow the seamless and transparent conversion of INP subscribers' numbers to NP. Upon implementation of NP pursuant to FCC or Commission regulation, both Parties agree to conform and provide such NP. To the extent NP rates or cost recovery mechanisms are not established by the applicable FCC or Commission order or regulation mandating the adoption of NP, the Parties will negotiate in good faith the charges or cost recovery mechanism for NP service at such time as a NP arrangement is adopted by the Parties.

3.4 Location Routing Number ("LRN")

3.4.1 If and to the extent that the FCC requires implementation of LRN as the NP methodology applicable in Pennsylvania, Bell Atlantic and MCI shall work cooperatively to implement an LRN-NP solution when Technically Feasible.

3.4.2 A ten-digit code, consistent with the North American Numbering Plan, called the location routing number ("LRN") shall be used as a network address for each Switch that terminates subscriber lines, (*i.e.*, an End Office). LRN shall support existing six-digit routing and may be implemented without changes to existing Switch routing algorithms. In existing End Offices, the LRN shall be selected from one of its existing NPA-NXXs. New End Offices shall be assigned LRNs through normal administrative processes.

3.4.3 LRN employs an "N-1" query strategy for interLATA or intraLATA toll calls, by which the originating carrier will pass the call to the appropriate toll carrier who will perform a query to an external routing database and route the call to the appropriate terminating local carrier either directly or through an access tandem office. For a local call to a ported number, the originating carrier is the "N-1" carrier. It will perform an external database query and pass the call to the appropriate terminating carrier. The "N-1" methodology will be used to extend portability on a phased, region-by-region basis and it does not place Bell Atlantic, MCI or other carriers needlessly in the call path.

3.4.4 The Parties shall furnish each other with the first six (6) digits of the originating LRN when they supply each other with the Jurisdiction Information Parameter (“JIP”) in the Initial Address Message (“IAM”), assuming the necessary LRN software is available from the Switch manufacturer and is loaded in the specific Switch that will populate the JIP parameter per the timetable set by the FCC and Commission.

3.4.5 Each Party agrees to use commercially reasonable efforts to begin the introduction of LRN to end user subscribers who may begin changing local service providers and retaining their existing telephone number based on the time line set out by the FCC in its Telephone Number Portability Order (CC Docket No. 95-116), or as per a State order if such time for introduction of LRN set by the State is earlier than would result under the FCC Order.

3.5 Additional NP Requirements (when available)

3.5.1 In the absence of Query On Release, for local calls to a portable NXX, each Party shall query an external database as soon as the call reaches the first NP-capable Switch in the call path. An LRN-capable originating Switch shall query on a local call to a portable NXX native to another Central Office as soon as the LNP trigger is encountered and it is determined that it (the originating Switch) does not serve the dialed number.

3.6 SMS Administration

3.6.1 Each Party will work cooperatively with other local service providers to establish the NP service management system (“SMS”). The SMS shall be administered by a neutral third party, to provide for the efficient porting of numbers between carriers. Subject to Applicable Law, there must be one exclusive Number Portability Administration Center (“NPAC”) per portability State or region, and each Party shall provide all information uploads and downloads regarding ported numbers to/from, respectively, the exclusive NPAC. Bell Atlantic and MCI shall cooperate to facilitate the expeditious deployment of LRN-based NP through the process prescribed by the FCC and the Commission, including, but not limited to, participation in the selection of a neutral third party and development of SMS, as well as SMS testing for effective procedures, electronic system interfaces, and overall readiness for use consistent with that specified for provisioning in this Agreement.

Section 4. Requirements for INP and NP

4.1 INP Cut-Over Process

The following cut-over coordination procedures shall apply for INP-ported numbers. NP cut-over procedures shall be reasonably agreed by the Parties at such time as the capability has been developed.

4.1.1 Upon request by the porting Party, the donor Party will apply the following coordination procedures to cut-overs of ported numbers.

4.1.2 The porting Party shall request the porting of a number from the donor Party by delivering to the donor Party a valid electronic transmittal service order (when available) or another mutually agreed-upon type of service order. Such service order shall be provided in accordance with industry format and specifications or such format and specifications as may be agreed to by the Parties. Within forty-eight (48) hours of the donor Party's receipt of such valid service order, the donor Party shall provide the porting Party the firm order commitment date and time according to the installation time frames set forth in Section 4.2 below.

4.1.3 On each porting order, the Parties will agree on a cut-over time at least forty-eight (48) hours before that cut-over. RCF cut-over time will be defined as a fifteen (15) to thirty (30) minutes per line window within which both Parties will make telephone contact to complete the cut-over. The cut-over window for other methodologies will be agreed to by the Parties.

4.1.4 Within the appointed fifteen (15) to thirty (30) minute cut-over time, the porting Party will call the donor Party to coordinate cut-over work and when the donor Party is reached in that interval, such work will be promptly performed.

4.1.5 If the porting Party requires a change in scheduling, it must contact the donor Party to issue a supplement to the original order. The negotiations process to determine the date and time of cut-over will then be reinitiated pursuant to Section 4.1.3 above.

4.1.6 If the porting Party is not ready within the appointed interval and if it had not called to reschedule the work at least two (2) hours prior to the start of the interval, the porting Party shall be liable for the non-recurring charge for such work for the missed appointment. In addition, non-recurring charges, if applicable, for the rescheduled appointment will apply.

4.1.7 If the donor Party is not available or not ready at any time during the appointed fifteen (15) to (30) minute interval, the Parties will reschedule and the donor Party will waive the non-recurring charge, if applicable, for such work whenever it is performed pursuant to an agreed-upon rescheduling.

4.1.8 Beginning nine (9) months from the Effective Date, if unusual or unexpected circumstances prolong or extend the time required to accomplish the coordinated cut-over, the Party responsible for such circumstances is responsible for the reasonable labor charges of the other Party. Delays caused by the subscriber are the responsibility of the porting Party.

4.2 Installation Time Frames

4.2.1 Installation time frames for RCF INP will be as follows:

4.2.1.1 Lines and Trunks:

4.2.1.1.1 For installations of RCF INP that are not installed and/or coordinated with in conjunction with any other service or service disconnect ordered from Bell Atlantic, installation time frames will be as follows: orders of 1-20 lines in four (4) business days; orders of 21-30 lines in seven (7) business days; orders over 30 lines will have an installment time frame as mutually agreed by the Parties; and

4.2.1.1.2 Notwithstanding Section 4.2.1.1.1, installation time frames for RCF INP when installed in conjunction with another service ordered from Bell Atlantic will be as follows: orders of 1-10 lines in six (6) business days; orders of 11-20 lines in ten (10) business days; orders of twenty-one (21) or more lines will have an installment time frame mutually agreed upon by the Parties.

4.2.1.2 The installation time frames set forth in Section 4.2.1.1 shall be applied as follows:

4.2.1.2.1 The time frames set forth in Section 4.2.1.1 shall apply on average to the order types and sizes specified therein; and

4.2.1.2.2 No individual order shall be installed in a time frame more than twice the length of the time frame specified in Section 4.2.1.1 for the order type and size, except in unusual circumstances. Unusual circumstances shall qualify to modify any time frame only to the extent that the unusual circumstances have comparable effects on Bell Atlantic's customer services and INP services for other CLECs.

4.3 INP Call Referral Announcements

4.3.1 Within forty-five (45) days after the Effective Date, Bell Atlantic will provide MCIIm a cost-based cost estimate and proposed implementation schedule for the development and implementation of the capability to allow MCIIm to order all referral announcements, and specify the particular announcement from Bell Atlantic's standard set of call referral announcement options, on a per telephone number basis, for telephone numbers which MCIIm has ported from Bell Atlantic to MCIIm and for which INP measures, at MCIIm's direction, have been terminated. Upon MCIIm's acceptance of the cost estimate and proposed implementation schedule (adjusted as necessary to reflect any significant delay in

such acceptance), Bell Atlantic will develop and implement said capability and MCIIm will pay the cost thereof, as set forth in the accepted cost estimate.

4.4 Engineering and Maintenance

4.4.1 Bell Atlantic and MCIIm will cooperate with the objective that the performance of trunking and signaling capacity shall be engineered and managed at Parity. Additional specific engineering and maintenance requirements shall apply as specified in this Agreement.

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ATTACHMENT VIII

BUSINESS PROCESS REQUIREMENTS

Section 1. General Business Requirements

1.1 Procedures

1.1.1 Contact with Subscribers

1.1.1.1 Each Party at all times shall be the primary contact and account control for all interactions with its own subscribers regarding such Party's services purchased by the subscribers, except as otherwise agreed. A Party's subscribers shall include active subscribers as well as those for whom it has service orders pending.

1.1.1.2 With respect to a Party that may receive inquiries from the other Party's subscribers, or otherwise have opportunity for such subscriber contact, the Party shall: (i) provide mutually agreed referrals to subscribers who inquire about the other Party's services or products; (ii) not disparage or discriminate against the other Party, or its products or services; and (iii) not provide information about its own products or services during that same inquiry or subscriber contact unless asked by the subscriber.

1.1.1.3 Each Party shall protect the Proprietary Information of the other Party and the other Party's subscribers in accordance with Section 22 of Part A.

1.1.2 Expedite, Escalation, and Disaster Procedures

1.1.2.1 No later than thirty (30) days after the Effective Date of this Agreement, the Parties shall develop mutually acceptable escalation and expedite procedures which may be invoked at any point in the service ordering, provisioning, maintenance, and subscriber usage data transfer processes to facilitate rapid and timely resolution of disputes. In addition, the Parties will establish intercompany contacts lists for purposes of handling subscriber and other matters which require attention/resolution outside of normal business procedures within thirty (30) days after the Effective Date of this Agreement. Each Party shall provide to the other an updated escalation contacts list promptly following any changes thereto.

1.1.3 Subscriber of Record

1.1.3.1 Each Party shall recognize the other as the subscriber of record for all services ordered by the other Party and shall send all notices, invoices, and information which pertain to such ordered services directly to such other Party. Each Party shall provide the other Party with addresses to which such notices, invoices, and information shall be sent.

1.1.4 Work Center Interface Procedures

1.1.4.1 Bell Atlantic and MCI shall, as early as practicable, but no later than ninety (90) days, after the Effective Date of this Agreement, develop and implement work center interface procedures where appropriate for a function/business process provided by a Party. Each Party shall provide reasonable notice to the other Party of changes to its processes.

1.2 Service Offerings

1.2.1 Changes in Retail Service Offerings

1.2.1.1 Bell Atlantic shall notify MCI of any proposed changes in the terms and conditions under which Bell Atlantic offers Telecommunications Services to subscribers who are not Telecommunications Service providers or carriers, including, but not limited to, the introduction or discontinuance of any features, functions, services, promotions, or changes in retail rates. Such notification shall be by such public notice, including Tariff filings, as is required by State law or Commission rule. In addition, Bell Atlantic shall provide notification by posting such changes on Bell Atlantic's World Wide Web site within five (5) business days after the date of the public notice required by State law or Commission rule.

1.2.2 Essential Services

1.2.2.1 Bell Atlantic shall designate an access line as an essential service line ("ESL") upon MCI's request. MCI will be responsible for following National Security Emergency Preparedness ("NSEP") guidelines for designating ESL services.

1.2.3 Deaf and Disabled Services

1.2.3.1 The Parties shall cooperate to provide services necessary to serve deaf and disabled service subscribers.

1.2.4 Training Support

1.2.4.1 Each Party will provide the other Party with sufficient operational instruction to enable the purchasing Party to access any of the providing Party's operational support systems provided for elsewhere in this Agreement.

1.2.5 Carrier Identification Codes

1.2.5.1 The providing Party shall provide to the purchasing Party a list of active carrier identification codes ("CIC") and shall provide occasional updates, as required, for each of the providing Party's access tandems or functional equivalent; provided, however, that MCI shall be obligated to provide such information only for CIC codes on any MCI access tandem or functional equivalent thereof which do not appear on the most current list provided to MCI by Bell Atlantic for such access tandem or functional equivalent thereof.

Section 2. Ordering and Provisioning

2.1 General Business Requirements

2.1.1 Ordering and Provisioning Parity

2.1.1.1 During the term of this Agreement, Bell Atlantic shall provide necessary ordering and provisioning business process support as well as those technical and systems interfaces as may be required to enable MCI to provide Local Resale services and Network Elements at parity with Bell Atlantic.

2.1.2 CLEC Sales and Support Center ("CSSC")/Single Point of Contact ("SPOC")

2.1.2.1 Bell Atlantic shall provide up to three (3) CSSCs or reasonable equivalent which shall serve as MCI's SPOC for all activities involved in the ordering and provisioning of Bell Atlantic's Network Elements and Local Resale services. The SPOC shall receive orders (through an electronic interface) twenty-four (24) hours a day, seven (7) days a week.

2.1.2.2 The SPOC shall provide service during the hours of 8:30 a.m. to 4:30 p.m., EST, Monday through Friday (or such additional hours as Bell Atlantic shall provide service to its own subscribers) answered by personnel reasonably trained to answer questions and resolve problems in connection with the ordering and provisioning of Network Elements and Local Resale services.

2.1.2.3 Bell Atlantic shall provide, through electronic interfaces, provisioning and premises visit installation support for coordinated

scheduling, status, and dispatch capabilities from 7:00 a.m. to other 10:00 p.m., EST, Monday through Friday, and Saturday from 7:00 a.m. to 8:00 p.m., EST, or for such additional hours as Bell Atlantic shall provide service to its own subscribers. Additional charges will be incurred for dispatches outside of Bell Atlantic's normal work days and work hours.

2.1.3 Street Address Guide ("SAG")

2.1.3.1 Commencing with the Effective Date of this Agreement, if Bell Atlantic should cease using postal information to develop and maintain its SAG, then upon terms and conditions to be mutually agreed, Bell Atlantic shall provide to MCIIm SAG data, or its equivalent, in a standard electronic format.

2.1.4 Subscriber Payment History

2.1.4.1 Neither Party shall refuse service to a potential subscriber of the other Party on the basis of the subscriber's past payment history with the providing Party, provided that the purchasing Party shall be responsible for payment to the providing Party for purchased services with respect to such subscriber regardless of the payment performance of the subscriber.

2.1.5 Carrier Selection

2.1.5.1 For Local Resale services or Network Elements, Bell Atlantic shall provide to MCIIm, when ordered by the Commission, the capability to order local service, intraLATA, and interLATA service by entering MCIIm's subscriber's choice of carrier on a single order. Bell Atlantic shall provide MCIIm with the capability to order separate interLATA and intraLATA carriers on a line or trunk (with line side treatment) basis.

2.1.5.2 Where intraLATA toll carrier selection is not implemented, Bell Atlantic agrees to provide intraLATA toll services for Local Resale and Local Switching, to resold or unbundled Switch lines provided to MCIIm. Where intraLATA toll carrier selection is implemented, Bell Atlantic will route toll calls to the appropriate carrier as designated by MCIIm.

2.1.6 Notification to Long Distance Carrier

2.1.6.1 Subject to Section 15 of Part A, Bell Atlantic agrees to notify MCIIm using OBF-approved CARE transactions, whenever an MCIIm subscriber who is provided local service through Local Resale or Local Switching changes PIC status.

2.1.6.2 Subject to Section 15 of Part A, Bell Atlantic shall support and implement new transaction code status indicators ("TCSIs") defined by OBF in support of Local Resale to enable MCIIm to provide seamless subscriber service.

2.1.6.2.1 Bell Atlantic shall implement TCSIs used in conjunction with the new local service provider (“LSP”) identification code for handling account maintenance, subscriber service, and such other codes as OBF may define.

2.1.6.2.2 In addition, Bell Atlantic shall implement TCSIs used in conjunction with the new ported telephone number field to link “shadow” and ported telephone numbers in support of INP.

2.1.6.3 Bell Atlantic shall provide to MCIIm the LSP ID on purchased lists of MCIIm’s PIC’d and non-PIC’d subscribers.

2.1.6.4 Bell Atlantic shall provide the ported telephone number on purchased CARE lists of MCIIm’s PIC’d and non-other party’s PIC’d subscribers.

2.1.7 Number Administration/Number Reservations

2.1.7.1 Until number administration functions are assumed by a neutral third-party in accordance with FCC Rules and Regulations, Bell Atlantic shall assign NXXs to MCIIm on a Non-Discriminatory Basis with no restrictions other than those imposed upon all carriers under the North American Numbering Plan or comparable conventions. In addition, Bell Atlantic shall provide activation of translations routing of MCIIm’s NXXs to meet established national implementation dates. Further, Bell Atlantic shall provide MCIIm with access to abbreviated dialing codes, access arrangements for 555 line numbers, and the ability to obtain telephone numbers, including specific numbers where available, while a subscriber is on the phone with MCIIm, all at Parity. Bell Atlantic shall provide the same range of number choices to MCIIm, including choice of exchange number, as Bell Atlantic provides its own subscribers. Reservation and aging of numbers shall remain Bell Atlantic’s responsibility.

2.1.7.2 Where mutually agreed, which agreement shall not be unreasonably withheld, the Parties will implement LERG reassignment for particular NXX codes.

2.1.7.3 Bell Atlantic shall accept MCIIm orders for vanity numbers and blocks of numbers for use with complex services including, but not limited to, direct inward dialing, CENTREX, and hunting arrangements, as reasonably requested by MCIIm, in accordance with applicable Tariffs, and at Parity.

2.1.7.4 For simple services number reservations, Bell Atlantic shall provide real-time confirmation of the number reservation. For number reservations associated with complex services, Bell Atlantic shall provide

confirmation of the number reservation within two (2) business days of MCIIm's request. Number reservations shall be provided in accordance with applicable Tariffs and at Parity with that provided Bell Atlantic's own subscribers.

2.2 Service Order Process Requirements

2.2.1 OBF Compliance

2.2.1.1 Subject to Section 15 of Part A and in accordance with OBF standards, Bell Atlantic and MCIIm shall generally follow the OBF-developed ordering and provisioning process standards. These include pre-order service inquiry, pre-order service inquiry response, firm order acknowledgment/rejection, firm order confirmation, and those to be developed for delay notification, completion notification and the like. Each Party agrees to work cooperatively to implement future relevant OBF-developed processes related to ordering and provisioning.

2.2.2 Service Migrations and New Subscriber Additions

2.2.2.1 Party A shall not require a disconnect order from a subscriber, another local service provider, or any other entity, to establish Party B's local service for a subscriber and/or migrate a subscriber to Party B's local service. Party B shall be responsible for obtaining a Third-Party Verification ("TPV"), Letter of Authorization ("LOA"), or the like which satisfies FCC and Commission requirements.

2.2.2.2 With respect solely to Local Resale services available for resale hereunder, Bell Atlantic shall not disconnect any such service or associated features at any time during the migration of a subscriber to MCIIm service without the prior consent of MCIIm, unless such disconnection is necessitated by the change in service requested by MCIIm. Upon completion of such migration, MCIIm shall be responsible for payment for any such non-disconnected service as set forth in Attachment I to this Agreement.

2.2.2.3 Party A shall recognize Party B as an agent for the subscriber in coordinating the disconnection of services provided by Party A or another carrier. MCIIm shall be responsible for obtaining a TPV, LOA, or the like which satisfies FCC requirements. In addition, when coordinated cut-over services are ordered, Bell Atlantic shall not disconnect any Bell Atlantic services provided to the Bell Atlantic subscriber until MCIIm notifies Bell Atlantic that MCIIm's service has been installed and operational, except where existing Bell Atlantic facilities are being reused.

2.2.2.4 Unless otherwise directed by MCIIm, when MCIIm orders Local Resale services or Local Switching, all trunk or telephone numbers

currently associated with existing POTS services shall be retained without loss of feature capability and without loss of associated ancillary services, including, but not limited to, Directory Assistance Services and 911/E911 capability offered by Bell Atlantic, provided that MCIIm includes such features and ancillary services in its orders.

2.2.3 Cut-Over Process

The following cut-over coordination procedures shall apply for conversions of “live” Telephone Exchange Services to Unbundled Local Loops, including conversions to Unbundled Local Loops with INP, and to any other conversions that either Party determines must be coordinated to avoid a substantial risk of significant subscriber service disruption. Although written below to describe only conversions from Bell Atlantic to MCIIm, these and other mutually agreed-upon coordination procedures shall apply reciprocally for the “live” cutover of subscribers from Bell Atlantic to MCIIm and from MCIIm to Bell Atlantic. NP cut-over procedures shall be reasonably agreed by the Parties at such time as the capability has been developed.

2.2.3.1 MCIIm shall request cut-over coordination by delivering to Bell Atlantic a valid electronic transmittal service order (when available) or another mutually agreed-upon type of service order. Such service order shall be provided in accordance with industry format and specifications or such format and specifications as may be agreed to by the Parties. Within forty-eight (48) hours after Bell Atlantic’s receipt of such valid service order, Bell Atlantic shall provide MCIIm the FOC date and time according to the installation time frames set forth in Section 2.5 below and for NP, Attachment VII, Section 4.2.

2.2.3.2 On each order, the Parties will agree on a cut-over time at least forty-eight (48) hours before that cut-over. Cut-over time will be defined as a fifteen (15) to thirty (30) minutes per line window within which both Parties will make telephone contact to complete the cut-over. The cut-over window for other methodologies will be agreed to by the Parties.

2.2.3.3 Within the appointed fifteen (15) to thirty (30) minute cut-over time, Bell Atlantic will call MCIIm to coordinate cut-over work and when MCIIm is reached in that interval, such work will be promptly performed.

2.2.3.4 If MCIIm requires a change in scheduling, it must contact Bell Atlantic to issue a supplement to the original order. The negotiations process to determine the date and time of cut-over will then be reinitiated as usual pursuant to Section 2.2.3.3.

2.2.3.5 If MCIIm is not ready within the appointed interval and if it had not called to reschedule the work at least two (2) hours prior to the start of the interval, MCIIm shall be liable for the non-recurring charge for such

work for the missed appointment. In addition, non-recurring charges, if applicable, for the rescheduled appointment will apply.

2.2.3.6 If Bell Atlantic is not available or not ready at any time during the appointed fifteen (15) to thirty (30) minute interval, the Parties will reschedule and Bell Atlantic will waive the non-recurring charge, if applicable, for such work whenever it is performed pursuant to an agreed-upon rescheduling.

2.2.3.7 Beginning nine (9) months from the Effective Date, if unusual or unexpected circumstances prolong or extend the time required to accomplish the coordinated cut-over, the Party responsible for such circumstances is responsible for the reasonable labor charges of the other Party. Delays caused by the MCIIm subscriber are the responsibility of MCIIm.

2.2.4 Intercept Treatment and Transfer of Service Announcements

2.2.4.1 For Local Resale services, Bell Atlantic shall provide unbranded basic intercept treatment and transfer of service announcements to MCIIm's subscribers.

2.2.4.2 When an end user customer changes its service provider from one Party to the other Party and does not retain its original telephone number, the Party formerly providing service to such end user shall provide a referral announcement on the end user's former telephone number that provides the end user's new number or other appropriate information to the extent known. Referral announcements shall be provided reciprocally, free of charge to either Party or the end user to the extent the providing Party does not charge its own end user customers for such service, for the same period of time the providing Party provides its own end user customers when they change their telephone numbers.

2.2.4.3 The providing Party shall provide such basic treatment and transfer of service announcement in accordance with its normal policies and procedures for all service disconnects, suspensions, or transfers.

2.2.5 Desired Due Date ("DDD")

2.2.5.1 For services with agreed upon intervals, the purchasing Party shall select on each order the DDD consistent with agreed intervals. For services with variable intervals, the purchasing Party shall select among available due dates, obtained through an electronic interface, for specific services with variable intervals. The providing Party shall use reasonable efforts to not complete the order prior to the DDD or later than the DDD unless authorized by the purchasing Party.

2.2.5.2 If the DDD falls after the standard order completion interval (as mutually agreed by the Parties), the providing Party shall use reasonable efforts to complete the order on the DDD.

2.2.5.3 Subsequent to an initial order submission, the purchasing Party may request a new/revised due date that is earlier than the minimum defined interval. The providing Party shall use reasonable efforts to meet such date and may assess Non-Discriminatory expedite charges. The Parties agree that expedite orders are not to be used as a mechanism for routine avoidance of the standard DDD or standard interval(s) set forth in this Agreement. If (i) the providing Party does not assess an expedite charge on the purchasing Party; and (ii) based on the exercise of reasonable judgment, the providing Party determines that the purchasing Party is using expedite orders at a rate substantially in excess of the rate at which the providing Party and other parties use expedite orders on the providing Party's ordering systems, the providing Party shall immediately notify the purchasing Party at the Director level of escalation. The Parties shall immediately undertake good faith negotiations, based on each Party's data, to resolve the issue at the Director level of escalation, and, failing prompt and successful negotiations, through the complaint processes of the Commission or the FCC.

2.2.5.4 Any special or preferred scheduling options available to the providing Party shall also be available to the purchasing Party. The providing Party may assess Non-Discriminatory charges for such options.

2.2.6 Subscriber Premises Inspections and Installations

2.2.6.1 MCI shall perform or contract for any needs assessments, including equipment and installation requirements, at the premises of the subscriber, for the provision of MCI services to such subscribers.

2.2.6.2 Bell Atlantic shall notify MCI of any problems observed on the customer side of the NID in a timely manner. Bell Atlantic shall not relay to the customer that inside wire could have been performed during a Bell Atlantic technician's visit if the customer was a Bell Atlantic customer rather than an MCI customer.

2.2.7 Firm Order Confirmation ("FOC")

2.2.7.1 Subject to Section 15 of Part A, the providing Party shall provide to the purchasing Party, via an electronic interface, a FOC meeting OBF standards for each purchasing Party order, after a reasonable implementation interval from final acceptance of the particular OBF standard.

