

Suzan DeBusk Paiva
Assistant General Counsel
Pennsylvania



1717 Arch Street, 3 East
Philadelphia, PA 19103

Tel: (215) 466-4755
Fax: (215) 563-2658
Suzan.D.Paiva@Verizon.com

March 8, 2012

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

RE: Joint Filing of
Verizon Pennsylvania Inc. and
QuantumShift Communications, Inc.
for Approval of an Interconnection Agreement
Dkt. No. _____

Dear Secretary Chiavetta:

Enclosed please find the joint filing of Verizon Pennsylvania Inc. and QuantumShift Communications, Inc. for Approval of an Interconnection Agreement. This Interconnection Agreement is an Amended, Extended and Restated Interconnection Agreement, replacing the Agreement between Verizon Pennsylvania Inc. and QuantumShift Communications, Inc., which was approved by Commission Order dated April 17, 2003 at Docket No. A-310872 F7000. The Amended, Extended and Restated Interconnection Agreement is deemed effective as of February 3, 2012, and was signed by the second of the two parties' signers on February 9, 2012. Thus, this Joint Filing is being made within 30 days of the day that the Agreement was signed, as required by ordering Paragraph 5 of the Commission's May 3, 2004 Final Order in Docket No. M-00960799.

As evidenced by the cc: below, notice of this filing is being provided to QuantumShift Communications, Inc.

Very truly yours,

A handwritten signature in cursive script that reads "Suzan D. Paiva".

Suzan D. Paiva

SDP/slb
Enclosure

cc: Karen Weller, V.P. – Corporate Development, QuantumShift Communications, Inc.
Attached Service List

SERVICE LIST

Irwin A. Popowsky
Office of Consumer Advocate
555 Walnut Street, 5th Floor
Harrisburg, PA 17101-1921

William Lloyd
Office of Small Business Advocate
Commerce Building, Suite 1102
300 North Second Street
Harrisburg, PA 17101

Johnnie E. Simms
Bureau of Investigation & Enforcement
PA Public Utility Commission
Commonwealth Keystone Bldg
400 North Street
Harrisburg, PA 17105-3265

Office of Special Assistants
PA Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

Bureau of Consumer Services
PA Public Utility Commission
P. O. Box 3265
Harrisburg, PA 17105-3265

Office of the Attorney General
Bureau of Consumer Protection
Strawberry Square, 14th Floor
Harrisburg, PA 17120

AMENDED, EXTENDED AND RESTATED AGREEMENT

by and between

QUANTUMSHIFT COMMUNICATIONS, INC.

and

VERIZON PENNSYLVANIA INC.

FOR THE COMMONWEALTH OF

PENNSYLVANIA

TABLE OF CONTENTS

AMENDED, EXTENDED AND RESTATED AGREEMENT	1
1. The Agreement.....	1
2. Term and Termination	2
3. Glossary and Attachments	2
4. Applicable Law.....	2
5. Assignment	4
6. Assurance of Payment.....	4
7. Audits.....	5
8. Authorization.....	5
9. Billing and Payment; Disputed Amounts	6
10. Confidentiality	7
11. Counterparts	9
12. Default.....	9
13. Discontinuance of Service by QuantumShift.....	9
14. Dispute Resolution	9
15. Force Majeure	10
16. Forecasts	10
17. Fraud	11
18. Good Faith Performance.....	11
19. Headings.....	11
20. Indemnification	11
21. Insurance	13
22. Intellectual Property	14
23. Joint Work Product.....	15
24. Law Enforcement.....	15
25. Liability	15

26.	Network Management	16
27.	Non-Exclusive Remedies	17
28.	Notice of Network Changes	17
29.	Notices	17
30.	Ordering and Maintenance	18
31.	Performance Standards	19
32.	Point of Contact for QuantumShift Customers	19
33.	Predecessor Agreements	19
34.	Publicity and Use of Trademarks or Service Marks	20
35.	References	20
36.	Relationship of the Parties	20
37.	Reservation of Rights	21
38.	Subcontractors	21
39.	Successors and Assigns	21
40.	Survival	21
41.	Taxes	22
42.	Technology Upgrades	24
43.	Territory	24
44.	Third Party Beneficiaries	24
45.	[This Section Intentionally Left Blank]	24
46.	252(i) Obligations	24
47.	Use of Service	25
48.	Waiver	25
49.	Warranties	25
50.	Withdrawal of Services	25
	SIGNATURE PAGE	26
	GLOSSARY	27
1.	General Rule	27

2.	Definitions	27
ADDITIONAL SERVICES ATTACHMENT		43
1.	Alternate Billed Calls.....	43
2.	Dialing Parity - Section 251(b)(3)	43
3.	[This Section Intentionally Left Blank]	43
4.	Directory Listing and Directory Distribution.....	43
5.	Voice Information Service Traffic	45
6.	Intercept and Referral Announcements	46
7.	Originating Line Number Screening (OLNS).....	46
8.	Operations Support Systems (OSS) Services	47
9.	Poles, Ducts, Conduits and Rights-of-Way.....	52
10.	Telephone Numbers	53
11.	Routing for Operator Services and Directory Assistance Traffic.....	53
12.	Unauthorized Carrier Change Charges	54
13.	Good Faith Performance.....	54
INTERCONNECTION ATTACHMENT.....		55
1.	General.....	55
2.	Points of Interconnection and Trunk Types	55
3.	Alternative Interconnection Arrangements.....	59
4.	Initiating Interconnection.....	61
5.	Transmission and Routing of Telephone Exchange Service Traffic.....	62
6.	Traffic Measurement and Billing over Interconnection Trunks	63
7.	Reciprocal Compensation Arrangements Pursuant to Section 251(b)(5) of the Act	64
8.	Other Types of Traffic	66
9.	Transmission and Routing of Exchange Access Traffic	67
10.	Meet-Point Billing (MPB) Arrangements	67
11.	Toll Free Service Access Code (e.g., 800/888/877) Traffic	70

12.	Tandem Transit Traffic	72
13.	Number Resources, Rate Center Areas and Routing Points	73
14.	Joint Network Implementation and Grooming Process; Forecasting.....	74
15.	Number Portability - Section 251(B)(2).....	75
16.	Good Faith Performance.....	77
RESALE ATTACHMENT		79
1.	General.....	79
2.	Use of Verizon Telecommunications Services	79
3.	Availability of Verizon Telecommunications Services	80
4.	Responsibility for Charges	80
5.	Operations Matters	81
6.	Rates and Charges	82
7.	Good Faith Performance.....	82
NETWORK ELEMENTS ATTACHMENT		83
1.	General.....	83
2.	Verizon’s Provision of Network Elements.....	85
3.	Loop Transmission Types	86
4.	Line Splitting (also referred to as “Loop Sharing”)	97
5.	[This Section Intentionally Left Blank]	98
6.	Sub-Loop	98
7.	Sub-Loop for Multiunit Tenant Premises Access.....	101
8.	Dark Fiber Transport	101
9.	Network Interface Device	107
10.	[This Section Intentionally Left Blank]	108
11.	Dedicated Transport.....	108
12.	[This Section Intentionally Left Blank]	109
13.	Operations Support Systems	109
14.	Availability of Other Network Elements on an Unbundled Basis	109

15.	Maintenance of Network Elements	110
16.	Combinations, Commingling, and Conversions	111
17.	Routine Network Modifications	114
18.	Rates and Charges	115
19.	Good Faith Performance.....	115
COLLOCATION ATTACHMENT		116
1.	Verizon’s Provision of Collocation	116
911 ATTACHMENT.....		117
1.	911/E-911 Arrangements.....	117
2.	ALI Database	117
3.	911/E-911 Interconnection	118
4.	911/E-911 General.....	119
5.	Good Faith Performance.....	119
PRICING ATTACHMENT.....		121
1.	General.....	121
2.	Verizon Telecommunications Services Provided to QuantumShift for Resale Pursuant to the Resale Attachment.....	121
3.	QuantumShift Prices	123
4.	[This Section Intentionally Left Blank]	123
5.	Regulatory Review of Prices	123
APPENDIX A TO THE PRICING ATTACHMENT		125
EXHIBIT A TO SECTION 3.1 (FIBER MEET ARRANGEMENT) OF THE INTERCONNECTION ATTACHMENT.....		134

AMENDED, EXTENDED AND RESTATED AGREEMENT

PREFACE

This Amended, Extended and Restated Agreement (“Agreement”) shall be deemed effective as of February 3, 2012 (the “Effective Date”), between QuantumShift Communications, Inc. (“QuantumShift”), a corporation organized under the laws of the State of California, with offices at 12657 Alcosta Boulevard, Suite 418, San Ramon, CA 94583 and Verizon Pennsylvania Inc. (“Verizon”), a corporation organized under the laws of the Commonwealth of Pennsylvania with offices at 1717 Arch Street, Philadelphia, PA 19103 (Verizon and QuantumShift may be referred to hereinafter, each, individually as a “Party”, and, collectively, as the “Parties”).

GENERAL TERMS AND CONDITIONS

In consideration of the mutual promises contained in this Agreement, and intending to be legally bound, pursuant to Section 252 of the Act, Verizon and QuantumShift hereby agree as follows:

1. The Agreement

- 1.1 This Agreement includes: (a) the Principal Document; (b) the Tariffs of each Party applicable to the Services that are offered for sale by it in the Principal Document (which Tariffs are incorporated into and made a part of this Agreement by reference); and, (c) an Order by a Party that has been accepted by the other Party.
- 1.2 Except as otherwise expressly provided in the Principal Document (including, but not limited to, the Pricing Attachment), conflicts among provisions in the Principal Document, Tariffs, and an Order by a Party that has been accepted by the other Party, shall be resolved in accordance with the following order of precedence, where the document identified in subsection “(a)” shall have the highest precedence: (a) the Principal Document; (b) the Tariffs; and, (c) an Order by a Party that has been accepted by the other Party. The fact that a provision appears in the Principal Document but not in a Tariff, or in a Tariff but not in the Principal Document, shall not be interpreted as, or deemed grounds for finding, a conflict for the purposes of this Section 1.2.
- 1.3 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, provided, however, notwithstanding any other provision of this Agreement or otherwise, this Agreement is an amendment, extension and restatement of the Parties’ prior interconnection and resale agreement(s), if any, and, as such, this Agreement is not intended to be, nor shall it be construed to create, a novation or accord and satisfaction with respect to any prior interconnection or resale agreements and, accordingly, all monetary obligations of the Parties to one another under any prior interconnection or resale agreements shall remain in full force and effect and shall constitute monetary obligations of the Parties under this Agreement (provided, however, that nothing contained in this Agreement shall convert any claim or debt that would otherwise constitute a prepetition claim or debt in a bankruptcy case into a postpetition claim or debt). In connection with the foregoing, Verizon expressly reserves all of its rights under the Bankruptcy Code and Applicable Law to seek or oppose any relief in respect of the assumption, assumption and assignment, or rejection of any interconnection or resale agreements between Verizon and QuantumShift.

- 1.4 Except as otherwise provided in the Principal Document, the Principal Document may not be waived or modified except by a written document that is signed by the Parties. Subject to the requirements of Applicable Law, a Party shall have the right to add, modify, or withdraw, its Tariff(s) at any time, without the consent of, or notice to, the other Party.

2. Term and Termination

- 2.1 This Agreement shall be effective as of the Effective Date and, unless cancelled or terminated earlier in accordance with the terms hereof, shall continue in effect until February 2, 2014 (the "Initial Term"). Thereafter, this Agreement shall continue in force and effect unless and until cancelled or terminated as provided in this Agreement.
- 2.2 Either QuantumShift or Verizon may terminate this Agreement effective upon the expiration of the Initial Term or effective upon any date after expiration of the Initial Term by providing written notice of termination at least ninety (90) days in advance of the date of termination.
- 2.3 If either QuantumShift or Verizon provides notice of termination pursuant to Section 2.2 and on or before the proposed date of termination either QuantumShift or Verizon has requested negotiation of a new interconnection agreement, unless this Agreement is cancelled or terminated earlier in accordance with the terms hereof (including, but not limited to, pursuant to Section 12), this Agreement shall remain in effect until the earlier of: (a) the effective date of a new interconnection agreement between QuantumShift and Verizon; or, (b) the date one (1) year after the proposed date of termination.
- 2.4 If either QuantumShift or Verizon provides notice of termination pursuant to Section 2.2 and by 11:59 PM Eastern Time on the proposed date of termination neither QuantumShift nor Verizon has requested negotiation of a new interconnection agreement, (a) this Agreement will terminate at 11:59 PM Eastern Time on the proposed date of termination, and (b) the Services being provided under this Agreement at the time of termination will be terminated, except to the extent that the Purchasing Party has requested that such Services continue to be provided pursuant to an applicable Tariff or Statement of Generally Available Terms (SGAT).

3. Glossary and Attachments

The Glossary and the following Attachments are a part of this Agreement:

Additional Services Attachment
Interconnection Attachment
Resale Attachment
Network Elements Attachment
Collocation Attachment
911 Attachment
Pricing Attachment

4. Applicable Law

- 4.1 The construction, interpretation and performance of this Agreement shall be governed by (a) the laws of the United States of America and (b) the laws of the

Commonwealth of Pennsylvania, without regard to its conflicts of laws rules. All disputes relating to this Agreement shall be resolved through the application of such laws.

- 4.2 Each Party shall remain in compliance with Applicable Law in the course of performing this Agreement.
- 4.3 Neither Party shall be liable for any delay or failure in performance by it that results from requirements of Applicable Law, or acts or failures to act of any governmental entity or official.
- 4.4 Each Party shall promptly notify the other Party in writing of any governmental action that limits, suspends, cancels, withdraws, or otherwise materially affects, the notifying Party's ability to perform its obligations under this Agreement.
- 4.5 If any provision of this Agreement shall be invalid or unenforceable under Applicable Law, such invalidity or unenforceability shall not invalidate or render unenforceable any other provision of this Agreement, and this Agreement shall be construed as if it did not contain such invalid or unenforceable provision; provided, that if the invalid or unenforceable provision is a material provision of this Agreement, or the invalidity or unenforceability materially affects the rights or obligations of a Party hereunder or the ability of a Party to perform any material provision of this Agreement, the Parties shall promptly renegotiate in good faith and amend in writing this Agreement in order to make such mutually acceptable revisions to this Agreement as may be required in order to conform the Agreement to Applicable Law.
- 4.6 If any legislative, regulatory, judicial or other governmental decision, order, determination or action, or any change in Applicable Law, materially affects any material provision of this Agreement, the rights or obligations of a Party hereunder, or the ability of a Party to perform any material provision of this Agreement, the Parties shall promptly renegotiate in good faith and amend in writing this Agreement in order to make such mutually acceptable revisions to this Agreement as may be required in order to conform the Agreement to Applicable Law. If within thirty (30) days of the effective date of such decision, determination, action or change, the Parties are unable to agree in writing upon mutually acceptable revisions to this Agreement, either Party may pursue any remedies available to it under this Agreement, at law, in equity, or otherwise, including, but not limited to, instituting an appropriate proceeding before the Commission, the FCC, or a court of competent jurisdiction, without first pursuing dispute resolution in accordance with Section 14 of this Agreement.
 - 4.6.1 Notwithstanding Section 4.6 above, to the extent Verizon is required by a change in Applicable Law to provide to QuantumShift a Service that is not offered under this Agreement to QuantumShift, the terms, conditions and prices for such Service (including, but not limited to, the terms and conditions defining the Service and stating when and where the Service will be available and how it will be used, and terms, conditions and prices for pre-ordering, ordering, provisioning, repair, maintenance and billing) shall be as provided in an applicable Verizon Tariff, or, in the absence of an applicable Verizon Tariff, as mutually agreed by the Parties in a written amendment to the Agreement that, upon the request of either Party, the Parties shall negotiate in accordance with the requirements of Section 252 of the Act. In no event shall Verizon be required to provide any such Service in the absence of such a Verizon Tariff or amendment.

- 4.7 Notwithstanding anything in this Agreement to the contrary, if, as a result of any legislative, judicial, regulatory or other governmental decision, order, determination or action, or any change in Applicable Law, Verizon is not required by Applicable Law to provide any Service, payment or benefit, otherwise required to be provided to QuantumShift hereunder, then Verizon may discontinue the provision of any such Service, payment or benefit, and QuantumShift shall reimburse Verizon for any payment previously made by Verizon to QuantumShift that was not required by Applicable Law. Verizon will provide thirty (30) days prior written notice to QuantumShift of any such discontinuance of a Service, unless a different notice period or different conditions are specified in this Agreement (including, but not limited to, in the Networks Element Attachment or an applicable Tariff) or Applicable Law for termination of such Service in which event such specified period and/or conditions shall apply. For the avoidance of any doubt, this Section 4.7 is self-effectuating and no amendment to this Agreement shall be required to implement it.

5. Assignment

Neither Party may assign this Agreement or any right or interest under this Agreement, nor delegate any obligation under this Agreement, without the prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned or delayed. Any attempted assignment or delegation in violation of this Section 5 shall be void and ineffective and constitute default of this Agreement.

6. Assurance of Payment

- 6.1 Upon request by Verizon, QuantumShift shall, at any time and from time to time, provide to Verizon adequate assurance of payment of amounts due (or to become due) to Verizon hereunder.
- 6.2 Assurance of payment of charges may be requested by Verizon if QuantumShift (a) prior to the Effective Date, has failed to timely pay a bill rendered to QuantumShift by Verizon or its Affiliates, (b) on or after the Effective Date, fails to timely pay a bill rendered to QuantumShift by Verizon or its Affiliates, (c) in Verizon's reasonable judgment, at the Effective Date or at any time thereafter, is unable to demonstrate that it is creditworthy, or (d) admits its inability to pay its debts as such debts become due, has commenced a voluntary case (or has had a case commenced against it) under the U.S. Bankruptcy Code or any other law relating to bankruptcy, insolvency, reorganization, winding-up, composition or adjustment of debts or the like, has made an assignment for the benefit of creditors or is subject to a receivership or similar proceeding.
- 6.3 Unless otherwise agreed by the Parties, the assurance of payment shall consist of an unconditional, irrevocable standby letter of credit naming Verizon as the beneficiary thereof and otherwise in form and substance satisfactory to Verizon from a financial institution acceptable to Verizon. The letter of credit shall be in an amount equal to two (2) months anticipated charges (including, but not limited to, both recurring and non-recurring charges), as reasonably determined by Verizon, for the Services to be provided by Verizon to QuantumShift in connection with this Agreement. If QuantumShift meets the condition in subsection 6.2(d) above or has failed to timely pay two or more bills rendered by Verizon or a Verizon Affiliate in any twelve (12)-month period, Verizon may, at its option, demand (and QuantumShift shall provide) additional assurance of payment, consisting of monthly advanced payments of estimated charges as reasonably determined by Verizon, with appropriate true-up against actual billed charges no more frequently than once per Calendar Quarter.

- 6.4 [Intentionally Left Blank].
- 6.5 [Intentionally Left Blank].
- 6.6 Verizon may (but is not obligated to) draw on the letter of credit upon notice to QuantumShift in respect of any amounts to be paid by QuantumShift hereunder that are not paid within thirty (30) days of the date that payment of such amounts is required by this Agreement.
- 6.7 If Verizon draws on the letter of credit, upon request by Verizon, QuantumShift shall provide a replacement or supplemental letter of credit conforming to the requirements of Section 6.3.
- 6.8 Notwithstanding anything else set forth in this Agreement, if Verizon makes a request for assurance of payment in accordance with the terms of this Section, then Verizon shall have no obligation thereafter to perform under this Agreement until such time as QuantumShift has provided Verizon with such assurance of payment.
- 6.9 The fact that a letter of credit is requested by Verizon hereunder shall in no way relieve QuantumShift from compliance with the requirements of this Agreement (including, but not limited to, any applicable Tariffs) as to advance payments and payment for Services, nor constitute a waiver or modification of the terms herein pertaining to the discontinuance of Services for nonpayment of any amounts payment of which is required by this Agreement.

7. Audits

- 7.1 Except as may be otherwise specifically provided in this Agreement, either Party ("Auditing Party") may audit the other Party's ("Audited Party") books, records, documents, facilities and systems for the purpose of evaluating the accuracy of the Audited Party's bills. Such audits may be performed once in each Calendar Year; provided, however, that audits may be conducted more frequently (but no more frequently than once in each Calendar Quarter) if the immediately preceding audit found previously uncorrected net inaccuracies in billing in favor of the Audited Party having an aggregate value of at least \$1,000,000.
- 7.2 The audit shall be performed by independent certified public accountants selected and paid by the Auditing Party. The accountants shall be reasonably acceptable to the Audited Party. Prior to commencing the audit, the accountants shall execute an agreement with the Audited Party in a form reasonably acceptable to the Audited Party that protects the confidentiality of the information disclosed by the Audited Party to the accountants. The audit shall take place at a time and place agreed upon 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 Audited Party.
- 7.3 Each Party shall cooperate fully in any such audit, providing reasonable access to any and all employees, books, records, documents, facilities and systems, reasonably necessary to assess the accuracy of the Audited Party's bills.
- 7.4 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, documents, facilities and systems necessary to assess the accuracy of the Audited Party's bills.

8. Authorization

- 8.1 Verizon represents and warrants that it is a corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Pennsylvania and has full power and authority to execute and deliver this Agreement and to perform its obligations under this Agreement.
- 8.2 QuantumShift represents and warrants that it is a corporation duly organized, validly existing and in good standing under the laws of the State of California, and has full power and authority to execute and deliver this Agreement and to perform its obligations under this Agreement.
- 8.3 QuantumShift Certification.

Notwithstanding any other provision of this Agreement, Verizon shall have no obligation to perform under this Agreement until such time as QuantumShift has obtained such FCC and Commission authorization as may be required by Applicable Law for conducting business in the Commonwealth of Pennsylvania. QuantumShift shall not place any Orders under this Agreement until it has obtained such authorization. QuantumShift shall provide proof of such authorization to Verizon upon request.

9. Billing and Payment; Disputed Amounts

- 9.1 Except as otherwise provided in this Agreement, each Party shall submit to the other Party on a monthly basis in an itemized form, statement(s) of charges incurred by the other Party under this Agreement.
- 9.2 Except as otherwise provided in this Agreement, payment of amounts billed for Services provided under this Agreement, whether billed on a monthly basis or as otherwise provided in this Agreement, shall be due, in immediately available U.S. funds, on the later of the following dates (the "Due Date"): (a) the due date specified on the billing Party's statement; or (b) twenty (20) days after the date the statement is received by the billed Party. Payments shall be transmitted by electronic funds transfer.
- 9.3 If any portion of an amount billed by a Party under this Agreement is subject to a good faith dispute between the Parties, the billed Party shall give notice to the billing Party of the amounts it disputes ("Disputed Amounts") and include in such notice the specific details and reasons for disputing each item. A Party may also dispute prospectively with a single notice a class of charges that it disputes. Notice of a dispute may be given by a Party at any time, either before or after an amount is paid, and a Party's payment of an amount shall not constitute a waiver of such Party's right to subsequently dispute its obligation to pay such amount or to seek a refund of any amount paid. The billed Party shall pay by the Due Date all undisputed amounts. Billing disputes shall be subject to the terms of Section 14, Dispute Resolution.
- 9.4 Charges due to the billing Party that are not paid by the Due Date, shall be subject to a late payment charge. The late payment charge shall be in an amount specified by the billing 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.
- 9.5 Although it is the intent of both Parties to submit timely statements of charges, failure by either Party to present statements to the other Party in a timely manner shall not constitute a breach or default, or a waiver of the right to payment of the incurred charges, by the billing Party under this Agreement, and, except for assertion of a provision of Applicable Law that limits the period in which a suit or

other proceeding can be brought before a court or other governmental entity of appropriate jurisdiction to collect amounts due, the billed Party shall not be entitled to dispute the billing Party's statement(s) based on the billing Party's failure to submit them in a timely fashion.

10. Confidentiality

- 10.1 As used in this Section 10, "Confidential Information" means the following information that is disclosed by one Party ("Disclosing Party") to the other Party ("Receiving Party") in connection with, or anticipation of, this Agreement:
- 10.1.1 Books, records, documents and other information disclosed in an audit pursuant to Section 7;
 - 10.1.2 Any forecasting information provided pursuant to this Agreement;
 - 10.1.3 Customer Information (except to the extent that (a) the Customer information is published in a directory, (b) the Customer information is disclosed through or in the course of furnishing a Telecommunications Service, such as directory assistance, operator service, Caller ID or similar service, or LIDB service, or (c) the Customer to whom the Customer Information is related has authorized the Receiving Party to use and/or disclose the Customer Information);
 - 10.1.4 information related to specific facilities or equipment (including, but not limited to, cable and pair information);
 - 10.1.5 any information that is in written, graphic, electromagnetic, or other tangible form, and marked at the time of disclosure as "Confidential" or "Proprietary"; and
 - 10.1.6 any information that is communicated orally or visually and declared to the Receiving Party at the time of disclosure, and by written notice with a statement of the information given to the Receiving Party within ten (10) days after disclosure, to be "Confidential" or "Proprietary".

Notwithstanding any other provision of this Agreement, a Party shall have the right to refuse to accept receipt of information which the other Party has identified as Confidential Information pursuant to Sections 10.1.5 or 10.1.6.

- 10.2 Except as otherwise provided in this Agreement, the Receiving Party shall:
- 10.2.1 use the Confidential Information received from the Disclosing Party only in performance of this Agreement; and
 - 10.2.2 using the same degree of care that it uses with similar confidential information of its own (but in no case a degree of care that is less than commercially reasonable), hold Confidential Information received from the Disclosing Party in confidence and restrict disclosure of the Confidential Information solely to those of the Receiving Party's Affiliates and the directors, officers, employees, Agents and contractors of the Receiving Party and the Receiving Party's Affiliates, that have a need to receive such Confidential Information in order to perform the Receiving Party's obligations under this Agreement. The Receiving Party's Affiliates and the directors, officers, employees, Agents and contractors of the Receiving Party and the Receiving Party's Affiliates, shall be required by the Receiving Party to comply

with the provisions of this Section 10 in the same manner as the Receiving Party. The Receiving Party shall be liable for any failure of the Receiving Party's Affiliates or the directors, officers, employees, Agents or contractors of the Receiving Party or the Receiving Party's Affiliates, to comply with the provisions of this Section 10.

- 10.3 The Receiving Party shall return or destroy all Confidential Information received from the Disclosing Party, including any copies made by the Receiving Party, within thirty (30) days after a written request by the Disclosing Party is delivered to the Receiving Party, except for (a) Confidential Information that the Receiving Party reasonably requires to perform its obligations under this Agreement, and (b) one copy for archival purposes only.
- 10.4 Unless otherwise agreed, the obligations of Sections 10.2 and 10.3 do not apply to information that:
 - 10.4.1 was, at the time of receipt, already in the possession of or known to the Receiving Party free of any obligation of confidentiality and restriction on use;
 - 10.4.2 is or becomes publicly available or known through no wrongful act of the Receiving Party, the Receiving Party's Affiliates, or the directors, officers, employees, Agents or contractors of the Receiving Party or the Receiving Party's Affiliates;
 - 10.4.3 is rightfully received from a third person having no direct or indirect obligation of confidentiality or restriction on use to the Disclosing Party with respect to such information;
 - 10.4.4 is independently developed by the Receiving Party;
 - 10.4.5 is approved for disclosure or use by written authorization of the Disclosing Party (including, but not limited to, in this Agreement); or
 - 10.4.6 is required to be disclosed by the Receiving Party pursuant to Applicable Law, provided that the Receiving Party shall have made commercially reasonable efforts to give adequate notice of the requirement to the Disclosing Party in order to enable the Disclosing Party to seek protective arrangements.
- 10.5 Notwithstanding the provisions of Sections 10.1 through 10.4, the Receiving Party may use and disclose Confidential Information received from the Disclosing Party to the extent necessary to enforce the Receiving Party's rights under this Agreement or Applicable Law. In making any such disclosure, the Receiving Party shall make reasonable efforts to preserve the confidentiality and restrict the use of the Confidential Information while it is in the possession of any person to whom it is disclosed, including, but not limited to, by requesting any governmental entity to whom the Confidential Information is disclosed to treat it as confidential and restrict its use to purposes related to the proceeding pending before it.
- 10.6 The Disclosing Party shall retain all of the Disclosing Party's right, title and interest in any Confidential Information disclosed by the Disclosing Party to the Receiving Party. Except as otherwise expressly provided 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 Confidential Information.

- 10.7 The provisions of this Section 10 shall be in addition to and not in derogation of 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 the use, or protection of the confidentiality of, CPNI provided by Applicable Law.
- 10.8 Each Party's obligations under this Section 10 shall survive expiration, cancellation or termination of this Agreement.

11. Counterparts

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

12. Default

If either Party ("Defaulting Party") fails to make a payment required by this Agreement (including, but not limited to, any payment required by Section 9.3 of undisputed amounts to the billing Party) or materially breaches any other material provision of this Agreement, and such failure or breach continues for thirty (30) days after written notice thereof from the other Party, the other Party may, by written notice to the Defaulting Party, (a) suspend the provision of any or all Services hereunder, or (b) cancel this Agreement and terminate the provision of all Services hereunder.

13. Discontinuance of Service by QuantumShift

- 13.1 If QuantumShift proposes to discontinue, or actually discontinues, its provision of service to all or substantially all of its Customers, whether voluntarily, as a result of bankruptcy, or for any other reason, QuantumShift shall send written notice of such discontinuance to Verizon, the Commission, and each of QuantumShift's Customers. QuantumShift shall provide such notice such number of days in advance of discontinuance of its service as shall be required by Applicable Law. Unless the period for advance notice of discontinuance of service required by Applicable Law is more than thirty (30) days, to the extent commercially feasible, QuantumShift shall send such notice at least thirty (30) days prior to its discontinuance of service.
- 13.2 Such notice must advise each QuantumShift Customer that unless action is taken by the QuantumShift Customer to switch to a different carrier prior to QuantumShift's proposed discontinuance of service, the QuantumShift Customer will be without the service provided by QuantumShift to the QuantumShift Customer.
- 13.3 Should a QuantumShift Customer subsequently become a Verizon Customer, QuantumShift shall provide Verizon with all information necessary for Verizon to establish service for the QuantumShift Customer, including, but not limited to, the QuantumShift Customer's billed name, listed name, service address, and billing address, and the services being provided to the QuantumShift Customer.
- 13.4 Nothing in this Section 13 shall limit Verizon's right to cancel or terminate this Agreement or suspend provision of Services under this Agreement.

14. Dispute Resolution

- 14.1 Except as otherwise provided in this Agreement, any dispute between the Parties regarding the interpretation or enforcement of this Agreement or any of its terms shall be addressed by good faith negotiation between the Parties. To initiate such negotiation, a Party must provide to the other Party written notice of the dispute that includes both a detailed description of the dispute or alleged nonperformance and the name of an individual who will serve as the initiating Party's representative in the negotiation. The other Party shall have ten Business Days to designate its own representative in the negotiation. The Parties' representatives shall meet at least once within 45 days after the date of the initiating Party's written notice in an attempt to reach a good faith resolution of the dispute. Upon agreement, the Parties' representatives may utilize other alternative dispute resolution procedures such as private mediation to assist in the negotiations.
- 14.2 If the Parties have been unable to resolve the dispute within 45 days of the date of the initiating Party's written notice, either Party may pursue any remedies available to it under this Agreement, at law, in equity, or otherwise, including, but not limited to, instituting an appropriate proceeding before the Commission, the FCC, or a court of competent jurisdiction.

15. Force Majeure

- 15.1 Neither Party shall be responsible for any delay or failure in performance which results from causes beyond its reasonable control ("Force Majeure Events"), whether or not foreseeable by such Party. Such Force Majeure Events include, but are not limited to, adverse weather conditions, flood, fire, explosion, earthquake, volcanic action, power failure, embargo, boycott, war, revolution, civil commotion, act of public enemies, labor unrest (including, but not limited to, strikes, work stoppages, slowdowns, picketing or boycotts), inability to obtain equipment, parts, software or repairs thereof, acts or omissions of the other Party, and acts of God.
- 15.2 If a Force Majeure Event occurs, the non-performing Party shall give prompt notification of its inability to perform to the other Party. During the period that the non-performing Party is unable to perform, the other Party shall also be excused from performance of its obligations to the extent such obligations are reciprocal to, or depend upon, the performance of the non-performing Party that has been prevented by the Force Majeure Event. The non-performing Party shall use commercially reasonable efforts to avoid or remove the cause(s) of its non-performance and both Parties shall proceed to perform once the cause(s) are removed or cease.
- 15.3 Notwithstanding the provisions of Sections 15.1 and 15.2, in no case shall a Force Majeure Event excuse either Party from an obligation to pay money as required by this Agreement.
- 15.4 Nothing in this Agreement shall require the non-performing Party to settle any labor dispute except as the non-performing Party, in its sole discretion, determines appropriate.

16. Forecasts

In addition to any other forecasts required by this Agreement, upon request by Verizon, QuantumShift shall provide to Verizon forecasts regarding the Services that QuantumShift expects to purchase from Verizon, including, but not limited to, forecasts regarding the types and volumes of Services that QuantumShift expects to purchase and the locations where such Services will be purchased.

17. Fraud

QuantumShift assumes responsibility for all fraud associated with its Customers and accounts. Verizon shall bear no responsibility for, and shall have no obligation to investigate or make adjustments to QuantumShift's account in cases of, fraud by QuantumShift's Customers or other third parties.

18. Good Faith Performance

The Parties shall act in good faith in their performance of this Agreement. Except as otherwise expressly stated in this Agreement (including, but not limited to, where consent, approval, agreement or a similar action is stated to be within a Party's sole discretion), where consent, approval, mutual agreement or a similar action is required by any provision of this Agreement, such action shall not be unreasonably withheld, conditioned or delayed. If and, to the extent that, Verizon, prior to the Effective Date of this Agreement, has not provided in the Commonwealth of Pennsylvania a Service offered under this Agreement, Verizon reserves the right to negotiate in good faith with QuantumShift reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such Service; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.

19. Headings

The headings used in the Principal Document are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning of the Principal Document.

20. Indemnification

20.1 Each Party ("Indemnifying Party") shall indemnify, defend and hold harmless the other Party ("Indemnified Party"), the Indemnified Party's Affiliates, and the directors, officers and employees of the Indemnified Party and the Indemnified Party's Affiliates, from and against any and all Claims that arise out of bodily injury to or death of any person, or damage to, or destruction or loss of, tangible real and/or personal property of any person, to the extent such injury, death, damage, destruction or loss, was proximately caused by the grossly negligent or intentionally wrongful acts or omissions of the Indemnifying Party, the Indemnifying Party's Affiliates, or the directors, officers, employees, Agents or contractors (excluding the Indemnified Party) of the Indemnifying Party or the Indemnifying Party's Affiliates, in connection with this Agreement.

20.2 Indemnification Process.

20.2.1 As used in this Section 20, "Indemnified Person" means a person whom an Indemnifying Party is obligated to indemnify, defend and/or hold harmless under Section 20.1.

20.2.2 An Indemnifying Party's obligations under Section 20.1 shall be conditioned upon the following:

20.2.3 The Indemnified Person: (a) shall give the Indemnifying Party notice of the Claim promptly after becoming aware thereof (including a statement of facts known to the Indemnified Person related to the Claim and an estimate of the amount thereof); (b) prior to taking any material action with respect to a Third Party Claim, shall consult with the Indemnifying Party as to the procedure to be followed in defending,

settling, or compromising the Claim; (c) shall not consent to any settlement or compromise of a Third Party Claim without the written consent of the Indemnifying Party; (d) shall permit the Indemnifying Party to assume the defense of a Third Party Claim (including, except as provided below, the compromise or settlement thereof) at the Indemnifying Party's own cost and expense, provided, however, that the Indemnified Person shall have the right to approve the Indemnifying Party's choice of legal counsel.

- 20.2.4 If the Indemnified Person fails to comply with Section 20.2.3 with respect to a Claim, to the extent such failure shall have a material adverse effect upon the Indemnifying Party, the Indemnifying Party shall be relieved of its obligation to indemnify, defend and hold harmless the Indemnified Person with respect to such Claim under this Agreement.
 - 20.2.5 Subject to 20.2.6 and 20.2.7, below, the Indemnifying Party shall have the authority to defend and settle any Third Party Claim.
 - 20.2.6 With respect to any Third Party Claim, the Indemnified Person shall be entitled to participate with the Indemnifying Party in the defense of the Claim if the Claim requests equitable relief or other relief that could affect the rights of the Indemnified Person. In so participating, the Indemnified Person shall be entitled to employ separate counsel for the defense at the Indemnified Person's expense. The Indemnified Person shall also be entitled to participate, at its own expense, in the defense of any Claim, as to any portion of the Claim as to which it is not entitled to be indemnified, defended and held harmless by the Indemnifying Party.
 - 20.2.7 In no event shall the Indemnifying Party settle a Third Party Claim or consent to any judgment with regard to a Third Party Claim without the prior written consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed. In the event the settlement or judgment requires a contribution from or affects the rights of an Indemnified Person, the Indemnified Person shall have the right to refuse such settlement or judgment with respect to itself and, at its own cost and expense, take over the defense against the Third Party Claim, provided that in such event the Indemnifying Party shall not be responsible for, nor shall it be obligated to indemnify or hold harmless the Indemnified Person against, the Third Party Claim for any amount in excess of such refused settlement or judgment.
 - 20.2.8 The Indemnified Person shall, in all cases, assert any and all provisions in applicable Tariffs and Customer contracts that limit liability to third persons as a bar to, or limitation on, any recovery by a third-person claimant.
 - 20.2.9 The Indemnifying Party and the Indemnified Person shall offer each other all reasonable cooperation and assistance in the defense of any Third Party Claim.
- 20.3 Each Party agrees that it will not implead or bring any action against the other Party, the other Party's Affiliates, or any of the directors, officers or employees of the other Party or the other Party's Affiliates, based on any claim by any person for personal injury or death that occurs in the course or scope of employment of

such person by the other Party or the other Party's Affiliate and that arises out of performance of this Agreement.

- 20.4 Each Party's obligations under this Section 20 shall survive expiration, cancellation or termination of this Agreement.

21. Insurance

- 21.1 QuantumShift shall maintain during the term of this Agreement and for a period of two years thereafter all insurance required to satisfy its obligations under this Agreement (including, but not limited to, its obligations set forth in Section 20 hereof) and all insurance required by Applicable Law. The insurance shall be obtained from an insurer having an A.M. Best insurance rating of at least A-, financial size category VII or greater. At a minimum and without limiting the foregoing undertaking, QuantumShift shall maintain the following insurance:
- 21.1.1 Commercial General Liability Insurance, on an occurrence basis, including but not limited to, premises-operations, broad form property damage, products/completed operations, contractual liability, independent contractors, and personal injury, with limits of at least \$2,000,000 combined single limit for each occurrence.
 - 21.1.2 Commercial Motor Vehicle Liability Insurance covering all owned, hired and non-owned vehicles, with limits of at least \$2,000,000 combined single limit for each occurrence.
 - 21.1.3 Excess Liability Insurance, in the umbrella form, with limits of at least \$10,000,000 combined single limit for each occurrence.
 - 21.1.4 Worker's Compensation Insurance as required by Applicable Law and Employer's Liability Insurance with limits of not less than \$2,000,000 per occurrence.
 - 21.1.5 All risk property insurance on a full replacement cost basis for all of QuantumShift's real and personal property located at any Collocation site or otherwise located on or in any Verizon premises (whether owned, leased or otherwise occupied by Verizon), facility, equipment or right-of-way.
- 21.2 Any deductibles, self-insured retentions or loss limits ("Retentions") for the foregoing insurance must be disclosed on the certificates of insurance to be provided to Verizon pursuant to Sections 21.4 and 21.5, and Verizon reserves the right to reject any such Retentions in its reasonable discretion. All Retentions shall be the responsibility of QuantumShift.
- 21.3 QuantumShift shall name Verizon and Verizon's Affiliates as additional insureds on the foregoing liability insurance.
- 21.4 QuantumShift shall, within two (2) weeks of the Effective Date hereof at the time of each renewal of, or material change in, QuantumShift's insurance policies, and at such other times as Verizon may reasonably specify, furnish certificates or other proof of the foregoing insurance reasonably acceptable to Verizon. The certificates or other proof of the foregoing insurance shall be sent to: Director-Negotiations, Verizon Global Wholesale, 600 Hidden Ridge, HQEWMNOTICES, Irving, TX 75038.

- 21.5 QuantumShift shall require its contractors, if any, that may enter upon the premises or access the facilities or equipment of Verizon or Verizon's affiliates to maintain insurance in accordance with Sections 21.1 through 21.3 and, if requested, to furnish Verizon certificates or other adequate proof of such insurance acceptable to Verizon in accordance with Section 21.4.
- 21.6 Failure of QuantumShift or QuantumShift's contractors to maintain insurance and provide certificates of insurance as required in Sections 21.1 through 21.5, above, shall be deemed a material breach of this Agreement.
- 21.7 Certificates furnished by QuantumShift or QuantumShift's contractors shall contain a clause stating: "Verizon Pennsylvania Inc. shall be notified in writing at least thirty (30) days prior to cancellation of, or any material change in, the insurance."

22. Intellectual Property

- 22.1 Except as expressly stated in this Agreement, this Agreement shall not be construed as granting a license with respect to any patent, copyright, trade name, trademark, service mark, trade secret or any other intellectual property, now or hereafter owned, controlled or licensable by either Party. Except as expressly stated in this Agreement, neither Party may use any patent, copyrightable materials, trademark, trade name, trade secret or other intellectual property right, of the other Party except in accordance with the terms of a separate license agreement between the Parties granting such rights.
- 22.2 Except as stated in Section 22.4, neither Party shall have any obligation to defend, indemnify or hold harmless, or acquire any license or right for the benefit of, or owe any other obligation or have any liability to, the other Party or its Affiliates or Customers based on or arising from any Third Party Claim alleging or asserting that the provision or use of any service, facility, arrangement, or software by either Party under this Agreement, or the performance of any service or method, either alone or in combination with the other Party, constitutes direct, vicarious or contributory infringement or inducement to infringe, or misuse or misappropriation of any patent, copyright, trademark, trade secret, or any other proprietary or intellectual property right of any Party or third person. Each Party, however, shall offer to the other reasonable cooperation and assistance in the defense of any such claim.
- 22.3 NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE PARTIES AGREE THAT NEITHER PARTY HAS MADE, AND THAT THERE DOES NOT EXIST, ANY WARRANTY, EXPRESS OR IMPLIED, THAT THE USE BY EACH PARTY OF THE OTHER'S SERVICES PROVIDED UNDER THIS AGREEMENT SHALL NOT GIVE RISE TO A CLAIM OF INFRINGEMENT, MISUSE, OR MISAPPROPRIATION OF ANY INTELLECTUAL PROPERTY RIGHT.
- 22.4 QuantumShift agrees that the Services provided by Verizon hereunder shall be subject to the terms, conditions and restrictions contained in any applicable agreements (including, but not limited to software or other intellectual property license agreements) between Verizon and Verizon's vendors. Verizon agrees to advise QuantumShift, directly or through a third party, of any such terms, conditions or restrictions that may limit any QuantumShift use of a Service provided by Verizon that is otherwise permitted by this Agreement. At QuantumShift's written request, to the extent required by Applicable Law, Verizon will use Verizon's best efforts, as commercially practicable, to obtain intellectual property rights from Verizon's vendor to allow QuantumShift to use the Service in

the same manner as Verizon that are coextensive with Verizon's intellectual property rights, on terms and conditions that are equal in quality to the terms and conditions under which Verizon has obtained Verizon's intellectual property rights. QuantumShift shall reimburse Verizon for the cost of obtaining such rights.

23. Joint Work Product

The Principal Document is the joint work product of the Parties, has been negotiated by the Parties, and shall be fairly interpreted in accordance with its terms. In the event of any ambiguities, no inferences shall be drawn against either Party.

24. Law Enforcement

24.1 Each Party may cooperate with law enforcement authorities and national security authorities to the full extent required or permitted by Applicable Law in matters related to Services provided by it under this Agreement, including, but not limited to, the production of records, the establishment of new lines or the installation of new services on an existing line in order to support law enforcement and/or national security operations, and, the installation of wiretaps, trap-and-trace facilities and equipment, and dialed number recording facilities and equipment.

24.2 A Party shall not have the obligation to inform the other Party or the Customers of the other Party of actions taken in cooperating with law enforcement or national security authorities, except to the extent required by Applicable Law.

24.3 Where a law enforcement or national security request relates to the establishment of lines (including, but not limited to, lines established to support interception of communications on other lines), or the installation of other services, facilities or arrangements, a Party may act to prevent the other Party from obtaining access to information concerning such lines, services, facilities and arrangements, through operations support system interfaces.

25. Liability

25.1 As used in this Section 25, "Service Failure" means a failure to comply with a direction to install, restore or terminate Services under this Agreement, a failure to provide Services under this Agreement, and failures, mistakes, omissions, interruptions, delays, errors, defects or the like, occurring in the course of the provision of any Services under this Agreement.

25.2 Except as otherwise stated in Section 25.5, the liability, if any, of a Party, a Party's Affiliates, and the directors, officers and employees of a Party and a Party's Affiliates, to the other Party, the other Party's Customers, and to any other person, for Claims arising out of a Service Failure shall not exceed an amount equal to the pro rata applicable monthly charge for the Services that are subject to the Service Failure for the period in which such Service Failure occurs.

25.3 Except as otherwise stated in Section 25.5, a Party, a Party's Affiliates, and the directors, officers and employees of a Party and a Party's Affiliates, shall not be liable to the other Party, the other Party's Customers, or to any other person, in connection with this Agreement (including, but not limited to, in connection with a Service Failure or any breach, delay or failure in performance, of this Agreement) for special, indirect, incidental, consequential, reliance, exemplary, punitive, or like damages, including, but not limited to, damages for lost revenues, profits or savings, or other commercial or economic loss, even if the person whose liability is excluded by this Section has been advised of the possibility of such damages.

- 25.4 The limitations and exclusions of liability stated in Sections 25.1 through 25.3 shall apply regardless of the form of a claim or action, whether statutory, in contract, warranty, strict liability, tort (including, but not limited to, negligence of a Party), or otherwise.
- 25.5 Nothing contained in Sections 25.1 through 25.4 shall exclude or limit liability:
- 25.5.1 under Sections 20, Indemnification, or 41, Taxes.
 - 25.5.2 for any obligation to indemnify, defend and/or hold harmless that a Party may have under this Agreement.
 - 25.5.3 for damages arising out of or resulting from bodily injury to or death of any person, or damage to, or destruction or loss of, tangible real and/or personal property of any person, or Toxic or Hazardous Substances, to the extent such damages are otherwise recoverable under Applicable Law;
 - 25.5.4 for a claim for infringement of any patent, copyright, trade name, trade mark, service mark, or other intellectual property interest;
 - 25.5.5 under Section 258 of the Act or any order of FCC or the Commission implementing Section 258; or
 - 25.5.6 under the financial incentive or remedy provisions of any service quality plan required by the FCC or the Commission.
- 25.6 In the event that the liability of a Party, a Party's Affiliate, or a director, officer or employee of a Party or a Party's Affiliate, is limited and/or excluded under both this Section 25 and a provision of an applicable Tariff, the liability of the Party or other person shall be limited to the smaller of the amounts for which such Party or other person would be liable under this Section or the Tariff provision.
- 25.7 Each Party shall, in its tariffs and other contracts with its Customers, provide that in no case shall the other Party, the other Party's Affiliates, or the directors, officers or employees of the other Party or the other Party's Affiliates, be liable to such Customers or other third-persons for any special, indirect, incidental, consequential, reliance, exemplary, punitive or other damages, arising out of a Service Failure.

26. Network Management

- 26.1 Cooperation. The Parties will work cooperatively in a commercially reasonable manner to install and maintain a reliable network. QuantumShift and Verizon will exchange appropriate information (e.g., network information, maintenance contact numbers, escalation procedures, and information required to comply with requirements of law enforcement and national security agencies) to achieve this desired reliability. In addition, the Parties will work cooperatively in a commercially reasonable manner to apply sound network management principles to alleviate or to prevent traffic congestion and subject to Section 17, to minimize fraud associated with third number billed calls, calling card calls, and other services related to this Agreement.
- 26.2 Responsibility for Following Standards. Each Party recognizes a responsibility to follow the standards that may be agreed to between the Parties and to employ characteristics and methods of operation that will not interfere with or impair the

service, network or facilities of the other Party or any third parties connected with or involved directly in the network or facilities of the other.

26.3 Interference or Impairment. If a Party ("Impaired Party") reasonably determines that the services, network, facilities, or methods of operation, of the other Party ("Interfering Party") will or are likely to interfere with or impair the Impaired Party's provision of services or the operation of the Impaired Party's network or facilities, the Impaired Party may interrupt or suspend any Service provided to the Interfering Party to the extent necessary to prevent such interference or impairment, subject to the following:

26.3.1 Except in emergency situations (e.g., situations involving a risk of bodily injury to persons or damage to tangible property, or an interruption in Customer service) or as otherwise provided in this Agreement, the Impaired Party shall have given the Interfering Party at least ten (10) days' prior written notice of the interference or impairment or potential interference or impairment and the need to correct the condition within said time period; and taken other actions, if any, required by Applicable Law; and,

26.3.2 Upon correction of the interference or impairment, the Impaired Party will promptly restore the interrupted or suspended Service. The Impaired Party shall not be obligated to provide an out-of-service credit allowance or other compensation to the Interfering Party in connection with the suspended Service.

26.4 Outage Repair Standard. In the event of an outage or trouble in any Service being provided by a Party hereunder, the Providing Party will follow Verizon's standard procedures for isolating and clearing the outage or trouble.

27. **Non-Exclusive Remedies**

Except as otherwise expressly provided in this Agreement, each of the remedies provided under this Agreement is cumulative and is in addition to any other remedies that may be available under this Agreement or at law or in equity.

28. **Notice of Network Changes**

If a Party makes a change in the information necessary for the transmission and routing of services using that Party's facilities or network, or any other change in its facilities or network that will materially affect the interoperability of its facilities or network with the other Party's facilities or network, the Party making the change shall publish notice of the change at least ninety (90) days in advance of such change, and shall use reasonable efforts, as commercially practicable, to publish such notice at least one hundred eighty (180) days in advance of the change; provided, however, that if an earlier publication of notice of a change is required by Applicable Law (including, but not limited to, 47 CFR 51.325 through 51.335) notice shall be given at the time required by Applicable Law.

29. **Notices**

29.1 Except as otherwise provided in this Agreement, notices given by one Party to the other Party under this Agreement:

29.1.1 shall be in writing;

29.1.2 shall be delivered (a) personally, (b) by express delivery service with next Business Day delivery, (c) by first class, certified or registered

U.S. mail, postage prepaid, or (d) by facsimile telecopy, with a copy delivered in accordance with (a), (b) or (c), preceding; and

29.1.3 shall be delivered to the following addresses of the Parties:

To QuantumShift:

Karen Weller
12657 Alcosta Blvd, Suite 418
San Ramon, CA 94583
Telephone Number: (925) 415-2126, Ext.: None
Facsimile Number: (925) 415-2176
Internet Address: kweller@vcomsolutions.com

To Verizon:

Director-Negotiations
Verizon Global Wholesale
600 Hidden Ridge
HQEWMNOTICES
Irving, TX 75038
Facsimile Number: (972) 719-1519
Internet Address: wmnotices@verizon.com

with a copy to:

Vice President and Deputy General Counsel
Verizon Global Wholesale
1320 North Court House Road
9th Floor
Arlington, VA 22201
Facsimile: (703) 351-3656

or to such other address as either Party shall designate by proper notice.

Notices will be deemed given as of the earlier of (a) where there is personal delivery of the notice, the date of actual receipt, (b) where the notice is sent via express delivery service for next Business Day delivery, the next Business Day after the notice is sent, (c) where the notice is sent via First Class U.S. Mail, three (3) Business Days after mailing, (d) where notice is sent via certified or registered U.S. mail, the date of receipt shown on the Postal Service receipt, and (e) where the notice is sent via facsimile telecopy, if the notice is sent on a Business Day and before 5 PM. in the time zone where it is received, on the date set forth on the telecopy confirmation, or if the notice is sent on a non-Business Day or if the notice is sent after 5 PM in the time zone where it is received, the next Business Day after the date set forth on the telecopy confirmation.

QuantumShift shall notify Verizon, by written notice pursuant to this Section 29, of any changes in the addresses or other QuantumShift contact information identified under Section 29.1.3 above.

30. Ordering and Maintenance

QuantumShift shall use Verizon's electronic Operations Support System access platforms to submit Orders and requests for maintenance and repair of Services, and to engage in other pre-ordering, ordering, provisioning, maintenance and repair transactions. If Verizon has not yet deployed an electronic capability for QuantumShift to

perform a pre-ordering, ordering, provisioning, maintenance or repair, transaction offered by Verizon, QuantumShift shall use such other processes as Verizon has made available for performing such transaction (including, but not limited to, submission of Orders by telephonic facsimile transmission and placing trouble reports by voice telephone transmission).

31. Performance Standards

- 31.1 Verizon shall provide Services under this Agreement in accordance with the performance standards required by Applicable Law, including, but not limited to, Section 251(c) of the Act.
- 31.2 QuantumShift shall provide Services under this Agreement in accordance with the performance standards required by Applicable Law.

32. Point of Contact for QuantumShift Customers

- 32.1 QuantumShift shall establish telephone numbers and mailing addresses at which QuantumShift Customers may communicate with QuantumShift and shall advise QuantumShift Customers of these telephone numbers and mailing addresses.
- 32.2 Except as otherwise agreed to by Verizon, Verizon shall have no obligation, and may decline, to accept a communication from a QuantumShift Customer, including, but not limited to, a QuantumShift Customer request for repair or maintenance of a Verizon Service provided to QuantumShift.

33. Predecessor Agreements

- 33.1 Except as stated in Section 33.2 or as otherwise agreed in writing by the Parties:
 - 33.1.1 Further to the provisions of Section 1 of the General Terms and Conditions of this Agreement, any prior interconnection or resale agreement between the Parties for the Commonwealth of Pennsylvania pursuant to Section 252 of the Act and in effect prior to the Effective Date is hereby amended, extended and restated; and
 - 33.1.2 any Services that were purchased by one Party from the other Party under a prior interconnection or resale agreement between the Parties for the Commonwealth of Pennsylvania pursuant to Section 252 of the Act and in effect prior to the Effective Date, shall as of the Effective Date be subject to and purchased under this Agreement.
- 33.2 Except as otherwise agreed in writing by the Parties, if a Service purchased by a Party under a prior interconnection or resale agreement between the Parties pursuant to Section 252 of the Act was subject to a contractual commitment that it would be purchased for a period of longer than one month, and such period had not yet expired as of the Effective Date and the Service had not been terminated prior to the Effective Date, to the extent not inconsistent with this Agreement, such commitment shall remain in effect and the Service will be purchased under this Agreement; provided, that if this Agreement would materially alter the terms of the commitment, either Party may elect to cancel the commitment.
- 33.3 If either Party elects to cancel the commitment pursuant to the proviso in Section 33.2, the Purchasing Party shall not be liable for any termination charge that would otherwise have applied. However, if the commitment was cancelled by the Purchasing Party, the Providing Party shall be entitled to payment from the

Purchasing Party of the difference between the price of the Service that was actually paid by the Purchasing Party under the commitment and the price of the Service that would have applied if the commitment had been to purchase the Service only until the time that the commitment was cancelled.