2.2.7.2 For a revised FOC, the providing Party shall provide order detail in accordance with OBF standards after a reasonable implementation interval from final acceptance of the particular OBF standard.

2.2.8 Order Rejections

2.2.8.1 The providing Party shall reject and return to the purchasing Party any order that is incomplete, internally inconsistent, or that the providing Party cannot provision due to defects, including, but not limited to, the requested due date is prior to the submission date. When MCI orders reach Bell Atlantic's service order processing systems, those orders will be processed or rejected at Parity.

2.2.9 Service Order Changes

2.2.9.1 If an installation or other ordered work requires a material change from the original service order, the providing Party shall call the purchasing Party in advance of performing the installation or other work to obtain authorization. The providing Party shall then provide the purchasing Party an estimate of additional labor hours and/or materials. After all installation or other work is completed, the providing Party shall promptly notify the purchasing Party of actual labor hours and/or materials used in accordance with regular service order completion processes.

2.2.9.1.1 If additional work is completed on a service order, as approved by the purchasing Party, the cost of the additional work must be reported to the purchasing Party.

2.2.9.1.2 If work on a service order is partially completed, notification shall identify the work that was performed and work remaining to be completed.

2.2.9.2 If an MCI subscriber requests a service change at the time of installation or other work being performed by Bell Atlantic on behalf of MCI, Bell Atlantic, while at the subscriber premises, shall direct the MCI subscriber to contact MCI to order such change.

2.2.10 Jeopardy Situations

2.2.10.1 The providing Party shall provide to the purchasing Party known delayed order notification prior to the committed due date, and other known delays in completing work specified on the purchasing Party's service order as detailed on the FOC, in accordance with mutually agreed procedures.

2.2.11 Cooperative Testing

2.2.11.1 Cooperative Testing shall be performed in accordance with Attachment III, Section 15.1.

2.2.11.2 **Systems and Process Testing**

2.2.11.2.1 The Parties shall cooperate upon request to assess whether all operational interfaces and processes are in place and functioning as intended. Testing shall simulate actual operational procedures and systems interfaces to the greatest extent possible. Either Party may request cooperative testing as it deems appropriate to assess service performance, reliability, and subscriber serviceability. The requested Party may levy time and materials charges on the requesting Party.

2.2.12 **Service Suspensions/Restorations**

2.2.12.1 Upon a request through a suspend/restore order, which shall comply with Applicable Law, Bell Atlantic shall suspend or restore the functionality of any Network Element or Local Resale service. Bell Atlantic shall provide restoration priority on a per Network Element or Combination basis in a manner that conforms with priorities requested by MCI, which shall comply with Applicable Law.

2.2.13 **Disconnects**

2.2.13.1 The providing Party shall notify the purchasing Party of any termination of service provided under this Agreement when such termination is requested by the providing Party or any third-party. Such notice shall be in a format and detail consistent with industry standards.

2.2.14 **Order Completion Notification**

2.2.14.1 Subject to Section 15 of Part A and when industry standards are developed for such service, and after a reasonable implementation interval, upon completion of a service order by the providing Party, the providing Party shall submit to the purchasing Party an order completion which reasonably details the work performed. Notification shall be provided in accordance with industry standards when developed. The Parties will cooperate in the interim to assure adequate notification.

2.2.15 **Fulfillment Process**

2.2.15.1 Each Party shall conduct all activities associated with the account fulfillment process for all of its subscribers.

2.2.16 **Specific Unbundling Requirements**

2.2.16.1 MCIIm may order and Bell Atlantic shall provision Network Elements either individually or in Technically Feasible Combinations. Network Elements ordered as combined shall be reasonably provisioned as combined by Bell Atlantic, unless MCIIm specifies that the Network Elements ordered in Combination be provisioned separately.

2.2.16.2 Prior to providing service in a specific geographic area or when MCIIm requires a change of network configuration, the Parties shall cooperate in planning the preparation of Network Elements and Switch translations in advance of orders for additional Network Elements from MCIIm.

2.2.16.3 For mutually-agreed Combinations of Network Elements, Network Elements that are currently connected and ordered together will not be physically disconnected, except for technical reasons.

2.2.16.4 Network Elements to be provisioned together shall be identified and ordered by MCIIm as such.

2.2.16.5 When ordering a Combination of Network Elements, MCIIm shall have the option of ordering all features, functions and capabilities of each Network Element, as they exist in Bell Atlantic's network on the Effective Date.

2.2.16.6 When MCIIm orders Network Elements, Bell Atlantic shall provision the features, functions, and capabilities of the Network Elements specified in this Agreement for such element, as reflected on MCIIm's order.

2.2.16.7 MCIIm and Bell Atlantic shall cooperate and coordinate activities including the sharing of relevant specifications in such a manner as to promote compatibility between and among respective service elements.

2.2.16.8 Orders for Network Elements will generally contain relevant administration, bill, contact, and subscriber information, as defined by the OBF.

2.3 Systems Interfaces and Information

2.3.1 General Requirements

2.3.1.1 Where access to operational support systems functionality is required, Bell Atlantic shall provide to MCIIm electronic interface(s) for transferring and receiving information and executing transactions in regards to service ordering and provisioning of Network Elements and Local Resale. Subject to Section 15 of Part A, the interface(s) shall be capable of supporting the steps in the OBF-developed ordering and provisioning process no later than April 1, 1997.

2.3.1.2 Bell Atlantic interfaces shall provide MCIIm with the same process and system capabilities for both residence and business ordering and provisioning at Parity.

2.3.1.3 Bell Atlantic and MCIIm shall agree on and implement interim solutions for Bell Atlantic interfaces within forty-five (45) days after the Effective Date of this Agreement. Such interim interface(s) shall, at a minimum, provide MCIIm the same functionality and level of service as is currently provided by the electronic interfaces used by Bell Atlantic for its own systems, users, or subscribers.

2.3.1.4 The foregoing interim interfaces or processes may be modified, if so agreed by MCIIm and Bell Atlantic, during the interim period.

2.3.1.5 Until the Party's electronic interfaces are available, the providing Party agrees that a co-carrier service center ("CSSC") or similar function will accept a purchasing Party's orders. Orders will be transmitted to the CSSC via an interface or method agreed upon by the Parties.

2.3.1.6 For territories in which Bell Atlantic provides Telephone Exchange Services, Bell Atlantic shall provide MCIIm with at least 1-2 months prior notification of local calling area changes, and generally publish any area code splits at least three (3) months prior to such splits going into effect.

2.3.1.7 **[RESERVED]** Bell Atlantic shall provide to MCIIm, via an electronic interface, a list by end office switch of all CLASS, CENTREX and all other features and functions and shall provide updates to such list at the time new features and functions become available.

2.3.2 Ordering and Provisioning for Resale Services

2.3.2.1 Bell Atlantic shall provide to MCIIm all intraLATA (when presubscription is available) and interLATA carriers available for subscriber selection based on a valid subscriber address.

2.3.2.2 **[RESERVED]**

2.3.2.3 Subject to the provisions of Part A, Section 22 (Confidentiality and Publicity) and in accordance with all Applicable Law and regulations, the providing Party shall provide the requesting Party with access to CPNI of a requesting Party subscriber without requiring the requesting Party to produce a signed LOA based on the requesting Party's representation that the subscriber has authorized the requesting Party to obtain such CPNI.

2.3.2.3.1 Bell Atlantic shall provide to MCIIm an electronic interface to Bell Atlantic subscriber information systems which

will allow MCIIm to obtain Bell Atlantic's current subscriber profile based on valid bill telephone number or working telephone number, including subscriber name, billing and service addresses, billed telephone number(s), and identification of features and services on the subscriber accounts, and, in response to a valid telephone number or address, allow MCIIm to obtain information on features and services available in the end office where subscriber's services are currently provisioned.

2.3.2.3.2 Until access is available via an electronic interface for subscriber profile information, MCIIm agrees that Bell Atlantic can obtain subscriber profile information in an interim manner. The Parties shall agree on and implement interim solutions for interfaces within forty-five (45) days after the Effective Date of this Agreement.

2.3.2.4 Bell Atlantic shall provide to MCIIm a list of Local Resale services, including new services and eligible trial offers and promotions, within sixty (60) days after the Effective Date of this Agreement, and shall provide updates to such information as soon as practicable after new features and functions become available.

2.3.2.5 Bell Atlantic shall provide to MCIIm mediated query-response via an electronic interface to Bell Atlantic information systems as soon as possible, but no later than April 1, 1997 to allow MCIIm to:

2.3.2.5.1 assign telephone number(s) (if the subscriber does not already have a telephone number or requests a change of telephone number);

2.3.2.5.2 schedule dispatch and installation appointments;

2.3.2.5.3 provide service availability dates; and

2.3.2.5.4 transmit status information on service orders. Until the electronic interface is available, Bell Atlantic agrees that it will provide status on service orders at the following critical intervals: acknowledgment and firm order confirmation according to interim procedures to be mutually developed.

2.3.3 Ordering and Provisioning for Unbundling

2.3.3.1 Bell Atlantic shall provide to MCIIm, upon reasonable request a listing of available, orderable services for Network Elements.

2.3.3.2 Bell Atlantic shall provide to MCIIm upon request such engineering design and layout information for Network Elements as may be mutually agreed.

2.3.3.3 Bell Atlantic shall provide to MCIIm an electronic interface as soon as practicable after applicable OBF standards are formally accepted which will allow MCIIm to determine service due date intervals and schedule appointments.

2.3.3.4 Where applicable, Bell Atlantic shall provide to MCIIm information on charges associated with special construction. Bell Atlantic agrees that it will, as soon as practicable, notify MCIIm of any charges associated with necessary construction.

2.3.3.5 On request from MCIIm, Bell Atlantic shall provide MCIIm with results from mechanized loop tests where such tests are Technically Feasible on a time and materials basis or at Commission-approved rates, as appropriate.

2.3.3.6 Bell Atlantic shall provide MCIIm with confirmation of circuit assignments at Parity.

2.4 Standards

2.4.1 General Requirements

2.4.1.1 MCIIm and Bell Atlantic shall agree upon the appropriate ordering and provisioning codes to be used for Network Elements. These codes shall apply to all aspects of the unbundling of that element or Combination of elements and shall be known as data elements as defined by the Telecommunications Industry Forum Electronic Data Interchange Service Order Subcommittee ("TCIF-EDI-SOSC").

Section 3. Billing and Recording

This Section 3 describes the requirements for Bell Atlantic to bill and record charges MCIIm incurs when purchasing services under this Agreement, except as may be otherwise specified in this Agreement.

3.1 Billable Information And Charges

3.1.1 Interim Billing

The interim billing process described herein shall commence upon the Effective Date and continue until replaced by the standard billing process described below, with such replacement by no later than the end of the third quarter 1997 for Local Resale services purchased from Bell Atlantic by MCIIm. With regard to Network Elements, interim billing shall commence upon the Effective Date and continue until replaced by standard Billing Operations System ("BOS") billing for such elements. Bell Atlantic shall implement the BOS release that includes Network

Element billing as soon as practicable after the release is available, and will promptly inform MCIIm in writing if, given the nature and magnitude of that release, implementation is likely to take more than sixty (60) days after the release is made available. Notwithstanding the foregoing, with respect to unbundled loops, unbundled switching and INP, Bell Atlantic will provide MCIIm with an implementation date for BOS billing within ninety (90) days after the Effective Date.

3.1.1.2 Except as otherwise provided in this Section 3, Bell Atlantic will use its existing billing systems to issue bills and invoices to MCIIm for amounts due under this Agreement. These bills and invoices will contain a summary of account charges with component elements and/or records when applicable. The Parties acknowledge that Bell Atlantic's existing billing system does not issue bills or invoices in accordance with national industry standard specifications in all respects.

3.1.1.3 Bell Atlantic will provide MCIIm with the capability to summarize by features and functions both monthly recurring and non-recurring charges. This capability may be satisfied by use of Bell Atlantic's CD-ROM billing for Resellers. Bell Atlantic shall cooperate with MCIIm on the testing and acceptance of interim billing procedures.

3.1.1.4 The providing Party will initially identify the purchasing Party's Billing Account Numbers (BAN) (or for MCIIm, the functionally equivalent thereof) and will not change them without ten (10) days advance written notice to the purchasing Party.

3.1.1.5 The providing Party will use a minimum of two BANs per state, one for residential customers and one for business customers. The Parties acknowledge that in Bell Atlantic's billing system, only 50,000 component accounts can be on one summary bill and that a new summary bill may be created when any MCIIm master account exceeds 45,000 component accounts.

3.1.1.6 Bell Atlantic will not use the 7th or the 14th day of the month for bill closing dates.

3.1.1.7 The providing Party will use reasonable efforts to transmit paper bills to the purchasing Party within ten (10) days of the bill closing date. If the providing Party fails to transmit an invoice within the time period specified above, the payment due date for that invoice will be extended by the number of days it is late.

3.1.2 Standard Billing

3.1.2.1 The providing Party will bill services in accordance with this Section 3 and at the rates set forth in Attachment I. The providing Party

will use commercially reasonable efforts to format its electronic bills in accordance with national industry standard specifications, as appropriate. These electronic bills will include a separate and unique billing code for, and the quantity of, each type of service purchased by the purchasing Party. The providing Party will jurisdictionally identify the charges on these bills wherever it has the information necessary to do so. Wherever the providing Party is unable to identify the jurisdiction of the service purchased by the purchasing Party, the Parties will jointly develop a process to determine the appropriate jurisdiction.

3.1.2.2 The providing Party will bill the purchasing Party on a monthly basis under this Agreement. These monthly bills will include all appropriate charges, credits and adjustments for the services that were ordered, established, utilized, discontinued or performed during the relevant billing period.

3.1.2.3 The providing Party and the purchasing Party will use reasonable commercial efforts to establish the same monthly billing date ("Bill Date") for each purchasing Party account within the state. The providing Party will include the Bill Date on each invoice transmitted to the purchasing Party. The payment due date (as described in this Attachment) shall be thirty (30) calendar days after the Bill Date. The providing Party will transmit all invoices within ten (10) calendar days after the Bill Date. Any invoice transmitted on a Saturday, Sunday or a day designated as a holiday by the Parties' bill processing departments will be deemed transmitted on the next business day. If the providing Party fails to transmit an invoice within the time period specified above, the payment due date for that invoice will be extended by the number of days it is late.

3.1.2.4 The providing Party will use the same account identification numbers each month, unless it provides the purchasing Party with ten (10) days advance written notice of any change. If either Party requests an additional copy(ies) of a bill, such Party shall pay the other Party a reasonable fee per additional bill copy, unless such copy was requested due to an error or omission of the providing Party.

3.1.2.5 Except as otherwise specified in this Agreement, each Party shall be responsible for (i) all costs and expenses it incurs in complying with its obligations under this Agreement; and (ii) the development, modification, technical installation and maintenance of any systems or other infrastructure which it requires to comply with and to continue complying with its responsibilities and obligations under this Agreement.

3.1.2.6 The providing Party and purchasing Party will identify a contact person for the handling of any questions or problems that may arise during the implementation and performance of the terms and conditions of this Attachment.

3.1.3 Meet-Point Billing

3.1.3.1 For purposes of this Section 3.1.3, "Tandem Party" shall mean the Party connected to the IXC. The "End Office Party" shall mean the Party using the Tandem Party to reach the IXC. The End Office Party and the Tandem Party will utilize commercially reasonable efforts, individually and collectively, to establish meet-point billing ("MPB") arrangements to provide a Common Transport option to switched Access Services subscribers via an access Tandem Switch in accordance with the Meet-Point Billing guidelines adopted by and contained in the OBF's MECAB and MECOD documents, except as modified herein and the Tandem Party's Tariffs. The arrangements described in this section are intended to be used to provide switched Exchange Access Service that originates and/or terminates on a Telephone Exchange Service that is provided by either Party, where the transport component of the switched Exchange Access Service is routed through a Tandem Switch that is provided by the Tandem Party.

3.1.3.2 In each LATA, the Parties shall establish MPB arrangements between the applicable rating point/the Tandem Party local serving Wire Center combinations.

3.1.3.3 Interconnection for the MPB arrangement shall occur at the applicable access tandems or functional equivalent in the LATA, unless otherwise agreed to by the Parties.

3.1.3.4 The Parties will use commercially reasonable efforts, individually and collectively, to maintain provisions in their respective federal and state access Tariffs, and/or provisions within the National Exchange Carrier Association ("NECA") Tariff No. 4, or any successor Tariff, to reflect the MPB arrangements identified in this Agreement, in MECAB and in MECOD.

3.1.3.5 Each Party will implement the "multiple bill/single tariff" or "multiple bill/multiple tariff" option, as appropriate, in order to bill any IXC for the portion of the jointly provided Access Service provided by that Party. For all traffic carried over MPB arrangements using Network Elements or interconnection services provided under this Agreement, the Parties shall bill each other all applicable rates specified in this Agreement.

3.1.3.6 The rate elements to be billed by each Party are as set forth below. The actual rate values for each Party's affected Access Service rate element shall be the rates contained in that Party's own effective federal and state access Tariffs, or other document that contains the terms under which that Party's Access Services are offered. The MPB billing

percentages for each rating point/Tandem Party local serving Wire Center Combination shall be calculated in accordance with the formula set forth in subsection 3.1.3.15 below.

3.1.3.6.1 Rate Elements under Meet-Point Billing

Interstate Access - Terminating to or originating from End Office Party subscribers

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	End Office Party
Local Switching	End Office Party
Interconnection Charge	End Office Party
Local Transport Facility/ Tandem Switched Transport Per Mile	Based on negotiated billing percentage
Tandem Switching	Tandem Party
Local Transport Termination/ Tandem Switched Transport Fixed	Tandem Party
Entrance Facility	Tandem Party
800 Database Query	Party that performs query

Intrastate Access - Terminating to or originating from End Office Party subscribers (Pre-LTR tariff)

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	End Office Party
Local Switching	End Office Party
Transport	Based on negotiated billing percentage

Intrastate Access - Terminating to or originating from End Office Party subscribers (Post-LTR tariff)

<u>Rate Element</u>	<u>Billing Company</u>
Carrier Common Line	End Office Party
Local Switching	End Office Party
Interconnection Charge	End Office Party
Local Transport Facility/ Tandem Switched Transport Per Mile	Based on negotiated billing percentage
Tandem Switching	Tandem Party
Local Transport Termination/ Tandem Switched Transport Fixed	Tandem Party
Entrance Facility	Tandem Party
800 Database Query	Party that performs query

3.1.3.7 Each Party shall provide the other Party with the billing name, billing address, and carrier identification code ("CIC") of the IXC, and identification of the IXC's local serving Wire Center in order to comply with the MPB notification process as outlined in the MECAB document via facsimile or such other media as the Parties may agree to, all in accordance with a Party's existing offerings.

3.1.3.8 The Tandem Party will provide the End Office Party with the switched access detail usage data (category 1101XX records) on magnetic tape or via such other media as the Parties may agree to, no later than ten (10) business days of bill rendering.

3.1.3.9 The End Office Party will provide the Tandem Party with the switched access detail usage data (category 1101XX records) on magnetic tape or via such other media as the Parties may agree to, no later than ten (10) business days after the date the usage occurred.

3.1.3.10 The Parties will coordinate and exchange the billing account reference ("BAR") and billing account cross reference ("BACR") numbers or OCN, as appropriate, for the MPB arrangements described in this Agreement. Each Party will notify the other if the level of billing or other BAR/BACR elements change, resulting in a new BAR/BACR number.

3.1.3.11 Errors in MPB data exchanged by the Parties may be discovered by the End Office Party, the Tandem Party or the billable IXC. Both the End Office Party and the Tandem Party agree to provide the other Party with notification of any discovered errors as soon as practicable following such discovery. The other Party shall attempt to correct the error and resubmit the data as soon as practicable after notification. In the event the errors cannot be corrected within the time period specified above, the erroneous data shall be considered lost. If MPB data is lost due to intractable errors or otherwise, both Parties shall cooperate to reconstruct the lost data and, if such reconstruction is not possible, shall accept a reasonable estimate of the lost data based upon prior usage data. Each Party shall be responsible for any lost revenue arising from its inability to relocate lost data that is adequate to support the other Party's billing of IXCs' subscriber(s).

3.1.3.12 Neither Party will charge the other for the services rendered, or for information provided pursuant to this Section 3, except those MPB and other charges set forth herein. Both Parties will identify a contact person to handle any MPB questions or problems.

3.1.3.13 MPB will apply for all traffic bearing the 500, 900, 800/888 (to the extent provided by an IXC) or any other non-geographic NPA which may be likewise designated for such traffic in the future.

3.1.3.14 In the event a Party determines to offer Telephone Exchange Services in a LATA in which the other Party operates an access Tandem Switch, the Tandem Party shall permit and enable the End Office Party to subtend the Tandem Party access Tandem Switch(es) designated for the Tandem Party end offices in the area where the End Office Party rating points(s) associated with the NPA-NXX(s) to/from which the switched Exchange Access Services are homed. The MPB billing percentages for each new rating point/the End Office Party local serving Wire Center Combination shall be calculated according to the following formula:

$$a / (a + b) = \text{End Office Party Billing Percentage; and}$$

$$b / (a + b) = \text{Tandem Party Billing Percentage}$$

where:

a = the airline mileage between the rating point and the actual point of interconnection for the MPB arrangement; and

b = the airline mileage between the Tandem Party local serving Wire Center and the actual point of interconnection for the MPB arrangement.

The End Office Party shall inform the Tandem Party of the LATA in which it intends to offer Telephone Exchange Services and its calculation of the billing percentages which should apply for such arrangement. Within ten (10) business days of the End Office Party's delivery of notice to the Tandem Party, the Tandem Party and the End Office Party shall confirm the new rating point/Tandem Party local serving Wire Center Combination and billing percentages. Nothing in this subsection shall be construed to limit the End Office Party's ability to interconnect with the Tandem Party in additional LATAs by means of interconnection at a local serving Wire Center, to the extent that such interconnection is permitted under this Agreement.

3.1.4 Collocation

3.1.4.1 Bell Atlantic agrees to issue a separate bill to MCIIm for any Collocation capital expenditures (*e.g.*, costs associated with building the "cage") incurred under this Agreement. Bell Atlantic will send these separate bills for Collocation capital expenses to the location specified by MCIIm. Bell Atlantic will bill all other non-capital recurring Collocation rates to MCIIm in accordance with this Section 3.

3.1.5 Local Number Portability

3.1.5.1 The providing Party agrees to track and record the purchasing Party's Interim Number Portability usage. After the Commission establishes a final competitively neutral Interim Number Portability funding mechanism and rate, the providing Party will bill the purchasing Party for the usage that accrued before the Commission's final decision. The purchasing Party agrees to pay these bills with appropriate Commission-determined interest charges, but reserves the right to challenge the accuracy of the tracking.

3.1.5.2 Under the INP arrangement in this Agreement, terminating compensation on calls to ported numbers should be received by each customer's chosen local service provider as if each call to the customer had been originally addressed by the caller to a telephone number bearing an NPA-NXX directly assigned to the customer's chosen local service provider. In order to accomplish this objective where INP is employed, the Parties shall utilize the process set forth in this Subsection 3.1.5.2 whereby terminating compensation on calls subject to INP will be passed from the Party that performs the INP to the other Party for whose subscriber the INP is provided.

3.1.5.2.1 The Parties shall individually and collectively make best efforts to track and quantify INP traffic between their networks based on the CPN of each call by identifying CPNs which are ported numbers. MCI shall charge Bell Atlantic for each minute of INP traffic at the INP traffic rate specified in Subsection 3.1.5.2.3 in lieu of any other compensation charges for terminating such traffic, except as provided in Subsection 3.1.5.2.2.

3.1.5.2.2 By the interconnection activation date within a LATA, the Parties shall jointly estimate for the prospective six (6) months, based on historic data of all traffic in the LATA, the percentages of such traffic that, if dialed to telephone numbers bearing NPA-NXXs directly assigned to MCI (as opposed to the ported number), would have been subject to: (i) local compensation ("Local Traffic"); (ii) appropriate intrastate FGD charges ("Intra Traffic"); (iii) interstate FGD charges ("Inter Traffic"); or (iv) handling as transit traffic. On the date which is six (6) months after the interconnection activation date, and thereafter on each succeeding six month anniversary of such interconnection activation date, the Parties shall establish new INP traffic percentages in the prospective six (6) month period, based on Bell Atlantic's choice of actual INP traffic percentages from the preceding six (6) month period or historic data of all traffic in the LATA.

3.1.5.2.3 The INP traffic rate shall be equal to the sum of:

(Local Traffic percentage times the rate for local traffic transportation and termination set forth in Attachment I)
plus
(Intra Traffic percentage times MCIIm's effective intrastate FGD rates)
plus
(Inter Traffic percentage times MCIIm's effective interstate FGD rates).

MCIIm shall compensate Bell Atlantic for its billing and collection of charges for the intrastate and interstate FGD Access Services provided by MCIIm to a third-party through the greater of: (i) the difference between the intrastate and interstate FGD rates of MCIIm and Bell Atlantic; or (ii) three percent (3%) of Bell Atlantic's intrastate and interstate FGD revenues for ported numbers. Under no circumstances shall Bell Atlantic, in performing the billing and collections service on behalf of MCIIm, be obligated to pass through more than ninety-seven percent (97%) of its FGD access charge to MCIIm in connection with any given ported call.

3.1.6 Electronic Transmissions

3.1.6.1 The providing Party agrees to transmit bills and invoices in the appropriate CABS or SECAB format electronically via Connect:Direct (formerly known as Network Data Mover) to the purchasing Party at an agreed upon location.