34. Publicity and Use of Trademarks or Service Marks

- 34.1 A Party, its Affiliates, and their respective contractors and Agents, shall not use the other Party's trademarks, service marks, logos or other proprietary trade dress, in connection with the sale of products or services, or in any advertising, press releases, publicity matters or other promotional materials, unless the other Party has given its written consent for such use, which consent the other Party may grant or withhold in its sole discretion.
- 34.2 Neither Party may imply any direct or indirect affiliation with or sponsorship or endorsement of it or its services or products by the other Party.
- 34.3 Any violation of this Section 34 shall be considered a material breach of this Agreement.

35. References

- 35.1 All references to Sections, Appendices and Exhibits shall be deemed to be references to Sections, Appendices and Exhibits of this Agreement unless the context shall otherwise require.
- 35.2 Unless the context shall otherwise require, any reference to a Tariff, agreement, technical or other document (including Verizon or third party guides, practices or handbooks), or provision of Applicable Law, is to such Tariff, agreement, document, or provision of Applicable Law, as amended and supplemented from time to time (and, in the case of a Tariff or provision of Applicable Law, to any successor Tariff or provision).

36. Relationship of the Parties

- 36.1 The relationship of the Parties under this Agreement shall be that of independent contractors and nothing herein shall be construed as creating any other relationship between the Parties.
- 36.2 Nothing contained in this Agreement shall make either Party the employee of the other, create a partnership, joint venture, or other similar relationship between the Parties, or grant to either Party a franchise, distributorship or similar interest.
- 36.3 Except for provisions herein expressly authorizing a Party to act for another Party, nothing in this Agreement shall constitute a Party as a legal representative or Agent of the other Party, nor shall a Party have the right or authority to assume, create or incur any liability or any obligation of any kind, express or implied, against, in the name or on behalf of the other Party unless otherwise expressly permitted by such other Party in writing, which permission may be granted or withheld by the other Party in its sole discretion.
- 36.4 Each Party shall have sole authority and responsibility to hire, fire, compensate, supervise, and otherwise control its employees, Agents and contractors. Each Party shall be solely responsible for payment of any Social Security or other taxes that it is required by Applicable Law to pay in conjunction with its employees, Agents and contractors, and for withholding and remitting to the

applicable taxing authorities any taxes that it is required by Applicable Law to collect from its employees.

36.5 Except as otherwise expressly provided in this Agreement, no Party undertakes to perform any obligation of the other Party, whether regulatory or contractual, or to assume any responsibility for the management of the other Party's business.

36.6 The relationship of the Parties under this Agreement is a non-exclusive relationship.

37. Reservation of Rights

37.1 Notwithstanding anything to the contrary in this Agreement, neither Party waives, and each Party hereby expressly reserves, its rights: (a) to appeal or otherwise seek the reversal of and changes in any arbitration decision associated with this Agreement; (b) to challenge the lawfulness of this Agreement and any provision of this Agreement; (c) to seek changes in this Agreement (including, but not limited to, changes in rates, charges and the Services that must be offered) through changes in Applicable Law; (d) to challenge the lawfulness and propriety of, and to seek to change, any Applicable Law, including, but not limited to any rule, regulation, order or decision of the Commission, the FCC, or a court of applicable jurisdiction; and (e) to collect debts owed to it under any prior interconnection or resale agreements. Nothing in this Agreement shall be deemed to limit or prejudice any position a Party has taken or may take before the Commission, the FCC, any other state or federal regulatory or legislative bodies, courts of applicable jurisdiction, or industry fora. The provisions of this Section shall survive the expiration, cancellation or termination of this Agreement.

37.2 QuantumShift acknowledges QuantumShift has been advised by Verizon that it is Verizon's position that this Agreement contains certain provisions which are intended to reflect Applicable Law and Commission and/or FCC arbitration decisions.

38. Subcontractors

A Party may use a contractor of the Party (including, but not limited to, an Affiliate of the Party) to perform the Party's obligations under this Agreement; provided, that a Party's use of a contractor shall not release the Party from any duty or liability to fulfill the Party's obligations under this Agreement.

39. Successors and Assigns

This Agreement shall be binding on and inure to the benefit of the Parties and their respective legal successors and permitted assigns.

40. Survival

The rights, liabilities and obligations of a Party for acts or omissions occurring prior to the expiration, cancellation or termination of this Agreement, the rights, liabilities and obligations of a Party under any provision of this Agreement regarding confidential information (including but not limited to, Section 10), indemnification or defense (including, but not limited to, Section 20), or limitation or exclusion of liability (including, but not limited to, Section 25), and the rights, liabilities and obligations of a Party under any provision of this Agreement which by its terms or nature is intended to continue beyond or to be performed after the expiration, cancellation or termination of this Agreement, shall survive the expiration, cancellation or termination of this Agreement.

41. Taxes

- 41.1 In General. With respect to any purchase of Services under this Agreement, if any federal, state or local tax, fee, surcharge or other tax-like charge, excluding any tax levied on property or net income, (a "Tax") is required or permitted by Applicable Law or a Tariff to be collected from the Purchasing Party by the Providing Party, then (a) the Providing Party shall bill the Purchasing Party for such Tax, as a separately stated item on the invoice, (b) the Purchasing Party shall timely remit such Tax to the Providing Party and (c) the Providing Party shall timely remit such collected Tax to the applicable taxing authority as and to the extent required by Applicable Law.
- 41.2 Taxes Imposed on the Providing Party or Receipts. With respect to any purchase of Services under this Agreement, if any federal, state or local Tax is imposed by Applicable Law on the receipts of the Providing Party, and such Applicable Law permits the Providing Party to exclude certain receipts received from sales to a public utility, distributor, telephone company, local exchange carrier, telecommunications company or other communications company ("Telecommunications Company"), such exclusion being based on the fact that the Purchasing Party is also subject to a tax based upon receipts ("Receipts Tax"), then the Purchasing Party shall pay and remit the Receipts Tax as required by Applicable Law.
- 41.3 Taxes Imposed on Subscriber. With respect to any purchase of Services under this Agreement that are resold to a third party, if any federal, state or local Tax is imposed by Applicable Law on the subscriber, end-user, customer or ultimate consumer ("Subscriber") in connection with any such purchase, which a Telecommunications Company is required to impose and/or collect from a Subscriber, or if any federal, state or local Tax is imposed on the Providing Party and required by Applicable Law to be passed through to the Subscriber, then the Purchasing Party (a) shall impose and/or collect such Tax from the Subscriber and (b) shall timely remit such Tax to the applicable taxing authority.
- 41.4 Tax Exemptions and Exemption Certificates. If Applicable Law clearly exempts a purchase hereunder 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 such exemption. Such exemption shall be effective upon receipt of the exemption certificate or affidavit in accordance with the terms set forth in Section 41.7. If Applicable Law clearly exempts a purchase hereunder from a Tax, but does not also provide an exemption procedure, then the Providing Party shall not collect such Tax if the Purchasing Party (a) furnishes the Providing Party with a letter signed by an officer requesting such an exemption and citing the provision in the Applicable Law which clearly allows such exemption and (b) supplies the Providing Party with an indemnification agreement, acceptable to the Providing Party, which holds the Providing Party harmless on an after-tax basis with respect to its forbearing to collect such Tax.
- 41.5 Liability for Uncollected Tax, Interest and Penalty.
- 41.5.1 If the Providing Party has not received an exemption certificate from the Purchasing Party and the Providing Party fails to bill the Purchasing Party for any Tax as required by Section 41.1, then, as between the Providing Party and the Purchasing Party, (a) the Purchasing Party shall remain liable for such unbilled Tax and any interest assessed thereon and (b) the Providing Party shall be liable

for any penalty assessed with respect to such unbilled Tax by a taxing authority.

- 41.5.2 If the Providing Party properly bills the Purchasing Party for any Tax but the Purchasing Party fails to remit such Tax to the Providing Party as required by Section 41.2, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall be liable for such uncollected Tax and any interest assessed thereon, as well as any penalty assessed with respect to such uncollected Tax by the applicable taxing authority.
- 41.5.3 If the Providing Party does not collect any Tax as required by Section 41.1 because the Purchasing Party has provided such Providing Party with an exemption certificate that is later found to be inadequate, invalid or inapplicable by a 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 assessed thereon, as well as any penalty assessed with respect to such uncollected Tax by the applicable taxing authority.
- 41.5.4 If the Purchasing Party fails to pay the Receipts Tax as required by Section 41.2, then, as between the Providing Party and the Purchasing Party, (a) the Providing Party shall be liable for any Tax imposed on its receipts and (b) the Purchasing Party shall be liable for any interest assessed thereon and any penalty assessed upon the Providing Party with respect to such Tax by the applicable taxing authority.
- 41.5.5 If the Purchasing Party fails to impose and/or collect any Tax from Subscribers as required by Section 41.3, then, as between the Providing Party and the Purchasing Party, the Purchasing Party shall remain liable for such uncollected Tax and any interest assessed thereon, as well as any penalty assessed with respect to such uncollected Tax by the applicable taxing authority. With respect to any Tax that the Purchasing Party has agreed to pay, or is required to impose on and/or collect from Subscribers, the Purchasing Party agrees to indemnify and hold the Providing Party harmless on an after-tax basis for any costs incurred by the Providing Party as a result of actions taken by the applicable taxing authority to recover the Tax from the Providing Party due to the failure of the Purchasing Party to timely pay, or collect and timely remit, such Tax to such authority.
- 41.6 Audit Cooperation. In the event either Party is audited by a taxing authority, the other Party agrees to cooperate fully 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.
- 41.7 Notices. All notices, affidavits, exemption-certificates or other communications required or permitted to be given by either Party to the other, for purposes of this Section 41, shall be made in writing and shall be delivered in person or sent by certified mail, return receipt requested, or registered mail, or a courier service providing proof of service, and sent to the addressees set forth in Section 29 as well as to the following:

To Verizon:

Verizon Communications
Tax Department
One Verizon Way, VC53S-221
Basking Ridge, NJ 07920

To QuantumShift:

Jenna Brown
12657 Alcosta Blvd, Suite 418
San Ramon, California 94583

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

42. Technology Upgrades

Notwithstanding any other provision of this Agreement, Verizon shall have the right to deploy, upgrade, migrate and maintain its network at its discretion. The Parties acknowledge that Verizon, at its election, may deploy fiber throughout its network and that such fiber deployment may inhibit or facilitate QuantumShift's ability to provide service using certain technologies. Nothing in this Agreement shall limit Verizon's ability to modify its network through the incorporation of new equipment or software or otherwise. QuantumShift shall be solely responsible for the cost and activities associated with accommodating such changes in its own network.

43. Territory

- 43.1 This Agreement applies to the territory in which Verizon operates as an Incumbent Local Exchange Carrier in the Commonwealth of Pennsylvania. Verizon shall be obligated to provide Services under this Agreement only within this territory.
- 43.2 Notwithstanding any other provision of this Agreement, Verizon may terminate this Agreement as to a specific operating territory or portion thereof if Verizon sells or otherwise transfers its operations in such territory or portion thereof to a third-person. Verizon shall provide QuantumShift with at least 90 calendar days prior written notice of such termination, which shall be effective upon the date specified in the notice.

44. Third Party Beneficiaries

Except as expressly set forth in this Agreement, this Agreement is for the sole benefit of the Parties and their permitted assigns, and nothing herein shall create or be construed to provide any third-persons (including, but not limited to, Customers or contractors of a Party) with any rights (including, but not limited to, any third-party beneficiary rights) hereunder. Except as expressly set forth in this Agreement, a Party shall have no liability under this Agreement to the Customers of the other Party or to any other third person.

45. [This Section Intentionally Left Blank]

46. 252(i) Obligations

To the extent required by Applicable Law, each Party shall comply with Section 252(i) of the Act. To the extent that the exercise by QuantumShift of any rights it may have under Section 252(i) results in the rearrangement of Services by Verizon, QuantumShift shall be

solely liable for all costs associated therewith, as well as for any termination charges associated with the termination of existing Verizon Services.

47. Use of Service

Each Party shall make commercially reasonable efforts to ensure that its Customers comply with the provisions of this Agreement (including, but not limited to the provisions of applicable Tariffs) applicable to the use of Services purchased by it under this Agreement.

48. Waiver

A failure or delay of either Party 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 which is provided under this Agreement, shall in no way be construed to be a waiver of such provisions, rights, remedies or options.

49. Warranties

EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, NEITHER PARTY MAKES OR RECEIVES ANY WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE SERVICES PROVIDED, OR TO BE PROVIDED, UNDER THIS AGREEMENT AND THE PARTIES DISCLAIM ANY OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, **WARRANTIES OF MERCHANTABILITY, WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE** WARRANTIES AGAINST INFRINGEMENT, AND WARRANTIES ARISING BY TRADE CUSTOM, TRADE USAGE, COURSE OF DEALING OR PERFORMANCE, OR OTHERWISE.

50. Withdrawal of Services

50.1 Notwithstanding anything contained in this Agreement, except as otherwise required by Applicable Law, Verizon may terminate its offering and/or provision of any Service under this Agreement upon thirty (30) days prior written notice to QuantumShift.

50.2 Notwithstanding anything contained in this Agreement, except as otherwise required by Applicable Law, Verizon may with thirty (30) days prior written notice to QuantumShift terminate any provision of this Agreement that provides for the payment by Verizon to QuantumShift of compensation related to traffic, including, but not limited to, Reciprocal Compensation and other types of compensation for termination of traffic delivered by Verizon to QuantumShift. Following such termination, except as otherwise agreed in writing by the Parties, Verizon shall be obligated to provide compensation to QuantumShift related to traffic only to the extent required by Applicable Law. If Verizon exercises its right of termination under this Section, the Parties shall negotiate in good faith appropriate substitute provisions for compensation related to traffic; provided, however, that except as otherwise voluntarily agreed by Verizon in writing in its sole discretion, Verizon shall be obligated to provide compensation to QuantumShift related to traffic only to the extent required by Applicable Law. If within thirty (30) days after Verizon's notice of termination the Parties are unable to agree in writing upon mutually acceptable substitute provisions for compensation related to traffic, either Party may submit their disagreement to dispute resolution in accordance with Section 14 of this Agreement.

SIGNATURE PAGE

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the Effective Date.

QUANTUMSHIFT COMMUNICATIONS, INC.

VERIZON PENNSYLVANIA INC.

By: Karen A Weller

By: Jennifer Ross

Printed: Karen Weller

Printed: Jennifer Ross

Title: V.P. Corporate Development

Title: Director - Interconnection

Date: Jan 27, 2012

Date: Feb. 9, 2012

QUANTUMSHIFT COMMUNICATIONS, INC.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the Effective Date.

QUANTUMSHIFT COMMUNICATIONS, INC.

By: _____

Printed: Karen Weller

Title: V.P. Corporate Development

Date: _____

GLOSSARY

1. General Rule

- 1.1 The provisions of Sections 1.2 through 1.4 and Section 2 apply with regard to the Principal Document. Terms used in a Tariff shall have the meanings stated in the Tariff.
- 1.2 Unless the context clearly indicates otherwise, when a term listed in this Glossary is used in the Principal Document, the term shall have the meaning stated in this Glossary. A defined term intended to convey the meaning stated in this Glossary is capitalized when used. Other terms that are capitalized, and not defined in this Glossary or elsewhere in the Principal Document, shall have the meaning stated in the Act. Additional definitions that are specific to the matters covered in a particular provision of the Principal Document may appear in that provision. To the extent that there may be any conflict between a definition set forth in this Glossary and any definition in a specific provision, the definition set forth in the specific provision shall control with respect to that provision.
- 1.3 Unless the context clearly indicates otherwise, any term defined in this Glossary which is defined or used in the singular shall include the plural, and any term defined in this Glossary which is defined or used in the plural shall include the singular.
- 1.4 The words "shall" and "will" are used interchangeably throughout the Principal Document 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.

2. Definitions

- 2.1 Act.
The Communications Act of 1934 (47 U.S.C. §151 et seq.), as from time to time amended (including, but not limited to, by the Telecommunications Act of 1996).
- 2.2 Advanced Services.
As a general matter, shall have the meaning set forth by the FCC.
- 2.3 Affiliate.
Shall have the meaning set forth in the Act.
- 2.4 Agent.
An agent or servant.
- 2.5 Agreement.
This Agreement, as defined in Section 1 of the General Terms and Conditions.
- 2.6 ALI (Automatic Location Identification) Database.
The emergency services (E-911) database controlled by Verizon containing

caller address/location information including the carrier name, National Emergency Numbering Administration (“NENA”) ID, Call Back Number, and other carrier information used to process caller location records.

2.7 Ancillary Traffic.

All traffic that is destined for ancillary services, or that may have special billing requirements, including but not limited to the following: directory assistance, 911/E-911, operator services (IntraLATA call completion), IntraLATA third party, collect and calling card, 800/888 database query and LIDB.

2.8 ANI (Automatic Number Identification).

The signaling parameter that refers to the number transmitted through the network identifying the billing number of the calling party.

2.9 Applicable Law.

All effective laws, government regulations and government orders, applicable to each Party’s performance of its obligations under this Agreement. For the avoidance of any doubt, when used in relation to unbundled Network Elements or Combinations of unbundled Network Elements, the term "Applicable Law" means the Federal Unbundling Rules.

2.10 ASR (Access Service Request).

An industry standard form, which contains data elements and usage rules used by the Parties to add, establish, change or disconnect services or trunks for the purposes of interconnection.

2.11 ATIS.

The Alliance for Telecommunications Industry Solutions.

2.12 BFR (Bona Fide Request).

The process described in the Network Element Attachment that prescribes the terms and conditions relating to a Party’s request that the other Party provide a UNE that it is not otherwise required to provide under the terms of this Agreement.

2.13 Business Day.

Monday through Friday, except for holidays observed by Verizon.

2.14 Calendar Quarter.

January through March, April through June, July through September, or October through December.

2.15 Calendar Year.

January through December.

2.16 [Intentionally Left Blank].

2.17 Call Back Number.

A telephone number that can be used by the PSAP to re-contact the location from which a 911/E-911 Call was placed. The telephone number may or may not be the telephone number of the station used to originate the 911/E-911 Call.

2.18 CCS (Common Channel Signaling).

A method of transmitting call set-up and network control data over a digital signaling network separate from the public switched telephone network facilities that carry the actual voice or data content of the call.

2.19 Central Office.

An End Office or Tandem. Sometimes this term is used to refer to a telephone company building in which switching systems and telephone equipment are installed.

2.20 [Intentionally Left Blank].

2.21 Claims.

Any and all claims, demands, suits, actions, settlements, judgments, fines, penalties, liabilities, injuries, damages, losses, costs (including, but not limited to, court costs), and expenses (including, but not limited to, reasonable attorney's fees).

2.22 CLEC (Competitive Local Exchange Carrier).

Any Local Exchange Carrier other than Verizon that is operating as a Local Exchange Carrier in the territory in which Verizon operates as an ILEC in the Commonwealth of Pennsylvania. QuantumShift is or shortly will become a CLEC.

2.23 CLLI Codes.

Common Language Location Identifier Codes.

2.24 CMDS (Centralized Message Distribution System).

The billing record and clearing house transport system that LECs use to exchange out collects and in collects as well as Carrier Access Billing System (CABS) records.

2.25 Commission.

Pennsylvania Public Utility Commission.

2.26 Controlling 911 Authority.

The duly authorized state, county or local government agency empowered by law to oversee the 911/E-911 services, operations and systems within a defined jurisdiction.

2.27 CPN (Calling Party Number).

A CCS parameter that identifies the calling party's telephone number.

2.28 CPNI (Customer Proprietary Network Information).

Shall have the meaning set forth in Section 222 of the Act, 47 U.S.C. § 222.

2.29 Cross Connection.

For a collocation arrangement, the facilities between the collocating Party's equipment and the equipment or facilities of the housing Party (such as the housing Party's digital signal cross connect, Main Distribution Frame, or other suitable frame or panel).

2.30 Customer.

A third party residence or business end-user subscriber to Telephone Exchange Services provided by either of the Parties.

2.31 [Intentionally Left Blank.]

2.32 Dark Fiber Transport.

An optical transmission facility, within a LATA, that Verizon has not activated by attaching multiplexing, aggregation or other electronics, between Verizon switches (as identified in the LERG) or UNE Wire Centers.

2.33 Dedicated Transport.

A DS0-, DS1-, or DS3-capacity transmission facility between Verizon switches (as identified in the LERG) or UNE Wire Centers, within a LATA, that is dedicated to a particular end user or carrier. Dedicated Transport is sometimes referred to as dedicated interoffice facilities ("IOF"). Dedicated Transport does not include any facility that does not connect a pair of Verizon UNE Wire Centers.

2.34 Default PSAP.

The PSAP designated by the Controlling 911 Authority to receive a 911/E-911 Call when it is not feasible to route that 911/E-911 Call to the Designated PSAP.

2.35 Designated PSAP.

The primary PSAP designated by the Controlling 911 Authority to receive a 911/E-911 Call based upon the geographic location of the end user.

2.36 Digital Signal Level.

One of several transmission rates in the time-division multiplex hierarchy.

2.37 Discontinued Facility.

Any facility, element, arrangement or the like that the Federal Unbundling Rules do not require Verizon to provide on an unbundled basis to QuantumShift, whether because the facility was never subject to an unbundling requirement under the Federal Unbundling Rules, because the facility by operation of law has ceased or ceases to be subject to an unbundling requirement under the Federal Unbundling Rules, or otherwise.

2.38 DS0 (Digital Signal Level 0).

The 64kbps zero-level signal in the time-division multiplex hierarchy.

- 2.39 DS1 (Digital Signal Level 1).
The 1.544 Mbps first-level signal in the time-division multiplex hierarchy.
- 2.40 DS1 Dedicated Transport.
Dedicated Transport having a total digital signal speed of 1.544 Mbps.
- 2.41 DS3 (Digital Signal Level 3).
The 44.736 Mbps third-level signal in the time-division multiplex hierarchy.
- 2.42 DS3 Dedicated Transport.
Dedicated Transport having a total digital signal speed of 44.736 Mbps.
- 2.43 DS3 Loop.
A digital transmission channel, between the main distribution frame (or its equivalent) in an end user's serving UNE Wire Center and the demarcation point at the end user customer's premises, suitable for the transport of isochronous bipolar serial data at a rate of 44.736 Mbps (the equivalent of 28 DS1 channels). This Loop type is more fully described in Verizon TR 72575, as revised from time to time. A DS3 Loop requires the electronics necessary to provide the DS3 transmission rate.
- 2.44 EMI (Exchange Message Interface).
Standard used for the interexchange of telecommunications message information between local exchange carriers and interexchange carriers for billable, non-billable, sample, settlement and study data. Data is provided between companies via a unique record layout that contains Customer billing information, account summary and tracking analysis. EMI format is contained in document SR-320 published by ATIS.
- 2.45 End Office.
A switching entity that is used for connecting lines to lines or lines to trunks for the purpose of originating/terminating calls. Sometimes this term is used to refer to a telephone company building in which switching systems and telephone equipment are installed.
- 2.46 [Intentionally Left Blank].
- 2.47 Exchange Access.
Shall have the meaning set forth in the Act.
- 2.48 Extended Local Calling Scope Arrangement.
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.

2.49 FCC.

The Federal Communications Commission.

2.50 FCC Internet Orders.

The following FCC orders: (a) Order on Remand and Report and Order, *In the Matter of 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, 16 FCC Rcd 9151 (adopted April 18, 2001) (hereinafter the "April 18, 2001 FCC Internet Order"); and, (b) Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, *In the Matter of High-Cost Universal Service Support; Federal-State Joint Board on Universal Service; Lifeline and Link Up; Universal Service Contribution Methodology; Numbering Resource Optimization; Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Developing a Unified Intercarrier Compensation Regime; Intercarrier Compensation for ISP-Bound Traffic; IP-Enabled Services*, FCC 08-262, CC Docket Nos. 96-45, 96-98, 99-68, 99-200, 01-92, WC Docket Nos. 03-109, 04-36, 05-337, 06-122 (adopted November 5, 2008) (hereinafter the "November 5, 2008 FCC Internet Order").

2.51 FCC Regulations.

The unstayed, effective regulations promulgated by the FCC, as amended from time to time.

2.52 Federal Unbundling Rules.

Any lawful requirement to provide access to unbundled Network Elements or Combinations of unbundled Network Elements that is imposed upon Verizon by the FCC pursuant to both 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Any reference in this Agreement to "Federal Unbundling Rules" shall not include an unbundling requirement if the unbundling requirement does not exist under both 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51.

2.53 Feeder.

The fiber optic cable (lit or unlit) or metallic portion of a Loop between a serving End Office and a remote terminal or feeder/distribution interface.

2.54 FNID (Fiber Network Interface Device).

A passive fiber optic demarcation unit designed for the interconnection and demarcation of optical fibers between two separate network providers.

2.55 FTTP Loop.

A Loop consisting entirely of fiber optic cable, whether dark or lit, that extends from the main distribution frame (or its equivalent) in an end user's serving End Office to the demarcation point at the end user's customer premises or to a serving area interface at which the fiber optic cable connects to copper or coaxial distribution facilities that extend to the end user's customer premises demarcation point, provided that all copper or coaxial distribution facilities extending from such serving area interface are not more than 500 feet from the demarcation point at the respective end users' customer premises; provided, however, that in the case of predominantly residential multiple dwelling units

(MDUs), an FTTP Loop is a Loop consisting entirely of fiber optic cable, whether dark or lit, that extends from the main distribution frame (or its equivalent) in the End Office that serves the multiunit premises: (a) to or beyond the multiunit premises' minimum point of entry (MPOE), as defined in 47 C.F.R. § 68.105; or (b) to a serving area interface at which the fiber optic cable connects to copper or coaxial distribution facilities that extend to or beyond the multiunit premises' MPOE, provided that all copper or coaxial distribution facilities extending from such serving area interface are not more than 500 feet from the MPOE at the multiunit premises.

2.56 House and Riser Cable.

A two-wire metallic distribution facility in Verizon's network between the minimum point of entry for a building where a premises of a Customer is located (such a point, an "MPOE") and the Rate Demarcation Point for such facility (or NID) if the NID is located at such Rate Demarcation Point).

2.57 Hybrid Loop.

A Loop composed of both fiber optic cable and copper wire or cable. An FTTP Loop is not a Hybrid Loop.

2.58 IDLC (Integrated Digital Loop Carrier).

A subscriber Loop carrier system that integrates within the switch at a DS1 level, which is twenty-four (24) Loop transmission paths combined into a 1.544 Mbps digital signal.

2.59 ILEC (Incumbent Local Exchange Carrier).

Shall have the meaning stated in the Act.

2.60 Information Access.

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 a provider of Internet access or Internet transmission services.

2.61 Inside Wire or Inside Wiring.

All wire, cable, terminals, hardware, and other equipment or materials, on the Customer's side of the Rate Demarcation Point.

2.62 Interconnection Wire Center.

A building or portion thereof which serves as the premises for one or more End Offices, Tandems and related facilities.

2.63 Internet Traffic.

Any traffic that is transmitted to or returned from the Internet at any point during the duration of the transmission.

2.64 InterLATA Service.

Shall have the meaning set forth in the Act.

2.65 IntraLATA.

Telecommunications that originate and terminate within the same LATA.

2.66 [Intentionally Left Blank].

2.67 ISDN (Integrated Services Digital Network).

A switched network service providing end-to-end digital connectivity for the simultaneous transmission of voice and data. Basic Rate Interface-ISDN (BRI-ISDN) provides for digital transmission of two (2) 64 kbps bearer channels and one (1) 16 kbps data and signaling channel (2B+D). Primary Rate Interface-ISDN (PRI-ISDN) provides for digital transmission of twenty-three (23) 64 kbps bearer channels and one (1) 64 kbps data and signaling channel (23B+D).

2.68 IXC (Interexchange Carrier).

A Telecommunications Carrier that provides, directly or indirectly, InterLATA or IntraLATA Telephone Toll Services.

2.69 LATA (Local Access and Transport Area).

Shall have the meaning set forth in the Act.

2.70 LEC (Local Exchange Carrier).

Shall have the meaning set forth in the Act.

2.71 LERG (Local Exchange Routing Guide).

A Telcordia Technologies reference containing NPA/NXX routing and homing information.

2.72 LIDB (Line Information Data Base).

Line Information databases which provide, among other things, calling card validation functionality for telephone line number cards issued by Verizon and other entities and validation data for collect and third number-billed calls (e.g., data for billed number screening).

2.73 [Intentionally Left Blank].

2.74 Line Side.

An End Office connection that provides transmission, switching and optional features suitable for Customer connection to the public switched network, including loop start supervision, ground start supervision and signaling for BRI-ISDN service.

2.75 Loop.

A transmission path that extends from a Main Distribution Frame or functionally comparable piece of equipment in a Customer's serving End Office, to the Rate Demarcation Point (or NID if installed at the Rate Demarcation Point) in or at the Customer's premises. The actual transmission facilities used to provide a Loop

may utilize any of several technologies.

2.76 LSR (Local Service Request).

An industry standard form, which contains data elements and usage rules, used by the Parties to establish, add, change or disconnect resold Telecommunications Services and Network Elements.

2.77 Maintenance Control Office.

Either Party's center responsible for control of the maintenance and repair of a circuit.

2.78 MDF (Main Distribution Frame).

The primary point at which outside plant facilities terminate within an Interconnection Wire Center, for interconnection to other Telecommunications facilities within the Interconnection Wire Center. The distribution frame used to interconnect cable pairs and line trunk equipment terminating on a switching system.

2.79 Measured Internet Traffic.

Dial-up, switched Internet Traffic originated by a Customer of one Party on that Party's network at a point in a Verizon local calling area, and delivered to a Customer or an Internet Service Provider served by the other Party, on that other Party's network at a point in the same Verizon local calling area. Verizon local calling areas shall be as defined by Verizon. For the purposes of this definition, a Verizon local calling area includes a Verizon non-optional Extended Local Calling Scope Arrangement, but does not include a Verizon optional Extended Local Calling Scope Arrangement. Calls originated on a 1+ presubscription basis, or on a casual dialed (10XXX/101XXXX) basis, are not considered Measured Internet Traffic. For the avoidance of any doubt, Virtual Foreign Exchange Traffic (i.e., V/FX Traffic) (as defined in the Interconnection Attachment) does not constitute Measured Internet Traffic.

2.80 MECAB (Multiple Exchange Carrier Access Billing).

A document prepared by the Billing Committee of the Ordering and Billing Forum (OBF), which functions under the auspices of the Carrier Liaison Committee (CLC) of ATIS. The MECAB document, published by ATIS as "ATIS/OBF-MECAB", as revised from time to time, 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.

2.81 MECOD (Multiple Exchange Carriers Ordering and Design Guidelines for Access Services - Industry Support Interface).

A document developed by the Ordering/Provisioning Committee under the auspices of the Ordering and Billing Forum (OBF), which functions under the auspices of the Carrier Liaison Committee (CLC) of ATIS. The MECOD document, published by ATIS as "ATIS/OBF-MECOD", as revised from time to time, establishes methods for processing orders for Exchange Access Service that is to be provided by two or more LECs.

2.82 [Intentionally Left Blank].

- 2.83 Mobile Wireless Services.
- Any mobile wireless Telecommunications Service, including any commercial mobile radio service.
- 2.84 NANP (North American Numbering Plan).
- The system of telephone numbering employed in the United States, Canada, Bermuda, Puerto Rico and certain Caribbean islands. The NANP format is a 10-digit number that consist of a 3-digit NPA Code (commonly referred to as the area code), followed by a 3-digit NXX code and 4 digit line number.
- 2.85 Network Element.
- Shall have the meaning stated in the Act.
- 2.86 NID (Network Interface Device).
- The Verizon provided interface terminating Verizon's Telecommunications network on the property where the Customer's service is located at a point determined by Verizon. The NID contains an FCC Part 68 registered jack from which Inside Wire may be connected to Verizon's network.
- 2.87 911/E-911 Call(s).
- Call(s) made by the QuantumShift end user by dialing the three digit telephone number "911" to facilitate the reporting of an emergency requiring response by a public safety agency.
- 2.88 911/E-911 Service Provider.
- An entity authorized to provide 911/E-911 network and database services within a particular jurisdiction.
- 2.89 Non-Revertive.
- Where traffic is redirected to a protection line because of failure of a working line and the working line is repaired, traffic will remain on the protection line until there is either manual intervention or a failure of the protection line.
- 2.90 NPA (Numbering Plan Area).
- Also sometimes referred to as an area code, is the first three-digit indicator of each 10-digit telephone number within the NANP. 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" or "SAC Code" is typically associated with a specialized Telecommunications Service that may be provided across multiple geographic NPA areas. 500, 700, 800, 888 and 900 are examples of Non-Geographic NPAs.
- 2.91 NXX, NXX Code, Central Office Code or CO Code.
- The three-digit switch entity indicator (i.e. the first three digits of a seven-digit telephone number).

- 2.92 Order.
An order or application to provide, change or terminate a Service (including, but not limited to, a commitment to purchase a stated number or minimum number of lines or other Services for a stated period or minimum period of time).
- 2.93 Originating Switched Access Detail Usage Data.
A category 1101XX record as defined in the EMI Telcordia Practice BR-010-200-010.
- 2.94 POI (Point of Interconnection).
The physical location where the Parties' respective facilities physically interconnect for the purpose of mutually exchanging their traffic. As set forth in the Interconnection Attachment, a Point of Interconnection shall be at (i) a technically feasible point on Verizon's network in a LATA and/or (ii) a fiber meet point to which the Parties mutually agree under the terms of this Agreement. By way of example, a technically feasible Point of Interconnection on Verizon's network in a LATA would include an applicable Verizon Tandem Interconnection Wire Center or Verizon End Office Interconnection Wire Center but, notwithstanding any other provision of this Agreement or otherwise, would not include a QuantumShift Interconnection Wire Center, QuantumShift switch or any portion of a transport facility provided by Verizon to QuantumShift or another party between (x) a Verizon Interconnection Wire Center or switch and (y) the Interconnection Wire Center or switch of QuantumShift or another party.
- 2.95 Primary Reference Source.
Equipment that provides a timing signal to synchronize network elements.
- 2.96 Principal Document.
This document, including, but not limited to, the Title Page, the Table of Contents, the Preface, the General Terms and Conditions, the signature page, this Glossary, the Attachments, and the Appendices to the Attachments.
- 2.97 Providing Party.
A Party offering or providing a Service to the other Party under this Agreement.
- 2.98 PSAP.
Public Safety Answering Point.
- 2.99 Purchasing Party.
A Party requesting or receiving a Service from the other Party under this Agreement.
- 2.100 Qualifying UNE.
An unbundled Network Element or a combination of unbundled Network Elements obtained, pursuant to the Federal Unbundling Rules, under this Agreement or a Verizon UNE Tariff.
- 2.101 Qualifying Wholesale Services.

Wholesale services obtained from Verizon under a Verizon access Tariff or a separate wholesale agreement.

2.102 Rate Center Area.

The geographic area that has been identified by a given LEC as being associated with a particular NPA-NXX code assigned to the LEC for its provision of Telephone Exchange Services. The Rate Center Area is the exclusive geographic area that the LEC has identified as the area within which it will provide Telephone Exchange Services bearing the particular NPA-NXX designation associated with the specific Rate Center Area.

2.103 Rate Center Point.

A specific geographic point, defined by a V&H coordinate, located within the Rate Center Area and used to measure distance for the purpose of billing for distance-sensitive Telephone Exchange Services and Toll Traffic. Pursuant to Telcordia Practice BR-795-100-100, the Rate Center Point may be an End Office location, or a "LEC Consortium Point of Interconnection".

2.104 Rate Demarcation Point.

The physical point in a Verizon provided network facility at which Verizon's responsibility for maintaining that network facility ends and the Customer's responsibility for maintaining the remainder of the facility begins, as set forth in this Agreement, Verizon's applicable Tariffs, if any, or as otherwise prescribed under Applicable Law.

2.105 Reciprocal Compensation.

The arrangement for recovering, in accordance with Section 251(b)(5) of the Act, the FCC Internet Orders, and other applicable FCC orders and FCC Regulations, costs incurred for the transport and termination of Reciprocal Compensation Traffic originating on one Party's network and terminating on the other Party's network (as set forth in Section 7 of the Interconnection Attachment).

2.106 Reciprocal Compensation Traffic.

Telecommunications traffic originated by a Customer of one Party on that Party's network and terminated to a Customer of the other Party on that other Party's network, except for Telecommunications traffic that is interstate or intrastate Exchange Access, Information Access, or exchange services for Exchange Access or Information Access. The determination of whether Telecommunications traffic is Exchange Access or Information Access shall be based upon Verizon's local calling areas as defined by Verizon. Reciprocal Compensation Traffic does not include the following traffic (it being understood that certain traffic types will fall into more than one (1) of the categories below that do not constitute Reciprocal Compensation Traffic): (1) any Internet Traffic; (2) traffic that does not originate and terminate within the same Verizon local calling area as defined by Verizon, and based on the actual originating and terminating points of the complete end-to-end communication; (3) Toll Traffic, including, but not limited to, calls originated on a 1+ presubscription basis, or on a casual dialed (10XXX/101XXX) basis; (4) Optional Extended Local Calling Scope Arrangement Traffic; (5) special access, private line, Frame Relay, ATM, or any other traffic that is not switched by the terminating Party; (6) Tandem Transit Traffic; (7) Voice Information Service Traffic (as defined in Section 5 of

the Additional Services Attachment); or, (8) Virtual Foreign Exchange Traffic (or V/FX Traffic) (as defined in the Interconnection Attachment). For the purposes of this definition, a Verizon local calling area includes a Verizon non-optional Extended Local Calling Scope Arrangement, but does not include a Verizon optional Extended Local Calling Scope Arrangement.

2.107 Retail Prices.

The prices at which a Service is provided by Verizon at retail to subscribers who are not Telecommunications Carriers.

2.108 Routing Point.

A specific geographic point identified by a specific V&H coordinate. The Routing Point is used to route inbound traffic to specified NPA-NXXs. The Routing Point must be located within the LATA in which the corresponding NPA-NXX is located. However, the Routing Point associated with each NPA-NXX need not be the same as the corresponding Rate Center Point, nor must it be located within the corresponding Rate Center Area, nor must there be a unique and separate Routing Point corresponding to each unique and separate Rate Center Area.

2.109 Service.

Any Interconnection arrangement, Network Element, Telecommunications Service, collocation arrangement, or other service, facility or arrangement, offered by a Party under this Agreement.

2.110 [Intentionally Left Blank].

2.111 SS7 (Signaling System 7).

The common channel out-of-band signaling protocol developed by the Consultative Committee for International Telephone and Telegraph (CCITT) and the American National Standards Institute (ANSI). Verizon and QuantumShift utilize this out-of-band signaling protocol in relation to their routing and completion of traffic.

2.112 Subsidiary.

A corporation or other person that is controlled by a Party.

2.113 Sub-Loop Distribution Facility.

A two-wire or four-wire metallic distribution facility in Verizon's network between a Verizon feeder distribution interface ("FDI") and the Rate Demarcation Point for such facility (or NID if the NID is located at such Rate Demarcation Point).

2.114 Switched Exchange Access Service.

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.

2.115 Tandem.

A switching entity that has billing and recording capabilities and is used to connect and switch trunk circuits between and among End Offices and between and among End Offices and carriers' aggregation points, points of termination, or points of presence, and to provide Switched Exchange Access Services. Sometimes this term is used to refer to a telephone company building in which switching systems and telephone equipment are installed.

2.116 Tariff.

2.116.1 Any applicable Federal or state tariff of a Party, as amended from time to time; or

2.116.2 Any standard agreement or other document, as amended from time to time, that sets forth the generally available terms, conditions and prices under which a Party offers a Service.

The term "Tariff" does not include any Verizon Statement of Generally Available Terms (SGAT) which has been approved or is pending approval by the Commission pursuant to Section 252(f) of the Act.

2.117 Telcordia Technologies.

Telcordia Technologies, Inc., formerly known as Bell Communications Research, Inc. (Bellcore).

2.118 Telecommunications Carrier.

Shall have the meaning set forth in the Act.

2.119 Telecommunications Services.

Shall have the meaning set forth in the Act.

2.120 Telephone Exchange Service.

Shall have the meaning set forth in the Act.

2.121 Terminating Switched Access Detail Usage Data.

A category 1101XX record as defined in the EMI Telcordia Practice BR-010-200-010.

2.122 Third Party Claim.

A Claim where there is (a) a claim, demand, suit or action by a person who is not a Party, (b) a settlement with, judgment by, or liability to, a person who is not a Party, or (c) a fine or penalty imposed by a person who is not a Party.

2.123 Toll Traffic.

Traffic that is originated by a Customer of one Party on that Party's network and terminates to a Customer of the other Party on that other Party's network and is not Reciprocal Compensation Traffic, Measured Internet Traffic, or Ancillary Traffic. Toll Traffic may be either "IntraLATA Toll Traffic" or "InterLATA Toll Traffic", depending on whether the originating and terminating points are within the same LATA.

2.124 Toxic or Hazardous Substance.

Any substance designated or defined as toxic or hazardous under any “Environmental Law” or that poses a risk to human health or safety, or the environment, and products and materials containing such substance. “Environmental Laws” means the Comprehensive Environmental Response, Compensation, and Liability Act, the Emergency Planning and Community Right-to-Know Act, the Water Pollution Control Act, the Air Pollution Control Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, and all other Federal, State or local laws or governmental regulations or requirements, that are similar to the above-referenced laws or that otherwise govern releases, chemicals, products, materials or wastes that may pose risks to human health or safety, or the environment, or that relate to the protection of wetlands or other natural resources.

2.125 Traffic Factor 1.

For traffic exchanged via Interconnection Trunks, a percentage calculated by dividing the number of minutes of interstate traffic (excluding Measured Internet Traffic) by the total number of minutes of interstate and intrastate traffic. ($\frac{\text{Interstate Traffic Total Minutes of Use (excluding Measured Internet Traffic Total Minutes of Use)}}{\text{Interstate Traffic Total Minutes of Use} + \text{Intrastate Traffic Total Minutes of Use}} \times 100$). Until the form of a Party’s bills is updated to use the term “Traffic Factor 1”, the term “Traffic Factor 1” may be referred to on the Party’s bills and in billing related communications as “Percent Interstate Usage” or “PIU”.

2.126 Traffic Factor 2.

For traffic exchanged via Interconnection Trunks, a percentage calculated by dividing the combined total number of minutes of Reciprocal Compensation Traffic and Measured Internet Traffic by the combined total number of minutes of intrastate traffic and Measured Internet Traffic. ($\frac{\text{Reciprocal Compensation Traffic Total Minutes of Use} + \text{Measured Internet Traffic Total Minutes of Use}}{\text{Intrastate Traffic Total Minutes of Use} + \text{Measured Internet Traffic Total Minutes of Use}} \times 100$). Until the form of a Party’s bills is updated to use the term “Traffic Factor 2”, the term “Traffic Factor 2” may be referred to on the Party’s bills and in billing related communications as “Percent Local Usage” or “PLU”.

2.127 Triennial Review Remand Order (TRRO).

The FCC’s Order on Remand in WC Docket No. 04-313 and CC Docket No. 01-338, released on February 4, 2005.

2.128 Trunk Side.

A Central Office Switch connection that is capable of, and has been programmed to treat the circuit as, connecting to another switching entity, for example, to another carrier’s network. Trunk side connections offer those transmission and signaling features appropriate for the connection of switching entities and cannot be used for the direct connection of ordinary telephone station sets.

2.129 UDLC (Universal Digital Loop Carrier).

UDLC arrangements consist of a Central Office Terminal and a Remote Terminal

located in the outside plant or at a Customer premises. The Central Office and the Remote Terminal units perform analog to digital conversions to allow the feeding facility to be digital. UDLC is deployed where the types of services to be provisioned by the systems cannot be integrated such as non-switched services and UNE Loops.

2.130 UNE Wire Center.

Shall have the same meaning as "Wire Center" set forth in 47 C.F.R. § 51.5.

2.131 V and H Coordinates Method.

A method of computing airline miles between two points by utilizing an established formula that is based on the vertical and horizontal coordinates of the two points.

2.132 Voice Grade.

Either an analog signal of 300 to 3000 Hz or a digital signal of 56/64 kilobits per second. When referring to digital Voice Grade service (a 56-64 kbps channel), the terms "DS0" or "sub-DS1" may also be used.

2.133 xDSL.

As defined and offered in this Agreement. The small "x" before the letters DSL signifies reference to DSL as a generic transmission technology, as opposed to a specific DSL "flavor".

ADDITIONAL SERVICES ATTACHMENT

1. **Alternate Billed Calls**

1.1 The Parties will engage in settlements of intraLATA intrastate alternate-billed calls (e.g., collect, calling card, and third-party billed calls) originated or authorized by their respective Customers in accordance with an arrangement mutually agreed to by the Parties.

2. **Dialing Parity - Section 251(b)(3)**

Each Party shall provide the other Party with nondiscriminatory access to such services and information as are necessary to allow the other Party to implement local Dialing Parity in accordance with the requirements of Section 251(b)(3) of the Act.

3. **[This Section Intentionally Left Blank]**

4. **Directory Listing and Directory Distribution**

To the extent required by Applicable Law, Verizon will provide directory services to QuantumShift. Such services will be provided in accordance with the terms set forth herein.

4.1 Listing Information.

As used herein, "Listing Information" means a QuantumShift Customer's primary name, address (including city, state and zip code), telephone number(s), the delivery address and number of directories to be delivered, and, in the case of a business Customer, the primary business heading under which the business Customer desires to be placed, and any other information Verizon deems necessary for the publication and delivery of directories.

4.2 Listing Information Supply.

QuantumShift shall provide to Verizon on a regularly scheduled basis, at no charge, and in a format required by Verizon or by a mutually agreed upon industry standard (e.g., Ordering and Billing Forum developed) all Listing Information and the service address for each QuantumShift Customer whose service address location falls within the geographic area covered by the relevant Verizon directory. QuantumShift shall also provide to Verizon on a daily basis: (a) information showing QuantumShift Customers who have disconnected or terminated their service with QuantumShift; and (b) delivery information for each non-listed or non-published QuantumShift Customer to enable Verizon to perform its directory distribution responsibilities. Verizon shall promptly provide to QuantumShift (normally within forty-eight (48) hours of receipt by Verizon, excluding non-business days) a query on any listing that is not acceptable.

4.3 Listing Inclusion and Distribution.

Verizon shall include each QuantumShift Customer's primary listing in the appropriate alphabetical directory and, for business Customers, in the appropriate classified (Yellow Pages) directory in accordance with the directory configuration, scope and schedules determined by Verizon in its sole discretion, and shall provide initial distribution of such directories to such QuantumShift Customers in the same manner it provides initial distribution of such directories to

its own Customers. "Primary Listing" means a Customer's primary name, address, and telephone number. Listings of QuantumShift's Customers shall be interfiled with listings of Verizon's Customers and the Customers of other LECs included in the Verizon directories. QuantumShift shall pay Verizon's Tariffed charges for additional, foreign, and other listings products (as documented in local Tariff) for QuantumShift's Customers.

4.4 Verizon Information.

Upon request by QuantumShift, Verizon shall make available to QuantumShift the following information to the extent that Verizon provides such information to its own business offices: a directory list of relevant NXX codes, directory and Customer Guide close dates, and Yellow Pages headings. Verizon shall also make available to QuantumShift, on Verizon's Wholesale website (or, at Verizon's option, in writing) Verizon's directory listings standards and specifications.

4.5 Confidentiality of Listing Information.

Verizon shall accord QuantumShift Listing Information the same level of confidentiality that Verizon accords its own listing information, and shall use such Listing Information solely for the purpose of providing directory-related services; provided, however, that should Verizon elect to do so, it may use or license QuantumShift Listing Information for directory publishing, direct marketing, or any other purpose for which Verizon uses or licenses its own listing information, so long as QuantumShift Customers are not separately identified as such; and provided further that QuantumShift may identify those of its Customers who request that their names not be sold for direct marketing purposes and Verizon shall honor such requests to the same extent that it does for its own Customers. Verizon shall not be obligated to compensate QuantumShift for Verizon's use or licensing of QuantumShift Listing Information.

4.6 Accuracy.

Both Parties shall use commercially reasonable efforts to ensure the accurate publication of QuantumShift Customer listings. At QuantumShift's request, Verizon shall provide QuantumShift with a report of all QuantumShift Customer listings in a reasonable timeframe prior to the service order close date for the applicable directory. Verizon shall process any corrections made by QuantumShift with respect to its listings, provided such corrections are received prior to the close date of the particular directory.

4.7 Indemnification.

QuantumShift shall adhere to all practices, standards, and ethical requirements established by Verizon with regard to listings. By providing Verizon with Listing Information, QuantumShift warrants to Verizon that QuantumShift has the right to provide such Listing Information to Verizon on behalf of its Customers. QuantumShift shall make commercially reasonable efforts to ensure that any business or person to be listed is authorized and has the right (a) to provide the product or service offered, and (b) to use any personal or corporate name, trade name, trademark, service mark or language used in the listing. QuantumShift agrees to release, defend, hold harmless and indemnify Verizon from and against any and all claims, losses, damages, suits, or other actions, or any liability whatsoever, suffered, made, instituted, or asserted by any person arising

out of Verizon's publication or dissemination of the Listing Information as provided by QuantumShift hereunder.

4.8 Liability.

Verizon's liability to QuantumShift in the event of a Verizon error in or omission of a QuantumShift Customer listing shall not exceed the amount actually paid by QuantumShift to Verizon for such listing. QuantumShift agrees to take all reasonable steps, including, but not limited to, entering into appropriate contractual provisions with its Customers, to ensure that its and Verizon's liability to QuantumShift's Customers in the event of a Verizon error in or omission of a listing shall be subject to the same limitations of liability applicable between Verizon and its own Customers as set forth in Verizon's applicable Tariffs.

4.9 Service Information Pages.

Verizon shall include all QuantumShift NXX codes associated with the geographic areas to which each directory pertains, to the extent it does so for Verizon's own NXX codes, in any lists of such codes that are contained in the general reference portion of each directory. QuantumShift's NXX codes shall appear in such lists in the same manner as Verizon's NXX information. In addition, when QuantumShift is authorized to, and is offering, local service to Customers located within the geographic area covered by a specific directory, at QuantumShift's request, Verizon shall include, at no charge, in the "Customer Guide" or comparable section of the applicable alphabetical directories, QuantumShift's critical contact information for QuantumShift's installation, repair and Customer service, as provided by QuantumShift. Such critical contact information shall appear alphabetically by local exchange carrier and in accordance with Verizon's generally applicable policies. QuantumShift shall be responsible for providing the necessary information to Verizon by the applicable close date for each affected directory.

4.10 Directory Publication.

Nothing in this Agreement shall require Verizon to publish a directory where it would not otherwise do so.

4.11 Other Directory Services.

QuantumShift acknowledges that if QuantumShift desires directory services in addition to those described herein, such additional services must be obtained under separate agreement with Verizon's directory publishing company.

5. Voice Information Service Traffic

5.1 For purposes of this Section 5, (a) Voice Information Service means a service that provides [i] recorded voice announcement information or [ii] a vocal discussion program open to the public, and (b) Voice Information Service Traffic means intraLATA switched voice traffic, delivered to a Voice Information Service. Voice Information Service Traffic does not include any form of Internet Traffic. Voice Information Service Traffic also does not include 555 traffic or similar traffic with AIN service interfaces, which traffic shall be subject to separate arrangements between the Parties. Voice Information Service Traffic is not subject to Reciprocal Compensation charges under Section 7 of the Interconnection Attachment.

- 5.2 If a QuantumShift Customer is served by resold Verizon dial tone line Telecommunications Service, to the extent reasonably feasible, Verizon will route Voice Information Service Traffic originating from such Service to the appropriate Voice Information Service connected to Verizon's network unless a feature blocking such Voice Information Service Traffic has been installed. For such Voice Information Service Traffic, QuantumShift shall pay to Verizon without discount any Voice Information Service provider charges billed by Verizon to QuantumShift. QuantumShift shall pay Verizon such charges in full regardless of whether or not QuantumShift collects such charges from its Customer.
- 5.3 QuantumShift shall have the option to route Voice Information Service Traffic that originates on its own network to the appropriate Voice Information Service connected to Verizon's network. In the event QuantumShift exercises such option, QuantumShift will establish, at its own expense, a dedicated trunk group to the Verizon Voice Information Service serving switch. This trunk group will be utilized to allow QuantumShift to route Voice Information Service Traffic originated on its network to Verizon. For such Voice Information Service Traffic, unless QuantumShift has entered into a written agreement with Verizon under which QuantumShift will collect from QuantumShift's Customer and remit to Verizon the Voice Information Service provider's charges, QuantumShift shall pay to Verizon without discount any Voice Information Service provider charges billed by Verizon to QuantumShift. QuantumShift shall pay Verizon such charges in full regardless of whether or not QuantumShift collects such charges from its own Customer.

6. Intercept and Referral Announcements

- 6.1 When a Customer changes its service provider from Verizon to QuantumShift, or from QuantumShift to Verizon, and does not retain its original telephone number, the Party formerly providing service to such Customer shall provide a referral announcement ("Referral Announcement") on the abandoned telephone number which provides the Customer's new number or other appropriate information, to the extent known to the Party formerly providing service. Notwithstanding the foregoing, a Party shall not be obligated under this Section to provide a Referral Announcement if the Customer owes the Party unpaid overdue amounts or the Customer requests that no Referral Announcement be provided.
- 6.2 Referral Announcements shall be provided, in the case of business Customers, for a period of not less than one hundred and twenty (120) days after the date the Customer changes its telephone number, and, in the case of residential Customers, not less than thirty (30) days after the date the Customer changes its telephone number; provided that if a longer time period is required by Applicable Law, such longer time period shall apply. Except as otherwise provided by Applicable Law, the period for a referral may be shortened by the Party formerly providing service if a number shortage condition requires reassignment of the telephone number.
- 6.3 This referral announcement will be provided by each Party at no charge to the other Party; provided that the Party formerly providing service may bill the Customer its standard Tariff charge, if any, for the referral announcement.

7. Originating Line Number Screening (OLNS)

Upon QuantumShift's request, Verizon will update its database used to provide originating line number screening (the database of information which indicates to an operator the acceptable billing methods for calls originating from the calling number (e.g., penal institutions, COCOTS).

8. Operations Support Systems (OSS) Services

8.1 Definitions.

The terms listed below shall have the meanings stated below:

- 8.1.1 Verizon Operations Support Systems: Verizon systems for pre-ordering, ordering, provisioning, maintenance and repair, and billing.
- 8.1.2 Verizon OSS Services: Access to Verizon Operations Support Systems functions. The term "Verizon OSS Services" includes, but is not limited to: (a) Verizon's provision of QuantumShift Usage Information to QuantumShift pursuant to Section 8.3 of this Attachment; and, (b) "Verizon OSS Information", as defined in Section 8.1.4 of this Attachment.
- 8.1.3 Verizon OSS Facilities: Any gateways, interfaces, databases, facilities, equipment, software, or systems, used by Verizon to provide Verizon OSS Services to QuantumShift.
- 8.1.4 Verizon OSS Information: Any information accessed by, or disclosed or provided to, QuantumShift through or as a part of Verizon OSS Services. The term "Verizon OSS Information" includes, but is not limited to: (a) any Customer Information related to a Verizon Customer or a QuantumShift Customer accessed by, or disclosed or provided to, QuantumShift through or as a part of Verizon OSS Services; and, (b) any QuantumShift Usage Information (as defined in Section 8.1.6 of this Attachment) accessed by, or disclosed or provided to, QuantumShift.
- 8.1.5 Verizon Retail Telecommunications Service: Any Telecommunications Service that Verizon provides at retail to subscribers that are not Telecommunications Carriers. The term "Verizon Retail Telecommunications Service" does not include any Exchange Access service (as defined in Section 3(16) of the Act, 47 U.S.C. § 153(16)) provided by Verizon.
- 8.1.6 QuantumShift Usage Information: For a Verizon Retail Telecommunications Service purchased by QuantumShift pursuant to the Resale Attachment, the usage information that Verizon would record if Verizon was furnishing such Verizon Retail Telecommunications Service to a Verizon end-user retail Customer.
- 8.1.7 Customer Information: CPNI of a Customer and any other non-public, individually identifiable information about a Customer or the purchase by a Customer of the services or products of a Party.