3.1.7 Tape or Paper Transmissions

3.1.7.1 In the event that the Connect:Direct capabilities of either Party are not available, the Parties will transmit billing information to each other via magnetic tape or paper, as agreed to by the Parties. The Parties shall cooperate in determining such alternate billing methods, when necessary.

3.1.8 Payment Of Charges

3.1.8.1 Payments of all undisputed amounts due under this Agreement shall be made in U.S. Dollars no later than the due date on an invoice or bill. At least thirty (30) days prior to the first transmission of a bill or invoice under this Agreement, the Parties shall provide each other the name and address to whom payment shall be made, including where appropriate, the respective banks, and account and routing numbers. If such banking information changes, each Party shall provide the other Party at least sixty (60) days written notice of the change and such notice shall include the new banking information. In the event the purchasing Party receives multiple bills or invoices from the providing Party which

are payable on the same date, the purchasing Party may remit one payment for the sum of all bills and invoices. Each Party shall provide the other Party with a contact person for the handling of payment questions or problems under this Agreement.

3.1.8.2 Undisputed amounts which are not paid by the due date stated on the providing Party's bill shall be subject to a late payment charge. The late payment charge shall be in the amount provided in Bell Atlantic's interstate access tariff; provided, that in the absence of an interstate access tariff late payment charge, the late payment charge shall be in an amount specified by the providing Party, which shall not exceed a rate of one and one-half percent (1.5%) of the overdue amount (including any unpaid, previously billed late payment charges) per month.

3.1.8.3 Although it is the intent of each Party as a providing Party to submit timely and accurate bills, failure by a providing Party to present bills to a purchasing Party in a timely or accurate manner shall not constitute a breach or default of this Agreement, or a waiver of a right of payment of the incurred charges, by the providing Party. Closure of a specific billing period shall occur by joint agreement of the Parties whereby the Parties agree that such billing period is closed to any further charges, analysis and financial transactions, except those resulting from an Audit or for charges due under a "true-up" of charges pursuant to Sections 3.1.5 hereunder. Closure shall take place within nine (9) months of the Bill Date. The month being closed represents those charges that were billed or should have been billed by the respective Bill Date.

3.1.9 Billing Dispute

3.1.9.1 Subject to and without waiver of any of the providing Party's rights under Section 21.3 of Part A of this Agreement, each Party agrees to notify the other Party upon the discovery of a billing dispute. In the event of a billing dispute, the Parties will endeavor to resolve the dispute within sixty (60) days of the Bill Date on which such disputed charges appear. Resolution of the dispute is expected to occur at the first level of management resulting in a recommendation for settlement of the dispute and closure of a specific billing period. If the issues are not resolved within the allotted time frame, the following resolution procedure will begin:

3.1.9.1.1 If the dispute is not resolved within sixty (60) days of the Bill Date, the dispute will be escalated to the second level of management for each of the respective Parties for resolution.

3.1.9.1.2 If the dispute is not resolved within ninety (90) days of the Bill Date, the dispute will be escalated to the third level of management for each of the respective Parties for resolution.

3.1.9.1.3 If the dispute is not resolved within one hundred and twenty (120) days of the Bill Date, the dispute will be resolved in accordance with the dispute resolution procedures set forth in Part A of this Agreement.

3.1.9.2 Upon resolution of the dispute, the relevant Party shall pay all amounts determined to have been due in accordance with Section 21.3 of Part A.

3.2 Standards

3.2.1 At least twenty (20) days prior to the providing Party transmitting a bill or invoice to the purchasing Party for the first time via electronic transmission or tape, or at least thirty (30) days prior to changing mechanized formats (i.e., from SECAB to CABS), the providing Party will transmit to the purchasing Party a test bill or invoice in the appropriate mechanized format. The providing Party will also provide to the purchasing Party the providing Party's originating or state level company code, so that it may be added to the purchasing Party's internal tables at least twenty (20) calendar days prior to testing or a change in the providing Party's originating or state level company code. The purchasing Party will notify the providing Party within the time period agreed to by the Parties if the test bill or invoice transmission fails to meet the purchasing Party's testing specifications. The Parties will work cooperatively to resolve any problems identified by the transmission of the test bill or invoice.

3.2.2 As mutually agreed upon prior to any change in existing formats or change to a different format, the providing Party shall send to the purchasing Party connectivity bill data in the appropriate mechanized format for testing to ensure that the bills can be processed and that the bills comply with the requirements of this Attachment. The providing Party agrees that it shall not send to the purchasing Party bill data in the new mechanized format until such bill data has met the testing specifications as set forth in this subsection. The providing Party shall provide the purchasing Party documentation on proposed format changes within ninety (90) days of the implementation of such changes.

3.2.3 The providing Party agrees that if it transmits data to the purchasing Party in a mechanized format, the providing Party shall also comply with the following specifications which are not contained in CABS or SECAB guidelines, but which are necessary for the purchasing Party to process connectivity billing information and data:

3.2.3.1 The Bill Date shall not contain spaces or non-numeric values.

3.2.3.2 Each Connectivity Bill must contain at least one detail record, unless no usage has been recorded. Industry standards require that zero bills be rendered.

3.2.3.3 Any “from” date should be less than the associated “thru” date and neither date can contain spaces, unless otherwise permitted under applicable industry standards.

3.2.3.4 The invoice number must not have embedded spaces or low values.

3.2.4 The providing Party agrees to use commercially reasonable efforts to transmit to the purchasing Party accurate and current bills and invoices. If necessary beyond the provisions of this Section 3, the Parties agree to negotiate implementations of controls and processes to facilitate the transmission of accurate and current bills and invoices.

Section 4. Provision Of Subscriber Usage Data

For Local Resale and Local Switching, this Section 4 sets forth the terms and conditions for Bell Atlantic’s provision of Recorded Usage Data (as defined in Section 4.1.1.3 below) to MCIIm in connection with the provision to MCIIm of Bell Atlantic’s Switch-based services.

4.1 Procedures

4.1.1 General

4.1.1.1 Bell Atlantic shall use commercially reasonable efforts to comply with OBF and other standards set forth in this Section 4. To satisfy this requirement, Bell Atlantic and MCIIm shall mutually agree to the interpretation of any such standards referred to in this Section 4.

4.1.1.2 Bell Atlantic shall use commercially reasonable efforts to comply with Bellcore-documented EMR standards and the additional standards set forth in this Section 4 when recording and transmitting Recorded Usage Data to MCIIm.

4.1.1.3 Bell Atlantic shall record such Recorded Usage Data originating from MCIIm subscribers that Bell Atlantic records with respect to its own customers in the ordinary course of business, using services ordered by MCIIm. “Recorded Usage Data” as used in this Section 4 means billing detail recorded in the normal course of business by Bell Atlantic including, but not limited to, billing detail recorded for the following categories of information:

4.1.1.3.1 Completed calls;

4.1.1.3.2 Use of CLASS/LASS/Custom features;

4.1.1.3.3 Calls to Directory Assistance where Bell Atlantic provides such service to an MCIIm subscriber;

4.1.1.3.4 Calls completed via Bell Atlantic's Operator Services where Bell Atlantic provides such service to MCIIm's subscribers; and

4.1.1.3.5 CENTREX usage recorded by Bell Atlantic on its switches in the normal course of business.

4.1.1.4 **Retention of Records.** Bell Atlantic shall maintain a machine readable back-up copy of the message detail provided to MCIIm for the Recorded Usage Data described above for a minimum of forty-five (45) calendar days.

4.1.1.5 Bell Atlantic shall provide to MCIIm Recorded Usage Data for MCIIm subscribers in accordance with the terms herein. Bell Atlantic shall not submit other carrier local usage data as part of MCIIm Recorded Usage Data.

4.1.1.6 MCIIm, and not Bell Atlantic, shall bill MCIIm subscribers for services purchased by MCIIm hereunder.

4.1.1.7 For Local Resale, Bell Atlantic shall record and rate all calls to information service providers (*i.e.*, 976 service calls) and include such information on the data usage file ("DUF") provided to MCIIm hereunder. MCIIm shall bill such calls directly to its subscribers. To the extent either Party offers variable rated service (*e.g.*, 976, 554, and/or 915, as applicable), the Parties shall agree to separate arrangements for the billing and compensation of such services. With respect to unbundled Local Switching, Bell Atlantic shall record, and provide to MCIIm, unrated calls to information service providers (*i.e.*, 976 service calls) and include such information on the data usage file ("DUF") provided to MCIIm hereunder.

4.1.1.8 Bell Atlantic shall provide Recorded Usage Data to MCIIm billing locations as reasonably designated by MCIIm.

4.1.1.9 Bell Atlantic shall establish a CLEC sales and service center (CSSC) or similar function to serve as MCIIm's single point of contact to respond to MCIIm's call usage, data error, and record transmission inquiries.

4.1.1.10 Bell Atlantic shall provide MCIIm with a single point of contact, remote identifiers ("IDs"), and expected usage data volumes for each sending location.

4.1.1.11 MCIIm shall provide a single point of contact responsible for receiving usage transmitted by Bell Atlantic and receiving usage tapes from a courier service in the event of a facility outage.

4.1.1.12 Bell Atlantic shall bill MCIIm, and MCIIm shall pay such charges for, Recorded Usage Data at the prices set forth in Attachment I. Billing and payment shall be in accordance with the applicable terms and conditions set forth in Attachment VIII, Section 3.

4.1.2 **Incomplete Calls.** No charges shall be assessed by Bell Atlantic for incomplete call attempts, unless Bell Atlantic assesses a charge for such incomplete call attempts to its subscribers.

4.1.3 **Central Clearinghouse & Settlement (ICS/Non-ICS Incollects/Outcollects)**

4.1.3.1 Bell Atlantic shall comply with clearinghouse and incollect/outcollect procedures to be determined by the Parties from time to time.

4.1.3.2 Bell Atlantic shall reasonably cooperate with MCIIm in its development of a neutral third-party in and out-collect process developed for intra-region alternately billed messages.

4.1.3.3 Bell Atlantic shall settle with MCIIm intra-region and inter-region billing exchanges relating to calling card calls, bill-to-third-party calls and collect calls.

4.1.4 **Lost Data**

4.1.4.1 Loss of Recorded Usage Data - MCIIm Recorded Usage Data determined to have been lost, damaged or destroyed as a result of an error or omission by Bell Atlantic in its performance of the recording function shall, upon MCIIm's request, be recovered by Bell Atlantic at no charge to MCIIm. In the event the data cannot be recovered by Bell Atlantic, Bell Atlantic shall estimate the messages and associated revenue, with assistance from MCIIm, based upon the method described below. This method shall be applied on a consistent basis, subject to modifications agreed to by Bell Atlantic and MCIIm. This estimate shall be used to adjust amounts MCIIm owes Bell Atlantic for services Bell Atlantic provides in conjunction with the provision of Recorded Usage Data.

4.1.4.2 Partial Loss - Bell Atlantic shall review its daily controls to determine if data has been lost. When there has been a partial loss, actual message and minute volumes shall be reported, if possible. Where actual data are not available, a full day shall be estimated for the recording entity, as outlined in the following paragraphs. The amount of the partial

loss is then determined by subtracting the data actually recorded for such day from the estimated total for such day.

4.1.4.3 Complete Loss - Estimated message and minute volumes for each loss consisting of an entire AMA tape or entire data volume due to its loss prior to or during processing, lost after receipt, degaussed before processing, receipt of a blank or unreadable tape, or lost for other causes, shall be reported.

4.1.4.4 Estimated Volumes - From message and minute volume reports for the entity experiencing the loss, Bell Atlantic shall secure message/minute counts for the four (4) corresponding days of the weeks preceding that in which the loss occurred and compute an average of these volumes.

4.1.4.5 If the day of loss is not a holiday but one (1) (or more) of the preceding corresponding days is a holiday, use additional preceding weeks in order to procure volumes for two (2) non-holidays in the previous two (2) weeks that correspond to the day of the week that is the day of the loss.

4.1.4.6 If the loss occurs on a weekday that is a holiday (except Christmas and Mother's day), Bell Atlantic shall use volumes from the two (2) preceding Sundays.

4.1.4.7 If the loss occurs on Mother's Day or Christmas day, Bell Atlantic shall use volumes from that day in the preceding year multiplied by a growth rate specified by MCIIm.

4.1.4.8 MCIIm may also request data be provided that has previously been successfully provided by Bell Atlantic to MCIIm. Bell Atlantic shall re-provide such data, if available. Any charges to MCIIm will be negotiated on a case by case basis.

4.1.5 Testing, Changes and Controls

4.1.5.1 The Recorded Usage Data, EMR format, content, and transmission process shall be tested as set forth in this subsection 4.1.5 and, if necessary, as otherwise agreed by the Parties.

4.1.5.2 **Interface Testing.** The purpose of this test is to determine whether the usage records can be sent by Bell Atlantic to MCIIm and can be accepted and processed by MCIIm. Bell Atlantic shall provide a test file to MCIIm's designated regional processing center ("RPC") in the format that shall be used for Bell Atlantic's live day-to-day processing. The file shall contain one (1) full day's production usage and all potential call types. MCIIm shall also provide Bell Atlantic with the agreed-upon control reports as part of this test.

4.1.5.3 Pursuant to a separate testing agreement between the Parties, for testing purposes Bell Atlantic shall provide MCIIm with Bell Atlantic recorded, unrated usage for a minimum of five (5) consecutive days. MCIIm shall provide Bell Atlantic with the message validation reports associated with test usage.

4.1.5.4 **Test File.** Test data should be transported via industry standard on-line transmission software. In the event that courier service must be used to transport test media, the physical tape characteristics to be used are described in Subsection 4.2.3.2.

4.1.5.5 **Periodic Review.** Control procedures shall be part of the normal production interface management function. Breakdowns which impact the flow of usage data between Bell Atlantic and MCIIm shall be identified and jointly resolved as they occur. The resolution may include changes to control procedures to avoid similar problems in the future. Any changes to control procedures shall be mutually agreed upon by MCIIm and Bell Atlantic.

4.1.5.6 **System and Software Changes**

4.1.5.6.1 When Bell Atlantic plans to introduce any system or software changes which impact the format or content structure of the usage data feed to MCIIm, designated Bell Atlantic personnel shall notify MCIIm no less than one hundred twenty (120) calendar days before such changes are implemented, unless a shorter time frame is mutually agreed to by the Parties, which agreement shall not be unreasonably withheld.

4.1.5.6.2 Bell Atlantic shall communicate the projected changes to MCIIm in reasonable detail to enable MCIIm to determine potential impacts on processing.

4.1.5.6.3 MCIIm may arrange to have its usage data tested utilizing the modified system or software when the latter are ready for testing.

4.1.5.6.4 If it is necessary for Bell Atlantic to make changes in the schedule, content or format of usage data transmitted to MCIIm, Bell Atlantic shall notify MCIIm.

4.1.5.7 **Requested Software Changes**

Bell Atlantic will consider reasonable requests for software changes that impact the format or content structure of the usage data feed to MCIIm.

The Parties shall mutually agree on the terms and conditions governing any such changes that Bell Atlantic agrees to implement.

4.1.5.8 **Changes to Data Exchange Controls**

Bell Atlantic will provide current data exchange controls to MCIIm promptly following the execution of this Agreement. Bell Atlantic shall notify MCIIm at least ninety (90) calendar days before such changes are implemented, unless a different time frame is mutually agreed to by the Parties and such consent shall not be unreasonably withheld.

4.1.5.9 **Verification Of Changes**

4.1.5.9.1 Based on the detailed description of material changes furnished by Bell Atlantic, MCIIm and Bell Atlantic personnel shall, as appropriate:

4.1.5.9.1.1 Determine the type of change(s) to be implemented.

4.1.5.9.1.2 Develop a comprehensive test plan.

4.1.5.9.1.3 Arrange for review of modified controls, if applicable.

4.1.5.10 **Introduction of Changes**

4.1.5.10.1 When any applicable testing requirements have been met, designated MCIIm and Bell Atlantic personnel shall develop an implementation plan.

4.2 **Information Exchange and Interfaces**

4.2.1 **Core Billing Information**

4.2.1.1 Bell Atlantic shall provide MCIIm with unrated industry standard EMR records associated with all intraLATA toll and local usage recorded on MCIIm's behalf. MCIIm shall be given notification thirty (30) days prior to implementation of a new type and/or category of record.

4.2.1.2 Bell Atlantic shall provide to MCIIm rated EMR records for alternative billed calls (*e.g.*, collect and billed to third number calls) and pursuant to Section 4.1.1.7.

4.2.1.3 **Data Delivery Schedules.** Data shall be delivered to MCIIm by Bell Atlantic five (5) days per week unless otherwise negotiated, except for weeks containing MCIIm and/or Bell Atlantic Data Center holidays.

Bell Atlantic and MCIIm shall exchange schedules of designated Data Center holidays. Bell Atlantic shall provide its transmission schedule to MCIIm.

4.2.2 Product/Service Specific

4.2.2.1 Bell Atlantic shall provide MCIIm a 42-50-01 record to support any special features star services resold by MCIIm.

4.2.3 Information Transport

4.2.3.1 Bell Atlantic and MCIIm shall jointly provide the transport facility for transmitting usage and billing data between Bell Atlantic locations and MCIIm locations as set forth in this Section 4.2. MCIIm shall be responsible for the circuit between the locations. Each Party shall be responsible for any software or hardware needed at its end of the circuit. Bell Atlantic shall transmit via NDM/Connect:Direct. In the event usage transfer cannot be accommodated by NDM because of extended (one (1) business day or longer) facility outages, Bell Atlantic shall contract for a courier service to transport the data via tape cartridge. The Party responsible for the outage shall incur the cost of transport.

4.2.3.2 Bell Atlantic shall comply with the following standards when data is transported to MCIIm on tape or cartridge via a courier. The data shall be in fixed or variable block format as mutually agreed by the Parties and be in the following format:

Tape: 9-track, 6250 (or 1600) BPI (Bytes per inch)
Cartridge: 38,000 BPI
LRECL: 2,472 Bytes
Parity: Odd
Character Set: Extended Binary Coded Decimal Interchange Code ("EBCDIC")
External labels: Exchange Carrier Name, Dataset Name ("DSN") and volume serial number
Internal labels: IBM Industry OS labels shall be used. They consist of a single volume label and two sets of header and trailer labels.

4.2.4 Rejected Recorded Usage Data

Any messages that cannot be rated and/or billed by MCIIm due to an error or omission by Bell Atlantic may be returned to Bell Atlantic via NDM. Returned messages shall be sent directly to Bell Atlantic in EMR format. Standard EMR return codes shall be utilized. Bell Atlantic shall investigate such returned records and use reasonable efforts to rectify the error or omission.

4.2.4.1 Bell Atlantic must return EMR/EMI records to Bell Atlantic’s billing and collections customers with the OBF standard message reject code which indicates that Bell Atlantic no longer serves the end user and which includes the OCN/local service provider ID of the new local service provider/Reseller serving the end user.

4.2.5 Interfaces

4.2.5.1 MCIIm shall notify Bell Atlantic of resend requirements if a pack or entire dataset must be replaced due to pack rejection, damage in transit, dataset name failure, etc.

4.2.5.2 Notification of pack rejection shall be made by MCIIm within one (1) business day of processing. Bell Atlantic shall use reasonable efforts to correct and retransmit rejected packs within twenty-four (24) hours, or within an alternate timeframe negotiated on a case by case basis.

4.2.5.3 A pack shall contain a minimum of one message record or a maximum of 9,999 message records plus a pack header record and a pack trailer record. A file transmission contains a maximum of 99 packs. A dataset shall contain a minimum of one pack. The providing Party shall provide the purchasing Party one dataset per Revenue Accounting Office (“RAO”) sending location, with the agreed upon RAO/OCN populated in the header and trailer records.

4.2.6 Formats and Characteristics

4.2.6.1 Rated in collect messages should be transmitted via the NDM and can be intermingled with the unrated messages. No special packing is needed.

4.2.6.2 **EMR.** Bell Atlantic shall provide Recorded Usage Data in the EMR format and by category, group and record types as specified herein, and shall be transmitted, via a direct feed, to MCIIm. The following is a list of EMR records that MCIIm can expect to receive from Bell Atlantic:

Header Record	20-21-01
Trailer Record	20-21-02
Detail Records	*01-01-01, 06, 07, 08, 09, 14, 16, 17, 18, 31, 32,35, 37, 80, 81, 82, 83, 42-50-01, 10-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37
Credit Records	03-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,
Rated Credits	41-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,
Cancel Records	51-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,

Correction Records 71-01-01, 06, 08, 09, 14, 17, 18, 31, 32, 35, 37, 80, 81, 82,

*Category 01 is utilized for Rated Messages; Category 10 is utilized for Unrated Messages. Category 10 records are to have indicator 13 populated with a value of 5.

4.2.6.3 Bell Atlantic shall reasonably comply with the most current version of Bellcore standard practice guidelines for formatting EMR records, or any superseding industry standards.

4.2.6.4 The Interfacing Bell RAO, OCN, and remote identifiers shall be used by MCIIm to control invoice sequencing and each shall have its own invoice controls. The OCN shall also be used to determine where the message returns file, containing any misdirected and unguidable usage, shall be sent.

4.2.6.5 The file's record format shall be variable block, unless otherwise agreed. The size and the logical record length shall be 2472 bytes.

4.2.6.6 Bell Atlantic shall not sort Recorded Usage Data for MCIIm except upon terms and conditions that may be mutually agreed by the Parties, including additional charges for such services.

4.2.6.7 Bell Atlantic shall transmit the usage data to MCIIm using dataset naming conventions reasonably prescribed by MCIIm.

4.2.7 Controls

4.2.7.1 MCIIm shall test and certify the NDM interface to ensure the accurate receipt of Recorded Usage Data.

4.2.7.2 Header and trailer records shall be populated in positions 13-27 with the following information for MCIIm:

Position	
13-14	Invoice numbers (1-99)
15-16	Bell Co. ID number or zeroes
17-19	Interfacing Bell RAO Code
20-23	MCIIm OCN value 7299
24-27	0000

The trailer grand total record count shall be populated with total records in pack (excluding header & trailer).

4.2.7.3 **Control Reports.** MCIIm shall accept input data provided by Bell Atlantic in EMR format in accordance with the requirements and

specifications detailed in Section 4. In order to ensure the overall integrity of the usage being transmitted from Bell Atlantic to MCIIm, data transfer control reports shall be provided by MCIIm. These reports shall be provided by MCIIm to Bell Atlantic on a daily or otherwise negotiated basis and reflect the results of the processing for each pack transmitted by Bell Atlantic.

4.2.7.4 Control Reports - Distribution. Since Bell Atlantic is receiving control reports, dataset names shall be established as mutually agreed.

4.2.7.5 Message Validation Reports. MCIIm shall provide once per day (or as otherwise negotiated) message validation reports to the designated Bell Atlantic system control coordinator. These reports shall be provided for all data received within Bell Atlantic Local Resale and Local Switching feed and shall be transmitted concurrent with the daily usage file schedule.

4.2.7.6 Incollect Pack Processing. MCIIm shall provide to Bell Atlantic a standard EMR report showing vital statistics and control totals for packs rejected and accepted and dropped messages. MCIIm will provide this in the following report formats and control levels:

Company Name
 Reseller Total Messages processed in a pack
 Packs processed shall reflect the number of messages initially erred and accepted within a pack
 Reseller Total Packs processed

4.3 Miscellaneous

4.3.1 When requested by MCIIm for law enforcement purposes, Bell Atlantic shall provide MCIIm with Recorded Usage Data as soon as practicable following such request. If not available in EMR format, the Recorded Usage Data may be provided in AMA format.

4.3.2 Bell Atlantic shall include the working telephone number of the originating dial tone line on each EMR call record provided to MCIIm.

4.3.3 End user subscriber usage records and station level detail records shall be in packs in accordance with EMR standards.

4.3.4 Bell Atlantic shall use its best commercially reasonable efforts to provide MCIIm with Recorded Usage Data to be provided hereunder not more than three (3) business days after termination of the call for which usage data is to be provided.

Section 5. Maintenance

5.1 General Requirements

5.1.1 The Parties shall provide repair, maintenance, testing, and surveillance for all Local Resale services, interconnection, and Network Elements in accordance with the terms and conditions of this Section 5 of Attachment VIII.

5.1.2 The Parties shall cooperate with each other to meet maintenance standards for all Local Resale services, interconnection, and Network Elements ordered under this Agreement, as specified in this Section 5 of Attachment VIII. Such maintenance standards shall include, without limitation, standards for testing, network management, call gapping, and notification of standards upgrades as they become available.

5.1.3 Bell Atlantic shall provide repair service that is at Parity in quality to that provided to Bell Atlantic subscribers; trouble calls from MCI shall receive response time priority that is at Parity to that of Bell Atlantic subscribers. MCI shall provide repair service that is at Parity in quality to that provided to MCI subscribers; trouble calls from Bell Atlantic shall receive response time priority that is at Parity to that of MCI subscribers.

5.1.4 The Parties shall provide scheduled and non-scheduled maintenance at Parity, including, without limitation, required and recommended maintenance intervals and procedures, for all Local Services, interconnection, and Network Elements under this Agreement that it currently provides for the maintenance of its own network. Each Party will provide reasonable notice of such maintenance if it is known to or is reasonably foreseeable to materially affect the other Party's subscribers.

5.1.4.1 Plans for scheduled maintenance shall include, at a minimum, the following information: description of work to be completed and date and time work is scheduled to be completed.

5.1.5 The Parties shall advise each other of all non-scheduled maintenance, testing, monitoring, and surveillance activity to be performed on any Network Element, including, without limitation, any hardware, equipment, software, or system, providing service functionality which is known or is reasonably foreseeable to materially affect the other Party's subscribers.

5.1.6 The Parties shall provide each other with a summary description of any and all network emergency restoration plans and network disaster recovery plans, however denominated, which are in place during the term of this Agreement. Such plans, if warranted by the nature thereof, shall include the following: (i) provision for notification to the other Party of the existence, location, and source of any emergency network outage reportable to the FCC that materially affects subscribers of the other Party, via fax to a single number designated by the other Party; (ii) establishment of a single point of contact responsible for initiating

and coordinating the restoration of all Local Resale services, interconnection, or Network Elements; (iii) provision of status of restoration efforts and problem resolution during the restoration process, via fax to a single number designated by the other Party; (iv) reasonably equivalent priority, as between MCIIm subscribers and Bell Atlantic subscribers, for restoration efforts, consistent with FCC service restoration guidelines, including, without limitation, deployment of repair personnel, and use of spare parts and components on the Party's own network; and (v) a mutually-agreeable process for escalation of maintenance problems, including a complete, up-to-date list of responsible contacts, each available twenty-four (24) hours per day, seven (7) days per week. Said plans shall be modified and updated as needed.

5.1.6.1 As identified, the Parties shall provide timely notification to each other of network outages at Parity with the notification provided to their own repair centers. Such outages may include, but are not limited to:

- 5.1.6.1.1 Central Office outages;
- 5.1.6.1.2 Facility outages such as cable cuts and repeater failures;
- 5.1.6.1.3 Commercial power outages;
- 5.1.6.1.4 Load sharing situations;
- 5.1.6.1.5 Subscriber loop outages;
- 5.1.6.1.6 Signaling network congestion; and
- 5.1.6.1.7 General network congestion.

5.1.7 Bell Atlantic and MCIIm will make reasonable efforts to minimize the number of calls misdirected to the other Party's repair bureau. Bell Atlantic and MCIIm shall establish mutually acceptable methods and procedures for the referral from Bell Atlantic to MCIIm, and vice versa, of any and all misdirected calls from subscribers requesting repair.

5.1.7.1 MCIIm and Bell Atlantic each agree to provide their own subscribers with a toll free or ordinary number to call for repair service. Bell Atlantic will accomplish this, and will assist MCIIm to accomplish this, in three stages:

(1) From the execution hereof until March 31, 1997, calls to 611 shall be answered by a voice response unit or live operator. Such unit or operator will provide a referral telephone number (provided by MCIIm) to those MCIIm customers who call this number. Such referrals shall be provided on a Non-Discriminatory basis.

(2) By April 1, 1997, calls to 611 will be answered solely by an automated announcement. This announcement will inform Bell Atlantic subscribers to call a toll free number and will inform all other subscribers to call their respective carriers. The automated announcement will not provide referral numbers. However, the

Bell Atlantic toll free referral number will be answered by a voice response unit or live operator who will provide maintenance referral numbers to non-Bell Atlantic subscribers.

(3) Commencing no later than December 31, 1997, the 611 repair number will be deactivated and callers will be informed by a recorded message that it is no longer a working number, and that they should contact their carrier directly. At all times, and on a Non-Discriminatory basis, Bell Atlantic operators will refer callers to the repair number of their respective carriers.

5.1.8 Each Party's repair bureau shall perform the following functions in conformance with performance and service quality standards at Parity with those provided to itself when providing repair and maintenance to the other Party and the other Party's subscribers under this Agreement:

5.1.8.1 Either Party may request repairs to the other Party's network by calling the other Party's repair bureau.

5.1.8.2 Each Party shall make reasonable efforts to ensure that its repair bureau, including the electronic interface described in Section 5.2 herein, is on-line and operational twenty-four (24) hours per day, seven (7) days per week. MCI and Bell Atlantic will develop mutually agreed-upon manual processes for repair reporting in the event of unavailability or failure of the electronic interface.

5.1.8.3 Each Party's repair bureau shall provide to the other Party an "arrive by time" or "estimated time to arrive" on reported Telephone Exchange Service or Exchange Access Service trouble.

5.1.8.4 Each Party shall notify the other Party, via status screen or verbal communication, when the "arrive by time" or "estimated time to arrive" has been significantly changed or impacted by other events.

5.1.8.5 Each Party shall provide the status of repair efforts to the other Party upon reasonable request.

5.1.8.5.1 Bell Atlantic shall inform MCI of repair completion and the reason for trouble, if identified, as soon as practicable after restoration of Network Elements and any other trouble reports by MCI. Notification should be provided via electronic interface, when available.

5.1.8.5.2 When trouble is reported by a subscriber served through Network Elements, MCI will test its network (including basic unbundled loops) to identify any problems. If no problems are identified with the MCI network and/or no trouble is found in

Bell Atlantic's service, MCIIm will open a trouble report with Bell Atlantic. Bell Atlantic shall then test its portion of the network and perform repairs, as appropriate, based on appointment availability. Each Party shall share test results and otherwise cooperate in order to resolve the trouble.

5.1.8.6 The Parties shall establish escalation procedures for trouble tickets and maintenance requests that are not resolved in a timely manner. The escalation procedures to be provided under this Agreement shall include names and telephone numbers of each Party's management personnel who are responsible for maintenance issues.

5.1.8.7 Neither Party shall perform maintenance services involving additional charges for Local Resale services, interconnection or Network Elements without advance authorization from the other Party, excluding charges for maintenance services as set forth in Attachment I, which will be billed to the Party requesting the maintenance services.

5.1.8.8 Bell Atlantic shall dispatch its technicians to MCIIm subscriber premises at Parity in response to reports submitted by MCIIm via an electronic interface established pursuant to Section 5.2 herein. The electronic interface shall have the capability of allowing MCIIm to receive trouble report information, access Bell Atlantic's status field and designated narratives which will contain the original test results, if applicable, and receive all applicable close out information including time of repair, work done and any charges associated with the trouble report.

5.1.8.9 Each Party shall furnish the other Party with single points of contact ("SPOC") for all communications relating to trouble tickets and maintenance requests.

5.1.8.10 Bell Atlantic agrees that MCIIm may call Bell Atlantic to verify Central Office features and functions as they relate to an open trouble report. Bell Atlantic agrees to work with MCIIm on the initial trouble report to isolate the cause of the trouble and, where possible, resolve the feature/function related trouble at that time.

5.1.9 The Parties shall exchange unique numbers to identify each initial report opened.

5.2 Systems Interfaces

5.2.1 Bell Atlantic will provide electronic interfaces (ECG and OSI) that meet OSI T-1 M-1 standards (ANSI T1-227, 1995 and ANSI T1-228 1995 as may be amended), as gateways to allow MCIIm maintenance personnel and customer service representatives to perform the following functions for Local Services resold to MCIIm subscribers: the ability to transmit a new trouble ticket for an MCIIm subscriber; for all OSI electronically bonded reports, the ability to receive

notification of status changes as they occur including notification of dispatch, providing MCIIm the ability to track current status on all open MCIIm subscriber trouble tickets; the ability to request an escalation and receive escalation responses of said request; the ability to receive dispatch "arrive by time" appointment (POTS only) when the trouble is established and automatic notification of appointment changes; the ability to update trouble information; and the ability to receive all applicable time and material charges at the time of ticket closure (total by subscriber, per event) along with clearance time and description of work done. The Parties will negotiate reciprocal interfaces and procedures for maintenance of Interconnection and Network Elements. Prior to availability of electronic interfaces, Bell Atlantic shall respond to MCIIm's telephonic inquires.

5.3 Standards

5.3.1 The following shall apply to premises visits by Bell Atlantic's employees and contractors:

5.3.1.1 Bell Atlantic employees or contractors shall provide to MCIIm subscribers a written notice of charges for work completed, if any, or notice that additional work (on access to the premises) will be necessary.

5.3.1.2 If work is not completed because of access problems, Bell Atlantic employees or contractors shall call MCIIm to advise it of the need for access. The report will be held for a reasonable period as "no-accessed" in Bell Atlantic's system and will be redated once new access is established with respect to the subscriber premises so that MCIIm can schedule a new appointment with Bell Atlantic and subscriber at the same time.

5.3.1.3 Bell Atlantic's employees or contractors shall use reasonable efforts to obtain the subscriber's signature on appropriate forms confirming any chargeable event.

Section 6. Miscellaneous Services & Functions

6.1 General Requirements

6.1.1 Basic 911 and E911 General Requirements

Basic 911 and E911 provides a caller access to the appropriate emergency service bureau by dialing a 3-digit universal telephone number (911). Basic 911 and E911 shall be provided to MCIIm in accordance with Sections 6.1.1 and 6.1.2 below. Notwithstanding the indemnification provisions set forth in Part A of this Agreement, Bell Atlantic's liability for indemnification resulting from third-party claims in connection with the provision of such 911 and E911 Services shall be subject to the liability limitations contained in Bell Atlantic's applicable 911 Tariffs.

6.1.1.1 E911 shall provide additional routing flexibility for 911 calls. E911 shall use subscriber data, contained in the 911 database system, to determine to which PSAP to route the call.

6.1.1.2 If available, Bell Atlantic shall offer a third type of 911 Service, 911 using SS7 (S911). All requirements for E911 as set forth herein shall also apply to S911 with the exception of the type of signaling used on the interconnection trunks from the local Switch to the S911 tandem.

6.1.1.3 Basic 911 and E911 functions provided to MCIIm shall be at least at the same level Bell Atlantic provides to its subscribers for such functionality.

6.1.1.4 Basic 911 and E911 access shall be provided to MCIIm in accordance with the following:

6.1.1.4.1 Bell Atlantic and MCIIm shall conform to all state regulations concerning emergency services.

6.1.1.4.2 For E911, Bell Atlantic shall use its current process, as the same may be modified from time to time, to update and maintain subscriber information in the ALI/DMS data base.

6.1.1.5 If a jurisdiction has planned for overflow, then Bell Atlantic shall provide for such overflow 911 traffic to be routed to Bell Atlantic Operator Services or, at MCIIm's discretion, directly to MCIIm Operator Services.

6.1.1.6 Basic 911 and E911 access from the MCIIm local Switch shall be provided to MCIIm in accordance with the following:

6.1.1.6.1 When ordered by MCIIm from Bell Atlantic, Bell Atlantic shall interconnect direct trunks from the MCIIm network to the 911 PSAP, or the E911 tandems as designated by MCIIm. Such trunks may alternatively be provided by MCIIm.

6.1.1.6.2 In jurisdictions where Bell Atlantic has obligations under existing agreements as the primary provider of the 911 Service to a government agency, MCIIm shall participate in the provision of the 911 Service as follows:

6.1.1.6.2.1 Each Party shall be responsible for those portions of the 911 Service for which it has control, including any necessary maintenance to each Party's portion of the 911 Service.

6.1.1.6.2 Bell Atlantic shall be responsible for maintaining the E911 database.

6.1.1.6.3 If a third party is the primary service provider to a government agency, MCI shall negotiate separately with such third party with regard to the provision of 911 Service to the agency. All relations between such third party and MCI are independent of this Agreement and Bell Atlantic makes no representations on behalf of the third party.

6.1.1.7 If available, Bell Atlantic shall provide to MCI, upon request, the emergency public agency (*e.g.*, police, fire, rescue, poison, and bomb) telephone numbers linked to all NPA NXXs for the states in which MCI provides service.

6.1.1.8 If available to Bell Atlantic and for those jurisdictions previously requested by MCI, Bell Atlantic shall transmit to MCI as soon as practicable all changes, alterations, modifications, and updates to the emergency public agency telephone numbers linked to all NPA NXXs. This transmission shall be electronic and be a separate feed from the subscriber listing feed.

6.1.1.9 The following are E911 database requirements:

6.1.1.9.1 If Bell Atlantic possesses an MSAG and is not prohibited from providing it to MCI, it shall provide copies of the MSAG within three (3) business days from the time requested. Copies shall be provided on diskette, magnetic tape, or in a format suitable for use with desktop computers. Updates to the MSAG thereafter will be provided on a monthly basis.

6.1.1.9.2 MCI shall be solely responsible for providing MCI database records to Bell Atlantic for inclusion in Bell Atlantic's ALI database on a timely basis.

6.1.1.9.3 Bell Atlantic and MCI shall arrange for the automated input and periodic updating on a mediated access basis of the E911 database information related to MCI end users to replace the manual data entry process currently used. Bell Atlantic shall work cooperatively with MCI to ensure the accuracy of the data transfer by verifying it against the MSAG provided that MCI shall be responsible for the accuracy of information it provides Bell Atlantic. The relevant governmental jurisdiction is responsible for accuracy of the MSAG, and Bell Atlantic shall have no responsibility for accuracy of the MSAG. As soon as Technically Feasible, Bell Atlantic shall accept electronically transmitted files or magnetic tape that conform to National

Emergency Number Association (“NENA”) Version #2 format for MCIIm subscribers.

6.1.1.9.3.1 MCIIm shall provide information on new subscribers to Bell Atlantic as part of the ordering process. Bell Atlantic shall update its database within two (2) business days of receiving the information from MCIIm. If Bell Atlantic detects an error in the MCIIm provided data, the data shall be returned to MCIIm within one (1) business day after the error was detected by Bell Atlantic. MCIIm shall respond to requests from Bell Atlantic to make corrections to database record errors by uploading corrected records within two (2) business days. Manual entry of the data by Bell Atlantic shall be allowed until an interface between the Parties is developed and deployed, and thereafter in the event such interface is not functioning properly. In the event of an E911 database failure, MCIIm subscriber E911 information review and entry shall be at Parity.

6.1.1.9.4 MCIIm shall assign an E911 database coordinator charged with the responsibility of forwarding MCIIm end user ALI record information to Bell Atlantic or via a third-party entity charged with the responsibility of ALI record transfer. MCIIm assumes all responsibility for the accuracy of the data that MCIIm provides to Bell Atlantic.

6.1.1.9.5 Bell Atlantic agrees to treat all data on MCIIm subscribers provided under this Agreement as Confidential Information in accordance with the terms of Section 22 of Part A and to use data on MCIIm subscribers only as provided under this Agreement.

6.1.1.9.6 Upon completion of NENA Telco Identification Code standards, Bell Atlantic shall use a Carrier Code (a NENA standard five-character field) on all ALI records received from MCIIm. The Carrier Code shall identify the carrier of record in INP configurations. Prior to completion of the NENA standards, Bell Atlantic shall use the ACNA code obtained from Bellcore’s carrier identification code assignments.

6.1.1.9.7 Bell Atlantic shall identify which ALI databases cover which states, counties or parts thereof, and identify and communicate a point of contact for each.

6.1.1.10 The following are basic 911 and E911 network requirements:

6.1.1.10.1 Bell Atlantic shall provide the number of trunks as may be ordered by MCIIm. These trunks shall be dedicated to routing 911 calls from MCIIm's Switch to a Bell Atlantic selective router.

6.1.1.10.2 Where available, Bell Atlantic shall provide the Selective Routing of E911 calls received from MCIIm's switching office. This consists of the ability to receive the ANI of MCIIm's subscriber, selectively route the call to the appropriate PSAP, and forward the subscriber's ANI to the PSAP. Bell Atlantic shall provide MCIIm with the appropriate common language location identifier ("CLLI") codes and specifications regarding the tandem serving area associated addresses and meet-points in the network.

6.1.1.10.3 Bell Atlantic will supply, upon MCIIm's request, the written exchange of pertinent data, at the Rate Center level, for the routing of basic 911 and E911 calls to the proper public safety agency.

6.1.1.10.4 MCIIm shall ensure that its Switches provide ANIs and the line number of the calling station that are compatible with Bell Atlantic's network.

6.1.1.10.5 Each ALI discrepancy report shall be jointly researched by Bell Atlantic and MCIIm. Corrective action shall be taken promptly by the responsible Party.

6.1.1.10.6 Subject to mutual agreement, Bell Atlantic shall provide MCIIm with written technical specifications for network interfaces, and technical specifications for database loading and maintenance pursuant to NENA Standards. Bell Atlantic shall also cooperate with MCIIm on reasonable requests for Rate Center information.

6.1.1.10.7 Bell Atlantic shall identify special routing arrangements to complete 911 calls.

6.1.1.10.8 Bell Atlantic shall begin restoration of E911 and/or E911 trunking facilities promptly upon notification of failure or outage. Bell Atlantic shall provide priority restoration of trunks or network outages on the same terms/conditions it provides itself.

6.1.1.10.9 Bell Atlantic shall identify any special operator-assisted calling requirements to support 911.

6.1.1.10.10 Trunking shall be arranged in compliance with local emergency service requirements to minimize the likelihood of Central Office isolation due to cable cuts or other equipment

failures. If there is an alternate means of transmitting a 911 call to a PSAP, in the event of an emergency, it will be available at Parity.

6.1.1.10.11 Equipment and circuits used for 911 shall be monitored at all times. Monitoring of circuits shall be done to the individual circuit level. Monitoring shall be conducted by Bell Atlantic for trunks between the tandem and all associated PSAPs.

6.1.1.10.12 Repair service shall begin promptly upon receipt of a report of a malfunction, the priority of which shall depend upon whether such malfunction impairs provision of 911 and E911 Services. Repair service includes testing and diagnostic service from a remote location, dispatch of or in-person visit(s) of personnel. Technicians shall be dispatched without unreasonable delay.

6.1.1.10.13 All 911 trunks must be capable of transmitting and receiving Baudot codes necessary to support the use of telecommunications devices for the deaf (TTY/TDDs).

6.1.2 Basic 911 and E911 Additional Requirements

6.1.2.1 All MCIIm lines that have been ported via INP shall reach the correct PSAP when 911 is dialed. Bell Atlantic shall send both the ported number and the MCIIm number (if both are received from MCIIm) to the PSAP upon an ALI request from the PSAP. The PSAP attendant shall see both numbers where the PSAP is using a standard ALI display screen and the PSAP extracts both numbers from the data that is sent. The MCIIm subscriber's directory number may be shown on the "remarks" line of the ALI record.

6.1.2.2 Bell Atlantic shall work with the appropriate government agency to provide MCIIm the ten-digit POTS number of each PSAP which subtends each Bell Atlantic selective router/911 tandem to which MCIIm is interconnected.

6.1.2.3 Bell Atlantic shall use reasonable efforts to notify MCIIm forty-eight (48) hours in advance of any scheduled testing or maintenance affecting MCIIm 911 Service, and provide notification as soon as possible of any unscheduled outage affecting MCIIm 911 Service.

6.1.2.4 MCIIm shall be responsible for reporting all errors, defects and malfunctions to Bell Atlantic. Bell Atlantic shall provide MCIIm with the point of contact for reporting errors, defects, and malfunctions in the service and shall also provide escalation contacts.

6.1.2.5 Bell Atlantic shall provide reasonable notification of any pending tandem moves, NPA splits, or scheduled maintenance outages affecting MCIIm 911 Service.

6.1.2.6 Bell Atlantic shall establish a process for handling "reverse ALI" inquiries by public safety entities.

6.1.2.7 Bell Atlantic shall establish a process for the management of NPA splits by populating the ALI database with the appropriate new NPA codes.

6.1.2.8 Bell Atlantic shall provide the ability for MCIIm to update 911 database with end user information for lines that have been ported via INP or NP.

6.1.3 Directory Assistance Service

6.1.3.1 Bell Atlantic shall provide for the routing of Directory Assistance calls (including but not limited to 411, 555-1212, NPA-555-1212) dialed by MCIIm subscribers directly to either the MCIIm Directory Assistance service platform or Bell Atlantic Directory Assistance service platform as specified by MCIIm.

6.1.3.2 MCIIm subscribers shall be provided the capability by Bell Atlantic to dial the same telephone numbers for access to MCIIm Directory Assistance that Bell Atlantic subscribers are provided to access Bell Atlantic Directory Assistance.

6.1.3.3 If MCIIm purchases from Bell Atlantic MCIIm-branded Directory Assistance service selectively routed to Bell Atlantic's Directory Assistance platform, MCIIm shall give Bell Atlantic six (6) months notice before terminating that arrangement by selectively rerouting Directory Assistance traffic to another Directory Assistance platform.

6.1.3.3.1 Bell Atlantic agrees to provide MCIIm subscribers with Directory Assistance service at Parity.

6.1.3.3.2 Bell Atlantic shall notify MCIIm in advance of any changes or enhancements to its Directory Assistance service, and shall make available such service enhancements at Parity and on a Non-Discriminatory basis with respect to other CLECs.

6.1.3.3.3 Bell Atlantic shall provide Directory Assistance to MCIIm subscribers in accordance with Bell Atlantic's internal methods, procedures and standards, which shall, at a minimum, comply with applicable state regulations. Upon MCIIm's request,

Bell Atlantic shall provide to MCI its methods and procedures for providing Directory Assistance service.

6.1.3.3.4 Bell Atlantic shall provide MCI with provisioning of Directory Assistance at Parity.

6.1.3.3.5 Service levels shall comply, at a minimum, with applicable state regulatory requirements, including those for number of rings to answer and disaster recovery options.

6.1.3.3.6 Specialized Routing

6.1.3.3.6.1 Commencing after April 1, 1997, and in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall make available to MCI branded Directory Assistance for Directory Assistance traffic originating at any Bell Atlantic Switches where Bell Atlantic has already implemented the rerouting of Directory Assistance traffic pursuant to a request from a carrier.

6.1.3.3.6.2 Where Bell Atlantic is not offering this service in response to a request from a carrier, MCI may request that a Switch offer such rerouting capability and, in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall begin implementation of such request within ninety (90) days, and complete implementation within ninety (90) days thereafter. Bell Atlantic shall fulfill such requests on a Non-Discriminatory Basis.

6.1.3.3.6.3 Bell Atlantic shall provide front end branding as reasonably specified by MCI. MCI has the option of providing its own branded recordings and related materials for branding .

6.1.3.3.7 Bell Atlantic shall provide the following minimum Directory Assistance capabilities to MCI's subscribers:

6.1.3.3.7.1 Bell Atlantic shall provide to MCI subscribers seeking Directory Assistance the same number of responses and detail of information that it provides its own subscribers.

6.1.3.3.7.2 Upon request by subscriber, call completion to the requested number for local and intraLATA toll calls

shall be returned to the MCI network. Rating and billing shall be done by MCI.

6.1.3.3.7.2.1 Upon MCI's request and if Technically Feasible, Bell Atlantic shall provide blocking of Directory Assistance call completion on an ANI specific basis.

6.1.3.3.7.3 Bell Atlantic shall populate MCI listings in the Directory Assistance database in the same manner and in the same time frame as it does for Bell Atlantic subscribers.

6.1.3.3.7.4 Any information provided by a Directory Assistance automatic response unit shall be repeated the same number of times for MCI subscribers as for Bell Atlantic subscribers.

6.1.3.3.7.5 Bell Atlantic shall instruct MCI subscribers to call a toll free number for MCI customer service to request a credit. Bell Atlantic shall provide one toll free number for business subscribers and another for residential subscribers.

6.1.4 Operator Services

6.1.4.1 Bell Atlantic shall provide for the routing of 0+ local, 0- and operator transfers for local Operator Services calls dialed by MCI subscribers directly to either the MCI Operator Service platform or Bell Atlantic Operator Service platform as specified by MCI and pursuant to Attachment III, Section 7.2.2.

6.1.4.2 MCI subscribers shall be provided the capability by Bell Atlantic to dial the same telephone numbers to access MCI operator service that Bell Atlantic subscribers dial to access Bell Atlantic Operator Service.

6.1.4.3 If MCI purchases from Bell Atlantic MCI-branded Operator Services selectively routed to Bell Atlantic's Operator Services platform, MCI shall give Bell Atlantic six (6) months notice before terminating that arrangement by selectively rerouting Operator Services traffic to another Operator Services platform.

6.1.4.3.1 Bell Atlantic agrees to provide MCI subscribers Operator Services and service enhancements at Parity and on a Non-Discriminatory basis.

6.1.4.3.2 Specialized Routing

6.1.4.3.2.1 Commencing after April 1, 1997, and in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall make available to MCIIm branded Operator Services for Operator Services traffic originating at any Bell Atlantic Switches where Bell Atlantic has already implemented the rerouting of Operator Services traffic pursuant to a request from a carrier.

6.1.4.3.2.2 Where Bell Atlantic is not offering this service in response to a request from a carrier, MCIIm may request that a Switch(es) offer such rerouting capability and, in conformance with the provisions of Attachment III, Section 7.2.2, Bell Atlantic shall begin implementation of such request within ninety (90) days, and complete implementation within ninety (90) days thereafter. Bell Atlantic shall fulfill such requests from carriers requesting it on a Non-Discriminatory Basis.

6.1.4.3.2.2.1 Bell Atlantic shall provide front end branding as reasonably specified by MCIIm. MCIIm has the option of providing its own branded recordings and related materials for branding.

6.1.4.3.3 Bell Atlantic shall provide the following minimum Operator Service capabilities to MCIIm subscribers at Parity.

6.1.4.3.3.1 Completion of 0+ and 0- dialed local calls;

6.1.4.3.3.2 Completion of 0+ intraLATA toll calls;

6.1.4.3.3.3 Completion of calls that are billed to a calling card, with the exception of calls billed to proprietary cards, and MCIIm shall designate to Bell Atlantic the acceptable types of special billing;

6.1.4.3.3.4 Completion of person-to-person calls;

6.1.4.3.3.5 Completion of collect calls;

6.1.4.3.3.6 The capability for callers to bill to a third party and complete such calls;

6.1.4.3.3.7 Completion of station-to-station calls;

6.1.4.3.3.8 The processing of emergency calls;

6.1.4.3.3.9 The processing of Line Status Verification and Verification and Call Interrupt requests;

6.1.4.3.3.10 The processing of operator-assisted Directory Assistance calls;

6.1.4.3.3.11 Provision of rate quotes;

6.1.4.3.3.12 The processing of time-and-charges requests; and

6.1.4.3.3.13 The routing of 0- traffic directly to a "live" operator team.

6.1.4.3.3.14 When requested by MCI and commencing on availability, Bell Atlantic shall provide when Technically Feasible, credit on Operator Services calls as provided to Bell Atlantic subscribers or shall instruct MCI subscribers to call a toll free number for MCI customer service to request a credit. Bell Atlantic shall provide one toll free number for business subscribers and another for residential subscribers.