8.2 Verizon OSS Services.

- 8.2.1 Upon request by QuantumShift, Verizon shall provide to QuantumShift Verizon OSS Services. Such Verizon OSS Services will be provided in accordance with, but only to the extent required by, Applicable Law.
- 8.2.2 Subject to the requirements of Applicable Law, Verizon Operations Support Systems, Verizon Operations Support Systems functions, Verizon OSS Facilities, Verizon OSS Information, and the Verizon OSS Services that will be offered by Verizon, shall be as determined

by Verizon. Subject to the requirements of Applicable Law, Verizon shall have the right to change Verizon Operations Support Systems, Verizon Operations Support Systems functions, Verizon OSS Facilities, Verizon OSS Information, and the Verizon OSS Services, from time-to-time, without the consent of QuantumShift.

- 8.2.3 To the extent required by Applicable Law, in providing Verizon OSS Services to QuantumShift, Verizon will comply with Verizon's applicable OSS Change Management Guidelines, as such Guidelines are modified from time-to-time, including, but not limited to, the provisions of the Guidelines related to furnishing notice of changes in Verizon OSS Services. Verizon's OSS Change Management Guidelines will be set out on a Verizon website.
- 8.3 QuantumShift Usage Information.
 - 8.3.1 Upon request by QuantumShift, Verizon shall provide to QuantumShift QuantumShift Usage Information. Such QuantumShift Usage Information will be provided in accordance with, but only to the extent required by, Applicable Law.
 - 8.3.2 QuantumShift Usage Information will be available to QuantumShift through Network Data Mover (NDM) or other such media as mutually agreed by both Parties.
 - 8.3.3 QuantumShift Usage Information will be provided in an ATIS EMI format.
 - 8.3.4 Except as stated in this Section 8.3, subject to the requirements of Applicable Law, the manner in which, and the frequency with which, QuantumShift Usage Information will be provided to QuantumShift shall be determined by Verizon.
- 8.4 Access to and Use of Verizon OSS Facilities.
 - 8.4.1 Verizon OSS Facilities may be accessed and used by QuantumShift only to the extent necessary for QuantumShift's access to and use of Verizon OSS Services pursuant to this Agreement.
 - 8.4.2 Verizon OSS Facilities may be accessed and used by QuantumShift only to provide Telecommunications Services to QuantumShift Customers.
 - 8.4.3 QuantumShift shall restrict access to and use of Verizon OSS Facilities to QuantumShift. This Section 8 does not grant to QuantumShift any right or license to grant sublicenses to other persons, or permission to other persons (except QuantumShift's employees, agents and contractors, in accordance with Section 8.4.7 of this Attachment), to access or use Verizon OSS Facilities.
 - 8.4.4 QuantumShift shall not (a) alter, modify or damage the Verizon OSS Facilities (including, but not limited to, Verizon software), (b) copy, remove, derive, reverse engineer, or decompile, software from the Verizon OSS Facilities, or (c) obtain access through Verizon OSS Facilities to Verizon databases, facilities, equipment, software, or systems, which are not offered for QuantumShift's use under this Section 8.

- 8.4.5 QuantumShift shall comply with all practices and procedures established by Verizon for access to and use of Verizon OSS Facilities (including, but not limited to, Verizon practices and procedures with regard to security and use of access and user identification codes).
 - 8.4.6 All practices and procedures for access to and use of Verizon OSS Facilities, and all access and user identification codes for Verizon OSS Facilities: (a) shall remain the property of Verizon; (b) shall be used by QuantumShift only in connection with QuantumShift's use of Verizon OSS Facilities permitted by this Section 8; (c) shall be treated by QuantumShift as Confidential Information of Verizon pursuant to Section 10 of the General Terms and Conditions; and, (d) shall be destroyed or returned by QuantumShift to Verizon upon the earlier of request by Verizon or the expiration or termination of this Agreement.
 - 8.4.7 QuantumShift's employees, agents and contractors may access and use Verizon OSS Facilities only to the extent necessary for QuantumShift's access to and use of the Verizon OSS Facilities permitted by this Agreement. Any access to or use of Verizon OSS Facilities by QuantumShift's employees, agents, or contractors, shall be subject to the provisions of this Agreement, including, but not limited to, Section 10 of the General Terms and Conditions and Section 8.5.3.2 of this Attachment.
- 8.5 Verizon OSS Information.
- 8.5.1 Subject to the provisions of this Section 8, in accordance with, but only to the extent required by, Applicable Law, Verizon grants to QuantumShift a non-exclusive license to use Verizon OSS Information.
 - 8.5.2 All Verizon OSS Information shall at all times remain the property of Verizon. Except as expressly stated in this Section 8, QuantumShift shall acquire no rights in or to any Verizon OSS Information.
 - 8.5.3 The provisions of this Section 8.5.3 shall apply to all Verizon OSS Information, except (a) QuantumShift Usage Information, (b) CPNI of QuantumShift, and (c) CPNI of a Verizon Customer or a QuantumShift Customer, to the extent the Customer has authorized QuantumShift to use the CPNI.
 - 8.5.3.1 Verizon OSS Information may be accessed and used by QuantumShift only to provide Telecommunications Services to QuantumShift Customers.
 - 8.5.3.2 QuantumShift shall treat Verizon OSS Information that is designated by Verizon, through written or electronic notice (including, but not limited to, through the Verizon OSS Services), as "Confidential" or "Proprietary" as Confidential Information of Verizon pursuant to Section 10 of the General Terms and Conditions.
 - 8.5.3.3 Except as expressly stated in this Section 8, this Agreement does not grant to QuantumShift any right or license to grant sublicenses to other persons, or permission to other persons (except QuantumShift's employees, agents or contractors, in accordance with Section 8.5.3.4 of this

Attachment), to access, use or disclose Verizon OSS Information.

- 8.5.3.4 QuantumShift's employees, agents and contractors may access, use and disclose Verizon OSS Information only to the extent necessary for QuantumShift's access to, and use and disclosure of, Verizon OSS Information permitted by this Section 8. Any access to, or use or disclosure of, Verizon OSS Information by QuantumShift's employees, agents or contractors, shall be subject to the provisions of this Agreement, including, but not limited to, Section 10 of the General Terms and Conditions and Section 8.5.3.2 of this Attachment.
- 8.5.3.5 QuantumShift's license to use Verizon OSS Information shall expire upon the earliest of: (a) the time when the Verizon OSS Information is no longer needed by QuantumShift to provide Telecommunications Services to QuantumShift Customers; (b) termination of the license in accordance with this Section 8; or (c) expiration or termination of this Agreement.
- 8.5.3.6 All Verizon OSS Information received by QuantumShift shall be destroyed or returned by QuantumShift to Verizon, upon expiration, suspension or termination of the license to use such Verizon OSS Information.
- 8.5.4 Unless sooner terminated or suspended in accordance with this Agreement or this Section 8 (including, but not limited to, Section 2.2 of the General Terms and Conditions and Section 8.6.1 of this Attachment), QuantumShift's access to Verizon OSS Information through Verizon OSS Services shall terminate upon the expiration or termination of this Agreement.
- 8.5.5 Audits.
 - 8.5.5.1 Verizon shall have the right (but not the obligation) to audit QuantumShift to ascertain whether QuantumShift is complying with the requirements of Applicable Law and this Agreement with regard to QuantumShift's access to, and use and disclosure of, Verizon OSS Information.
 - 8.5.5.2 Without in any way limiting any other rights Verizon may have under this Agreement or Applicable Law, Verizon shall have the right (but not the obligation) to monitor QuantumShift's access to and use of Verizon OSS Information which is made available by Verizon to QuantumShift pursuant to this Agreement, to ascertain whether QuantumShift is complying with the requirements of Applicable Law and this Agreement, with regard to QuantumShift's access to, and use and disclosure of, such Verizon OSS Information. The foregoing right shall include, but not be limited to, the right (but not the obligation) to electronically monitor QuantumShift's access to and use of Verizon OSS Information which is made available by Verizon to QuantumShift through Verizon OSS Facilities.

8.5.5.3 Information obtained by Verizon pursuant to this Section 8.5.5 shall be treated by Verizon as Confidential Information of QuantumShift pursuant to Section 10 of the General Terms and Conditions; provided that, Verizon shall have the right (but not the obligation) to use and disclose information obtained by Verizon pursuant to Section 8.5.5 of this Attachment to enforce Verizon's rights under this Agreement or Applicable Law.

8.5.6 QuantumShift acknowledges that the Verizon OSS Information, by its nature, is updated and corrected on a continuous basis by Verizon, and therefore that Verizon OSS Information is subject to change from time to time.

8.6 Liabilities and Remedies.

8.6.1 Any breach by QuantumShift, or QuantumShift's employees, agents or contractors, of the provisions of Sections 8.4 or 8.5 of this Attachment shall be deemed a material breach of this Agreement. In addition, if QuantumShift or an employee, agent or contractor of QuantumShift at any time breaches a provision of Sections 8.4 or 8.5 of this Attachment and such breach continues for more than ten (10) days after written notice thereof from Verizon, then, except as otherwise required by Applicable Law, Verizon shall have the right, upon notice to QuantumShift, to suspend the license to use Verizon OSS Information granted by Section 8.5.1 of this Attachment and/or the provision of Verizon OSS Services, in whole or in part.

8.6.2 QuantumShift agrees that Verizon would be irreparably injured by a breach of Sections 8.4 or 8.5 of this Attachment by QuantumShift or the employees, agents or contractors of QuantumShift, and that Verizon shall be entitled to seek equitable relief, including injunctive relief and specific performance, in the event of any such breach. Such remedies shall not be deemed to be the exclusive remedies for any such breach, but shall be in addition to any other remedies available under this Agreement or at law or in equity.

8.7 Relation to Applicable Law.

The provisions of Sections 8.4, 8.5 and 8.6 of this Attachment with regard to the confidentiality of information shall be in addition to and not in derogation of any provisions of Applicable Law with regard to the confidentiality of information, including, but not limited to, 47 U.S.C. § 222, and are not intended to constitute a waiver by Verizon of any right with regard to protection of the confidentiality of the information of Verizon or Verizon Customers provided by Applicable Law.

8.8 Cooperation.

QuantumShift, at QuantumShift's expense, shall reasonably cooperate with Verizon in using Verizon OSS Services. Such cooperation shall include, but not be limited to, the following:

8.8.1 Upon request by Verizon, QuantumShift shall by no later than the fifteenth (15th) day of the last month of each Calendar Quarter submit to Verizon reasonable, good faith estimates of the volume of each type of OSS transaction that QuantumShift anticipates submitting in each week of the next Calendar Quarter.

- 8.8.2 QuantumShift shall reasonably cooperate with Verizon in submitting orders for Verizon Services and otherwise using the Verizon OSS Services, in order to avoid exceeding the capacity or capabilities of such Verizon OSS Services.
- 8.8.3 QuantumShift shall participate in cooperative testing of Verizon OSS Services and shall provide assistance to Verizon in identifying and correcting mistakes, omissions, interruptions, delays, errors, defects, faults, failures, or other deficiencies, in Verizon OSS Services.
- 8.9 Verizon Access to Information Related to QuantumShift Customers.
 - 8.9.1 Verizon shall have the right to access, use and disclose information related to QuantumShift Customers that is in Verizon's possession (including, but not limited to, in Verizon OSS Facilities) to the extent such access, use and/or disclosure has been authorized by the QuantumShift Customer in the manner required by Applicable Law.
 - 8.9.2 Upon request by Verizon, QuantumShift shall negotiate in good faith and enter into a contract with Verizon, pursuant to which Verizon may obtain access to QuantumShift's operations support systems (including, systems for pre-ordering, ordering, provisioning, maintenance and repair, and billing) and information contained in such systems, to permit Verizon to obtain information related to QuantumShift Customers (as authorized by the applicable QuantumShift Customer), to permit Customers to transfer service from one Telecommunications Carrier to another, and for such other purposes as may be permitted by Applicable Law.
- 8.10 [Intentionally Left Blank].
- 8.11 Cancellations.

Verizon may cancel orders for service which have had no activity within thirty-one (31) consecutive calendar days after the original service due date.

9. Poles, Ducts, Conduits and Rights-of-Way

- 9.1 Verizon shall afford QuantumShift non-discriminatory access to poles, ducts, conduits and rights-of-way owned or controlled by Verizon. Such access shall be provided in accordance with, but only to the extent required by, Applicable Law, pursuant to Verizon's applicable Tariffs, or, in the absence of an applicable Verizon Tariff, Verizon's generally offered form of license agreement, or, in the absence of such a Tariff and license agreement, a mutually acceptable agreement to be negotiated by the Parties.
- 9.2 QuantumShift shall afford Verizon non-discriminatory access to poles, ducts, conduits and rights-of-way owned or controlled by QuantumShift. Such access shall be provided pursuant to QuantumShift's applicable Tariffs, or, in the absence of an applicable QuantumShift Tariff, QuantumShift's generally offered form of license agreement, or, in the absence of such a Tariff and license agreement, a mutually acceptable agreement to be negotiated by the Parties. The terms, conditions and prices offered to Verizon by QuantumShift for such access shall be no less favorable than the terms, conditions and prices offered to QuantumShift by Verizon for access to poles, ducts, conduits and rights of way owned or controlled by Verizon.

10. Telephone Numbers

- 10.1 This Section applies in connection with QuantumShift Customers served by Telecommunications Services provided by Verizon to QuantumShift for resale.
- 10.2 QuantumShift's use of telephone numbers shall be subject to Applicable Law and the rules of the North American Numbering Council, the North American Numbering Plan Administrator, the applicable provisions of this Agreement (including, but not limited to, this Section 10), and Verizon's practices and procedures for use and assignment of telephone numbers, as amended from time-to-time.
- 10.3 Subject to Sections 10.2 and 10.4 of this Attachment, if a Customer of either Verizon or QuantumShift who is served by a Verizon Telecommunications Service ("VTS") changes the LEC that serves the Customer using such VTS (including a change from Verizon to QuantumShift, from QuantumShift to Verizon, or from QuantumShift to a LEC other than Verizon), after such change, the Customer may continue to use with such VTS the telephone numbers that were assigned to the VTS for the use of such Customer by Verizon immediately prior to the change.
- 10.4 Verizon shall have the right to change the telephone numbers used by a Customer if at any time: (a) the Customer requests service at a new location, that is not served by the Verizon switch and the Verizon rate center from which the Customer previously had service; (b) continued use of the telephone numbers is not technically feasible; or, (c) in the case of Telecommunications Service provided by Verizon to QuantumShift for resale, the type or class of service subscribed to by the Customer changes.
- 10.5 If service on a VTS provided by Verizon to QuantumShift under this Agreement is terminated and the telephone numbers associated with such VTS have not been ported to a QuantumShift switch, the telephone numbers shall be available for reassignment by Verizon to any person to whom Verizon elects to assign the telephone numbers, including, but not limited to, Verizon, Verizon Customers, QuantumShift, or Telecommunications Carriers other than Verizon and QuantumShift.
- 10.6 QuantumShift may reserve telephone numbers only to the extent Verizon's Customers may reserve telephone numbers.

11. Routing for Operator Services and Directory Assistance Traffic

For a Verizon Telecommunications Service dial tone line purchased by QuantumShift for resale pursuant to the Resale Attachment, upon request by QuantumShift, Verizon will establish an arrangement that will permit QuantumShift to route the QuantumShift Customer's calls for operator and directory assistance services to a provider of operator and directory assistance services selected by QuantumShift. Verizon will provide this routing arrangement in accordance with, but only to the extent required by, Applicable Law. Verizon will provide this routing arrangement pursuant to an appropriate written request submitted by QuantumShift and a mutually agreed-upon schedule. This routing arrangement will be implemented at QuantumShift's expense, with charges determined on an individual case basis. In addition to charges for initially establishing the routing arrangement, QuantumShift will be responsible for ongoing monthly and/or usage charges for the routing arrangement. QuantumShift shall arrange, at its own expense, the trunking and other facilities required to transport traffic to QuantumShift's selected provider of operator and directory assistance services.

12. Unauthorized Carrier Change Charges

In the event either Party requests that the other Party install, provide, change, or terminate a Customer's Telecommunications Service (including, but not limited to, a Customer's selection of a primary Telephone Exchange Service Provider) without having obtained authorization from the Customer for such installation, provision, selection, change or termination in accordance with Applicable Laws, the requesting Party shall be liable to the other Party for all charges that would be applicable to the Customer for the initial change in the Customer's Telecommunications Service and any charges for restoring the Customer's Telecommunications Service to its Customer-authorized condition (all such charges together, the "Carrier Change Charges"), including to the appropriate primary Telephone Exchange Service provider. Such Carrier Change Charges may be assessed on the requesting Party by the other Party at any time after the Customer is restored to its Customer-authorized condition.

13. Good Faith Performance

If and, to the extent that, Verizon, prior to the Effective Date of this Agreement, has not provided in the Commonwealth of Pennsylvania a Service offered under this Attachment, Verizon reserves the right to negotiate in good faith with QuantumShift reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such Service; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.

INTERCONNECTION ATTACHMENT

1. General

Each Party shall provide to the other Party, in accordance with this Agreement, but only to the extent required by Applicable Law, interconnection at (i) any technically feasible Point(s) of Interconnection on Verizon's network in a LATA and/or (ii) a fiber meet point to which the Parties mutually agree under the terms of this Agreement, for the transmission and routing of Telephone Exchange Service and Exchange Access. By way of example, a technically feasible Point of Interconnection on Verizon's network in a LATA would include an applicable Verizon Tandem Interconnection Wire Center or Verizon End Office Interconnection Wire Center but, notwithstanding any other provision of this Agreement or otherwise, would not include a QuantumShift Interconnection Wire Center, QuantumShift switch or any portion of a transport facility provided by Verizon to QuantumShift or another party between (x) a Verizon Interconnection Wire Center or switch and (y) the Interconnection Wire Center or switch of QuantumShift or another party. For brevity's sake, the foregoing examples of locations that, respectively, are and are not "on Verizon's network" shall apply (and are hereby incorporated by reference) each time the term "on Verizon's network" is used in this Agreement.

2. Points of Interconnection and Trunk Types

2.1 Point(s) of Interconnection.

2.1.1 Each Party, at its own expense, shall provide transport facilities to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA selected by QuantumShift.

2.2 Trunk Types.

2.2.1 In interconnecting their networks pursuant to this Attachment, the Parties will use, as appropriate, the following separate and distinct trunk groups:

2.2.1.1 Interconnection Trunks for the transmission and routing of Reciprocal Compensation Traffic, translated LEC IntraLATA toll free service access code (e.g., 800/888/877) traffic, and IntraLATA Toll Traffic, between their respective Telephone Exchange Service Customers, Tandem Transit Traffic, and, Measured Internet Traffic, all in accordance with Sections 5 through 8 of this Attachment;

2.2.1.2 Access Toll Connecting Trunks for the transmission and routing of Exchange Access traffic, including translated InterLATA toll free service access code (e.g., 800/888/877) traffic, between QuantumShift Telephone Exchange Service Customers and purchasers of Switched Exchange Access Service via a Verizon access Tandem in accordance with Sections 9 through 11 of this Attachment; and

2.2.1.3 Miscellaneous Trunk Groups as mutually agreed to by the Parties, including, but not limited to: (a) choke trunks for traffic congestion and testing; and, (b) untranslated IntraLATA/InterLATA toll free service access code (e.g. 800/888/877) traffic.

- 2.2.2 Other types of trunk groups may be used by the Parties as provided in other Attachments to this Agreement (e.g., 911/E-911 Trunks) or in other separate agreements between the Parties (e.g., directory assistance trunks, operator services trunks, BLV/BLVI trunks or trunks for 500/555 traffic).
 - 2.2.3 In accordance with the terms of this Agreement, the Parties will deploy One-Way Interconnection Trunks (trunks with traffic going in one direction, including one-way trunks and uni-directional two-way trunks) and/or Two-Way Interconnection Trunks (trunks with traffic going in both directions).
 - 2.2.4 QuantumShift shall establish, at the technically feasible Point(s) of Interconnection on Verizon's network in a LATA, separate Interconnection Trunk group(s) between such POI(s) and each Verizon Tandem in a LATA with a subtending End Office(s) to which QuantumShift originates calls for Verizon to terminate.
 - 2.2.5 In the event the volume of traffic between a Verizon End Office and a technically feasible Point of Interconnection on Verizon's network in a LATA, which is carried by a Final Tandem Interconnection Trunk group, exceeds (a) the Centum Call Seconds (Hundred Call Seconds) busy hour equivalent of one (1) DS1 at any time; (b) 200,000 minutes of use for a single month; and/or; (c) 600 busy hour Centum Call Seconds (BHCCS) of use for a single month: (i) if One-Way Interconnection Trunks are used, the originating Party shall promptly establish new or augment existing End Office One-Way Interconnection Trunk groups between the Verizon End Office and the technically feasible Point of Interconnection on Verizon's network; or, (ii) if Two-Way Interconnection Trunks are used, QuantumShift shall promptly submit an ASR to Verizon to establish new or augment existing End Office Two-Way Interconnection Trunk group(s) between that Verizon End Office and the technically feasible Point of Interconnection on Verizon's network.
 - 2.2.6 Except as otherwise agreed in writing by the Parties, the total number of Tandem Interconnection Trunks between a technically feasible Point of Interconnection on Verizon's network and a Verizon Tandem will be limited to a maximum of 240 trunks. In the event that the volume of traffic between a technically feasible Point of Interconnection on Verizon's network and a Verizon Tandem exceeds, or reasonably can be expected to exceed, the capacity of the 240 trunks, QuantumShift shall promptly submit an ASR to Verizon to establish new or additional End Office Trunks to insure that the volume of traffic between the technically feasible Point of Interconnection on Verizon's network and the Verizon Tandem does not exceed the capacity of the 240 trunks.
- 2.3 One-Way Interconnection Trunks.
- 2.3.1 Where the Parties use One-Way Interconnection Trunks for the delivery of traffic from QuantumShift to Verizon, QuantumShift, at QuantumShift's own expense, shall:
 - 2.3.1.1 provide its own facilities for delivery of the traffic to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA; and/or

- 2.3.1.2 obtain transport for delivery of the traffic to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA (a) from a third party, or, (b) if Verizon offers such transport pursuant to a Verizon access Tariff, from Verizon.
 - 2.3.2 For each Tandem or End Office One-Way Interconnection Trunk group for delivery of traffic from QuantumShift to Verizon with a utilization level of less than sixty percent (60%) for final trunk groups and eighty-five percent (85%) for high usage trunk groups, unless the Parties agree otherwise, QuantumShift will promptly submit ASRs to disconnect a sufficient number of Interconnection Trunks to attain a utilization level of approximately sixty percent (60%) for all final trunk groups and eighty-five percent (85%) for all high usage trunk groups. In the event QuantumShift fails to submit an ASR to disconnect One-Way Interconnection Trunks as required by this Section, Verizon may disconnect the excess Interconnection Trunks or bill (and QuantumShift shall pay) for the excess Interconnection Trunks at the rates set forth in the Pricing Attachment.
 - 2.3.3 Where the Parties use One-Way Interconnection Trunks for the delivery of traffic from Verizon to QuantumShift, Verizon, at Verizon's own expense, shall provide its own facilities for delivery of the traffic to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA.
- 2.4 Two-Way Interconnection Trunks.
 - 2.4.1 Where the Parties use Two-Way Interconnection Trunks for the exchange of traffic between Verizon and QuantumShift, QuantumShift, at its own expense, shall:
 - 2.4.1.1 provide its own facilities to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA; and/or
 - 2.4.1.2 obtain transport to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA (a) from a third party, or, (b) if Verizon offers such transport pursuant to a Verizon access Tariff, from Verizon.
 - 2.4.2 Where the Parties use Two-Way Interconnection Trunks for the exchange of traffic between Verizon and QuantumShift, Verizon, at its own expense, shall provide its own facilities to the technically feasible Point(s) of Interconnection on Verizon's network in a LATA.
 - 2.4.3 Prior to establishing any Two-Way Interconnection Trunks, QuantumShift shall meet with Verizon to conduct a joint planning meeting ("Joint Planning Meeting"). At that Joint Planning Meeting, each Party shall provide to the other Party originating Centum Call Seconds (Hundred Call Seconds) information, and the Parties shall mutually agree on the appropriate initial number of End Office and Tandem Two-Way Interconnection Trunks and the interface specifications at the technically feasible Point(s) of Interconnection on Verizon's network in a LATA at which the Parties interconnect for the exchange of traffic. Where the Parties have agreed to convert existing One-Way Interconnection Trunks to Two-Way Interconnection Trunks, at the Joint Planning Meeting, the Parties shall also mutually agree on

the conversion process and project intervals for conversion of such One-Way Interconnection Trunks to Two-Way Interconnection Trunks.

- 2.4.4 On a semi-annual basis, QuantumShift shall submit a good faith forecast to Verizon of the number of End Office and Tandem Two-Way Interconnection Trunks that QuantumShift anticipates Verizon will need to provide during the ensuing two (2) year period for the exchange of traffic between QuantumShift and Verizon. QuantumShift's trunk forecasts shall conform to the Verizon CLEC trunk forecasting guidelines as in effect at that time.
- 2.4.5 The Parties shall meet (telephonically or in person) from time to time, as needed, to review data on End Office and Tandem Two-Way Interconnection Trunks to determine the need for new trunk groups and to plan any necessary changes in the number of Two-Way Interconnection Trunks.
- 2.4.6 Two-Way Interconnection Trunks shall have SS7 Common Channel Signaling. The Parties agree to utilize B8ZS and Extended Super Frame (ESF) DS1 facilities, where available.
- 2.4.7 With respect to End Office Two-Way Interconnection Trunks, both Parties shall use an economic Centum Call Seconds (Hundred Call Seconds) equal to five (5). Either Party may disconnect End Office Two-Way Interconnection Trunks that, based on reasonable engineering criteria and capacity constraints, are not warranted by the actual traffic volume experienced.
- 2.4.8 Two-Way Interconnection Trunk groups that connect to a Verizon access Tandem shall be engineered using a design blocking objective of Neal-Wilkinson B.005 during the average time consistent busy hour. Two-Way Interconnection Trunk groups that connect to a Verizon local Tandem shall be engineered using a design blocking objective of Neal-Wilkinson B.01 during the average time consistent busy hour. Verizon and QuantumShift shall engineer Two-Way Interconnection Trunks using Telcordia Notes on the Networks SR 2275 (formerly known as BOC Notes on the LEC Networks SR-TSV-002275).
- 2.4.9 The performance standard for final Two-Way Interconnection Trunk groups shall be that no such Interconnection Trunk group will exceed its design blocking objective (B.005 or B.01, as applicable) for three (3) consecutive calendar traffic study months.
- 2.4.10 QuantumShift shall determine and order the number of Two-Way Interconnection Trunks that are required to meet the applicable design blocking objective for all traffic carried on each Two-Way Interconnection Trunk group. QuantumShift shall order Two-Way Interconnection Trunks by submitting ASRs to Verizon setting forth the number of Two-Way Interconnection Trunks to be installed and the requested installation dates within Verizon's effective standard intervals or negotiated intervals, as appropriate. QuantumShift shall complete ASRs in accordance with OBF Guidelines as in effect from time to time.
- 2.4.11 Verizon may (but shall not be obligated to) monitor Two-Way Interconnection Trunk groups using service results for the applicable design blocking objective. If Verizon observes blocking in excess of

the applicable design objective on any Tandem Two-Way Interconnection Trunk group and QuantumShift has not notified Verizon that it has corrected such blocking, Verizon may submit to QuantumShift a Trunk Group Service Request directing QuantumShift to remedy the blocking. Upon receipt of a Trunk Group Service Request, QuantumShift will complete an ASR to establish or augment the End Office Two-Way Interconnection Trunk group(s), or, if mutually agreed, to augment the Tandem Two-Way Interconnection Trunk group with excessive blocking and submit the ASR to Verizon within five (5) Business Days.