6.1.4.3.3.15 Caller assistance for the disabled; and

6.1.4.3.3.16 Provision of operator-assisted conference calling, when Technically Feasible.

6.1.4.4 Operator Service shall provide to the extent Technically Feasible MCI's local service rates when providing rate quote and time-and-charges services when branding MCI services pursuant to Section 6.1.4.3.2.

6.1.4.5 Bell Atlantic shall exercise at least the same level of fraud control in providing Operator Service to MCI that Bell Atlantic provides for its own Operator Service.

6.1.4.6 Bell Atlantic shall perform billed number screening when handling collect, third party, and calling card calls, both for station-to-station and person-to-person call types.

6.1.4.7 Bell Atlantic shall refer subscriber account and other similar inquiries to the subscriber service centers reasonably designated in advance by MCI from time to time.

6.1.4.8 Line Status Verification and Call Interrupt (LSV/CI)

6.1.4.8.1 Bell Atlantic shall permit MCIIm to connect its local Operator Service to Bell Atlantic's LSV/CI systems to enable MCIIm to perform BLV/BLI services.

6.1.4.8.2 Bell Atlantic shall engineer its LSV/CI facilities to accommodate the anticipated volume of BLV/BLI requests during the busy hour. MCIIm may, from time to time, provide its anticipated volume of BLV/BLI requests to Bell Atlantic. In those instances when the LSV/CI systems become unavailable, Bell Atlantic shall inform MCIIm as soon as practicable.

6.1.4.9 Where INP is deployed and when a BLV/BLI request for a ported number is directed to a Bell Atlantic operator and the query is not successful (i.e., the request yields an abnormal result), the operator shall if Technically Feasible confirm whether the number has been ported and shall direct the request to the appropriate operator.

6.1.4.10 Bell Atlantic shall allow MCIIm to order provisioning of telephone line number (TLN) calling cards and billed number screening (BNS), in its LIDB, for ported numbers, as agreed by the Parties. Bell Atlantic shall continue to allow MCIIm reasonable access to its LIDB for this purpose.

6.1.5 Directory Assistance and Listings Service Requests

6.1.5.1 These requirements pertain to Bell Atlantic's Directory Assistance and listings service request process that enables MCIIm to (a) submit MCIIm subscriber information for inclusion in Bell Atlantic Directory Assistance and Directory Listings databases; (b) submit MCIIm subscriber information for inclusion in published directories; and (c) provide MCIIm subscriber delivery address information to enable Bell Atlantic to fulfill directory distribution obligations.

6.1.5.1.1 Bell Atlantic shall accept orders on a real-time basis via electronic interface in accordance with OBF Directory Service request standards as soon as practicable.

6.1.5.1.2 Bell Atlantic shall migrate Directory Listing in accordance with OBF industry standards when developed.

6.1.5.1.3 Bell Atlantic shall enable MCIIm to electronically transmit multi-line listing orders.

6.1.5.1.4 Bell Atlantic shall provide MCIIm with a daily summary of completed Directory Service requests in accordance with OBF industry standards when developed.

6.1.5.1.5 To facilitate accurate order processing, Bell Atlantic shall provide to MCIIm the following information to the same extent and in the same manner and frequency as provided to Bell Atlantic customer service centers:

6.1.5.1.5.1 A matrix of NXX to Central Office;

6.1.5.1.5.2 Yellow pages heading codes;

6.1.5.1.5.3 Directory names and codes, and identification of which telephone directories are provided to which subscribers by subscriber address, NPA/NXX, or other criteria;

6.1.5.1.5.4 Listing format rules;

6.1.5.1.5.5 Listing alphabetizing rules;

6.1.5.1.5.6 Standard abbreviations acceptable for use in listings and addresses;

6.1.5.1.5.7 Titles and designations; and

6.1.5.1.5.8 A list of all available directories and their close dates.

6.1.5.1.6 Based on changes submitted by MCIIm as required by Bell Atlantic, Bell Atlantic shall update and maintain Directory Assistance and Directory Listings data for MCIIm subscribers who:

6.1.5.1.6.1 Disconnect Service;

6.1.5.1.6.2 Change carrier;

6.1.5.1.6.3 Install Service;

6.1.5.1.6.4 Change any service which affects DA information;

6.1.5.1.6.5 Specify Non-Solicitation; or

6.1.5.1.6.6 Are Non-Published, Non-Listed, or Listed.

6.1.6 Directory Listings General Requirements

6.1.6.1 This Section 6.1.6 pertains to listings published by Bell Atlantic in white/yellow pages, specialty directories or other printed or electronic formats containing such information. The provisions of this Section 6.1.6 shall apply to Bell Atlantic, and Bell Atlantic shall be responsible for compliance therewith, notwithstanding any arrangement between Bell Atlantic and another party (including an Affiliate of Bell Atlantic) whereby the other Party publishes or produces directories and associated products on Bell Atlantic's behalf.

6.1.6.2 Bell Atlantic shall include in its master subscriber system database list information for MCIIm subscribers as agreed by the Parties.

6.1.6.3 Upon receipt of written instructions from MCIIm with respect to all MCIIm subscriber listings, or from an MCIIm subscriber with respect to that subscriber's listing, Bell Atlantic shall not sell or license, nor allow any third party, the use of MCIIm subscriber listings. In the absence of such instructions, Bell Atlantic may sell or license such listings in the same manner as it does listings of Bell Atlantic subscribers. All revenues associated with the sale or license by Bell Atlantic of MCIIm subscriber listings shall be retained by Bell Atlantic. Bell Atlantic shall not disclose nor allow any third party to disclose non-listed name or address information for any purpose other than what may be necessary to complete directory distribution.

6.1.6.4 MCIIm subscriber listings, including State, Local, and Federal government listing, shall be interfiled with listings of Bell Atlantic and other CLEC subscribers.

6.1.6.5 Each MCIIm subscriber account number shall be provided the same white page basic listings that Bell Atlantic provides its subscribers.

6.1.6.6 Each MCIIm business subscriber account shall be provided the same yellow page basic listings that Bell Atlantic provides its subscribers.

6.1.6.7 Primary listings for all MCIIm subscribers shall be at Parity. Bell Atlantic shall make commercially reasonable efforts to develop a methodology to include MCIIm subscribers' listings in multiple directories covering the same geographic area at Parity.

6.1.6.8 As agreed by the Parties, MCIIm sales, service, billing, and repair information for business and residential subscribers, along with MCIIm logo, shall be included in the customer guide pages. The information required by this section shall be included in a form and font size substantially similar to that attached as Exhibit B of its Attachment VIII and shall be in the same section of the telephone directory in which Bell Atlantic lists its own similar information. All CLEC listings shall be placed alphabetically based on the name under which CLEC ordinarily

conducts business. There shall be no charge for the basic listing contemplated by this section. However, Bell Atlantic may impose a Non-Discriminatory charge for additional enhancements or changes to this information, or for other information that Bell Atlantic may agree to include.

6.1.6.9 Bell Atlantic and MCIIm agree to mutually develop a process whereby MCIIm can review and correct subscriber Directory Listings.

6.1.6.10 Charges for additional and foreign white page listings ordered by MCIIm should be billed to MCIIm and itemized at the subscriber billing telephone number level.

6.1.6.11 Bell Atlantic shall distribute appropriate primary alphabetical and classified directories (white and yellow pages) to MCIIm subscribers at Parity: 1) upon establishment of new service; 2) during annual mass distribution; and 3) upon subscriber request. Bell Atlantic shall provide MCIIm its policy on the number of telephone directories provided at no charge to the customer.

6.1.6.12 Bell Atlantic shall permit, or ensure a third party permits, MCIIm subscribers to place orders for foreign directories on the same terms and conditions such directories are made available to Bell Atlantic subscribers. Bell Atlantic shall provide to MCIIm the procedures, terms, and conditions for obtaining foreign telephone directories from Bell Atlantic.

6.1.6.13 Upon request, and at no charge, Bell Atlantic shall provide, or ensure a third party provides, reasonable quantities of directories for MCIIm's internal use to cover areas in which MCIIm is an authorized CLEC.

6.1.6.14 The directory cover shall state that it includes listings for all local telephone companies.

6.1.6.15 Bell Atlantic shall make available current recycling services to MCIIm subscribers under the same terms and conditions that Bell Atlantic makes such services available to its own subscribers.

6.1.7 Directory Assistance Data

6.1.7.1 Bell Atlantic will provide to MCIIm, and MCIIm will pay Bell Atlantic for, directory assistance data at the rate and under terms and conditions set forth in the Directory Assistance License Agreement executed by the Parties on November 19, 1998, and as may be subsequently amended by the Parties.

July 3, 1997

ATTACHMENT VIII

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ATTACHMENT IX

SECURITY REQUIREMENTS

Section 1. Physical Security

This Section 1 sets forth security requirements for physical Collocation at Bell Atlantic's premises. Each Party shall take reasonable steps to protect the other's personnel and property, including the following:

1.1 MCIIm shall access only equipment owned by MCIIm and shall enter only those areas of Bell Atlantic's premises where such equipment is located. Bell Atlantic shall maintain a log of its employees and agents that enter these areas. Bell Atlantic shall allow MCIIm, after reasonable advance notice, to inspect areas that house or contain MCIIm equipment or equipment enclosures in accordance with mutually acceptable procedures.

1.2 MCIIm shall deliver to Bell Atlantic within thirty (30) days of the date of this Agreement and every sixty (60) days thereafter a current list of its employees and agents authorized to enter Bell Atlantic's premises. While on Bell Atlantic's premises, such employees or agents shall prominently display identification badges. If requested by Bell Atlantic, MCIIm shall provide this information in an electronic format.

1.3 Each Party shall, while on the other's premises or in areas on its premises designated solely for the other Party's use, comply with the other's generally applicable security and safety procedures and requirements as may be provided from time to time by the other Party (including but not limited to sign-in, identification, and escort requirements); provided, however, that MCIIm's procedures and requirements for access to its equipment areas shall be consistent with those established by Bell Atlantic for the relevant premises.

1.4 Neither Party shall tamper with or perform any activities upon the other's equipment located on its premises, except as necessary to perform this Agreement (*e.g.*, equipment maintenance, installation, *etc.*) or in case of emergency. In an emergency, the affected Party shall promptly notify the other of the emergency, take steps it deems appropriate to manage the emergency (using reasonable care under the circumstances to protect the other's equipment), and allow the other Party to access its premises (subject to the requirements of this Section 1) to protect its equipment.

1.5 MCIIm shall ensure that areas that house MCIIm's equipment are adequately secured to prevent unauthorized entry. Bell Atlantic shall have no liability in this regard. MCIIm shall furnish Bell Atlantic with all keys, entry codes, lock combinations, and other materials and information necessary for Bell Atlantic to gain entry to any secured MCIIm area. Bell Atlantic shall limit access to such areas to its authorized employees and agents.

1.6 Each Party shall promptly notify the other of any breach by the other Party of the foregoing provisions.

1.7 MCIIm shall ensure that MCIIm equipment at Bell Atlantic's premises is suitable for use in the operational environment at such premises. Bell Atlantic shall have no liability in this regard, other than to maintain the general environmental conditions in the premises at normal operational levels suitable for its own equipment.

Section 2. System Security

2.1 Each Party shall provide the other a back-up and recovery plan to be used in the event of a system failure or emergency to facilitate prompt systems restoration and recovery. The Parties shall reasonably cooperate to determine which systems require disaster, restoration and recovery plans. Any such plans will be provided to the other Party.

2.2 Each Party shall maintain a reasonable standard of security between operation system interfaces consistent with its own information security practices.

Section 3. Fraud Prevention

3.1 Each Party shall make available to the other fraud prevention features, including prevention, detection, or control functionality, that may be embedded within any of the Network Elements in accordance with applicable Tariffs or as otherwise mutually agreed, such as 900 NPA and international blocking offered to business customers and aggregators.

3.2 Uncollectible or unbillable revenues from fraud and resulting from, but not confined to provisioning, maintenance, or signal network routing errors shall be the responsibility of the Party causing such error.

3.3 Neither Party shall be responsible to the other for any fraud incurred in connection with their respective service offerings, except that each Party shall indemnify and hold each other harmless for any losses payable to IXC carriers caused by "clip-on" fraud incurred as a result of unauthorized access to an indemnifying party's Service Area Concept ("SAC"); provided that the indemnifying party shall control all negotiations and settlements of such claims with the applicable IXC carriers.

Section 4. Law Enforcement Interface

Each Party shall provide reasonable assistance to the other in accordance with Applicable Law and the Party's internal procedures in connection with: installation of and information retrieval from traps in its network, emergency traces on and information retrieval from subscriber invoked CLASS services (e.g., call traces requested by the other Party), and execution of wiretap or dialed number recorder orders from law enforcement authorities.

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PERFORMANCE REPORTING**

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ATTACHMENT X
PERFORMANCE REPORTING

Section 1. Initial Performance Reporting

1.1 Bell Atlantic shall supply to MCI initial performance reports each month on Bell Atlantic's performance in Pennsylvania in accordance with this Section 1. The reports shall be substantially in the format of the documents attached hereto as Schedules B through F. The definitions of the rows and columns in the reports are set forth in Schedule A. The coverage of each report is set forth in its title, with the additional explanations set forth below.

1.1.1 Schedule B (MCI-Specific) will report the statewide performance of Bell Atlantic for the services provided to MCI for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates in the cells in Schedule B are the dates that Bell Atlantic will be able to provide the information in that cell. Where the date is accompanied by the letters "Est." ("estimated"), the date in that cell is Bell Atlantic's best estimate and target, but not yet a commitment. Bell Atlantic will make its best efforts to meet the "Est." dates and will inform MCI of any potential change in those dates if and when that potential appears. Where the cell contains an "N/A" ("not applicable"), the measure is not applicable for that service category.

1.1.2 Schedule C (Bell Atlantic Including Bell Atlantic affiliates) will report statewide, system-wide performance of Bell Atlantic, including for the services provided to affiliate companies of Bell Atlantic, for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates and notations in Schedule C have the same meanings as those described above for Schedule B. Bell Atlantic does not have an immediately comparable service for Unbundling and, as a result, those columns have been marked as "N/A". Bell Atlantic's "Retail - POTS" column reflects results from Bell Atlantic's retail operations for POTS services and is comparable to the "Resale - POTS" service on the other schedules (Schedule B, Schedule D, Schedule E and, when available, Schedule F).

1.1.3 Schedule D (Top 3 Carriers) will report the statewide performance of Bell Atlantic for the services provided to the largest three telecommunications carriers interconnecting with or purchasing services from Bell Atlantic pursuant to Sections 251 and 252 of the Act, combined, for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates and notations in Schedule D have the same meanings as those described above for

Schedule B. In order to preserve the confidentiality of other carriers' information, results for a service (report column) will only be produced on this report if all three carriers purchased the reported service in the calendar month.

1.1.4 Schedule E (All CLECs) will report the statewide performance of Bell Atlantic for the services provided to telecommunications carriers interconnecting with or purchasing services from Bell Atlantic pursuant to Sections 251 and 252 of the Act and Bell Atlantic has a reporting obligation under the signed interconnection agreement, combined, for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The dates and notations in Schedule E have the same meanings as those described above for Schedule B. In order to preserve the confidentiality of other carriers' information, results for a service (report column) will only be produced on this report if three carriers purchased the reported service in the calendar month.

1.1.5 Schedule F (10 Largest Retail Customers) will, at such time as Bell Atlantic is able to collect and report such information, and upon agreement regarding compensation for the collection and reporting of such information, if any, report statewide performance of Bell Atlantic for the services provided to its ten largest retail customers for the preceding calendar month for the measures set forth in the report and defined in Schedule A. The cells in Schedule F are all marked "TBD" ("to be determined") without an accompanying estimated date because Bell Atlantic has not yet determined that the collection and reporting of this information is feasible, and if it is, when such reporting might be available. Bell Atlantic agrees, however, that it will continue its best efforts assessment of the feasibility of collecting and reporting this information and will promptly report to MCI the results of that assessment and the availability of such information at such time as Bell Atlantic develops the capability to collect and report it for Bell Atlantic's own internal use.

1.2 The Parties agree that the performance information included in these reports is Confidential Information of Bell Atlantic and, with respect to MCI specific reports, Confidential Information of MCI under, Section 22 of this Agreement. The Parties shall use such Confidential Information solely for internal performance assessment purposes, for purposes of joint MCI and Bell Atlantic assessments of service performance, and for reporting to the Commission, the FCC, or courts of competent jurisdiction, under cover of a protective order pursuant to Section 22 of Part A.

1.3 The question of what remedies or other action might be appropriate in any situation where MCI believes, based on a statistically significant number of data elements described above, that Bell Atlantic is not complying with any of the performance standards in the Agreement shall be resolved, in the first instance, through negotiations between the Parties to resolve the issue at the Director level of escalation, and, failing prompt and successful negotiations, through the

complaint processes of the Commission, the FCC, or a court of competent jurisdiction. Bell Atlantic agrees to join MCI in encouraging the Commission to develop expedited procedures for the resolution of any performance-related complaints.

Section 2. Further Performance Reporting

2.1 In addition to the performance reporting identified in Section 1, Bell Atlantic shall develop and provide to MCI further performance reporting in accordance with this Section 2.

2.1.1 Within thirty (30) days after the Effective Date of this Agreement, Bell Atlantic shall review MCI's list of reports (Exhibit A hereto) and identify those reports that Bell Atlantic either: (i) has already included in the reporting set forth in Section 1; (ii) produces for internal use; or (iii) is obligated to produce for regulatory purposes.

2.1.2 Within ninety (90) days after the Effective Date of this Agreement, Bell Atlantic shall provide MCI the estimated incremental costs of providing the reports included in Exhibit A hereto that are not identified pursuant to Paragraph 2.1.1. For reports for which the costs cannot be determined without the substantial participation of Bell Atlantic's equipment, software, or systems vendors, Bell Atlantic will identify such reports, and proceed to develop cost estimates with the vendor(s) only if authorized by MCI. If, after receiving cost estimates for particular reports, MCI elects to receive such reporting, MCI and other CLECs who also elect to receive such reports shall bear the incremental costs, allocated on a competitively-neutral basis, of providing any reports that Bell Atlantic does not provide for internal use or is not obligated to provide for regulatory purposes. The costs of developing cost estimates shall also be allocated among the receiving CLECs on a competitively-neutral basis.

2.1.3 Bell Atlantic shall begin reporting to MCI, and to other CLECs who also elect to receive such reports, all reports included in Exhibit A that MCI elects to receive in accordance with this Section 2.1.3 as soon as reasonably practicable after receiving MCI's written election and commitment to pay the costs of such reporting. Such reporting shall be integrated into the reporting set forth in Section 1.

2.1.4 MCI may from time to time request reports from Bell Atlantic that are not contained in MCI's original list (Exhibit A hereto). Bona Fide Request procedures set forth in Section 25 of Part A shall apply.

2.1.5 The Parties acknowledge that further discussions will be necessary to define the data upon which the reports are based. Therefore, within sixty (60)

days after the Effective Date of this Agreement, the Parties shall agree to such definitions and will amend this Attachment accordingly.

Section 3. Definitions for Initial Performance Reports

3.1 The following definitions apply to the Initial Performance Reports included in Section 1 above. Bell Atlantic shall develop and supply definitions at a comparable level of detail for any further performance reporting deployed pursuant to Section 2.

SCHEDULE A

SERVICE CATEGORY (COLUMN) DEFINITIONS

Name	Definition
Performance Measurement	Provides a general description of the fourteen (14) performance measurements. See Measurement Definitions - Rows below.
Special Services (Access) <i>DS0</i> <i>DS1</i> <i>DS3</i>	The column group title Special Services (Access) refers to Private Line Special Access results (does not include resold or unbundled services). DS1 and DS3 are discrete services. DS0 includes all other special services.
CLEC Trunking	The column represents service for CLEC trunks that carry traffic office to office.
Unbundling <i>POTS</i> <i>Special Services</i>	The column group title Unbundling refers to both POTS and Special unbundling services purchased by the CLEC. The POTS column includes the unbundled loops and ports. The Special Services column includes all special services combined.
Resale - POTS	The Resale-POTS column refers to POTS services that have been resold to the CLEC. On the Bell Atlantic Including Affiliates Report, the Retail-POTS column is comparable to the Resale-POTS column of the other four (4) reports.

MEASUREMENT DEFINITIONS - ROW

Name	Definition
1. Number of Installations	<p>This is the total number of service orders issued/requested by MCI and completed by Bell Atlantic. Regardless of the number of elements or circuits ordered, each service order counts as one.</p> <p>Number of Installations results can not be compared from report (e.g., MCI-Specific) to report (e.g. Bell Atlantic Including Bell Atlantic Affiliates). However, volume is a good indicator as to whether meaningful comparisons can be made about provisioning intervals and percent orders completed on time.</p>
2. Average Interval in Days	<p>This is the sum of the receipt date to the service order due date as established on the firm order confirmation (FOC) for each service order where Bell Atlantic established the interval using the normal interval with this sum being divided by the total number of service orders used in the calculation</p> <p>MCI will send Bell Atlantic a service order request (PON) and Bell Atlantic will return the FOC which stipulates the scheduled completion date. The time from the PON date to the date due established on the FOC represents the average interval per order.</p> <p>Bell Atlantic flags each order with an appointment flag of either "x" or "w". If the scheduled interval reflected on the order is established by Bell Atlantic using the normal interval process, the order will be flagged with the "w". However, if MCI should request a date that is further out than the normal interval, the order will be flagged with the "x" to indicate that long interval was offered at the customer's request.</p> <p>For this category measurement, only those orders with the "w" indicator will be counted.</p> <p>If for some reason the order needs to be redated (longer or shorter), the final FOC date is the date that will be used for measurement purposes.</p>
3. Percent Install on Time	This measurement is the total number of installations (both "x" and "w" service orders) that were completed on time (based on the service order established due date) divided by the total number of service orders. This is the percentage of orders completed on time.

Name	Definition
4. Total Number of Missed Appointments	This measurement is the total number of service orders <i>not</i> completed on time. An appointment is defined as the date due agreed to by the customer and Bell Atlantic and shown on the order. If the customer issues a supplemental order changing the date due, the new date due will be measured as the appointment. Orders that are held or missed due to customer reasons <i>will not</i> be counted as a Bell Atlantic miss. This definition includes multi-item orders. If one item of a multi-item order is missed due to customer reasons, the order <i>will not</i> be counted as a Bell Atlantic miss.
5. Total Percent of Missed Appointments	Total Number of Missed Appointments divided by the total number of service orders See appointment definition on item # 4.
6. Number of Reports	This is the total number of customer trouble reports (i.e. CR troubles) received from MCIIm by service category. Each trouble counts as one and in cases where the trouble is redated or subsequent reports are received for escalations or to question status, Bell Atlantic will not count the subsequent reports. From receipt to close, each trouble counts as 1, regardless of the trouble resolution (CPE, NTF or Bell Atlantic Network). This measurement <i>does not include</i> information tickets (i.e. INF troubles).
7. Mean Time to Clear Reports	<p>This is the total measurable hours and minutes from all customer trouble reports, i.e. #6 above, (from the time Bell Atlantic receives a trouble from MCIIm until the service is restored and closed with MCIIm) divided by the total number of troubles for the report period. This measurement <i>does not include</i> information tickets (i.e. INF troubles).</p> <p>For Special Services columns and CLEC Trunking, the measurements will be "Stop Clock" measurements where "no access" (customer access delayed) time is removed from the measurement.</p> <p>For POTS columns, this will be a running 24 hour clock from trouble receipt to trouble clearance time. The Bell Atlantic clear time is the time service is restored. The Bell Atlantic work process is for the customer (MCIIm) to be notified as soon as service is cleared. Bell Atlantic does not use the "close time" because after clearing the trouble, the technician may stay and complete another hour or so of clean up before actually closing the trouble.</p>
8. Number of Failures	<p>The number of failures is the total number of trouble reports where the trouble was closed out with a code indicating that the fault was a Bell Atlantic service problem.</p> <p>Removed from the total trouble reports will be all the troubles that reflect the cause of the trouble to be other than a Bell Atlantic Network fault. Examples would be troubles caused by Customer Provided Equipment (CPE), errors by the customers/end user in the use of the service or where no trouble was detected (F/OK and T/OK).</p>
9. Failure Frequency Percent	The Number of Failures (#8 above) divided by the total number of circuits that MCIIm has purchased from Bell Atlantic. The result expressed as a percentage.
10. Percent Without Report Outstanding	<p>For this measurement, Bell Atlantic is to do the following:</p> <ol style="list-style-type: none"> 1. Multiply the total number of circuits by the total hours in the report period to establish the total hours of service availability possible for the report period. 2. Add all of the measurable time (hours and minutes) for only the network reports (i.e. Failures) to establish the total non service availability hours for the report period. 3. Subtract the "non service availability" hours from the "total service availability" hours and divide the result by the "total service availability" hours and display this as a percentage.

Name	Definition
11. Total Number of Repeat Reports (30 days rolling)	This is the number of measured customer repeat reports (i.e. CR repeat reports) within a 30 day rolling window. The measured CR reports include: Came Clear (CC), Central Office (CO), Facility (FAC), Test OK (TOK), Serving Bureau Time (SVB), NPC - Bell Atlantic switch and beyond. Non-measured customer reports are Information (INF), Customer Provided Equipment (CPE), and Interexchange Carrier (IEC). This measurement will be provided initially at a regional level, not state specific. The 3 components of the regional measurement are: one for Pennsylvania and Delaware, one for New Jersey and one for the 4 former C&P Companies, Maryland, Virginia, West Virginia and Washington, DC. Bell Atlantic will request an enhancement to the support system being used for measurements. State specific measurements will be available on a date to be determined (TBD).
12. Repeats as a Percent of Total Troubles	Number of measured customer repeat reports (i.e. CR repeat reports) divided by the total number of customer reports (i.e. CR reports). See definition of customer report contained in item # 11. This measurement will also be provided initially at a regional level, not state specific. See definition of regions in item #11.
13. Number of Out of Service Cleared >= 24 Hours	<p>Number of out of service customer reports (i.e. CR reports) cleared in 24 hours or more. See definition of customer report contained in item # 11.</p> <p>For Special Services columns, the measurements will be “Stop Clock” measurements where “no access” time is removed from the measurement.</p>
14. Percent of Out of Service Cleared >= 24 Hours	<p>Number of Out of Service Cleared >= 24 Hours divided by the total number of customer reports (i.e. CR reports). The result is expressed as a percentage. See definition of customer report contained in item # 11.</p> <p>For Special Services columns, the measurements will be “Stop Clock” measurements where “no access” time is removed from the measurement.</p>

Exhibit A

Proposed Further Performance Reporting Measures
Ordering and Provisioning
Time to provision each unbundled element
Time to install resold lines and trunks - varies according to line size, line type, and need for premises visit.
Total number and percent of missed appointments
Total number and % of missed firm order commitment dates
Time to acknowledge receipt of service order
Time to provide FOC or notification of a rejected order
Time to complete any suspend/block/restore/order
Time to install Centrex lines
Time to implement feature change
Time to disconnect resold service - varies with or without premises visit
Time to disconnect resale service
Time to disconnect unbundled switching service
Time to disconnect other unbundled service
% of Outages within 30 days for new services provisioned
Usage Billing
Time taken to send records to MCI following recording
Number of omissions from records
Maintenance and Repair
In service and out of service repair intervals
Number and percentage of Repeat Troubles
Troubles per 100 lines
Time taken to answer phone where manual service provided
Number and percentage of missed appointments
Number and percentage of estimated time to restore met.
Number and percentage of troubles requiring a dispatch
% breakdowns attributed to each trouble category

Proposed Further Performance Reporting Measures
Operational Systems
Support Systems Availability
System Response Time
Operator Services
Monthly Average for Seconds of Operator Answer Delay
Monthly Total of Quarter Hours of Operator Answer Delay
Monthly Call Abandonment and Blockage
Directory Assistance
Voice DA Availability
Voice DA Outage Restoral Notification
Voice DA Time to Answer
Voice DA Average Work Time
Voice DA Abandonment From Queue
Network Performance
Switched Service Disruption
Dedicated Service Disruption
Network Event
Blocked Calls
Blocked Dial Tone
Post Dial Delay

AMENDMENT

To

INTERCONNECTION AGREEMENTS

THIS AMENDMENT (this "Amendment"), effective as of December 1, 2003 (the "Effective Date"), amends each of the Interconnection Agreements listed in Exhibit A hereto (the "Interconnection Agreements"), and is made by and between each of the Verizon incumbent local exchange carriers (individually and collectively "Verizon" or the "Verizon Parties") and each of the MCI competitive local exchange carriers ("CLECs") that is a party to an Interconnection Agreement with Verizon (individually and collectively "MCI" or the "MCI Parties"), all as shown in Exhibit A. Verizon and MCI are referred to herein individually as a "Party" and collectively as the "Parties". Defined terms are addressed in Section 4 hereof.

WITNESSETH:

WHEREAS, MCI, pursuant to its plan of reorganization recently confirmed and approved by the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in the cases jointly administered under Case No. 02-13533 (AJG), is in the process of consolidating its various competitive local exchange carrier entities in each state; and

WHEREAS, the Parties collectively have engaged in negotiations, pursuant to a settlement agreement between the Parties that was approved by the Bankruptcy Court on July 29, 2003, to resolve their outstanding disputes pertaining to intercarrier compensation and wish to establish uniform terms governing intercarrier compensation arrangements for certain traffic exchanged between the Parties on and after the Effective Date, and to address certain closely related matters, including related interconnection obligations; and

WHEREAS, the Parties have agreed to establish a new unitary intercarrier compensation rate that is derived from a blending of existing Reciprocal Compensation rates and the FCC's interim rate structure for ISP-Bound Traffic as set forth in the *Order on Remand*, assuming a reasonable time period for implementation of the *Order on Remand*, and the Parties' current volumes of robust exchange of both Reciprocal Compensation Traffic and ISP-Bound Traffic; and

WHEREAS, the Parties wish to amend all of the Interconnection Agreements to effectuate the foregoing, and for the ease of administration, have elected to do so through this single Amendment.

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Unitary Inter-carrier Compensation Rates.

The Parties' agreement to the terms of this Section 1 was expressly conditioned upon their agreement to the terms of Sections 2 and 3 hereof (and, similarly, the availability of the terms of this Section 1 to any carrier adopting this Amendment would also be expressly conditioned upon such adopting carrier's agreement to those other terms of this Amendment as well). Notwithstanding any other provision in the Interconnection Agreements, in any tariff or Statement of Generally Available Terms ("SGAT"), or under Applicable Law (including, without limitation, any change to Applicable Law effected after the Effective Date):

(a) Commencing upon the Effective Date, and continuing prospectively for the applicable time periods described below, when Applicable Traffic is originated by the Customer of a Party on that Party's network (the "Originating Party") and delivered to the other Party (the "Receiving Party") for delivery to a Customer of the Receiving Party, within thirty (30) days following receipt of an appropriate invoice from the Receiving Party, the Originating Party shall pay inter-carrier compensation to the Receiving Party on an equal and symmetrical basis at the applicable inter-carrier compensation rate set forth below (the "Unitary Rate") for each Minute of Use ("MOU") of Applicable Traffic delivered by the Originating Party to the Receiving Party:

- (i) For the period beginning on the Effective Date and ending June 13, 2004, the Unitary Rate shall be the blended rate that results from the blending methodology described in Part 1 of Exhibit B; ***provided, however***, that in no event shall the Unitary Rate during this period exceed a cap of \$.00165 per MOU; and
- (ii) For the period beginning three (3) years from the effective date of the *Order on Remand* (that is, on June 14, 2004) and ending June 13, 2005, the Unitary Rate shall be the blended rate that results from the blending methodology described in Part 2 of Exhibit B; ***provided, however***, that in no event shall the Unitary Rate during this period exceed a cap of \$.00120 per MOU; and
- (iii) For the period beginning four (4) years from the effective date of the *Order on Remand* (that is, on June 14, 2005) and ending June 13, 2006, the Unitary Rate shall be the blended rate that results from the blending methodology described in Part 3 of Exhibit B; ***provided, however***, that in no event shall the Unitary Rate during this period exceed a cap of \$.00070 per MOU;

provided, however, that the foregoing Unitary Rates shall apply as between any Verizon Party and any MCI Party only on the express (and nonexclusive) condition that all MCI Parties and all Verizon Parties are and remain bound by the terms of this Amendment with respect to the exchange of Applicable Traffic between any Verizon Party and any

MCI Party; and **provided further**, that if the ratio of MOUs of (A) all Applicable Traffic originated on the networks of all the Verizon Parties and delivered to all of the MCI Parties, on an aggregated basis across all state jurisdictions, to (B) all Applicable Traffic originated on the networks of all the MCI Parties and delivered to all of the Verizon Parties, on an aggregated basis across all state jurisdictions (the “Aggregated Traffic Ratio”), in any ninety (90) day period during the timeframe beginning on the Effective Date and ending on June 13, 2006 (or ending on any date after June 13, 2006 on which this Amendment remains in effect, if this Amendment remains in effect after June 13, 2006) is equal to or greater than nine (9) to one (1), the Unitary Rate in all jurisdictions for all Applicable Traffic above a six (6) to one (1) Aggregated Traffic Ratio shall be zero from the first day of that ninety (90) day period through the last day that this Amendment remains in effect (i.e., compensation for Applicable Traffic up to and including a six (6) to one (1) Aggregated Traffic Ratio shall be at the then applicable Unitary Rate during such period, and compensation for Applicable Traffic above a six (6) to one (1) Aggregated Traffic Ratio shall be subject to “bill and keep” during such period); and **provided further**, that the foregoing Unitary Rates shall apply only on the express (and nonexclusive) condition that the Aggregated Traffic Ratio for the quarter ending thirty (30) days prior to the Effective Date (or, in the case of a carrier adopting the terms of this Amendment, the quarter ending thirty (30) days prior to the effective date of any such adoption) shall not be equal to or greater than three (3) to one (1); and **provided further**, that in no case shall the Unitary Rate, for any monthly billing period, be greater than Verizon’s nationwide, weighted averaged rate for the tariffed interstate access terminating local switching element in effect in each jurisdiction (i.e., in each state or the District of Columbia) for such month (such average to be weighted based on the number of MOUs, by jurisdiction, used for the calculations in Exhibit B hereto); and **provided further**, that the foregoing Unitary Rates shall apply only on the express condition that there are no outstanding billing disputes as of the Effective Date between the Parties for charges assessed by either Party with respect to Applicable Traffic or other traffic addressed in this Amendment (e.g., Type 2 VOIP Traffic) (or, in the case of a carrier adopting the terms of this Amendment, that there are no outstanding billing disputes between Verizon and such carrier or one of its CLEC affiliates, as of the effective date of any such adoption, for charges assessed by Verizon or that carrier or one of its CLEC affiliates with respect to Applicable Traffic or other traffic addressed in this Amendment); and **provided further**, should a Party not begin to exchange traffic with the other Party in a particular jurisdiction until after the Effective Date, the Parties shall apply the Unitary Rate in effect at the time they begin to exchange traffic, as shown in the table above. (By way of example, if a Verizon Party and an MCI Party (or any CLEC adopting this Amendment pursuant to 47 U.S.C. § 252(i)) do not begin to exchange traffic under this Amendment until August, 2005, the applicable Unitary Rate shall be the blended rate that results from the blending methodology described in Part 3 of Exhibit B, subject to the rate cap of \$.0007 per MOU and the other terms of this Amendment.)

(b) For the purpose of calculating the Aggregated Traffic Ratio, MOUs of Applicable Traffic exchanged between Verizon and MCI over UNE-P lines provided to MCI by Verizon shall be included in such calculation. Specifically: (i) MOUs originated by MCI over a UNE-P line shall be as measured by Verizon; (ii) MOUs originated by

Verizon Customers and delivered to MCI UNE-P lines are not being measured by Verizon as of the Effective Date; and (iii) until such time as Verizon, in its sole discretion, elects to provide actual measurement of MOUs originated by Verizon Customers and delivered to MCI UNE-P lines, the Parties shall assume that the ratio of MOUs originated on MCI UNE-P lines to MOUs received by MCI on such UNE-P lines is 1:1.

(c) For the avoidance of doubt, (i) traffic originated by MCI over Verizon-provided UNE-P lines and delivered by Verizon to third party carriers served by other Verizon-provided UNE-P lines, (ii) traffic originated by MCI over Verizon-provided UNE-P lines and delivered by Verizon to third party carriers utilizing their own switches (i.e., facilities-based carriers) and (iii) traffic originated by Customers of third party carriers and delivered via the network facilities of either Party to the other Party, shall not be subject to the Unitary Rates set forth in this Amendment; provided, however, the terms, if any, contained in the Interconnection Agreements with respect to the foregoing types of traffic shall not be superseded, amended or affected by this subsection (c).

(d) The Parties anticipate that the terms set forth in this Amendment will greatly reduce (if not eliminate) the incidence of billing disputes between them with respect to Applicable Traffic and other traffic addressed in this Amendment (e.g., Type 2 VOIP Traffic). If, nonetheless, a good faith dispute arises with respect to any amounts billed by a Party to the other Party for Applicable Traffic or other traffic addressed under the terms of this Amendment, the billed Party shall notify the billing Party in writing of such good faith dispute as soon as reasonably possible after the billed Party is aware of such dispute, and shall pay the disputed charges pending resolution of the dispute; ***provided, however***, that the billed Party may withhold payment of any charges or category of charges billed in a given month that exceed one hundred, thirty-five percent (135%) of the three (3) prior months' average monthly non-disputed billings, provided it has a good faith basis for disputing such excess charges; and ***provided further***, that where (i) the billed Party has disputed a particular charge or category of charges in good faith for at least three (3) prior months, (ii) has paid such disputed charge or category of charges in accordance with the foregoing provisions, and (iii) has initiated dispute resolution in accordance with the terms of the relevant Interconnection Agreement(s), the billed Party may withhold further payment of such disputed charge or category of charges pending such dispute resolution. Both Parties shall use their commercially reasonable best efforts to promptly resolve any and all such billing disputes, and the billing Party shall promptly credit (and/or pay, as applicable) any amounts due to the billed Party upon dispute resolution and, conversely, the billed Party shall promptly pay any amounts due to the billing Party upon dispute resolution. Notwithstanding any other provision of the Interconnection Agreements, the disputing Party may proceed directly to the dispute resolution mechanism set forth in the Interconnection Agreement (e.g., arbitration), and shall not be obligated to take any other preliminary steps that otherwise may be called for under the terms of the relevant Interconnection Agreement(s) (e.g., without the need to escalate or mediate the dispute, wait a set number of days before making a claim, etc.). Neither the withholding of payment nor the payment of disputed charges in accordance herewith shall constitute a waiver of either Party's right to dispute the matter or to pursue

other remedies at law, or be given any evidentiary weight as to the merits of the dispute.

(e) The Originating Party shall take steps to ensure that all calls (including VOIP Traffic) originated by its Customers (each a "Calling Customer") include any Charge Number, Calling Party Number ("CPN"), Automatic Number Identifier or similar signaling parameters intended to identify the Calling Customer ("Call Records") and that such Call Records are transmitted intact to the Receiving Party and to any intermediate service provider carrying these calls, as applicable. The Receiving Party shall use such Call Records to determine the proper jurisdictional nature of the call, in accordance with the terms of this Section 1. Except as may be required by Applicable Law or as may be agreed upon in writing by the Parties (any such agreement not to be unreasonably withheld), the Originating Party shall not (i) to the extent technically feasible, remove such Call Records, (ii) alter or replace such Call Records, or (iii) insert or add any Call Record information (such as Charge Number) that does not correspond to the local calling area of the Calling Customer. Neither Party shall knowingly and intentionally (a) strip or alter Call Records to disguise the jurisdiction of a call or (b) permit third parties to do so for a Party's originated traffic. Inserting a billing telephone number ("BTN") or other designation that accurately reflects the jurisdiction of the call from the Originating Party's Customer shall not constitute a violation of the foregoing.

(f) For billing purposes, each Party shall pass CPN information on each call delivered to the other Party. The Receiving Party shall bill the Originating Party the then-current Unitary Rate, intrastate switched exchange access service rates, or interstate switched exchange access services rates applicable to each relevant minute of traffic for which CPN is passed, as provided in this Amendment, the Interconnection Agreements or the Receiving Party's applicable tariffs.

(g) If, under the circumstances set forth in subsection (f) directly above, the Originating Party does not pass CPN on up to (but not more than) ten percent (10%) of calls, the Receiving Party shall bill the Originating Party the then-current Unitary Rate, intrastate switched exchange access services rates, or interstate switched exchange access services rates applicable to each relevant minute of traffic, as provided in this Amendment, the Interconnection Agreements or the Receiving Party's applicable tariffs, for which CPN is passed. For the remaining calls (i.e., the calls without CPN information), the Receiving Party shall bill the Originating Party for such traffic at the then-current Unitary Rate, intrastate switched exchange access services rates, or interstate switched exchange access services rates applicable to each relevant minute of traffic, as provided in this Amendment, the Interconnection Agreements and the Receiving Party's applicable tariffs, in direct proportion to the minutes of use of calls passed with CPN information.

(h) If the Originating Party fails to pass CPN on at least ninety percent (90%) of calls, the Receiving Party shall bill the Originating Party the then-current Unitary Rate, intrastate switched exchange access services rates, or interstate switched exchange access services rates applicable to each relevant minute of traffic, as provided in this Amendment, the Interconnection Agreements or the Receiving Party's applicable tariffs,

for which CPN is passed. For the remaining calls (i.e., the calls without CPN information), the Receiving Party shall bill the Originating Party for such traffic as follows: (i) for calls without CPN information comprising up to (but not exceeding) ten percent (10%) of all calls, the Receiving Party shall bill the Originating Party for such traffic at the then-current Unitary Rate, intrastate switched exchange access services rates, or interstate switched exchange access services rates applicable to each relevant minute of traffic, as provided in this Amendment, the Interconnection Agreements and the Receiving Party's applicable tariffs, in direct proportion to the minutes of use of calls passed with CPN information; and (ii) for the remaining calls without CPN information, the receiving Party shall bill the higher of its interstate switched exchange access services rates or its intrastate switched exchange access services rates for such traffic, unless the Parties agree that other rates should apply to such traffic.

(i) If the Receiving Party lacks the ability to use CPN information to classify on an automated basis traffic delivered by the other Party as either Applicable Traffic or toll traffic, the Originating Party will supply an auditable Percent Local Usage (PLU) report quarterly, based on the previous three (3) months' traffic, and applicable to the following three (3) months' traffic. If the Originating Party also desires to combine interstate and intrastate toll traffic on the same trunk group, it will supply an auditable Percent Interstate Usage (PIU) report quarterly, based on the previous three (3) months' terminating traffic, and applicable to the following three (3) months' traffic. In lieu of the foregoing PLU and/or PIU reports, the Parties may agree to provide and accept reasonable surrogate measures for an agreed-upon period.

(j) Measurement of billing minutes for purposes of determining terminating compensation shall be in conversation seconds. The Parties agree that, in addition to any applicable audit provisions in their Interconnection Agreements, each Party shall have the right to conduct, at its own cost, periodic (but in any case no more frequent than semi-annual) audits, on commercially reasonable terms and conditions, with respect to billings sent in connection with this Amendment; and the other Party agrees to reasonably cooperate with any such audits.

(k) Notwithstanding any provision in the Interconnection Agreements, this Amendment or a tariff, Verizon shall not charge MCI a UNE terminating local switching rate element for calls originated by a Verizon Customer that Verizon delivers to MCI for an MCI UNE-P Customer; nor shall MCI charge Verizon the Unitary Rate, Reciprocal Compensation charges or any other charges with respect to such calls.

2. VOIP Traffic.

Notwithstanding any other provision in the Interconnection Agreements, in any tariff or SGAT, or under Applicable Law (including, without limitation, except as set forth in the last sentence of this section, any change to Applicable Law effected after the Effective Date), the Parties agree that, for purposes of this Amendment only: (i) VOIP Traffic shall be considered to be Telecommunications Traffic, and not Information Services Traffic; (ii) VOIP Traffic that is delivered to the Receiving Party with a CPN (or other accurate Call Record information) that is associated with an exchange outside the Verizon local calling

area in which the Customer of the Receiving Party is physically located (“Type 2 VOIP Traffic”) shall not be subject to the Unitary Rates set forth in Section 1 above, but shall instead be subject to the Receiving Party’s applicable switched access rates; (iii) VOIP Traffic that is delivered to the Receiving Party with a CPN (or other accurate Call Record information) that is associated with the same local calling area (or the same LATA, in the case of the state of New York, so long as LATA-wide reciprocal compensation is required by the New York Public Service Commission) in which the Customer of the Receiving Party is physically located (“Type 1 VOIP Traffic”) shall be subject to the Unitary Rates set forth in Section 1 above; and (iv) VOIP Traffic that is delivered to the Receiving Party without CPN (or other accurate Call Record information) shall be subject to the provisions of Sections 1(f)-1(j). Notwithstanding anything in this Section 2, if, after the Effective Date, the FCC or Congress promulgates an effective and unstayed law, rule or regulation, or a court of competent jurisdiction issues an effective and unstayed nationally-effective order, decision, ruling, or the like regarding VOIP Traffic, the Parties will adhere to the relevant portions (i.e., those relating to the regulatory classification of or, compensation for, VOIP Traffic generally or any category of VOIP Traffic) of such legally effective and unstayed rule, regulation, order, decision, ruling or the like as soon as it becomes legally effective.

3. Points of Interconnection.

Notwithstanding any other provision in the Interconnection Agreements, any applicable tariff or SGAT, or under Applicable Law, this Section 3 shall set forth the Parties’ respective rights and obligations with respect to interconnection architecture; provided however, that if, (a) pursuant to the fourth proviso of Section 1(a) of this Amendment, the Unitary Rates are capped by a change in the tariffed interstate access terminating local switching element and (b) the FCC or Congress promulgates an effective and unstayed law, rule or regulation, or a court of competent jurisdiction issues an effective and unstayed, nationally-effective order, decision, ruling, or the like regarding network architecture in conjunction with reduced interstate access rates, (i) either Party may put on hold the construction of new interconnection facilities required by this Section 3 and (ii) the Parties shall promptly negotiate amendments reflecting and transitioning to the newly prescribed network architecture.

(a) Mutual points of interconnection (“POIs”) in each LATA in which one (or both) of the Parties originates Applicable Traffic for delivery to the other Party shall be established as set forth in this Section 3.

(i) MCI shall establish at least one mutual POI (i.e., a technically feasible point at which each Party delivers its originating traffic to the other Party) on Verizon’s network in each of the Verizon Tandem serving areas in which MCI assigns to its end user Customers its own or ported telephone numbers. In addition, in each LATA with two (2) or more Verizon Tandems, MCI shall promptly establish additional mutual POI(s) once the total volume of Applicable Traffic originated by the Parties in a Verizon Tandem serving area reaches or exceeds the level of two (2) DS1s during any

month, provided that until such time, MCI shall hand off direct non-switched trunk groups to Verizon at the nearest Verizon Tandem (in such LATA) where MCI has assigned telephone numbers (and Verizon shall provide transport between such Verizon Tandem and the terminating Verizon Tandem at no charge to MCI, provided that where MCI has as of the Effective Date existing (or adds thereafter) transport facilities to the terminating Verizon Tandem, MCI shall utilize those facilities until such time as MCI establishes the mutual POI at the relevant Verizon Tandem). If Verizon's deployment of a logical Tandem (i.e., a Tandem using voice over ATM technology) in a LATA results in an increase in the number of Tandems in that LATA, such deployment shall not result in a requirement for MCI to establish an additional mutual POI in such LATA; provided, however, in such case MCI shall nonetheless fulfill the direct routed trunk group obligations set forth above. Each POI shall be at a technically feasible point in the relevant Verizon Tandem Wire Center, unless otherwise agreed to in writing by the Parties.

(ii) In any Verizon Tandem serving area in which MCI does not assign its own or ported telephone numbers, MCI shall deliver Applicable Traffic for termination to Verizon at a technically feasible POI at the terminating Verizon Tandem or End Office Wire Center.

(iii) In any LATA in which there are fewer than two (2) Verizon Tandems, then in addition to the mutual POI at the Verizon Tandem Wire Center, additional mutual POIs shall be established at such Verizon End Office Wire Centers mutually agreed to in writing by the Parties. The LATAs in which, as of the Effective Date, Verizon has fewer than (2) Tandems, include, without limitation, the LATAs set forth in Exhibit C.

(iv) For those Verizon End Offices that subtend a third party Tandem, Verizon may elect to designate the third party Tandem as the relevant mutual POI and, if Verizon does not do so, MCI shall designate a technically feasible point on the Verizon network in the relevant Tandem serving area, as the relevant mutual POI, and shall hand off direct non-switched trunks to relevant Verizon End Offices at that mutual POI.

(b) From and after the Effective Date, in any LATA where the Parties have not yet established mutual POIs as described in Section 3(a), MCI shall not bill (and Verizon shall not have an obligation to pay) any fees, charges or the like (including, without limitation, any transport charges) with respect to such arrangements.

(c) Subject to subsections (e) and (f) directly below, neither Party may charge (and neither Party shall have an obligation to pay) any fees, charges or the like (including, without limitation, any transport charges), with respect to Applicable Traffic that either Party delivers at a mutual POI, other than the Unitary Rates for Applicable Traffic.

(d) If the Applicable Traffic destined for an End Office exceeds the CCS

busy hour equivalent of two (2) DS1s, Verizon may request, and MCI shall order, Direct End Office Trunks (“DEOTs”) to that End Office. Verizon shall provide the DEOT facilities between the mutual POI and the Verizon End Office at no additional charge to MCI. MCI shall be responsible for ordering and providing such DEOTs between the mutual POI and the MCI switch at no additional charge to Verizon. After initially establishing DEOTs pursuant to this subsection, traffic routed to this End Office will be allowed to overflow to the Tandem not to exceed the CCS busy hour equivalent of one (1) DS1.