- 2.4.12 The Parties will review all Tandem Two-Way Interconnection Trunk groups that reach a utilization level of seventy percent (70%), or greater, to determine whether those groups should be augmented. QuantumShift will promptly augment all Tandem Two-Way Interconnection Trunk groups that reach a utilization level of eighty percent (80%) by submitting ASRs for additional trunks sufficient to attain a utilization level of approximately seventy percent (70%), unless the Parties agree that additional trunking is not required. For each Tandem Two-Way Interconnection Trunk group with a utilization level of less than sixty percent (60%), unless the Parties agree otherwise, QuantumShift will promptly submit ASRs to disconnect a sufficient number of Interconnection Trunks to attain a utilization level of approximately sixty percent (60%) for each respective group, unless the Parties agree that the Two-Way Interconnection Trunks should not be disconnected. In the event QuantumShift fails to submit an ASR for Two-Way Interconnection Trunks in conformance with this Section, Verizon may disconnect the excess Interconnection Trunks or bill (and QuantumShift shall pay) for the excess Interconnection Trunks at the applicable Verizon rates.
- 2.4.13 Because Verizon will not be in control of when and how many Two-Way Interconnection Trunks are established between its network and QuantumShift's network, Verizon's performance in connection with these Two-Way Interconnection Trunk groups shall not be subject to any performance measurements and remedies under this Agreement, and, except as otherwise required by Applicable Law, under any FCC or Commission approved carrier-to-carrier performance assurance guidelines or plan.
- 2.4.14 QuantumShift will route its traffic to Verizon over the End Office and Tandem Two-Way Interconnection Trunks in accordance with SR-TAP-000191, including but not limited to those standards requiring that a call from QuantumShift to a Verizon End Office will first be routed to the End Office Interconnection Trunk group between QuantumShift and the Verizon End Office.

3. Alternative Interconnection Arrangements

3.1 Fiber Meet Arrangement Provisions.

- 3.1.1 Each Party may request a Fiber Meet arrangement by providing written notice thereof to the other Party if each of the following conditions has been met: (a) the Parties have consistently been exchanging an amount of applicable traffic (as set forth in Section 3.1.3 below) in the relevant exchanges equal to at least one (1) DS-3 and (b) neither QuantumShift nor any of QuantumShift's affiliates has

an overdue balance on any bill rendered to QuantumShift or QuantumShift's affiliates for charges that are not subject to a good faith dispute. Any such Fiber Meet arrangement shall be subject to the terms of this Agreement. In addition, the establishment of any Fiber Meet arrangement is expressly conditioned upon the Parties mutually agreeing to the technical specifications and requirements for such Fiber Meet arrangement including, but not limited to, the location of the Fiber Meet points, routing, equipment (e.g., specifications of Add/Drop Multiplexers, number of strands of fiber, etc.), software, ordering, provisioning, maintenance, repair, testing, augment and on any other technical specifications or requirements necessary to implement the Fiber Meet arrangement. For each Fiber Meet arrangement the Parties agree to implement, the Parties will complete and sign a Technical Specifications and Requirements document, the form of which is attached hereto as Exhibit A to Section 3 of the Interconnection Attachment Fiber Meet Arrangement Provisions. Each such document will be treated as Confidential Information.

- 3.1.2 The Parties agree to consider the possibility of using existing fiber cable with spare capacity, where available, to implement any such request for a Fiber Meet arrangement. If existing fiber cable with spare capacity is not available, the Parties agree to minimize the construction and deployment of fiber cable necessary for any Fiber Meet arrangement to which they agree. Except as otherwise agreed by the Parties, any and all Fiber Meet points established between the Parties shall extend no further than three (3) miles from an applicable Verizon Tandem or End Office and Verizon shall not be required to construct or deploy more than five hundred (500) feet of fiber cable for a Fiber Meet arrangement.
- 3.1.3 A Fiber Meet arrangement established under this Agreement may be used for the transmission and routing of only the following traffic types (over the Interconnection Trunks):
 - 3.1.3.1 Reciprocal Compensation Traffic between the Parties' respective Telephone Exchange Service Customers;
 - 3.1.3.2 Translated LEC IntraLATA toll free service access code (e.g., 800/888/877) traffic between the Parties' respective Telephone Exchange Service Customers;
 - 3.1.3.3 IntraLATA Toll Traffic between the Parties' respective Telephone Exchange Service Customers;
 - 3.1.3.4 Tandem Transit Traffic; and
 - 3.1.3.5 Measured Internet Traffic.

To the extent that a Fiber Meet arrangement established under this Agreement is used for the transmission and routing of traffic of the types set forth in Sections 3.1.3.1 and/or 3.1.3.5, other than the obligation to pay intercarrier compensation charges pursuant to the terms of the Agreement, neither Party shall have any obligation to pay the other Party any charges in connection with any Fiber Meet arrangements established under this Agreement. To the extent that a Fiber Meet arrangement established under this Agreement is used for the transmission and routing of traffic of the type set forth in Section

3.1.3.2, the transport and termination of such traffic shall be subject to the rates and charges set forth in the Agreement and applicable Tariffs. To the extent that a Fiber Meet arrangement established under this Agreement is used for the transmission and routing of traffic of the type set forth in Section 3.1.3.3, the Party originating such traffic shall compensate the terminating Party for the transport and termination of such traffic at the rates and charges set forth in the Agreement and applicable Tariffs. To the extent that a Fiber Meet arrangement established under this Agreement is used for the transmission and routing of traffic of the type set forth in Section 3.1.3.4, Verizon shall charge (and QuantumShift shall pay) Verizon's applicable rates and charges as set forth in the Agreement and Verizon's applicable Tariffs, including transport charges to the terminating Verizon Tandem.

3.1.4 At QuantumShift's written request, a Fiber Meet arrangement established under this Agreement may be used for the transmission and routing of the following traffic types over the following trunk types:

3.1.4.1 Operator services traffic from QuantumShift's Telephone Exchange Service Customers to an operator services provider over operator services trunks;

3.1.4.2 Directory assistance traffic from QuantumShift's Telephone Exchange Service Customers to a directory assistance provider over directory assistance trunks;

3.1.4.3 911 traffic from QuantumShift's Telephone Exchange Service Customers to 911/E-911 Tandem Office(s)/Selective Router(s) over 911 trunks; and

3.1.4.4 Jointly-provided Switched Exchange Access Service traffic, including translated InterLATA toll free service access code (e.g., 800/888/877) traffic, between QuantumShift's Telephone Exchange Service Customers and third-party purchasers of Switched Exchange Access Service via a Verizon access Tandem over Access Toll Connecting Trunks.

To the extent that a Fiber Meet arrangement established under this Agreement is used for the transmission and routing of any traffic of the types set forth in this Section 3.1.4 Verizon may bill (and QuantumShift shall pay) Verizon's applicable Tariff rates and charges. Except as otherwise agreed in writing by the Parties or as expressly set forth in Sections 3.1.3 and/or 3.1.4 of this Interconnection Attachment, access services (switched and unswitched) and unbundled network elements shall not be provisioned on or accessed through Fiber Meet arrangements.

3.1.5 QuantumShift will include traffic to be exchanged over Fiber Meet arrangements in its forecasts provided to Verizon under the Agreement.

4. Initiating Interconnection

4.1 If QuantumShift determines to offer Telephone Exchange Services and to interconnect with Verizon in any LATA in which Verizon also offers Telephone

Exchange Services and in which the Parties are not already interconnected pursuant to this Agreement, QuantumShift shall provide written notice to Verizon of the need to establish Interconnection in such LATA pursuant to this Agreement.

- 4.2 The notice provided in Section 4.1 of this Attachment shall include (a) the initial Routing Point(s); (b) the applicable technically feasible Point(s) of Interconnection on Verizon's network to be established in the relevant LATA in accordance with this Agreement; (c) QuantumShift's intended Interconnection activation date; (d) a forecast of QuantumShift's trunking requirements conforming to Section 14.2 of this Attachment; and (e) such other information as Verizon shall reasonably request in order to facilitate Interconnection.
- 4.3 The interconnection activation date in the new LATA shall be mutually agreed to by the Parties after receipt by Verizon of all necessary information as indicated above. Within ten (10) Business Days of Verizon's receipt of QuantumShift's notice provided for in Section 4.1 of this Attachment, Verizon and QuantumShift shall confirm the technically feasible Point of Interconnection on Verizon's network in the new LATA and the mutually agreed upon Interconnection activation date for the new LATA.

5. Transmission and Routing of Telephone Exchange Service Traffic

5.1 Scope of Traffic.

Section 5 prescribes parameters for Interconnection Trunks used for Interconnection pursuant to Sections 2 through 4 of this Attachment.

5.2 Trunk Group Connections and Ordering.

- 5.2.1 For both One-Way and Two-Way Interconnection Trunks, if QuantumShift wishes to use a technically feasible interface other than a DS1 or a DS3 facility at the POI, the Parties shall negotiate reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such arrangement; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.
- 5.2.2 When One-Way or Two-Way Interconnection Trunks are provisioned using a DS3 interface facility, if QuantumShift orders the multiplexed DS3 facilities to a Verizon Central Office that is not designated in the NECA 4 Tariff as the appropriate Intermediate Hub location (i.e., the Intermediate Hub location in the appropriate Tandem subtending area based on the LERG), and the provision of such facilities to the subject Central Office is technically feasible, the Parties shall negotiate in good faith reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such arrangement; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.
- 5.2.3 Each Party will identify its Carrier Identification Code, a three or four digit numeric code obtained from Telcordia, to the other Party when ordering a trunk group.

5.2.4 For multi-frequency (MF) signaling each Party will out pulse ten (10) digits to the other Party, unless the Parties mutually agree otherwise.

5.2.5 Each Party will use commercially reasonable efforts to monitor trunk groups under its control and to augment those groups using generally accepted trunk-engineering standards so as to not exceed blocking objectives. Each Party agrees to use modular trunk-engineering techniques for trunks subject to this Attachment.

5.3 Switching System Hierarchy and Trunking Requirements.

For purposes of routing QuantumShift traffic to Verizon, the subtending arrangements between Verizon Tandems and Verizon End Offices shall be the same as the Tandem/End Office subtending arrangements Verizon maintains for the routing of its own or other carriers' traffic (i.e., traffic will be routed to the appropriate Verizon Tandem subtended by the terminating End Office serving the Verizon Customer). For purposes of routing Verizon traffic to QuantumShift, the subtending arrangements between QuantumShift Tandems and QuantumShift End Offices shall be the same as the Tandem/End Office subtending arrangements that QuantumShift maintains for the routing of its own or other carriers' traffic.

5.4 Signaling.

Each Party will provide the other Party with access to its databases and associated signaling necessary for the routing and completion of the other Party's traffic in accordance with the provisions of this Agreement and any applicable Tariff.

5.5 Grades of Service.

The Parties shall initially engineer and shall monitor and augment all trunk groups consistent with the Joint Process as set forth in Section 14.1 of this Attachment.

6. Traffic Measurement and Billing over Interconnection Trunks

6.1 For billing purposes, each Party shall pass Calling Party Number (CPN) information on at least ninety-five percent (95%) of calls carried over the Interconnection Trunks.

6.1.1 As used in this Section 6, "Traffic Rate" means the applicable Reciprocal Compensation Traffic rate, Measured Internet Traffic rate, intrastate Switched Exchange Access Service rate, interstate Switched Exchange Access Service rate, or intrastate/interstate Tandem Transit Traffic rate, as provided in the Pricing Attachment, an applicable Tariff, or, for Measured Internet Traffic, the FCC Internet Orders.

6.1.2 If the originating Party passes CPN on ninety-five percent (95%) or more of its calls, the receiving Party shall bill the originating Party the Traffic Rate applicable to each relevant minute of traffic for which CPN is passed. For any remaining (up to 5%) calls without CPN information, the receiving Party shall bill the originating Party for such traffic at the Traffic Rate applicable to each relevant minute of traffic, in direct proportion to the minutes of use of calls passed with CPN information.

- 6.1.3 If the originating Party passes CPN on less than ninety-five percent (95%) of its calls and the originating Party chooses to combine Reciprocal Compensation Traffic and Toll Traffic on the same trunk group, the receiving Party shall bill the higher of its interstate Switched Exchange Access Service rates or its intrastate Switched Exchange Access Services rates for all traffic that is passed without CPN, unless the Parties agree that other rates should apply to such traffic.
- 6.2 At such time as a receiving Party has the capability, on an automated basis, to use such CPN to classify traffic delivered over Interconnection Trunks by the other Party by Traffic Rate type (e.g., Reciprocal Compensation Traffic/Measured Internet Traffic, intrastate Switched Exchange Access Service, interstate Switched Exchange Access Service, or intrastate/interstate Tandem Transit Traffic), such receiving Party shall bill the originating Party the Traffic Rate applicable to each relevant minute of traffic for which CPN is passed. If the receiving Party lacks the capability, on an automated basis, to use CPN information on an automated basis to classify traffic delivered by the other Party by Traffic Rate type, the originating Party will supply Traffic Factor 1 and Traffic Factor 2. The Traffic Factors shall be supplied in writing by the originating Party within thirty (30) days of the Effective Date and shall be updated in writing by the originating Party quarterly. Measurement of billing minutes for purposes of determining terminating compensation shall be in conversation seconds (the time in seconds that the Parties equipment is used for a completed call, measured from the receipt of answer supervision to the receipt of disconnect supervision). Measurement of billing minutes for originating toll free service access code (e.g., 800/888/877) calls shall be in accordance with applicable Tariffs. Determination as to whether traffic is Reciprocal Compensation Traffic or Measured Internet Traffic shall be made in accordance with Paragraphs 8 and 79, and other applicable provisions, of the April 18, 2001 FCC Internet Order (including, but not limited to, in accordance with the rebuttable presumption established by the April 18, 2001 FCC Internet Order that traffic delivered to a carrier that exceeds a 3:1 ratio of terminating to originating traffic is Measured Internet Traffic, and in accordance with the process established by the April 18, 2001 FCC Internet Order for rebutting such presumption before the Commission) as modified by the November 5, 2008 FCC Internet Order and other applicable FCC orders and FCC Regulations.
- 6.3 Each Party reserves the right to audit all Traffic, up to a maximum of two audits per Calendar Year, to ensure that rates are being applied appropriately; provided, however, that either Party shall have the right to conduct additional audit(s) if the preceding audit disclosed material errors or discrepancies. Each Party agrees to provide the necessary Traffic data in conjunction with any such audit in a timely manner.
- 6.4 Nothing in this Agreement shall be construed to limit either Party's ability to designate the areas within which that Party's Customers may make calls which that Party rates as "local" in its Customer Tariffs.
- 6.5 If and, to the extent that, a QuantumShift Customer receives V/FX Traffic, QuantumShift shall promptly provide notice thereof to Verizon (such notice to include, without limitation, the specific telephone number(s) that the Customer uses for V/FX Traffic, as well as the LATA in which the Customer's station is actually physically located) and shall not bill Verizon Reciprocal Compensation, intercarrier compensation or any other charges for calls placed by Verizon's Customers to such QuantumShift Customers.

7. Reciprocal Compensation Arrangements Pursuant to Section 251(b)(5) of the Act

7.1 Reciprocal Compensation.

The Parties shall exchange Reciprocal Compensation Traffic at the technically feasible Point(s) of Interconnection on Verizon's network in a LATA designated in accordance with the terms of this Agreement. The Party originating Reciprocal Compensation Traffic shall compensate the terminating Party for the transport and termination of such traffic to its Customer in accordance with Section 251(b)(5) of the Act at the equal and symmetrical rates stated in the Pricing Attachment; it being understood and agreed that Verizon shall charge (and QuantumShift shall pay Verizon) the End Office Reciprocal Compensation rate set forth in the Pricing Attachment for Reciprocal Compensation Traffic QuantumShift physically delivers to a POI at the Verizon Interconnection Wire Center in which the terminating Verizon End Office is located, and otherwise that Verizon shall charge (QuantumShift shall pay Verizon) the Tandem Reciprocal Compensation rate set forth in the Pricing Attachment for Reciprocal Compensation Traffic QuantumShift delivers to Verizon; it also being understood and agreed that QuantumShift shall charge (and Verizon shall pay QuantumShift) the End Office Reciprocal Compensation rate set forth in the Pricing Attachment for Reciprocal Compensation Traffic Verizon delivers to QuantumShift. These rates are to be applied at the technically feasible Point(s) of Interconnection on Verizon's network in a LATA at which the Parties interconnect, whether such traffic is delivered by Verizon for termination by QuantumShift, or delivered by QuantumShift for termination by Verizon. No additional charges shall be assessed by the terminating Party for the transport and termination of such traffic from the technically feasible Point(s) of Interconnection on Verizon's network in a LATA to its Customer; provided, however, for the avoidance of any doubt, QuantumShift shall also pay Verizon, at the rates set forth in the Pricing Attachment, for any multiplexing, cross connects or other collocation related Services that QuantumShift obtains from Verizon. When Toll Traffic is delivered over the same Interconnection Trunks as Reciprocal Compensation Traffic, any port, transport or other applicable access charges related to the delivery of Toll Traffic from the technically feasible Point of Interconnection on Verizon's network in a LATA to the terminating Party's Customer shall be prorated so as to apply only to the Toll Traffic. The designation of traffic as Reciprocal Compensation Traffic for purposes of Reciprocal Compensation shall be based on the actual originating and terminating points of the complete end-to-end communication.

7.2 Traffic Not Subject to Reciprocal Compensation.

- 7.2.1 Reciprocal Compensation shall not apply to interstate or intrastate Exchange Access (including, without limitation, Virtual Foreign Exchange Traffic (i.e., V/FX Traffic), Information Access, or exchange services for Exchange Access or Information Access.
- 7.2.2 Reciprocal Compensation shall not apply to Internet Traffic.
- 7.2.3 Reciprocal Compensation shall not apply to Toll Traffic, including, but not limited to, calls originated on a 1+ presubscription basis, or on a casual dialed (10XXX/101XXXX) basis.
- 7.2.4 Reciprocal Compensation shall not apply to Optional Extended Local Calling Scope Arrangement Traffic.
- 7.2.5 Reciprocal Compensation shall not apply to special access, private line, or any other traffic that is not switched by the terminating Party.
- 7.2.6 Reciprocal Compensation shall not apply to Tandem Transit Traffic.

- 7.2.7 Reciprocal Compensation shall not apply to Voice Information Service Traffic (as defined in Section 5 of the Additional Services Attachment).
 - 7.2.8 Reciprocal Compensation shall not apply to traffic that is not subject to Reciprocal Compensation under Section 251(b)(5) of the Act.
 - 7.2.9 Reciprocal Compensation shall not apply to Virtual Foreign Exchange Traffic (i.e., V/FX Traffic). As used in this Agreement, "Virtual Foreign Exchange Traffic" or "V/FX Traffic" is defined as calls in which a QuantumShift 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. For the avoidance of any doubt, QuantumShift shall pay Verizon's originating access charges for all V/FX Traffic originated by a Verizon Customer, and QuantumShift shall pay Verizon's terminating access charges for all V/FX Traffic originated by a QuantumShift Customer.
- 7.3 The Reciprocal Compensation rates (including, but not limited to, the Reciprocal Compensation per minute of use charges) billed by QuantumShift to Verizon shall not exceed the Reciprocal Compensation rates (including, but not limited to, Reciprocal Compensation per minute of use charges) billed by Verizon to QuantumShift.

8. Other Types of Traffic

- 8.1 Notwithstanding any other provision of this Agreement or any Tariff: (a) the Parties' rights and obligations with respect to any intercarrier compensation that may be due in connection with their exchange of Internet Traffic shall be governed by the terms of the FCC Internet Orders and other applicable FCC orders and FCC Regulations; and, (b) a Party shall not be obligated to pay any intercarrier compensation for Internet Traffic that is in excess of the intercarrier compensation for Internet Traffic that such Party is required to pay under the FCC Internet Orders and other applicable FCC orders and FCC Regulations.
- 8.2 Subject to Section 8.1 of this Attachment, interstate and intrastate Exchange Access, Information Access, exchange services for Exchange Access or Information Access, and Toll Traffic, shall be governed by the applicable provisions of this Agreement and applicable Tariffs.
- 8.3 For any traffic originating with a third party carrier and delivered by QuantumShift to Verizon, QuantumShift shall pay Verizon the same amount that such third party carrier would have been obligated to pay Verizon for termination of that traffic at the location the traffic is delivered to Verizon by QuantumShift.
- 8.4 Any traffic not specifically addressed in this Agreement shall be treated as required by the applicable Tariff of the Party transporting and/or terminating the traffic.
- 8.5 The Parties may also exchange Internet Traffic at the technically feasible Point(s) of Interconnection on Verizon's network in a LATA established hereunder for the exchange of Reciprocal Compensation Traffic. Any intercarrier compensation that may be due in connection with the Parties' exchange of Internet Traffic shall be applied at such technically feasible Point of Interconnection on Verizon's network in a LATA in accordance with the FCC Internet Orders and other applicable FCC orders and FCC Regulations.

9. Transmission and Routing of Exchange Access Traffic

9.1 Scope of Traffic.

Section 9 prescribes parameters for certain trunks to be established over the Interconnections specified in Sections 2 through 5 of this Attachment for the transmission and routing of traffic between QuantumShift Telephone Exchange Service Customers and Interexchange Carriers ("Access Toll Connecting Trunks"), in any case where QuantumShift elects to have its End Office Switch subtend a Verizon Tandem. This includes casually-dialed (1010XXX and 101XXXX) traffic.

9.2 Access Toll Connecting Trunk Group Architecture.

- 9.2.1 If QuantumShift chooses to subtend a Verizon access Tandem, QuantumShift's NPA/NXX must be assigned by QuantumShift to subtend the same Verizon access Tandem that a Verizon NPA/NXX serving the same Rate Center Area subtends as identified in the LERG.
- 9.2.2 QuantumShift shall establish Access Toll Connecting Trunks pursuant to applicable access Tariffs by which it will provide Switched Exchange Access Services to Interexchange Carriers to enable such Interexchange Carriers to originate and terminate traffic to and from QuantumShift's Customers.
- 9.2.3 The Access Toll Connecting Trunks shall be two-way trunks. Such trunks shall connect the End Office QuantumShift utilizes to provide Telephone Exchange Service and Switched Exchange Access to its Customers in a given LATA to the access Tandem(s) Verizon utilizes to provide Exchange Access in such LATA.
- 9.2.4 Access Toll Connecting Trunks shall be used solely for the transmission and routing of Exchange Access to allow QuantumShift's Customers to connect to or be connected to the interexchange trunks of any Interexchange Carrier which is connected to a Verizon access Tandem.

10. Meet-Point Billing (MPB) Arrangements

- 10.1 QuantumShift and Verizon will establish MPB arrangements in order to provide a common transport option to Switched Exchange Access Services customers via a Verizon access Tandem Switch in accordance with the MPB guidelines contained in the OBF's MECAB and MECOD documents, except as modified herein, and in Verizon's applicable Tariffs. The arrangements described in this Section 10 are intended to be used to provide Switched Exchange Access Service where the transport component of the Switched Exchange Access Service is routed through an access Tandem Switch that is provided by Verizon.
- 10.2 In each LATA, the Parties shall establish MPB arrangements for the applicable QuantumShift Routing Point/Verizon Serving Interconnection Wire Center combinations.
- 10.3 Interconnection for the MPB arrangement shall occur at each of the Verizon access Tandems in the LATA, unless otherwise agreed to by the Parties.

- 10.4 QuantumShift and Verizon will use reasonable efforts, individually and collectively, to maintain provisions in their respective state access Tariffs, and/or provisions within the National Exchange Carrier Association (NECA) Tariff No. 4, or any successor Tariff sufficient to reflect the MPB arrangements established pursuant to this Agreement.
- 10.5 In general, there are four alternative MPB arrangements possible, which are: Single Bill/Single Tariff, Multiple Bill/Single Tariff, Multiple Bill/Multiple Tariff, and Single Bill/Multiple Tariff, as outlined in the OBF MECAB Guidelines.
- Each Party shall implement the "Multiple Bill/Single Tariff" or "Multiple Bill/Multiple Tariff" option, as appropriate, in order to bill an IXC for the portion of the MPB arrangement provided by that Party. Alternatively, in former Bell Atlantic service areas, upon agreement of the Parties, each Party may use the New York State Access Pool on its behalf to implement the Single Bill/Multiple Tariff or Single Bill/Single Tariff option, as appropriate, in order to bill an IXC for the portion of the MPB arrangement provided by that Party.
- 10.6 The rates to be billed by each Party for the portion of the MPB arrangement provided by it shall be as set forth in that Party's applicable Tariffs, or other document that contains the terms under which that Party's access services are offered. For each QuantumShift Routing Point/Verizon Serving Interconnection Wire Center combination, the MPB billing percentages for transport between the QuantumShift Routing Point and the Verizon Serving Interconnection Wire Center shall be calculated in accordance with the formula set forth in Section 10.17 of this Attachment.
- 10.7 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 Verizon Interconnection Wire Center serving the IXC in order to comply with the MPB notification process as outlined in the MECAB document.
- 10.8 Verizon shall provide QuantumShift with the Terminating Switched Access Detail Usage Data (EMI category 1101XX records) recorded at the Verizon access Tandem on cartridge or via such other media as the Parties may agree to, no later than ten (10) Business Days after the date the usage occurred.
- 10.9 QuantumShift shall provide Verizon with the Originating Switched Access Detail Usage Data (EMI category 1101XX records) on cartridge or via such other media as the Parties may agree, no later than ten (10) Business Days after the date the usage occurred.
- 10.10 All usage data to be provided pursuant to Sections 10.8 and 10.9 of this Attachment shall be sent to the following addresses:

To QuantumShift:

Manav Babbar
12657 Alcosta Blvd, Suite 418
San Ramon, California 94583

For Verizon:

Verizon Data Services
ATTN: MPB
1 East Telecom Parkway

Dock D
Temple Terrace, FL 33637

Either Party may change its address for receiving usage data by notifying the other Party in writing pursuant to Section 29 of the General Terms and Conditions.

- 10.11 QuantumShift and Verizon shall coordinate and exchange the billing account reference (BAR) and billing account cross reference (BACR) numbers or Operating Company Number ("OCN"), as appropriate, for the MPB arrangements described in this Section 10. Each Party shall notify the other if the level of billing or other BAR/BACR elements change, resulting in a new BAR/BACR number, or if the OCN changes.
- 10.12 Each Party agrees to provide the other Party with notification of any errors it discovers in MPB data within thirty (30) calendar days of the receipt of the original data. The other Party shall attempt to correct the error and resubmit the data within ten (10) Business Days of the notification. In the event the errors cannot be corrected within such ten- (10) Business-Day period, the erroneous data will be considered lost. In the event of a loss of data, whether due to uncorrectable 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.
- 10.13 Either Party may request a review or audit of the various components of access recording up to a maximum of two (2) audits per calendar year. All costs associated with each review and audit shall be borne by the requesting Party. Such review or audit shall be conducted subject to Section 7 of the General Terms and Conditions and during regular business hours. A Party may conduct additional audits, at its expense, upon the other Party's consent, which consent shall not be unreasonably withheld.
- 10.14 Except as expressly set forth in this Agreement, nothing contained in this Section 10 shall create any liability for damages, losses, claims, costs, injuries, expenses or other liabilities whatsoever on the part of either Party.
- 10.15 MPB will apply for all traffic bearing the 500, 900, toll free service access code (e.g. 800/888/877) (to the extent provided by an IXC) or any other non-geographic NPA which may be designated for such traffic in the future.
- 10.16 In the event QuantumShift determines to offer Telephone Exchange Services in a LATA in which Verizon operates an access Tandem Switch, Verizon shall permit and enable QuantumShift to subtend the Verizon access Tandem Switch(es) designated for the Verizon End Offices in the area where there are located QuantumShift Routing Point(s) associated with the NPA NXX(s) to/from which the Switched Exchange Access Services are homed.
- 10.17 Except as otherwise mutually agreed by the Parties, the MPB billing percentages for each Routing Point/Verizon Serving Interconnection Wire Center combination shall be calculated according to the following formula, unless as mutually agreed to by the Parties:
- a / (a + b) = QuantumShift Billing Percentage
- and
- b / (a + b) = Verizon Billing Percentage

where:

a = the airline mileage between QuantumShift Routing Point and the actual point of interconnection for the MPB arrangement; and

b = the airline mileage between the Verizon Serving Interconnection Wire Center and the actual point of interconnection for the MPB arrangement.