(e) In those LATAs in which the Parties have previously established interconnection at POIs and/or are using interconnection transport and trunking architectures other than as set forth pursuant to the terms of Section 3(a), either Party may require the other Party, via written notice to the other Party, to bring such pre-existing interconnection arrangements into compliance with the terms of Section 3(a) through either of the following methods:

(i) Within a commercially reasonable time following the foregoing notice (not to exceed six (6) months after the date of such notice unless otherwise agreed in writing by the Parties), the Parties shall negotiate in good faith and implement a physical migration of the pre-existing arrangements to the terms prescribed herein; or

(ii) In lieu of requiring physical rearrangements of pre-existing facilities, or where the physical rearrangement has not been completed, within six (6) months following such notice, the Parties shall implement a billing arrangement pursuant to which MCI shall pay Verizon for the transport (and entrance facilities if provided by Verizon) between each Verizon Tandem (or other designated POIs at Verizon End Offices in LATAs with less than two (2) Verizon Tandems) and the hand off to or from MCI at the MCI switch or other location, at the applicable Verizon intrastate access rates and charges; provided, however, that so long as Verizon may be required by Applicable Law to provide interconnection transport facilities between any specific Verizon Central Offices at TELRIC-based rates and charges, Verizon shall do so (and, if not so required under Applicable Law, Verizon shall provide the transport facilities between such Central Offices at the applicable Verizon intrastate access rates and charges).

With respect to subsection (i) directly above, each Party shall bear its own costs with respect to any such migration; the Parties will coordinate any such migration, trunk group prioritization, and implementation schedule; and Verizon agrees to develop a cutover plan and to project manage the cutovers with MCI participation and agreement.

(f) MCI may apportion spare capacity on existing access entrance facilities (and/or transport where applicable) purchased by MCI between the relevant mutual POIs and/or the MCI switch as described in this section 3; however, any such apportionment shall not affect the rates or charges applied to the relevant facilities.

(g) Subject to written agreement of the Parties, MCI may designate an MCI

collocation space(s) (at a Verizon Wire Center) as an additional mutual POI(s) within a given Tandem serving area.

4. Defined Terms.

Notwithstanding anything to the contrary in the Interconnection Agreements, in any applicable tariff or SGAT, or under Applicable Law (including, without limitation, a change to Applicable Law effected after the Effective Date), the terms defined in this Section (or elsewhere in this Amendment) shall have the respective meanings set forth in this Amendment. A defined term intended to convey the meaning stated in this Amendment is capitalized when used. Other terms that are capitalized, and not defined in this Amendment, shall have the meaning set forth in the Act. Unless the context clearly indicates otherwise, any term defined in this Amendment that is defined or used in the singular shall include the plural, and any term defined in this Amendment that is defined or used in the plural shall include the singular. The words “shall” and “will” are used interchangeably, and the use of either indicates a mandatory requirement. The use of one or the other shall not confer a different degree of right or obligation for either Party. The terms defined in this Amendment have the meanings stated herein for the purpose of this Amendment only, and not for any other purpose. By agreeing to use the definitions of terms used in this Amendment, neither Party is conceding the definition of a term for any other purpose.

(a) “Act” means the Communications Act of 1934 (47 U.S.C. §151 et seq.), as amended and in effect from time to time (including, but not limited to, by the Telecommunications Act of 1996).

(b) “Applicable Law” means all effective laws and government regulations, rules, decisions and orders applicable to each Party’s rights, and performance of its obligations, under this Amendment and the Interconnection Agreements.

(c) “Applicable Traffic” consists of Reciprocal Compensation Traffic (including, without limitation, for purposes of this Amendment and no other purpose, Reciprocal Compensation Traffic originated by MCI UNE-P Customers and terminated to Verizon Customers, ISP-Bound Traffic (including, for purposes of this Amendment and for no other purpose, V/FX Traffic that is ISP-Bound Traffic), and Type 1 VOIP Traffic. Applicable Traffic does not include Reciprocal Compensation Traffic originated by Verizon Customers and terminated to MCI UNE-P Customers. Applicable Traffic also does not include Type 2 VOIP Traffic or V/FX Traffic that is not ISP-bound Traffic, each of which types of traffic is subject to applicable switched exchange access tariff charges; the Parties hereby agree that, as of the Effective Date, they are exchanging only a de minimis amount of V/FX Traffic that is not ISP-bound Traffic; the Parties further agree that, from time to time, upon written request from either Party, the Parties will review whether the amount of such V/FX Traffic that is not ISP-bound Traffic exchanged between them remains de minimis. For the purpose of calculating traffic ratios only, and not for the purpose of calculating intercarrier compensation, “Applicable Traffic” also includes Reciprocal Compensation Traffic originated by Verizon Customers and

terminated to MCI UNE-P Customers.

(d) “Central Office Switch” means a switch used to provide Telecommunications Services, including, but not limited to, an End Office Switch or a Tandem Switch. A Central Office Switch may also be employed as a combination End Office/Tandem Office Switch.

(e) “Customer” means a third party residence or business end-user subscriber to Telephone Exchange Services provided by one of the Parties.

(f) “End Office” or “End Office Switch” means a switching entity that is used to terminate Customer station loops for the purpose of interconnection to each other and to trunks.

(g) “Extended Local Calling Scope Arrangement” means an arrangement that provides a Customer a local calling scope (Extended Area Service, “EAS”), outside of the Customer’s basic exchange serving area. Extended Local Calling Scope Arrangements may be either optional or non-optional. “Optional Extended Local Calling Scope Arrangement Traffic” is traffic that under an optional Extended Local Calling Scope Arrangement chosen by the Customer terminates outside of the Customer’s basic exchange serving area.

(h) “Information Access” means the provision of specialized exchange Telecommunications Services in connection with the origination, termination, transmission, switching, forwarding or routing of Telecommunications traffic to or from the facilities of a provider of information services, including an Internet service provider.

(i) “ISP-Bound Traffic” has the meaning set forth in the *Order on Remand*.

(j) “LERG” or “Local Exchange Routing Guide” means a Telcordia Technologies reference containing NPA/NXX routing and homing information.

(k) “NXX” or “NXX Code” means the three-digit switch entity indicator (i.e. the first three digits of a seven-digit telephone number).

(l) “*Order on Remand*” is the Federal Communications Commission’s Order on Remand and Report and Order in *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Intercarrier Compensation for ISP Bound Traffic*, FCC 01-131, CC Docket Nos. 96-98 and 99-68 (rel. Apr. 27, 2001).

(m) “Reciprocal Compensation” means the arrangement for recovering, in accordance with Section 251(b)(5) of the Act, the *Order on Remand*, and other applicable FCC orders and FCC regulations, costs incurred for the transport and termination of Reciprocal Compensation Traffic.

(n) “Reciprocal Compensation Traffic” consists of Telecommunications traffic for which compensation is required by both Section 251(b)(5) of the Act and 47

C.F.R Part 51; and, for the avoidance of any doubt, the following types of traffic, among others, do not constitute Reciprocal Compensation Traffic: Telecommunications traffic that is interstate or intrastate Exchange Access, Information Access, or exchange services for Exchange Access or Information Access; toll traffic, including, but not limited to, calls originated on a 1+ presubscription basis, or on a casual dialed (10XXX/101XXX) basis; Optional Extended Local Calling Scope Arrangement Traffic; special access, private line, frame relay, ATM, or any other traffic that is not switched by the Receiving Party; tandem transit traffic; or voice Information Service traffic.

(o) “Switched Exchange Access Service” means the offering of transmission and switching services for the purpose of the origination or termination of toll traffic. Switched Exchange Access Services include but may not be limited to: Feature Group A, Feature Group B, Feature Group D, 700 access, 800 access, 888 access and 900 access.

(p) “Tandem” or “Tandem Switch” means a physical or logical switching entity that has billing and recording capabilities and is used to connect and switch trunk circuits between and among End Office Switches and between and among End Office Switches and carriers' aggregation points, points of termination, or points of presence, and to provide Switched Exchange Access Services.

(q) “UNE-P” means a combination of a UNE switch port and UNE loop provided by Verizon pursuant to the requirements of 47 U.S.C. Section 251(c)(3) and 47 C.F.R. Part 51.

(r) “Virtual Foreign Exchange Traffic” or “V/FX Traffic” means calls placed over the public switched telephone network or VOIP Traffic, in either case in which a Customer is assigned a telephone number with an NXX Code (as set forth in the LERG) associated with an exchange that is different than the exchange (as set forth in the LERG) associated with the actual physical location of such Customer’s station.

(s) “VOIP Traffic” means voice communications, or data communications other than ISP-Bound Traffic, that are transmitted in whole or in part over packet switching facilities using Internet Protocol or any similar packet protocol. For purposes of this Amendment only (and without affecting any other matter), VOIP Traffic shall be treated as having been generated through provision of a Telecommunications Service, and not an Information Service.

(t) “Wire Center” means a building or portion thereof which serves as the premises for one or more Central Office Switches and related facilities.

5. Waiver of Rights; Successor Terms.

(a) Each Party irrevocably waives, with respect to the other Party, any and all rights that it may have or that it may obtain, from the beginning of time through and including June 13, 2006, under the Act (including, but not limited to, under Section 252(i) thereof), under any other Applicable Law, under the Interconnection Agreements, or otherwise (i) to adopt the terms of any other interconnection agreement, law, regulation,

order, arbitration award or the like relating to the subject matter of this Amendment; or (ii) to seek through negotiation, arbitration, or otherwise terms or provisions that would modify, replace, alter or otherwise change the terms and provisions of this Amendment prior to June 14, 2006. Further, the Parties agree that, if they establish new or replacement interconnection agreements beyond those set forth in Exhibit A to this Amendment, they shall implement the terms of this Amendment into such new or replacement interconnection agreements until such time as this Amendment is superceded in accordance with subsection (b) directly below. Neither Party hereby waives any other rights accorded to it under Applicable Law, except to the extent expressly stated in this Amendment. Nothing in this Amendment should be construed or interpreted as limiting in any way either Party's rights to pursue in any forum regulatory or legislative reform and/or changes to Applicable Law.

(b) If, by June 14, 2006, the Parties have not entered into successor terms and conditions with respect to the subject matter of this Amendment, then on and as of such date, the terms of this Amendment shall continue to be in effect until replaced by terms to which the Parties agree in writing (pursuant to a voluntary agreement or arbitration). On or after (but no earlier than) February 1, 2006, either Party may initiate, by written notice to the other Party, renegotiation of successor terms and provisions with respect to the subject matter of this Amendment. If the Parties are not able to negotiate such successor terms and provisions by June 14, 2006, either Party may initiate an arbitration under Section 252 of the Act, or another appropriate action (if applicable), in any and/or all jurisdictions, upon thirty (30) days written notice, which notice may be given at any time on or after (but not before) June 14, 2006.

6. Representations and Warranties.

(a) Each of the Verizon Parties represents and warrants that:

(i) it is a corporation validly existing and in good standing under the laws of its state of incorporation, it has all requisite corporate power and authority to execute and deliver this Amendment, and it has all requisite corporate power and authority to perform its respective obligations hereunder;

(ii) the execution, delivery and performance of this Amendment by the Verizon Party will not result in any violation or be in conflict with its charter or by-laws, or any agreement, order, judgment, decree, statute, rule or regulation applicable to the subject Verizon Party; and

(iii) this Amendment is a valid and binding agreement of the Verizon Party.

(b) Each MCI Party represents and warrants that:

(i) it is a corporation or company validly existing and in good standing under the laws of its state of incorporation, it has all requisite corporate power and authority

to execute and deliver this Amendment, and it has all requisite corporate power and authority to perform its respective obligations hereunder;

(ii) the execution, delivery and performance of this Amendment by the MCI Party will not result in any violation or be in conflict with its charter or by-laws, or any agreement, order, judgment, decree, statute, rule or regulation applicable to it; and

(iii) this Amendment is a valid and binding agreement of the MCI Party.

7. Conflicts.

This Amendment shall amend the terms and provisions of the Interconnection Agreements only to the extent necessary to give effect to the terms and provisions of this Amendment, and, except to the extent set forth in this Amendment, the terms and provisions of the Interconnection Agreements shall remain in full force and effect after the Effective Date. In the event of a conflict between the terms and provisions of this Amendment and the terms and provisions of the Interconnection Agreements, this Amendment shall govern.

8. Entire Agreement.

This Amendment contains the entire understanding between the Parties pertaining to the subject matter of the Amendment.

9. Amendments.

The Parties can amend this Amendment only by a written document signed by each of the Parties (and/or by an authorized designee (or designees) signing on behalf of one or more of the Parties).

10. Counterparts.

This Amendment may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

11. No Severability.

If any provision of this Amendment is held to be invalid or unenforceable under Applicable Law, such invalidity or unenforceability shall not invalidate the entire Amendment (unless such construction would be unreasonable), and this Amendment shall be construed as if it did not contain the invalid or unenforceable provision or provisions, and the rights and obligations of each Party construed and enforced accordingly; *provided, however*, the Parties agree that, it would be unreasonable to not invalidate the entire Amendment if, among other things, one (1) or more portions of Section 1(a) were held to be invalid or unenforceable. If any provision of this Amendment is held to be invalid or unenforceable under Applicable Law, and it would be unreasonable to not invalidate the entire Amendment, the Parties shall negotiate in good

faith respecting an amendment hereto that would preserve, to the fullest extent possible, the respective benefits and burdens imposed on each Party under this Amendment as originally executed. In the event, and only in the event, that the Parties are unable to agree on the terms of such amendment within forty five (45) days after such declaration of invalidity or unenforceability, then either Party, on written notice, may terminate its obligations contained in this Amendment in the state(s) or jurisdiction(s) in which such invalidity or unenforceability occurs only, in which event this Amendment shall thereafter be of no force and effect within such affected jurisdiction(s); in such case, effective from and after the date of receipt of the foregoing notice (without the need for any further action such as an amendment of the affected Interconnection Agreement(s)), the provisions, if any, under Applicable Law shall apply to the subject matter of this Amendment in the affected jurisdiction(s).

12. Joint Work Product.

This Amendment is a joint work product, and any ambiguities in this Amendment shall not be construed by operation of law against either Party.

13. Captions.

The Parties acknowledge that the captions in this Amendment have been inserted solely for convenience of reference and in no way define or limit the scope or substance of any term or provision of this Amendment.

IN WITNESS WHEREOF, the undersigned have caused this Amendment to be duly executed and to become effective as of the Effective Date.

The MCI Parties

The Verizon Parties

By: _____

By: _____

Printed:

Printed:

Title:

Title:

Date:

Date:

Exhibit A

List of Interconnection Agreements By State

Exhibit A

State	MCI Affiliate	Verizon Affiliate	EffectiveDate	Unitary Rate Amendment is:
CA	Brooks Fiber Communications of Bakersfield Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	Brooks Fiber Communications of Fresno Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	Brooks Fiber Communications of Sacramento Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	Brooks Fiber Communications of San Jose Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	Brooks Fiber Communications of Stockton Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	Intermedia Communications Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	MCI WORLDCOM Communications Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CA	MCImetro Access Transmission Services LLC	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #3
CT	MCImetro Access Transmission Services LLC	Verizon New York Inc., d/b/a Verizon New York, f/k/a New York Telephone Company, d/b/a Bell Atlantic-New York	4/20/98	Amendment #2
CT	MCImetro Access Transmission Services LLC (as successor to Rhythms Links Inc.)	Verizon New York Inc., d/b/a Verizon New York, f/k/a New York Telephone Company, d/b/a Bell Atlantic-New York	11/8/01	Amendment #1
DC	Intermedia Communications Inc.	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	2/19/97	Amendment #2
DC	MCI WORLDCOM Communications Inc.	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	9/28/99	Amendment #1
DC	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	11/28/01	Amendment #1
DC	MCImetro Access Transmission Services LLC	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	9/12/97	Amendment #2
DE	Intermedia Communications Inc.	Verizon Delaware Inc., f/k/a Bell Atlantic - Delaware, Inc.	2/19/97	Amendment #3
DE	MCI WorldCom Communications Inc.	Verizon Delaware Inc., f/k/a Bell Atlantic - Delaware, Inc.	7/16/96	Amendment #3
DE	MCImetro Access Transmission Services LLC	Verizon Delaware Inc., f/k/a Bell Atlantic - Delaware, Inc.	9/12/02	Amendment #1
FL	Intermedia Communications Inc.	Verizon Florida Inc., f/k/a GTE Florida Incorporated	6/19/97	Amendment #2
FL	MCImetro Access Transmission Services LLC	Verizon Florida Inc., f/k/a GTE Florida Incorporated	4/29/99	Amendment #1
FL	Metropolitan Fiber Systems of Florida Inc.	Verizon Florida Inc., f/k/a GTE Florida Incorporated	11/20/96	Amendment #1
HI	MCImetro Access Transmission Services LLC	Verizon Hawaii Inc., f/k/a GTE Hawaiian Telephone Company Incorporated	6/25/03	Amendment #1

ID	MCI WORLDCOM Communications Inc.	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	6/25/03	Amendment #2
ID	MCImetro Access Transmission Services LLC	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	6/25/03	Amendment #2
IL	Intermedia Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated, Verizon South Inc., f/k/a GTE South Incorporated	6/25/03	Amendment #1
IL	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated, Verizon South Inc., f/k/a GTE South Incorporated	6/25/03	Amendment #1
IN	Intermedia Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated Contel of the South, Inc., d/b/a Verizon North Systems	6/3/03	Amendment #1
IN	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated Contel of the South, Inc., d/b/a Verizon North Systems	6/3/03	Amendment #1
IN	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated Contel of the South, Inc., d/b/a Verizon North Systems	6/3/03	Amendment #1
MA	Brooks Fiber Communications of Massachusetts Inc.	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	5/26/00	Amendment #1
MA	Intermedia Communications Inc.	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	12/9/96	Amendment #1
MA	MCI Worldcom Communications Inc.	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	6/25/99	Amendment #1
MA	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	11/29/01	Amendment #1
MA	MCImetro Access Transmission Services LLC	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	10/30/98	Amendment #2
MD	Intermedia Communications Inc.	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	2/19/97	Amendment #2
MD	MCI WORLDCOM Communications Inc.	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	4/25/00	Amendment #1
MD	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	11/28/01	Amendment #1
MD	MCImetro Access Transmission Services LLC	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	4/24/00	Amendment #1

ME	MCImetro Access Transmission Services LLC and New England Fiber Communications L.L.C.	Verizon New England Inc., d/b/a Verizon Maine, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Maine	7/17/97	Amendment #2
MI	Brooks Fiber Communications of Michigan Inc.	Verizon North Inc., f/k/a GTE North Incorporated	8/13/03	Amendment #1
MI	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	8/13/03	Amendment #1
MI	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated	8/13/03	Amendment #1
NC	Intermedia Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	9/15/97	Amendment #1
NC	MCI WORLDCOM Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	7/16/03	Amendment #2
NC	MCImetro Access Transmission Services LLC	Verizon South Inc., f/k/a GTE South Incorporated	8/2/97	Amendment #1
NH	MCImetro Access Transmission Services LLC and New England Fiber Communications L.L.C.	Verizon New England Inc., d/b/a Verizon New Hampshire, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - New Hampshire	7/17/97	Amendment #2
NJ	Intermedia Communications Inc.	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	2/19/97	Amendment #2
NJ	MCI WORLDCOM Communications Inc.	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	9/28/99	Amendment #1
NJ	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	11/28/01	Amendment #1
NJ	MCImetro Access Transmission Services LLC	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	6/26/97	Amendment #2
NV	Brooks Fiber Communications of Nevada Inc.	Verizon California Inc., f/k/a GTE California Incorporated	5/30/03	Amendment #1
NV	Intermedia Communications Inc.	Verizon California Inc., f/k/a GTE California Incorporated	5/30/03	Amendment #1
NV	MCImetro Access Transmission Services LLC	Verizon California Inc., f/k/a GTE California Incorporated	5/30/03	Amendment #1
NY	Brooks Fiber Communications of New York Inc.	Verizon New York Inc., f/k/a New York Telephone Company	9/21/99	Amendment #2
NY	Intermedia Communications Inc.	Verizon New York Inc., f/k/a New York Telephone Company	11/8/96	Amendment #3
NY	MCI WORLDCOM Communications Inc.	Verizon New York Inc., f/k/a New York Telephone Company	6/24/99	Amendment #2
NY	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon New York Inc., f/k/a New York Telephone Company	11/19/01	Amendment #1
NY	MCImetro Access Transmission Services LLC	Verizon New York Inc., f/k/a New York Telephone Company	10/1/97	Amendment #4
OH	Brooks Fiber Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	11/4/99	Amendment #1
OH	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #1
OH	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #1

OR	MCI WORLDCOM Communications Inc.	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	12/5/01	Amendment #1
OR	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	11/28/01	Amendment #1
OR	MCImetro Access Transmission Services LLC	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	10/8/99	Amendment #1
PAe	MCI WorldCom Communications Inc.	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	9/28/99	Amendment #1
PAe	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	11/28/01	Amendment #1
PAe	MCImetro Access Transmission Services LLC	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	9/3/97	Amendment #3
PAe	Pennsylvania Intermedia Communications Inc.	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	1/14/97	Amendment #2
Paw	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon North Inc., f/k/a GTE North Incorporated	11/28/01	Amendment #1
RI	MCImetro Access Transmission Services LLC and Brooks Fiber Communications of Rhode Island, Inc.	Verizon New England Inc., d/b/a Verizon Rhode Island, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Rhode Island	5/22/97	Amendment #2
SC	Intermedia Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	5/30/03	Amendment #1
SC	MCI WORLDCOM Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	5/30/03	Amendment #1
SC	MCImetro Access Transmission Services LLC	Verizon South Inc., f/k/a GTE South Incorporated	5/30/03	Amendment #1
TX	Brooks Fiber Communications of Texas, Inc., f/k/a Metro Access Networks Inc.	GTE Southwest Incorporated, d/b/a Verizon Southwest	5/21/97	Amendment #1
TX	Intermedia Communications Inc.	GTE Southwest Incorporated, d/b/a Verizon Southwest	3/7/98	Amendment #1
TX	MCI WorldCom Communications Inc.	GTE Southwest Incorporated, d/b/a Verizon Southwest	1/13/00	Amendment #1
TX	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	GTE Southwest Incorporated, d/b/a Verizon Southwest	11/1/01	Amendment #1
TX	MCImetro Access Transmission Services LLC	GTE Southwest Incorporated, d/b/a Verizon Southwest	4/22/97	Amendment #1
VAe	Intermedia Communications Inc.	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.	2/19/97	Amendment #3
VAe	MCI WORLDCOM Communications of Virginia Inc.	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.		
VAe	MCImetro Access Transmission Services of Virginia Inc.	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.		
VAe	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.	11/28/01	Amendment #1

VAW	MCI WORLDCOM Communications of Virginia Inc.	Verizon South Inc., f/k/a GTE South Incorporated	5/12/97	Amendment #1
VAW	MCImetro Access Transmission Services of Virginia Inc.	Verizon South Inc., f/k/a GTE South Incorporated	9/16/98	Amendment #1
VT	MCImetro Access Transmission Services LLC	Verizon New England Inc., d/b/a Verizon Vermont, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Vermont	10/18/02	Amendment #1
WA	MCI WORLDCOM Communications Inc.	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	12/31/03	Amendment #1
WA	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	11/30/01	Amendment #1
WA	MCImetro Access Transmission Services LLC	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	12/31/03	Amendment #1
WI	Intermedia Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #1
WI	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #1
WV	Intermedia Communications Inc.	Verizon West Virginia Inc., f/k/a Bell Atlantic - West Virginia, Inc.	2/19/97	Amendment #2
WV	MCImetro Access Transmission Services LLC	Verizon West Virginia Inc., f/k/a Bell Atlantic - West Virginia, Inc.	9/3/98	Amendment #2

Exhibit B

Part 1: For the period beginning on the Effective Date and ending on June 13, 2004, the blended rate (before application of the rate cap) shall be determined as follows:

Beginning with the most recent monthly traffic volumes available to the Verizon Parties as of October 1, 2003 for the MCI Parties exchanging traffic pursuant to this Amendment (or, in the case of an adoption of the terms set forth in this Amendment, the monthly traffic volumes for the adopting parties), calculate total surrogate compensation payable to the MCI Parties (in the aggregate) for that month (the "Baseline Month"), using the following assumptions: (i) in the District of Columbia, Massachusetts and Virginia (former GTE), ISP-Bound Traffic is exchanged on a bill-and-keep basis; (ii) in California, Florida, Michigan, Maine, Maryland, New Hampshire, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Texas, Virginia (former Bell Atlantic) and Washington, ISP-Bound Traffic is exchanged at the interim rate of \$.0007 per MOU, as set forth in the *Order on Remand*; (iii) in all other states, ISP-Bound Traffic is exchanged at the pre-Amendment Reciprocal Compensation, Local Traffic Termination, or equivalent rates set forth in the relevant Interconnection Agreements; (iv) in all states, Reciprocal Compensation Traffic is exchanged at the pre-Amendment Reciprocal Compensation, Local Traffic Termination, or equivalent rates set forth in the relevant Interconnection Agreements; and (v) in all states (except Massachusetts), it is assumed that all traffic above a 3:1 ratio of terminating to originating traffic is ISP-Bound Traffic (in Massachusetts, such assumption applying to all traffic above a 2:1 ratio). Applying the foregoing assumptions, the blended rate before application of the rate cap (which cap is \$.00165 per MOU for this period) is determined by taking total surrogate compensation, and dividing that figure by the total MOUs billed by the MCI Parties during the Baseline Month.

Part 2: For the period beginning three (3) years from the effective date of the *Order on Remand* (that is, on June 14, 2004) and ending on June 13, 2005, the blended rate (before application of the rate cap) shall be determined as follows:

Beginning with the monthly traffic volumes for the Baseline Month for the MCI Parties exchanging traffic pursuant to this Amendment (or, in the case of an adoption of the terms set forth in this Amendment, the monthly traffic volumes for the adopting parties), calculate total surrogate compensation payable to the MCI Parties (in the aggregate) for the Baseline Month, using the following assumptions: (i) in the District of Columbia, Massachusetts and Virginia (former GTE), ISP-Bound Traffic is exchanged on a bill-and-keep basis; (ii) in all other states, ISP-Bound Traffic is exchanged at the interim rate of \$.0007 per MOU, as set forth in the *Order on Remand*; (iii) in all states, Reciprocal Compensation Traffic is exchanged at the pre-Amendment Reciprocal Compensation, Local

Traffic Termination, or equivalent rates set forth in the relevant Interconnection Agreements; and (iv) in all states (except Massachusetts), it is assumed that all traffic above a 3:1 ratio of terminating to originating traffic is ISP-Bound Traffic (in Massachusetts, such assumption applying to all traffic above a 2:1 ratio). Applying the foregoing assumptions, the blended rate before application of the rate cap (which cap is \$.0012 per MOU for this period) is determined by taking total surrogate compensation, and dividing that figure by the total MOUs billed by the MCI Parties during the Baseline Month.

Part 3: For the period beginning four (4) years from the effective date of the *Order on Remand* (that is, on June 14, 2005) and ending on June 13, 2006, the blended rate (before application of the rate cap) shall be determined as follows:

Beginning with the monthly traffic volumes for the Baseline Month for the MCI Parties exchanging traffic pursuant to this Amendment (or, in the case of an adoption of the terms set forth in this Amendment, the monthly traffic volumes for the adopting parties), calculate total surrogate compensation payable to the MCI Parties (in the aggregate) for the Baseline Month, using the following assumptions: (i) in the District of Columbia, Massachusetts and Virginia (former GTE), ISP-Bound Traffic is exchanged on a bill-and-keep basis; (ii) in all other states, ISP-Bound Traffic is exchanged at the interim rate of \$.0007 per MOU, as set forth in the *Order on Remand*; (iii) in all states, Reciprocal Compensation Traffic is exchanged at the pre-Amendment Reciprocal Compensation, Local Traffic Termination, or equivalent rates set forth in the relevant Interconnection Agreements; and (iv) in all states (except Massachusetts), it is assumed that all traffic above a 3:1 ratio of terminating to originating traffic is ISP-Bound Traffic (in Massachusetts, such assumption applying to all traffic above a 2:1 ratio). Applying the foregoing assumptions, the blended rate before application of the rate cap (which cap is \$.0007 per MOU for this period) is determined by taking total surrogate compensation, and dividing that figure by the total MOUs billed by the MCI Parties during the Baseline Month.

Exhibit C

LATAs, Among Others, In Which, As Of The Effective Date, Verizon Has Fewer Than Two (2) Tandems

LATA

12/12/2003

**Verizon
East
LATAs
with One
Tandem**

STATE	LATA	SWITCH CLLI	SWITCH NAME
MA	126	SPFDMAW001T	SPRINGFIELD TANDEM
ME	120	PTLDMEF003T	PORTLAND TANDEM
NJ	222	CMDNNJCE05T	CAMDEN TANDEM
NJ	220	PSVLNJPL2GT	PLEASANTVILLE TANDEM
NY	134	ALBYNYSS50T	ALBANY STATE TANDEM
NY	140	BFLONYFR50T	BUFFALO FRANKLIN ST TANDEM
NY	138	BNGHNYHY20T	BINGHAMTON TANDEM
NY	133	PGHKNYSH81T	POUGHKEEPSIES S HAMILTON TDM
PA	226	HRBGPAHA72T	HARRISBURG TANDEM
RI	130	PRVDRIWA06T	WASHINGTON STREET TANDEM
VA	252	NRFLVABS52T	NORFOLK TANDEM

12/12/2003

**Verizon
West
LATAs
with One
Tandem**

STATE	LATA	SWITCH CLLI	SWITCH NAME
CA	722	CRCYCAXF03T	CRESCENT CITY TANDEM
CA	728	SNGRCAXF87T	SANGER TANDEM
CA	738	MNTCCAXG82T	MANTECA TANDEM
CA	740	SNBBCAXF83T	SANTA BARBARA TANDEM
CA	973	PLSPCAXG88T	PALM SPRINGS TANDEM
ID	960	CRALIDXX03T	COEUR D ALENE TANDEM
IL	360	FRPTILXA50T	FREEPORT TANDEM
IL	364	DKLBILXA50T	DEKALB TANDEM
IL	376	JCVLILXC50T	JACKSONVILLE TANDEM
IL	977	MCMBILXD50T	MACOMB TANDEM
IN	330	JSPRINXA02T	JASPER TANDEM
IN	334	FTWYINXA35T	FORT WAYNE TANDEM
IN	338	SYMRINXA02T	SEYMOUR TANDEM
IN	937	RCMDINXB05T	RICHMOND TANDEM
IN	938	TRRHINXA04T	TERRE HAUTE TANDEM

MI	340	ADRN MIXG45T	ADRIAN TANDEM
NC	420	SYLVN CXA02T	SYLVA TANDEM
NC	426	DRHMNCXM01T	DURHAM TANDEM
NV	720	GRDVNVXA26T	GARDNERVILLE TANDEM
OH	320	OBRLOHXA01T	OBERLIN TANDEM
OR	670	CSBYORXX03T COOS	BAY TANDEM
PA	230	JHTWPAXJ7H	JOHNSTOWN TANDEM
SC	432	MYBHSCAF1 GT	MYRTLE BEACH TANDEM
TX	564	PTLV TXXA02T	PORT LAVACA TANDEM
TX	566	FRBG TXXA02T	FREDERICKSBURG TANDEM
TX	570	BRYN TXXA02T	BRYAN TANDEM
VA	252	GRBRVAXAOH	GREAT BRIDGE TANDEM
VA	927	HRBGVAXA03T	HARRISONBURG TANDEM
WI	354	DGVLWIXA3H	DODGEVILLE TANDEM
WI	356	PLMOWIXA31T	PLYMOUTH TANDEM
WI	350	WAUSWIXA5H	WAUSAU TANDEM

AMENDMENT

To

INTERCONNECTION AGREEMENTS

THIS AMENDMENT (this "Amendment"), effective as of March 11, 2005 (the "Effective Date"), amends each of the Interconnection Agreements listed in Exhibit A hereto (the "Interconnection Agreements"), and is made by and between each of the Verizon incumbent local exchange carriers (individually and collectively "Verizon" or the "Verizon Parties") and each of the MCI competitive local exchange carriers ("CLECs") that is a party to an Interconnection Agreement with Verizon (individually and collectively "MCI" or the "MCI Parties"), all as shown in Exhibit A. Verizon and MCI are referred to herein individually as a "Party" and collectively as the "Parties".

WITNESSETH:

WHEREAS, Parties have agreed to amend the Interconnection Agreements to increase the charges applicable to MCI's DS0 UNE-P lines in service with Verizon as of March 10, 2005 ("Embedded Base"); and

WHEREAS, the Parties wish to amend all of the Interconnection Agreements to effectuate the foregoing, and for the ease of administration, have elected to do so through this single Amendment.

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Rates Applicable To Embedded Base.

The monthly recurring charge that MCI shall pay Verizon for the DS0 (or POTs) switch port for each Embedded Base line shall be increased by: (a) \$2.75 between March 11, 2005 and May 31, 2005 and (b) \$1.00 between June 1, 2005 and March 10, 2006.

2. Successor Terms.

Each Party agrees that, if they establish new or replacement interconnection agreements superceding those set forth in Exhibit A to this Amendment that are effective between March 11, 2005 and March 10, 2006 (including, for avoidance of doubt, interconnection agreements established through adoptions of other agreements under Section 252(i) of the Act), they shall implement the terms of this Amendment into such new or replacement interconnection agreements.

3. Conflicts.

This Amendment shall amend the terms and provisions of the Interconnection Agreements only to the extent necessary to give effect to the terms and provisions of this Amendment, and, except to the extent set forth in this Amendment, the terms and provisions of the Interconnection Agreements shall remain in full force and effect after the Effective Date. In the event of a conflict between the terms and provisions of this Amendment and the terms and provisions of the Interconnection Agreements, this Amendment shall govern.

4. Counterparts.

This Amendment may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

5. Joint Work Product.

This Amendment is a joint work product, and any ambiguities in this Amendment shall not be construed by operation of law against either Party.

6. Captions.

The Parties acknowledge that the captions in this Amendment have been inserted solely for convenience of reference and in no way define or limit the scope or substance of any term or provision of this Amendment.

7. Termination.

If a court or regulatory body of competent jurisdiction requires modifications to this Amendment, either Party shall have the right to terminate the Amendment after sixty (60) days advance written notice.

IN WITNESS WHEREOF, the undersigned have caused this Amendment to be duly executed and to become effective as of the Effective Date.

The MCI Parties

The Verizon Parties

By: _____

By: _____

Printed:

Printed:

Title:

Title:

Date:

Date:

Exhibit A

State	MCI Affiliate	Verizon Affiliate	Effective Date	Amendment #
CA	Brooks Fiber Communications of Bakersfield Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	Brooks Fiber Communications of Fresno Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	Brooks Fiber Communications of Sacramento Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	Brooks Fiber Communications of San Jose Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	Brooks Fiber Communications of Stockton Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	Intermedia Communications Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	MCI WORLDCOM Communications Inc.	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CA	MCImetro Access Transmission Services LLC	Verizon California Inc., f/k/a GTE California Incorporated	3/16/03	Amendment #4
CT	MCImetro Access Transmission Services LLC	Verizon New York Inc., d/b/a Verizon New York, f/k/a New York Telephone Company, d/b/a Bell Atlantic-New York	4/20/98	Amendment #3
CT	MCImetro Access Transmission Services LLC (as successor to Rhythms Links Inc.)	Verizon New York Inc., d/b/a Verizon New York, f/k/a New York Telephone Company, d/b/a Bell Atlantic-New York	11/8/01	Amendment #2
DC	Intermedia Communications Inc.	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	2/19/97	Amendment #3
DC	MCI WORLDCOM Communications Inc.	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	9/28/99	Amendment #2
DC	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	11/28/01	Amendment #2
DC	MCImetro Access Transmission Services LLC	Verizon Washington, DC Inc., f/k/a Bell Atlantic - Washington, D.C., Inc.	9/12/97	Amendment #3
DE	MCI WorldCom Communications Inc.	Verizon Delaware Inc., f/k/a Bell Atlantic - Delaware, Inc.	7/16/96	Amendment #4
DE	MCImetro Access Transmission Services LLC	Verizon Delaware Inc., f/k/a Bell Atlantic - Delaware, Inc.	9/12/02	Amendment #3
FL	Intermedia Communications Inc.	Verizon Florida Inc., f/k/a GTE Florida Incorporated	2/23/04	Amendment #2
FL	MCImetro Access Transmission Services LLC	Verizon Florida Inc., f/k/a GTE Florida Incorporated	2/23/04	Amendment #2
FL	Metropolitan Fiber Systems of Florida Inc.	Verizon Florida Inc., f/k/a GTE Florida Incorporated	2/23/04	Amendment #2
FL	MCI WORLDCOM Communications. Inc.	Verizon Florida Inc., f/k/a GTE Florida Incorporated	2/23/04	Amendment #2

HI	MCImetro Access Transmission Services LLC	Verizon Hawaii Inc., f/k/a GTE Hawaiian Telephone Company Incorporated	6/25/03	Amendment #2
ID	MCI WORLDCOM Communications Inc.	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	6/25/03	Amendment #3
ID	MCImetro Access Transmission Services LLC	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	6/25/03	Amendment #3
IL	Intermedia Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated, Verizon South Inc., f/k/a GTE South Incorporated	6/25/03	Amendment #2
IL	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated, Verizon South Inc., f/k/a GTE South Incorporated	6/25/03	Amendment #2
IN	Intermedia Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated Contel of the South, Inc., d/b/a Verizon North Systems	6/3/03	Amendment #2
IN	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated Contel of the South, Inc., d/b/a Verizon North Systems	6/3/03	Amendment #2
IN	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated Contel of the South, Inc., d/b/a Verizon North Systems	6/3/03	Amendment #2
MA	Brooks Fiber Communications of Massachusetts Inc.	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	5/26/00	Amendment #2
MA	Intermedia Communications Inc.	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	12/9/96	Amendment #2
MA	MCI Worldcom Communications Inc.	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	6/25/99	Amendment #2
MA	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	11/29/01	Amendment #2
MA	MCImetro Access Transmission Services LLC	Verizon New England Inc., d/b/a Verizon Massachusetts, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Massachusetts	10/30/98	Amendment #3
MD	Intermedia Communications Inc.	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	2/19/97	Amendment #3
MD	MCI WORLDCOM Communications Inc.	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	4/25/00	Amendment #2
MD	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	11/28/01	Amendment #2

MD	MCImetro Access Transmission Services LLC	Verizon Maryland Inc., f/k/a Bell Atlantic - Maryland, Inc.	4/24/00	Amendment #2
ME	MCImetro Access Transmission Services LLC and New England Fiber Communications L.L.C.	Verizon New England Inc., d/b/a Verizon Maine, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Maine	7/17/97	Amendment #3
MI	Brooks Fiber Communications of Michigan Inc.	Verizon North Inc., f/k/a GTE North Incorporated	8/13/03	Amendment #2
MI	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	8/13/03	Amendment #2
MI	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated	8/13/03	Amendment #2
NC	Intermedia Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	9/15/97	Amendment #2
NC	MCI WORLDCOM Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	7/16/03	Amendment #3
NH	MCImetro Access Transmission Services LLC and New England Fiber Communications L.L.C.	Verizon New England Inc., d/b/a Verizon New Hampshire, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - New Hampshire	7/17/97	Amendment #3
NJ	Intermedia Communications Inc.	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	2/19/97	Amendment #3
NJ	MCI WORLDCOM Communications Inc.	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	9/28/99	Amendment #2
NJ	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	11/28/01	Amendment #2
NJ	MCImetro Access Transmission Services LLC	Verizon New Jersey Inc., f/k/a Bell Atlantic - New Jersey, Inc.	6/26/97	Amendment #3
NV	Brooks Fiber Communications of Nevada Inc.	Verizon California Inc., f/k/a GTE California Incorporated	5/30/03	Amendment #2
NV	Intermedia Communications Inc.	Verizon California Inc., f/k/a GTE California Incorporated	5/30/03	Amendment #2
NV	MCImetro Access Transmission Services LLC	Verizon California Inc., f/k/a GTE California Incorporated	5/30/03	Amendment #2
NY	Brooks Fiber Communications of New York Inc.	Verizon New York Inc., f/k/a New York Telephone Company	9/21/99	Amendment #3
NY	Intermedia Communications Inc.	Verizon New York Inc., f/k/a New York Telephone Company	11/8/96	Amendment #4
NY	MCI WORLDCOM Communications Inc.	Verizon New York Inc., f/k/a New York Telephone Company	6/24/99	Amendment #3
NY	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon New York Inc., f/k/a New York Telephone Company	11/19/01	Amendment #2
NY	MCImetro Access Transmission Services LLC	Verizon New York Inc., f/k/a New York Telephone Company	10/1/97	Amendment #5
OH	Brooks Fiber Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	11/4/99	Amendment #2
OH	MCI WORLDCOM Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #2
OH	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #2

OR	MCI WORLDCOM Communications Inc.	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	12/5/01	Amendment #2
OR	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	11/28/01	Amendment #2
OR	MCImetro Access Transmission Services LLC	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	10/8/99	Amendment #2
PAe	MCI WorldCom Communications Inc.	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	9/28/99	Amendment #2
PAe	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	11/28/01	Amendment #2
PAe	MCImetro Access Transmission Services LLC	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	9/3/97	Amendment #4
PAe	Pennsylvania Intermedia Communications Inc.	Verizon Pennsylvania Inc., f/k/a Bell Atlantic - Pennsylvania, Inc.	1/14/97	Amendment #3
Paw	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon North Inc., f/k/a GTE North Incorporated	11/28/01	Amendment #2
RI	MCImetro Access Transmission Services LLC and Brooks Fiber Communications of Rhode Island, Inc.	Verizon New England Inc., d/b/a Verizon Rhode Island, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Rhode Island	5/22/97	Amendment #3
SC	Intermedia Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	5/30/03	Amendment #2
SC	MCI WORLDCOM Communications Inc.	Verizon South Inc., f/k/a GTE South Incorporated	5/30/03	Amendment #2
SC	MCImetro Access Transmission Services LLC	Verizon South Inc., f/k/a GTE South Incorporated	5/30/03	Amendment #2
TX	Brooks Fiber Communications of Texas, Inc., f/k/a Metro Access Networks Inc.	GTE Southwest Incorporated, d/b/a Verizon Southwest	5/21/97	Amendment #3
TX	Intermedia Communications Inc.	GTE Southwest Incorporated, d/b/a Verizon Southwest	3/7/98	Amendment #3
TX	MCI WorldCom Communications Inc.	GTE Southwest Incorporated, d/b/a Verizon Southwest	1/13/00	Amendment #3
TX	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	GTE Southwest Incorporated, d/b/a Verizon Southwest	11/1/01	Amendment #2
TX	MCImetro Access Transmission Services LLC	GTE Southwest Incorporated, d/b/a Verizon Southwest	4/22/97	Amendment #3
VAe	Intermedia Communications Inc.	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.	2/19/97	Amendment #4
VAe	MCI WORLDCOM Communications of Virginia Inc.	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.	10/8/02	Amendment #3
VAe	MCImetro Access Transmission Services of Virginia Inc.	Verizon Virginia Inc. f/k/a Bell Atlantic - Virginia, Inc.	10/8/02	Amendment #3
VAw	MCI WORLDCOM Communications of Virginia Inc.	Verizon South Inc., f/k/a GTE South Incorporated	5/12/97	Amendment #2

VAW	MCImetro Access Transmission Services of Virginia Inc.	Verizon South Inc., f/k/a GTE South Incorporated	9/16/98	Amendment #2
VT	MCImetro Access Transmission Services LLC	Verizon New England Inc., d/b/a Verizon Vermont, f/k/a New England Telephone and Telegraph Company, d/b/a Bell Atlantic - Vermont	10/18/02	Amendment #2
WA	MCI WORLDCOM Communications Inc.	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	12/31/03	Amendment #2
WA	MCI WORLDCOM Communications Inc. (as successor to Rhythms Links Inc.)	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	11/30/01	Amendment #2
WA	MCImetro Access Transmission Services LLC	Verizon Northwest Inc., f/k/a GTE Northwest Incorporated	12/31/03	Amendment #3
WI	Intermedia Communications Inc.	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #2
WI	MCImetro Access Transmission Services LLC	Verizon North Inc., f/k/a GTE North Incorporated	6/25/03	Amendment #2
WV	Intermedia Communications Inc.	Verizon West Virginia Inc., f/k/a Bell Atlantic - West Virginia, Inc.	2/19/97	Amendment #3
WV	MCImetro Access Transmission Services LLC	Verizon West Virginia Inc., f/k/a Bell Atlantic - West Virginia, Inc.	9/3/98	Amendment #3

"MCIIm Specific" Report

Performance Measurement	Special Services (Access)			CLEC Trunking	Unbundling		Resale
	DS0	DS1	DS3		POTS	Special Services	POTS
Installation							
1 Number of Installations	See note below	See note below	See note below	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
2 Average Interval in Days	See note below	See note below	See note below	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
3 Percent Install on Time	See note below	See note below	See note below	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
4 Total Number of Missed Appointments	See note below	See note below	See note below	N/A	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
5 Total Percent of Missed Appointments	See note below	See note below	See note below	N/A	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
Service Quality							
6 Number of Reports	See note below	See note below	See note below	4/1/1997	See note below	See note below	See note below
7 Mean Time to Clear Reports	See note below	See note below	See note below	4/1/1997	See note below	See note below	See note below
8 Number of Failures	See note below	See note below	See note below	4/1/1997	See note below	See note below	See note below
9 Failure Frequency Percent	See note below	See note below	See note below	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
10 Percent Without Report Outstanding	See note below	See note below	See note below	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
11 Total Number of Repeat Reports (30 Days Rolling)	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
12 Repeats as a Percent of Total Troubles	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
13 Number of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
14 Percent of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997

Note: End of first full calendar month following initial exchange of traffic between the Parties under this Agreement

Bell Atlantic Including Bell Atlantic Affiliates Report

Performance Measurement	Special Services (Access)			CLEC Trunking	Unbundling		Retail
	DS0	DS1	DS3		POTS	Special Services	POTS
Installation							
1 Number of Installations	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
2 Average Interval in Days	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
3 Percent Install on Time	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
4 Total Number of Missed Appointments	1/1/1997	1/1/1997	1/1/1997	N/A	N/A	N/A	1/1/1997
5 Total Percent of Missed Appointments	1/1/1997	1/1/1997	1/1/1997	N/A	N/A	N/A	1/1/1997
Service Quality							
6 Number of Reports	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
7 Mean Time to Clear Reports	1/1/1997	1/1/1997	1/197	4/1/1997	N/A	N/A	1/1/1997
8 Number of Failures	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
9 Failure Frequency Percent	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
10 Percent Without Report Outstanding	1/1/1997	1/1/1997	1/1/1997	4/1/1997	N/A	N/A	1/1/1997
11 Total Number of Repeat Reports (30 Days Rolling)	4/1/1997	4/1/1997	4/1/1997	N/A	N/A	N/A	4/1/1997
12 Repeats as a Percent of Total Troubles	4/1/1997	4/1/1997	4/1/1997	N/A	N/A	N/A	4/1/1997
13 Number of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	N/A	N/A	4/1/1997
14 Percent of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	N/A	N/A	4/1/1997

Top 3 Carrier Customers Report

Performance Measurement	Special Services (Access)			CLEC Trunking	Unbundling		Resale
	DS0	DS1	DS3		POTS	Special Services	POTS
Installation							
1 Number of Installations	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
2 Average Interval in Days	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
3 Percent Install on Time	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
4 Total Number of Missed Appointments	1/1/1997	1/1/1997	1/1/1997	N/A	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
5 Total Percent of Missed Appointments	1/1/1997	1/1/1997	1/1/1997	N/A	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
Service Quality							
6 Number of Reports	1/1/1997	1/1/1997	1/1/1997	4/1/1997	1/1/1997	1/1/1997	1/1/1997
7 Mean Time to Clear Reports	1/1/1997	1/1/1997	1/197	4/1/1997	1/1/1997	1/1/1997	1/1/1997
8 Number of Failures	1/1/1997	1/1/1997	1/1/1997	4/1/1997	1/1/1997	1/1/1997	1/1/1997
9 Failure Frequency Percent	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
10 Percent Without Report Outstanding	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
11 Total Number of Repeat Reports (30 Days Rolling)	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
12 Repeats as a Percent of Total Troubles	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
13 Number of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
14 Percent of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997

Note: Results produced when a minimum of 3 carriers purchase measured service.

All CLECs Report

Performance Measurement	Special Services (Access)			CLEC Trunking	Unbundling		Resale
	DS0	DS1	DS3		POTS	Special Services	POTS
Installation							
1 Number of Installations	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
2 Average Interval in Days	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
3 Percent Install on Time	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
4 Total Number of Missed Appointments	1/1/1997	1/1/1997	1/1/1997	N/A	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
5 Total Percent of Missed Appointments	1/1/1997	1/1/1997	1/1/1997	N/A	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
Service Quality							
6 Number of Reports	1/1/1997	1/1/1997	1/1/1997	4/1/1997	1/1/1997	1/1/1997	1/1/1997
7 Mean Time to Clear Reports	1/1/1997	1/1/1997	1/1/1997	4/1/1997	1/1/1997	1/1/1997	1/1/1997
8 Number of Failures	1/1/1997	1/1/1997	1/1/1997	4/1/1997	1/1/1997	1/1/1997	1/1/1997
9 Failure Frequency Percent	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
10 Percent Without Report Outstanding	1/1/1997	1/1/1997	1/1/1997	4/1/1997	Est. (7/1/97)	Est. (7/1/97)	Est. (7/1/97)
11 Total Number of Repeat Reports (30 Days Rolling)	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
12 Repeats as a Percent of Total Troubles	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
13 Number of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997
14 Percent of Out of Service Cleared >= 24 Hours	4/1/1997	4/1/1997	4/1/1997	N/A	4/1/1997	4/1/1997	4/1/1997

Note: Results produced when a minimum of 3 carriers purchase measured service

Top 10 Largest Customers Report

Performance Measurement	Special Services (Access)			CLEC Trunking	Unbundling		Resale
	DS0	DS1	DS3		POTS	Special Services	POTS
Installation							
1 Number of Installations	TBD	TBD	TBD	TBD	TBD	TBD	TBD
2 Average Interval in Days	TBD	TBD	TBD	TBD	TBD	TBD	TBD
3 Percent Install on Time	TBD	TBD	TBD	TBD	TBD	TBD	TBD
4 Total Number of Missed Appointments	TBD	TBD	TBD	TBD	TBD	TBD	TBD
5 Total Percent of Missed Appointments	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Service Quality							
6 Number of Reports	TBD	TBD	TBD	TBD	TBD	TBD	TBD
7 Mean Time to Clear Reports	TBD	TBD	TBD	TBD	TBD	TBD	TBD
8 Number of Failures	TBD	TBD	TBD	TBD	TBD	TBD	TBD
9 Failure Frequency Percent	TBD	TBD	TBD	TBD	TBD	TBD	TBD
10 Percent Without Report Outstanding	TBD	TBD	TBD	TBD	TBD	TBD	TBD
11 Total Number of Repeat Reports (30 Days Rolling)	TBD	TBD	TBD	TBD	TBD	TBD	TBD
12 Repeats as a Percent of Total Troubles	TBD	TBD	TBD	TBD	TBD	TBD	TBD
13 Number of Out of Service Cleared >= 24 Hours	TBD	TBD	TBD	TBD	TBD	TBD	TBD
14 Percent of Out of Service Cleared >= 24 Hours	TBD	TBD	TBD	TBD	TBD	TBD	TBD