10.18 QuantumShift shall inform Verizon of each 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 QuantumShift's delivery of notice to Verizon, Verizon and QuantumShift shall confirm the Routing Point/Verizon Serving Interconnection Wire Center combination and billing percentages.

11. Toll Free Service Access Code (e.g., 800/888/877) Traffic

The following terms shall apply when either Party delivers toll free service access code (e.g., 800/877/888)("8YY") calls to the other Party. For the purposes of this Section 11, the terms "translated" and "untranslated" refers to those toll free service access code calls that have been queried ("translated") or have not been queried ("untranslated") to an 8YY database. Except as otherwise agreed to by the Parties, all QuantumShift originating "untranslated" 8YY traffic will be routed over a separate One-Way miscellaneous Trunk group.

11.1 When QuantumShift delivers translated 8YY calls to Verizon to be completed by

11.1.1 an IXC:

11.1.1.1 QuantumShift will provide an appropriate EMI record to Verizon;

11.1.1.2 QuantumShift will bill the IXC the QuantumShift's applicable Switched Exchange Access Tariff charges and the QuantumShift's applicable Tariff query charges; and

11.1.1.3 Verizon will bill the IXC Verizon's applicable Switched Exchange Access Tariff charges.

11.1.2 Verizon:

11.1.2.1 QuantumShift will provide an appropriate EMI record to Verizon; and

11.1.2.2 QuantumShift will bill Verizon the QuantumShift's Switched Exchange Access Tariff charges and the QuantumShift's applicable Tariff query charge.

11.1.3 a toll free service access code service provider in that LATA:

11.1.3.1 QuantumShift will provide an appropriate EMI record to Verizon and the toll free service access code service provider;

11.1.3.2 QuantumShift will bill the toll free service access code service provider the QuantumShift's applicable Switched

Exchange Access Tariff charges and the QuantumShift's applicable Tariff query charges; and

11.1.3.3 Verizon will bill the toll free service access code service provider Verizon's applicable Switched Exchange Access Tariff charges.

11.2 When Verizon performs the query and delivers translated 8YY calls, originated by Verizon's Customer or another LEC's Customer to QuantumShift to be completed by

11.2.1 QuantumShift:

11.2.1.1 Verizon will provide an appropriate EMI record to QuantumShift; and

11.2.1.2 Verizon will bill QuantumShift Verizon's applicable Switched Exchange Access Tariff charges and Verizon's applicable Tariff query charges.

11.2.2 a toll free service access code service provider in that LATA:

11.2.2.1 Verizon will provide an appropriate EMI record to QuantumShift and the toll free service access code service provider;

11.2.2.2 Verizon will bill the toll free service access code service provider Verizon's applicable Switched Exchange Access Tariff charges and Verizon's applicable Tariff query charges; and

11.2.2.3 QuantumShift will bill the toll free service access code service provider the QuantumShift's applicable Switched Exchange Access Tariff charges.

11.3 When QuantumShift delivers untranslated 8YY calls to Verizon to be completed by

11.3.1 an IXC:

11.3.1.1 Verizon will query the call and route the call to the appropriate IXC;

11.3.1.2 Verizon will provide an appropriate EMI record to QuantumShift;

11.3.1.3 Verizon will bill the IXC Verizon's applicable Switched Exchange Access Tariff charges and Verizon's applicable Tariff query charges; and

11.3.1.4 QuantumShift will bill the IXC QuantumShift's applicable Switched Exchange Access Tariff charges.

11.3.2 Verizon:

11.3.2.1 Verizon will query the call and complete the call;

- 11.3.2.2 Verizon will provide an appropriate EMI record to QuantumShift;
- 11.3.2.3 QuantumShift will bill Verizon the QuantumShift's applicable Switched Exchange Access Tariff charges.
- 11.3.3 a toll free service access code service provider in that LATA:
 - 11.3.3.1 Verizon will query the call and route the call to the appropriate toll free service access code service provider;
 - 11.3.3.2 Verizon will provide an appropriate EMI record to QuantumShift and the toll free service access code service provider;
 - 11.3.3.3 Verizon will bill the toll free service access code service provider Verizon's applicable Switched Exchange Access Tariff and Verizon's applicable Tariff query charges; and
 - 11.3.3.4 QuantumShift will bill the toll free service access code service provider the QuantumShift's applicable Switched Exchange Access Tariff charges.
- 11.4 Verizon will not direct untranslated toll free service access code calls to QuantumShift.

12. Tandem Transit Traffic

- 12.1 As used in this Section, Tandem Transit Traffic is Telephone Exchange Service traffic that originates on QuantumShift's network, and is transported through Verizon's Tandem to the subtending End Office or its equivalent of another carrier (CLEC, ILEC other than Verizon, Commercial Mobile Radio Service (CMRS) carrier, or other LEC ("Other Carrier")). Neither the originating nor terminating customer is a Customer of Verizon. Subtending End Offices shall be determined in accordance with and as identified in the Local Exchange Routing Guide (LERG). For the avoidance of any doubt, under no circumstances shall Verizon be required to transit traffic through a Verizon Tandem to a Central Office that the LERG does not identify as subtending that particular Verizon Tandem. Switched Exchange Access Service traffic is not Tandem Transit Traffic.
- 12.2 Tandem Transit Traffic Service provides QuantumShift with the transport of Tandem Transit Traffic as provided below.
- 12.3 Tandem Transit Traffic may be routed over the Interconnection Trunks described in Sections 2 through 6 of this Attachment. QuantumShift shall deliver each Tandem Transit Traffic call to Verizon's Tandem with CCS and the appropriate Transactional Capabilities Application Part ("TCAP") message to facilitate full interoperability of CLASS Features and billing functions.
- 12.4 QuantumShift may use Tandem Transit Traffic Service only for traffic that originates on QuantumShift's network and only to send traffic to an Other Carrier with whom QuantumShift has a reciprocal traffic exchange arrangement (either via written agreement or mutual tariffs) that provides for the Other Carrier, to terminate or complete traffic originated by QuantumShift and to bill QuantumShift, and not to bill Verizon, for such traffic. QuantumShift agrees not to use Verizon's Tandem Transit Traffic Service to send traffic to an Other Carrier

with whom QuantumShift does not have such a reciprocal traffic exchange arrangement or to send traffic that does not originate on QuantumShift's network.

- 12.5 QuantumShift shall pay Verizon for Tandem Transit Traffic Service at the rates specified in the Pricing Attachment. Verizon will not be liable for compensation to any Other Carrier for any traffic that is transported through Verizon's Tandem and Verizon reserves the right to assess to QuantumShift any additional charges or costs any Other Carrier imposes or levies on Verizon for the delivery or termination of such traffic, including any Switched Exchange Access Service charges. If Verizon is billed by any Other Carrier for any traffic originated by QuantumShift, Verizon may provide notice to QuantumShift of such billing. Upon receipt of such notice, QuantumShift shall immediately stop using Verizon's Tandem Transit Traffic Service to send any traffic to such Other Carrier until it has provided to Verizon certification that the Other Carrier has removed such billed charges from its bill to Verizon and that the Other Carrier will not bill Verizon for any traffic originated by QuantumShift. Such certification must be signed by an authorized officer or agent of the Other Carrier and must be in a form acceptable to Verizon.
- 12.6 If QuantumShift uses Tandem Transit Traffic Service for traffic volumes that exceed the Centum Call Seconds (Hundred Call Seconds) busy hour equivalent of 200,000 combined minutes of use per month (a DS1 equivalent) to the subtending End Office of a particular Other Carrier for any month (the "Threshold Level"). QuantumShift shall use good faith efforts to establish direct interconnection with such Other Carrier and reduce such traffic volumes below the Threshold Level. If Verizon believes that QuantumShift has not exercised good faith efforts promptly to obtain such direct interconnection, either Party may use the Dispute Resolution processes of this Agreement.
- 12.7 If QuantumShift fails to comply with Section 12 of this Attachment, such failure shall be a material breach of a material provision of this Agreement and Verizon may exercise any and all remedies under this Agreement and Applicable Law for such breach.
- 12.8 If or when a third party carrier plans to subtend a QuantumShift switch, then QuantumShift shall provide written notice to Verizon at least ninety (90) days before such subtending service arrangement becomes effective so that Verizon may negotiate and establish direct interconnection with such third party carrier. Upon written request from Verizon, QuantumShift shall offer to Verizon a service arrangement equivalent to or the same as Tandem Transit Traffic Service provided by Verizon to QuantumShift as defined in this Section such that Verizon may terminate calls to a Central Office or its equivalent of a CLEC, ILEC other than Verizon, CMRS carrier, or other LEC, that subtends a QuantumShift Central Office or its equivalent ("Reciprocal Tandem Transit Service"). QuantumShift shall offer such Reciprocal Transit Service arrangements under terms and conditions of an amendment to this Agreement or a separate agreement no less favorable than those provided in this Section.
- 12.9 Neither Party shall take any actions to prevent the other Party from entering into a direct and reciprocal traffic exchange arrangement with any carrier to which it originates, or from which it terminates, traffic.

13. Number Resources, Rate Center Areas and Routing Points

- 13.1 Nothing in this Agreement shall be construed to limit or otherwise adversely affect in any manner either Party's right to employ or to request and be assigned any Central Office Codes ("NXX") pursuant to the Central Office Code

Assignment Guidelines and any relevant FCC or Commission orders, as may be amended from time to time, or to establish, by Tariff or otherwise, Rate Center Areas and Routing Points corresponding to such NXX codes.

- 13.2 It shall be the responsibility of each Party to program and update its own switches and network systems pursuant to information provided on ASRs as well as the LERG in order to recognize and route traffic to the other Party's assigned NXX codes. Except as expressly set forth in this Agreement, neither Party shall impose any fees or charges whatsoever on the other Party for such activities.
- 13.3 Unless otherwise required by Commission order, the Rate Center Areas will be the same for each Party. During the term of this Agreement, QuantumShift shall adopt the Rate Center Area and Rate Center Points that the Commission has approved for Verizon within the LATA and Tandem serving area. QuantumShift shall assign whole NPA-NXX codes to each Rate Center Area unless otherwise ordered by the FCC, the Commission or another governmental entity of appropriate jurisdiction, or the LEC industry adopts alternative methods of utilizing NXXs.
- 13.4 QuantumShift will also designate a Routing Point for each assigned NXX code. QuantumShift shall designate one location for each Rate Center Area in which the QuantumShift has established NXX code(s) as the Routing Point for the NPA-NXXs associated with that Rate Center Area, and such Routing Point shall be within the same LATA as the Rate Center Area but not necessarily within the Rate Center Area itself. Unless specified otherwise, calls to subsequent NXXs of QuantumShift will be routed in the same manner as calls to QuantumShift's initial NXXs.
- 13.5 Notwithstanding anything to the contrary contained herein, nothing in this Agreement is intended, and nothing in this Agreement shall be construed, to in any way constrain QuantumShift's choices regarding the size of the local calling area(s) that QuantumShift may establish for its Customers, which local calling areas may be larger than, smaller than, or identical to Verizon's local calling areas.

14. Joint Network Implementation and Grooming Process; Forecasting

14.1 Joint Network Implementation and Grooming Process.

Upon request of either Party, the Parties shall jointly develop an implementation and grooming process (the "Joint Grooming Process" or "Joint Process") which may define and detail, inter alia:

- 14.1.1 standards to ensure that Interconnection Trunks experience a grade of service, availability and quality which is comparable to that achieved on interoffice trunks within Verizon's network and in accord with all appropriate relevant industry-accepted quality, reliability and availability standards. Except as otherwise stated in this Agreement, trunks provided by either Party for Interconnection services will be engineered using a design-blocking objective of B.01.
- 14.1.2 the respective duties and responsibilities of the Parties with respect to the administration and maintenance of the trunk groups, including, but not limited to, standards and procedures for notification and discoveries of trunk disconnects;
- 14.1.3 disaster recovery provision escalations;

- 14.1.4 additional technically feasible Point(s) of Interconnection on Verizon's network in a LATA as provided in Section 2 of this Attachment; and
 - 14.1.5 such other matters as the Parties may agree, including, e.g., End Office to End Office high usage trunks as good engineering practices may dictate.
- 14.2 Trunk Forecasting Requirements.
- 14.2.1 Initial Trunk Forecast Requirements. At least ninety (90) days before initiating interconnection in a LATA, QuantumShift shall provide Verizon a two (2)-year traffic forecast that complies with the Verizon Interconnection Trunking Forecast Guide, as revised from time to time. This initial traffic forecast will provide the amount of traffic to be delivered to and from Verizon over each of the Interconnection Trunk groups in the LATA over the next eight (8) quarters.
 - 14.2.2 Ongoing Trunk Forecast Requirements. Where the Parties have already established interconnection in a LATA, QuantumShift shall provide a new or revised traffic forecast that complies with the Verizon Interconnection Trunking Forecast Guide when QuantumShift develops plans or becomes aware of information that will materially affect the Parties' interconnection in that LATA. Instances that require a new or revised forecast include, but are not limited to: (a) QuantumShift plans to deploy a new switch; (b) QuantumShift plans to implement a new POI or network architecture; (c) QuantumShift plans to rearrange its network; (d) QuantumShift plans to convert a One-Way Interconnection Trunk group to a Two-Way Interconnection Trunk group; (e) QuantumShift plans to convert a Two-Way Interconnection Trunk group to a One-Way Interconnection Trunk group; or (f) QuantumShift expects a significant change in interconnection traffic volume. In addition, upon request by either Party, the Parties shall meet to: (i) review traffic and usage data on End Office and Tandem Interconnection Trunk groups and (ii) determine whether the Parties should establish new Interconnection Trunk groups, augment existing Interconnection Trunk groups, or disconnect existing Interconnection Trunks.
 - 14.2.3 Use of Trunk Forecasts. Trunk forecasts provided pursuant to this Agreement must be prepared in good faith but are not otherwise binding on QuantumShift or Verizon.

15. Number Portability - Section 251(B)(2)

15.1 Scope.

The Parties shall provide Number Portability (NP) in accordance with rules and regulations as from time to time prescribed by the FCC.

15.2 Procedures for Providing LNP ("Local Number Portability").

The Parties will follow the LNP provisioning process recommended by the North American Numbering Council (NANC) and the Industry Numbering Council (INC), and adopted by the FCC. In addition, the Parties agree to follow the LNP ordering procedures established at the OBF. The Parties shall provide LNP on a reciprocal basis.

- 15.2.1 A Customer of one Party ("Party A") elects to become a Customer of the other Party ("Party B"). The Customer elects to utilize the original telephone number(s) corresponding to the Telephone Exchange Service(s) it previously received from Party A, in conjunction with the Telephone Exchange Service(s) it will now receive from Party B. After Party B has received authorization from the Customer in accordance with Applicable Law and sends an LSR to Party A, Parties A and B will work together to port the Customer's telephone number(s) from Party A's network to Party B's network.
- 15.2.2 When a telephone number is ported out of Party A's network, Party A will remove any non-proprietary line based calling card(s) associated with the ported number(s) from its Line Information Database (LIDB). Reactivation of the line-based calling card in another LIDB, if desired, is the responsibility of Party B or Party B's Customer.
- 15.2.3 When a Customer of Party A ports their telephone numbers to Party B and the Customer has previously secured a reservation of line numbers from Party A for possible activation at a future point, these reserved but inactive numbers may be ported along with the active numbers to be ported provided the numbers have been reserved for the Customer. Party B may request that Party A port all reserved numbers assigned to the Customer or that Party A port only those numbers listed by Party B. As long as Party B maintains reserved but inactive numbers ported for the Customer, Party A shall not reassign those numbers. Party B shall not reassign the reserved numbers to another Customer.
- 15.2.4 When a Customer of Party A ports their telephone numbers to Party B, in the process of porting the Customer's telephone numbers, Party A shall implement the ten-digit trigger feature where it is available. When Party A receives the porting request, the unconditional trigger shall be applied to the Customer's line before the due date of the porting activity. When the ten-digit unconditional trigger is not available, Party A and Party B must coordinate the disconnect activity.
- 15.2.5 The Parties shall furnish each other with the Jurisdiction Information Parameter (JIP) in the Initial Address Message (IAM), according to industry standards.
- 15.2.6 Where LNP is commercially available, the NXXs in the office shall be defined as portable, except as noted in 15.2.7, and translations will be changed in the Parties' switches to open those NXXs for database queries in all applicable LNP capable offices within the LATA of the given switch(es). On a prospective basis, all newly deployed switches will be equipped with LNP capability and so noted in the LERG.
- 15.2.7 All NXXs assigned to LNP capable switches are to be designated as portable unless a NXX(s) has otherwise been designated as non-portable. Non-portable NXXs include NXX codes assigned to paging services; NXX codes assigned for internal testing and official use, and any other NXX codes required to be designated as non-portable by the rules and regulations of the FCC. NXX codes assigned to mass calling on a choked network may not be ported using LNP technology but are portable using methods established by the NANC and adopted by the FCC. On a prospective basis, newly assigned codes in

switches capable of porting shall become commercially available for porting with the effective date in the network.

15.2.8 Both Parties' use of LNP shall meet the performance criteria specified by the FCC. Both Parties will act as the default carrier for the other Party in the event that either Party is unable to perform the routing necessary for LNP.

15.3 Procedures for Providing NP Through Full NXX Code Migration.

Where a Party has activated an entire NXX for a single Customer, or activated at least eighty percent (80%) of an NXX for a single Customer, with the remaining numbers in that NXX either reserved for future use by that Customer or otherwise unused, if such Customer chooses to receive Telephone Exchange Service from the other Party, the first Party shall cooperate with the second Party to have the entire NXX reassigned in the LERG (and associated industry databases, routing tables, etc.) to an End Office operated by the second Party. Such transfer will be accomplished with appropriate coordination between the Parties and subject to appropriate industry lead times for movements of NXXs from one switch to another. Neither Party shall charge the other in connection with this coordinated transfer.

15.4 Procedures for LNP Request.

The Parties shall provide for the requesting of End Office LNP capability on a reciprocal basis through a written request. The Parties acknowledge that Verizon has deployed LNP throughout its network in compliance with FCC 96-286 and other applicable FCC Regulations.

15.4.1 If Party B desires to have LNP capability deployed in an End Office of Party A, which is not currently capable, Party B shall issue a LNP request to Party A. Party A will respond to the Party B, within ten (10) days of receipt of the request, with a date for which LNP will be available in the requested End Office. Party A shall proceed to provide for LNP in compliance with the procedures and timelines set forth in FCC 96-286, Paragraph 80, and FCC 97-74, Paragraphs 65 through 67.

15.4.2 The Parties acknowledge that each can determine the LNP-capable End Offices of the other through the Local Exchange Routing Guide (LERG). In addition, the Parties shall make information available upon request showing their respective LNP-capable End Offices, as set forth in this Section 15.4.

15.5 QuantumShift shall submit orders to port numbers electronically using an LSR via the Verizon web Graphical User Interface ("GUI") or Electronic Data Interface ("EDI") pursuant to the instructions, business rules and guidelines set forth on the Verizon Global Wholesale website (formerly referred to as the Verizon Partner Solutions website).

16. Good Faith Performance

If and, to the extent that, Verizon, prior to the Effective Date of this Agreement, has not provided in the Commonwealth of Pennsylvania a Service offered under this Attachment, Verizon reserves the right to negotiate in good faith with QuantumShift reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such Service; and, if the Parties cannot agree to such terms and conditions (including,

without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.

RESALE ATTACHMENT

1. General

Verizon shall provide to QuantumShift, in accordance with this Agreement (including, but not limited to, Verizon's applicable Tariffs) and the requirements of Applicable Law, Verizon's Telecommunications Services for resale by QuantumShift; provided, that notwithstanding any other provision of this Agreement, Verizon shall be obligated to provide Telecommunications Services to QuantumShift only to the extent required by Applicable Law and may decline to provide a Telecommunications Service to QuantumShift to the extent that provision of such Telecommunications Service is not required by Applicable Law.

2. Use of Verizon Telecommunications Services

2.1 Verizon Telecommunications Services may be purchased by QuantumShift under this Resale Attachment only for the purpose of resale by QuantumShift as a Telecommunications Carrier. Verizon Telecommunications Services to be purchased by QuantumShift for other purposes (including, but not limited to, QuantumShift's own use) must be purchased by QuantumShift pursuant to other applicable Attachments to this Agreement (if any), or separate written agreements, including, but not limited to, applicable Verizon Tariffs.

2.2 QuantumShift shall not resell:

2.2.1 Residential service to persons not eligible to subscribe to such service from Verizon (including, but not limited to, business or other nonresidential Customers);

2.2.2 Lifeline, Link Up America, or other means-tested service offerings, to persons not eligible to subscribe to such service offerings from Verizon;

2.2.3 Grandfathered or discontinued service offerings to persons not eligible to subscribe to such service offerings from Verizon; or

2.2.4 Any other Verizon service in violation of a restriction stated in this Agreement (including, but not limited to, a Verizon Tariff) that is not prohibited by Applicable Law.

2.2.5 In addition to any other actions taken by QuantumShift to comply with this Section 2.2, QuantumShift shall take those actions required by Applicable Law to determine the eligibility of QuantumShift Customers to purchase a service, including, but not limited to, obtaining any proof or certification of eligibility to purchase Lifeline, Link Up America, or other means-tested services, required by Applicable Law. QuantumShift shall indemnify Verizon from any Claims resulting from QuantumShift's failure to take such actions required by Applicable Law.

2.2.6 Verizon may perform audits to confirm QuantumShift's conformity to the provisions of this Section 2.2. Such audits may be performed twice per calendar year and shall be performed in accordance with Section 7 of the General Terms and Conditions.

- 2.3 QuantumShift shall be subject to the same limitations that Verizon's Customers are subject to with respect to any Telecommunications Service that Verizon grandfathers or discontinues offering. Without limiting the foregoing, except to the extent that Verizon follows a different practice for Verizon Customers in regard to a grandfathered Telecommunications Service, such grandfathered Telecommunications Service: (a) shall be available only to a Customer that already has such Telecommunications Service; (b) may not be moved to a new service location; and (c) will be furnished only to the extent that facilities continue to be available to provide such Telecommunications Service.
- 2.4 QuantumShift shall not be eligible to participate in any Verizon plan or program under which Verizon Customers may obtain products or services, which are not Verizon Telecommunications Services, in return for trying, agreeing to purchase, purchasing, or using Verizon Telecommunications Services.
- 2.5 In accordance with 47 CFR § 51.617(b), Verizon shall be entitled to all charges for Verizon Exchange Access services used by interexchange carriers to provide service to QuantumShift Customers.

3. Availability of Verizon Telecommunications Services

- 3.1 Verizon will provide a Verizon Telecommunications Service to QuantumShift for resale pursuant to this Attachment where and to the same extent, but only where and to the same extent that such Verizon Telecommunications Service is provided to Verizon's Customers.
- 3.2 Except as otherwise required by Applicable Law, subject to Section 3.1 of this Attachment, Verizon shall have the right to add, modify, grandfather, discontinue or withdraw Verizon Telecommunications Services at any time, without the consent of QuantumShift.
- 3.3 To the extent required by Applicable Law, the Verizon Telecommunications Services to be provided to QuantumShift for resale pursuant to this Attachment will include a Verizon Telecommunications Service customer-specific contract service arrangement ("CSA") (such as a customer specific pricing arrangement or individual case based pricing arrangement) that Verizon is providing to a Verizon Customer at the time the CSA is requested by QuantumShift.

4. Responsibility for Charges

- 4.1 QuantumShift shall be responsible for and pay to Verizon all charges for any Telecommunications Services provided by Verizon or provided by persons other than Verizon and billed for by Verizon, that are ordered, activated or used by QuantumShift, QuantumShift Customers or any other persons, through, by means of, or in association with, Telecommunications Services provided by Verizon to QuantumShift pursuant to this Resale Attachment.
- 4.2 Upon request by QuantumShift, Verizon will provide for use on resold Verizon retail Telecommunications Service dial tone lines purchased by QuantumShift such Verizon retail Telecommunications Service call blocking and call screening services as Verizon provides to its own end user retail Customers, where and to the extent Verizon provides such Verizon retail Telecommunications Service call blocking services to Verizon's own end user retail Customers. QuantumShift understands and agrees that certain of Verizon's call blocking and call screening services are not guaranteed to block or screen all calls and that notwithstanding QuantumShift's purchase of such blocking or screening services, QuantumShift's

end user Customers or other persons ordering, activating or using Telecommunications Services on the resold dial tone lines may complete or accept calls which QuantumShift intended to block. Notwithstanding the foregoing, QuantumShift shall be responsible for and shall pay Verizon all charges for Telecommunications Services provided by Verizon or provided by persons other than Verizon and billed for by Verizon in accordance with the terms of Section 4.1 above.

5. Operations Matters

5.1 Facilities.

5.1.1 Verizon and its suppliers shall retain all of their right, title and interest in all facilities, equipment, software, information, and wiring used to provide Verizon Telecommunications Services.

5.1.2 Verizon shall have access at all reasonable times to QuantumShift Customer locations for the purpose of installing, inspecting, maintaining, repairing, and removing, facilities, equipment, software, and wiring used to provide the Verizon Telecommunications Services. QuantumShift shall, at QuantumShift's expense, obtain any rights and authorizations necessary for such access.

5.1.3 Except as otherwise agreed to in writing by Verizon, Verizon shall not be responsible for the installation, inspection, repair, maintenance, or removal of facilities, equipment, software, or wiring provided by QuantumShift or QuantumShift Customers for use with Verizon Telecommunications Services.

5.2 Branding.

5.2.1 Except as stated in Section 5.2.2 of this Attachment, in providing Verizon Telecommunications Services to QuantumShift, Verizon shall have the right (but not the obligation) to identify the Verizon Telecommunications Services with Verizon's trade names, trademarks and service marks ("Verizon Marks"), to the same extent that these Services are identified with Verizon's Marks when they are provided to Verizon's Customers. Any such identification of Verizon's Telecommunications Services shall not constitute the grant of a license or other right to QuantumShift to use Verizon's Marks.

5.2.2 To the extent required by Applicable Law, upon request by QuantumShift and at prices, terms and conditions to be negotiated by QuantumShift and Verizon, Verizon shall provide Verizon Telecommunications Services for resale that are identified by QuantumShift's trade name, or that are not identified by trade name, trademark or service mark.

5.2.3 If Verizon uses a third-party contractor to provide Verizon operator services or Verizon directory assistance, QuantumShift will be responsible for entering into a direct contractual arrangement with the third-party contractor at QuantumShift's expense (a) to obtain identification of Verizon operator services or Verizon directory assistance purchased by QuantumShift for resale with QuantumShift's trade name, or (b) to obtain removal of Verizon Marks from Verizon operator services or Verizon directory assistance purchased by QuantumShift for resale.

6. Rates and Charges

The rates and charges for Verizon Telecommunication Services purchased by QuantumShift for resale pursuant to this Attachment shall be as provided in this Attachment and the Pricing Attachment.

7. Good Faith Performance

If and, to the extent that, Verizon, prior to the Effective Date of this Agreement, has not provided in the Commonwealth of Pennsylvania a Service offered under this Attachment, Verizon reserves the right to negotiate in good faith with QuantumShift reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such Service; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.

NETWORK ELEMENTS ATTACHMENT

1. General

- 1.1 Verizon shall provide to QuantumShift, in accordance with this Agreement (including, but not limited to, Verizon's applicable Tariffs) and the requirements of the Federal Unbundling Rules, access to Verizon's Network Elements on an unbundled basis and in combinations (Combinations), and UNEs commingled with wholesale services ("Commingling"); provided, however, that notwithstanding any other provision of this Agreement, Verizon shall be obligated to provide access to unbundled Network Elements (UNEs), Combinations, and Commingling to QuantumShift under the terms of this Agreement only to the extent required by the Federal Unbundling Rules and may decline to provide access to UNEs, Combinations, or Commingling to QuantumShift to the extent that provision of such UNEs, Combinations, or Commingling is not required by the Federal Unbundling Rules.
- 1.2 Verizon shall be obligated to combine UNEs that are not already combined in Verizon's network only to the extent required by the Federal Unbundling Rules. Except as otherwise required by this Agreement and the Federal Unbundling Rules: (a) Verizon shall be obligated to provide a UNE or Combination pursuant to this Agreement only to the extent such UNE or Combination, and the equipment and facilities necessary to provide such UNE or Combination, are already available in Verizon's network; and (b) Verizon shall have no obligation to construct, modify, or deploy facilities or equipment to offer any UNE or Combination.
- 1.3 QuantumShift may use a UNE or Combination only for those purposes for which Verizon is required by the Federal Unbundling Rules to provide such UNE or Combination to QuantumShift. Without limiting the foregoing, QuantumShift may not access a UNE or Combination for the exclusive provision of Mobile Wireless Services or Interexchange Services. For purposes of this section, "Interexchange Services" shall have the meaning set forth in the Triennial Review Remand Order and subsequent applicable FCC orders.
 - 1.3.1 Verizon shall not be obligated to provide to QuantumShift, and QuantumShift shall not request from Verizon, access to a proprietary advanced intelligent network service.
- 1.4 Nothing contained in this Agreement shall be deemed to constitute an agreement by Verizon that any item identified in this Agreement as a Network Element is (i) a Network Element under the Federal Unbundling Rules, or (ii) a Network Element Verizon is required by the Federal Unbundling Rules to provide to QuantumShift on an unbundled basis or in combination with other Network Elements.
- 1.5 If as the result of QuantumShift Customer actions (e.g., Customer Not Ready ("CNR")), Verizon cannot complete requested work activity when a technician has been dispatched to the QuantumShift Customer premises, QuantumShift will be assessed a non-recurring charge associated with this visit. This charge will be the sum of the applicable Service Order charge as provided in the Pricing Attachment and the Customer Not Ready Charge provided for in the Pricing Attachment (or, in the absence of a Customer Not Ready Charge, the Premises Visit Charge as provided in Verizon's applicable retail or wholesale Tariff or in the Pricing Attachment).

1.6 Absence or Cessation of Unbundling Obligation and Related Provisions. The following provisions shall apply notwithstanding any other provision of this Agreement or any Verizon Tariff or SGAT:

1.6.1 Discontinued Facilities.

1.6.1.1 Verizon may cease offering or providing QuantumShift with access on an unbundled basis at rates prescribed under Section 251 of the Act to any facility that is or becomes a Discontinued Facility, whether as a stand-alone UNE, as part of a Combination, or otherwise. To the extent Verizon has not already ceased offering or providing unbundled access to a particular Discontinued Facility that is a Discontinued Facility as of the Effective Date, Verizon may cease offering or providing unbundled access to such Discontinued Facility immediately upon the Effective Date without further notice to QuantumShift. If a facility on or at any time after the Effective Date is or becomes a Discontinued Facility, Verizon, to the extent it has not already ceased providing unbundled access to such Discontinued Facility, and provided it has given at least ninety (90) days written notice of discontinuance in cases where it has not already ceased providing such access, will continue to provide unbundled access to such Discontinued Facility under the Agreement only through the effective date of the notice of discontinuance, and not beyond that date.

1.6.1.2 Where Verizon is permitted to cease providing a Discontinued Facility pursuant to Section 1.6.1 above and QuantumShift has not submitted an LSR or ASR, as appropriate, to Verizon requesting disconnection of the Discontinued Facility and has not separately secured from Verizon an alternative arrangement to replace the Discontinued Facility, then Verizon, to the extent it has not already done so, may disconnect the subject Discontinued Facility without further notice to QuantumShift. In lieu of disconnecting the subject Discontinued Facility in the foregoing circumstances, Verizon, in its sole discretion, may elect to: (a) convert the subject Discontinued Facility to an arrangement available under a Verizon access tariff (in which case month-to-month rates shall apply unless a different rate applies under an applicable special access term/volume plan or other special access tariff arrangement in which QuantumShift is then enrolled), a resale arrangement, or other analogous arrangement that Verizon shall identify or has identified in writing to QuantumShift, or (b) in lieu of such a conversion, reprice the subject Discontinued Facility by application of a new rate (or, in Verizon's sole discretion, by application of a surcharge to an existing rate) to be equivalent to an arrangement available under a Verizon access tariff (at month-to-month rates unless a different rate applies under an applicable special access term/volume plan or other special access tariff arrangement in which QuantumShift is then enrolled), a resale arrangement, or other analogous arrangement that Verizon shall identify or has identified in writing to

QuantumShift; provided, however, that Verizon may disconnect the subject Discontinued Facility (or the replacement service to which the Discontinued Facility has been converted) if QuantumShift fails to pay when due any applicable new rate or surcharge billed by Verizon.

- 1.6.2 Notwithstanding any other provision of the Agreement, QuantumShift shall not request or obtain, and Verizon may reject any QuantumShift order for, a DS1 Loop, a DS3 Loop, DS1 Dedicated Transport, DS3 Dedicated Transport, or Dark Fiber Transport, including, but not limited to, any of the foregoing elements that constitute part of a Combination or that QuantumShift seeks to convert from another wholesale service to an unbundled network element (collectively, "TRRO Certification Elements"): (a) in any case where QuantumShift's order conflicts with a provision of a Verizon Tariff, (b) in any case where QuantumShift's order conflicts with a non-impaired UNE Wire Center designation set forth in a Wire Center List that Verizon has made available to QuantumShift by notice and/or by publication on Verizon's wholesale website, (c) in any case where QuantumShift's order conflicts with a non-impaired UNE Wire Center designation that the Commission or the FCC has ordered or approved or that has otherwise been confirmed through previous dispute resolution (regardless of whether QuantumShift was a party to such dispute resolution), or (d) as otherwise permitted under the Federal Unbundling Rules (including, but not limited to, upon a determination by the Commission, the FCC, or a court of competent jurisdiction that Verizon may reject orders for TRRO Certification Elements without first seeking dispute resolution). If, QuantumShift, inadvertently or otherwise, submits to Verizon an order that conflicts with this section and Verizon, inadvertently or otherwise, provisions the order on a Section 251 UNE basis, then upon thirty (30) days written notice from Verizon the subject service, facility or arrangement shall be treated as a Discontinued Facility under Section 1.6.1.2 above. The new non-UNE rate and/or surcharge that applies to the Discontinued Facility under Section 1.6.1.2 shall be applied retrospectively back to the date of provisioning (including, but not limited to, late payment charges for the unpaid difference between UNE rates and the new non-UNE rate and/or surcharge that applies under Section 1.6.1.2).
- 1.7 Limitation With Respect to Replacement Arrangements. Notwithstanding any other provision of this Agreement, any negotiations regarding any UNE-replacement arrangement, facility, service or the like that Verizon is not required to provide under the Federal Unbundling Rules (including without limitation any arrangement, facility, service or the like that Verizon offers under an access tariff) shall be deemed not to have been conducted pursuant to the Agreement, 47 U.S.C. § 252(a)(1), or 47 C.F.R. Part 51, and shall not be subject to arbitration or other requirements under 47 U.S.C. § 252(b). Any reference in this Attachment to Verizon's provision of a arrangement, facility, service or the like that Verizon is not required to provide under the Federal Unbundling Rules is solely for the convenience of the Parties and shall not be construed to require or permit: (a) arbitration pursuant to 47 U.S.C. § 252(b) of the rates, terms, or conditions upon which Verizon may provide such arrangement, facility, service or the like, or (b) application of 47 U.S.C. § 252 in any other respect.

2. Verizon's Provision of Network Elements

Subject to the conditions set forth in Section 1 of this Attachment, in accordance with, but only to the extent required by, the Federal Unbundling Rules, Verizon shall provide QuantumShift access to the following:

- 2.1 Loops, as set forth in Section 3 of this Attachment;
- 2.2 Line Splitting (also referred to as “Loop Sharing”), as set forth in Section 4 of this Attachment;
- 2.3 [Intentionally Left Blank];
- 2.4 Sub-Loops, as set forth in Section 6 of this Attachment;
- 2.5 Sub-Loop for Multiunit Tenant Premises Access, as set forth in Section 7 of this Attachment;
- 2.6 Dark Fiber Transport (sometimes referred to as “Dark Fiber IOF”), as set forth in Section 8 of this Attachment;
- 2.7 Network Interface Device, as set forth in Section 9 of this Attachment;
- 2.8 [Intentionally Left Blank];
- 2.9 Dedicated Transport (may also be referred to as “Interoffice Transmission Facilities”) (or “IOF”), as set forth in Section 11 of this Attachment;
- 2.10 [Intentionally Left Blank];
- 2.11 Operations Support Systems, as set forth in Section 13 of this Attachment; and
- 2.12 Other UNEs in accordance with Section 14 of this Attachment.

3. Loop Transmission Types

- 3.1 Subject to the conditions set forth in Section 1 of this Attachment, Verizon shall allow QuantumShift to access Loops unbundled from local switching and local transport, in accordance with this Section 3 and the rates and charges provided in the Pricing Attachment. Verizon shall allow QuantumShift access to Loops in accordance with, but only to extent required by, the Federal Unbundling Rules. Subject to the foregoing and the provisions regarding FTTP Loops, in Section 3.5 below, and Hybrid Loops, in Section 3.6 below, the available Loop types are as set forth below:
 - 3.1.1 “2 Wire Analog Voice Grade Loop” 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. This Loop type is more fully described in Verizon Technical Reference (TR)-72565, as revised from time-to-time. If “Customer-Specified Signaling” is requested, the Loop will operate with one of the following signaling types that may be specified when the Loop is ordered: loop-start, ground-start, loop-reverse-battery, and no signaling. Customer specified signaling is more fully described in Verizon TR-72570, as revised from time-to-time. Verizon will not build new facilities or modify existing facilities except to the extent required in Section 17 of this Attachment.
 - 3.1.2 “4-Wire Analog Voice Grade Loop” 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. This Loop type will operate with one of the following signaling types that may be specified when the Loop is ordered: loop-start, ground-start, loop-reverse-battery, duplex, and no signaling. This Loop type is more fully described in Verizon TR-72570, as revised from time-to-time. Verizon will not build new facilities or modify existing facilities except to the extent required in Section 17 of this Attachment.

- 3.1.3 “2-Wire ISDN Digital Grade Loop” 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. This Loop type is more fully described in American National Standards Institute (ANSI) T1.601-1998 and Verizon TR 72575, as revised from time-to-time. In some cases loop extension equipment may be necessary to bring the line loss within acceptable levels. Verizon will provide loop extension equipment only upon request. A separate charge will apply for loop extension equipment. The 2-Wire ISDN Digital Grade Loop is available only in the former Bell Atlantic Service Areas. In the former GTE Service Areas only, QuantumShift may order a 2-Wire Digital Compatible Loop using 2-wire ISDN ordering codes to provide similar capability. Verizon will not build new facilities or modify existing facilities except to the extent required in Section 17 of this Attachment.
- 3.1.4 “2-Wire ADSL-Compatible Loop” or “ADSL 2W” provides a channel with 2-wire interfaces at each end that is suitable for the transport of digital signals up to 8 Mbps toward the Customer and up to 1 Mbps from the Customer. This Loop type is more fully described in Verizon TR-72575, as revised from time-to-time. ADSL-Compatible Loops will be available only where existing copper facilities are available and meet applicable specifications. Verizon will not build new facilities or modify existing facilities except to the extent required in Sections 3.2 or 17 of this Attachment. The upstream and downstream ADSL power spectral density masks and dc line power limits in Verizon TR 72575, as revised from time-to-time, must be met. The 2-Wire ADSL-Compatible Loop is available only in the former Bell Atlantic Service Areas. In the former GTE Service Areas only, QuantumShift may order a 2-Wire Digital Compatible Loop using 2-wire ADSL ordering codes to provide similar capability.
- 3.1.5 “2-Wire HDSL-Compatible Loop” or “HDSL 2W” consists of a single 2-wire non-loaded, twisted copper pair that meets the carrier serving area design criteria. This Loop type is more fully described in Verizon TR-72575, as revised from time-to-time. The HDSL power spectral density mask and dc line power limits referenced in Verizon TR 72575, as revised from time-to-time, must be met. 2-Wire HDSL-Compatible Loops will be provided only where existing facilities are available and can meet applicable specifications. The 2-Wire HDSL-Compatible Loop is available only in the former Bell Atlantic Service areas. In the former GTE Service Areas only, QuantumShift may order a 2-Wire Digital Compatible Loop using 2-Wire HDSL ordering codes to provide similar capability. Verizon will not build new facilities or modify existing facilities except to the extent required in Sections 3.2 or 17 of this Attachment.

- 3.1.6 “4-Wire HDSL-Compatible Loop” or “HDSL 4W” consists of two 2-wire non-loaded, twisted copper pairs that meet the carrier serving area design criteria. This Loop type is more fully described in Verizon TR-72575, as revised from time-to-time. The HDSL power spectral density mask and dc line power limits referenced in Verizon TR 72575, as revised from time-to-time, must be met. 4-Wire HDSL-Compatible Loops will be provided only where existing facilities are available and can meet applicable specifications. Verizon will not build new facilities or modify existing facilities except to the extent required in Sections 3.2 or 17 of this Attachment.
- 3.1.7 “2-Wire IDSL-Compatible Metallic Loop” consists of a single 2-wire non-loaded, twisted copper pair that meets revised resistance design criteria. This Loop is intended to be used with very-low band symmetric DSL systems that meet the Class 1 signal power limits and other criteria in the T1E1.4 loop spectrum management standard (T1E1.4/2000-002R3) and are not compatible with 2B1Q 160 kbps ISDN transport systems. The actual data rate achieved depends upon the performance of CLEC-provided modems with the electrical characteristics associated with the loop. This Loop type is more fully described in T1E1.4/2000-002R3, as revised from time-to-time. This loop cannot be provided via UDLC. The 2-Wire IDSL-Compatible Metallic Loop is available only in the former Bell Atlantic Service Areas. In the former GTE Service Areas only, QuantumShift may order a 2-Wire Digital Compatible Loop using ISDN ordering codes to provide similar capability. Verizon will not build new facilities or modify existing facilities except to the extent required in Sections 3.2 or 17 of this Attachment.
- 3.1.8 “2-Wire SDSL-Compatible Loop”, is intended to be used with low band symmetric DSL systems that meet the Class 2 signal power limits and other criteria in the T1E1.4 loop spectrum management standard (T1E1.4/2000-002R3). This Loop consists of a single 2-wire non-loaded, twisted copper pair that meets Class 2 length limit in T1E1.4/2000-002R3. The data rate achieved depends on the performance of the CLEC-provided modems with the electrical characteristics associated with the loop. This Loop type is more fully described in T1E1.4/2000-002R3, as revised from time-to-time. The 2-Wire SDSL-Compatible Loop is available only in the former Bell Atlantic Service Areas. In the former GTE Service Areas only, QuantumShift may order a 2-Wire Digital Compatible Loop to provide similar capability. SDSL-compatible local loops will be provided only where facilities are available and can meet applicable specifications. Verizon will not build new facilities or modify existing facilities except to the extent required in Sections 3.2 or 17 of this Attachment.
- 3.1.9 “4-Wire 56 kbps Loop” is a 4-wire Loop that provides a transmission path that is suitable for the transport of digital data at a synchronous rate of 56 kbps in opposite directions on such Loop simultaneously. A 4-Wire 56 kbps Loop consists of two pairs of non-loaded copper wires with no intermediate electronics or it consists of universal digital loop carrier with 56 kbps DDS dataport transport capability. Verizon shall provide 4-Wire 56 kbps Loops to QuantumShift in accordance with, and subject to, the technical specifications set forth in Verizon TR-72575, as revised from time-to-time. Verizon will not build new

facilities or modify existing facilities except to the extent required in Section 17 of this Attachment.

- 3.1.10 “DS1 Loops” provide a digital transmission channel suitable for the transport of 1.544 Mbps digital signals. This Loop type is more fully described in Verizon TR 72575, as revised from time to time. The DS1 Loop includes the electronics necessary to provide the DS1 transmission rate. If, at the requested installation date, the electronics necessary to provide the DS1 transmission rate are not available for the requested DS1 Loop, then Verizon will not install new electronics except to the extent required in Section 17 of this Attachment. Verizon will not build new facilities and will not modify existing facilities except to the extent required in Section 17 of this Attachment. If the electronics necessary to provide Clear Channel (B8ZS) signaling are at the requested installation date available for a requested DS1 Loop, upon request by QuantumShift, the DS1 Loop will be furnished with Clear Channel (B8ZS) signaling. Verizon will not install new electronics to furnish Clear Channel (B8ZS) signaling. For purposes of provisions implementing any right Verizon may have to cease providing unbundled access to DS1-capacity Loops under the TRRO pursuant to Section 1 of this Attachment, the term "DS1 Loop" further includes any type of Loop described in Section 3.1 of the Network Elements Attachment that provides a digital transmission channel suitable for the transport of 1.544 Mbps digital signals, regardless of whether the subject Loop meets the specific definition of a DS1 Loop set forth in this section.
- 3.1.11 “DS3 Loops” will support the transmission of isochronous bipolar serial data at a rate of 44.736 Mbps (the equivalent of 28 DS1 channels). This Loop type is more fully described in Verizon TR 72575, as revised from time to time. The DS3 Loop includes the electronics necessary to provide the DS3 transmission rate. If, at the requested installation date, the electronics necessary to provide the DS3 transmission rate are not available for the requested DS3 Loop, then Verizon will not install new electronics except to the extent required in Section 17 of this Attachment. Verizon will not build new facilities and will not modify existing facilities except to the extent required in Section 17 of this Attachment. For purposes of provisions implementing any right Verizon may have to cease providing unbundled access to DS3-capacity loops under the TRRO pursuant to Section 1 of this Attachment, the term "DS3 Loop" further includes any type of Loop described in Section 3.1 of the Network Elements Attachment that provides a digital transmission channel suitable for the transport of 44.736 Mbps digital signals, regardless of whether the subject Loop meets the specific definition of a DS3 Loop set forth in this section.
- 3.1.12 In the former Bell Atlantic Service Areas only, “Digital Designed Loops” are comprised of designed loops that meet specific QuantumShift requirements for metallic loops over 18k ft. or for conditioning of ADSL, HDSL, SDSL, IDSL, or BRI ISDN Loops. “Digital Designed Loops” may include requests for:
- 3.1.12.1 a 2W Digital Designed Metallic Loop with a total loop length of 18k to 30k ft., unloaded, with the option to remove bridged tap;

- 3.1.12.2 a 2W ADSL Loop of 12k to 18k ft. with an option to remove bridged tap (such a Loop with the bridged tap so removed shall be deemed to be a "2W ADSL Compatible Loop");
- 3.1.12.3 a 2W ADSL Loop of less than 12k ft. with an option to remove bridged tap (such a Loop with the bridged tap so removed shall be deemed to be a "2W ADSL Compatible Loop");
- 3.1.12.4 a 2W HDSL Loop of less than 12k ft. with an option to remove bridged tap;
- 3.1.12.5 a 4W HDSL Loop of less than 12k ft with an option to remove bridged tap;
- 3.1.12.6 a 2 W Digital Designed Metallic Loop with Verizon-placed ISDN loop extension electronics;
- 3.1.12.7 a 2W SDSL Loop with an option to remove bridged tap; and
- 3.1.12.8 a 2W IDSL Loop of less than 18k ft. with an option to remove bridged tap;
- 3.1.13 Verizon shall make Digital Designed Loops available QuantumShift at the rates as set forth in the Pricing Attachment.
- 3.1.14 In the former GTE Service Areas only, "Conditioned Loops" are comprised of designed loops that meet specific QuantumShift requirements for metallic loops over 12k ft. or for conditioning of 2-wire or 4-wire digital or BRI ISDN Loops. "Conditioned Loops" may include requests for:
 - 3.1.14.1 a 2W Digital Loop with a total loop length of 12k to 30k ft., unloaded, with the option to remove bridged tap (such a Loop, unloaded, with bridged tap so removed shall be deemed to be a "2W Digital Compatible Loop");
 - 3.1.14.2 a 2W Digital Loop of 12k to 18k ft. with an option to remove load coils and/or bridged tap (such a Loop with load coils and/or bridged tap so removed shall be deemed to be a "2W Digital Compatible Loop");
 - 3.1.14.3 a 2W Digital or 4W Digital Loop of less than 12k ft. with an option to remove bridged tap (such a 2W Loop with bridged tap so removed shall be deemed to be a "2W Digital Compatible Loop");
 - 3.1.14.4 a 2W Digital Loop with Verizon-placed ISDN loop extension electronics (such a Loop with ISDN loop extension electronics so placed shall be deemed to be a "2W Digital Compatible Loop").
- 3.1.15 Verizon shall make Conditioned Loops available to QuantumShift at the rates as set forth in the Pricing Attachment.
- 3.2 The following ordering procedures shall apply to xDSL Compatible Loops, Digital Designed and Conditioned Loops:

- 3.2.1 QuantumShift shall place orders for xDSL Compatible Loops, Digital Designed and Conditioned Loops by delivering to Verizon a valid electronic transmittal Service Order or other 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.
- 3.2.2 In former Bell Atlantic Service Areas, Verizon is conducting a mechanized survey of existing Loop facilities, on a Central Office by Central Office basis, to identify those Loops that meet the applicable technical characteristics established by Verizon for compatibility with xDSL Compatible or BRI ISDN signals. The results of this survey will be stored in a mechanized database and made available to QuantumShift as the process is completed in each Central Office. QuantumShift must utilize this mechanized loop qualification database, where available, in advance of submitting a valid electronic transmittal Service Order for an xDSL Compatible or BRI ISDN Loop. Charges for mechanized loop qualification information are set forth in the Pricing Attachment. In former GTE Service Areas, Verizon provides access to mechanized xDSL loop qualification information to help identify those loops that meet applicable technical characteristics for compatibility with xDSL Services that the CLEC may wish to offer to its end user Customers. QuantumShift must access Verizon's mechanized loop qualification system through the use of the on-line computer interface at www.verizon.com/wise in advance of submitting a valid electronic transmittal Service Order for xDSL service arrangements. The loop qualification information provided by Verizon gives QuantumShift the ability to determine loop composition and loop length, and may provide other loop characteristics, when present, that may indicate incompatibility with xDSL Services such as load coils or Digital Loop Carrier. Information provided by the mechanized loop qualification system also indicates whether loop conditioning may be necessary. It is the responsibility of QuantumShift to evaluate the loop qualification information provided by Verizon and determine whether a loop meets QuantumShift requirements for xDSL Service, including determining whether conditioning should be ordered, prior to submitting an Order.
- 3.2.3 If the Loop is not listed in the mechanized database described in Section 3.2.2 of this Attachment, QuantumShift must request a manual loop qualification, where such qualification is available, prior to submitting a valid electronic Service Order for an xDSL Compatible or BRI ISDN Loop. In general, Verizon will complete a manual loop qualification request within three (3) Business Days, although Verizon may require additional time due to poor record conditions, spikes in demand, or other unforeseen events. The manual loop qualification process is currently available in the former Bell Atlantic Service Areas only.
- 3.2.4 If a query to the mechanized loop qualification database or manual loop qualification indicates that a Loop does not qualify (e.g., because it does not meet the applicable technical parameters set forth in the Loop descriptions above), QuantumShift may request an Engineering Query, where available, as described in Section 3.2.7 of this Attachment, to determine whether the result is due to characteristics of

the loop itself (e.g., specific number and location of bridged taps, the specific number of load coils, or the gauge of the cable).

- 3.2.5 Once a Loop has been pre-qualified, QuantumShift will submit a Service Order pursuant to Section 3.2.1 of this Attachment if it wishes to obtain the Loop.
 - 3.2.5.1 If the Loop is determined to be xDSL Compatible and if the Loop serving the serving address is usable and available to be assigned as a xDSL Compatible Loop, Verizon will initiate standard Loop provisioning and installation processes, and standard Loop provisioning intervals will apply.
 - 3.2.5.2 If the Loop is determined to be xDSL Compatible, but the Loop serving the service address is unusable or unavailable to be assigned as an xDSL Compatible Loop, Verizon will search the Customer's serving terminal for a suitable spare facility. If an xDSL Compatible Loop is found within the serving terminal, Verizon will perform a Line and Station Transfer (or "pair swap") whereby the Verizon technician will transfer the Customer's existing service from one existing Loop facility onto an alternate existing xDSL Compatible Loop facility serving the same location. Verizon performs Line and Station Transfers in accordance with the procedures developed in the DSL Collaborative in the State of New York, NY PSC Case 00-C-0127. Standard intervals do not apply when Verizon performs a Line and Station Transfer, and additional charges shall apply as set forth in the Pricing Attachment.
- 3.2.6 If QuantumShift submits a Service Order for an xDSL Compatible or BRI ISDN Loop that has not been prequalified, Verizon will query the Service Order back to QuantumShift for qualification and will not accept such Service Order until the Loop has been prequalified on a mechanized or manual basis. If QuantumShift submits a Service Order for an xDSL Compatible or BRI ISDN Loop that is, in fact, not compatible with the requested service (e.g. ADSL, HDSL etc.) in its existing condition, Verizon will respond back to QuantumShift with a "Nonqualified" indicator and with information showing whether the non-qualified result is due to the presence of load coils, presence of digital loop carrier, or loop length (including bridged tap).
- 3.2.7 Where QuantumShift has followed the prequalification procedure described above and has determined that a Loop is not compatible with xDSL technologies or BRI ISDN service in its existing condition, it may either request an Engineering Query, where available, to determine whether conditioning may make the Loop compatible with the applicable service; or if QuantumShift is already aware of the conditioning required (e.g., where QuantumShift has previously requested a qualification and has obtained loop characteristics), QuantumShift may submit a Service Order for a Digital Designed Loop. Verizon will undertake to condition or extend the Loop in accordance with this Section 3.2 of this Attachment upon receipt of QuantumShift's valid, accurate and pre-qualified Service Order for a Digital Designed Loop.

- 3.2.8 The Parties will make reasonable efforts to coordinate their respective roles in order to minimize provisioning problems. In general, where conditioning or loop extensions are requested by QuantumShift, an interval of eighteen (18) Business Days will be required by Verizon to complete the loop analysis and the necessary construction work involved in conditioning and/or extending the loop as follows:
- 3.2.8.1 Three (3) Business Days will be required following receipt of QuantumShift's valid, accurate and pre-qualified Service Order for a Digital Designed or Conditioned Loop to analyze the loop and related plant records and to create an Engineering Work Order.
- 3.2.8.2 Upon completion of an Engineering Work Order, Verizon will initiate the construction order to perform the changes/modifications to the Loop requested by QuantumShift. Conditioning activities are, in most cases, able to be accomplished within fifteen (15) Business Days. Unforeseen conditions may add to this interval.

After the engineering and conditioning tasks have been completed, the standard Loop provisioning and installation process will be initiated, subject to Verizon's standard provisioning intervals.

- 3.2.9 If QuantumShift requires a change in scheduling, it must contact Verizon to issue a supplement to the original Service Order. If QuantumShift cancels the request for conditioning after a loop analysis has been completed but prior to the commencement of construction work, QuantumShift shall compensate Verizon for an Engineering Work Order charge as set forth in the Pricing Attachment. If QuantumShift cancels the request for conditioning after the loop analysis has been completed and after construction work has started or is complete, QuantumShift shall compensate Verizon for an Engineering Work Order charge as well as the charges associated with the conditioning tasks performed as set forth in the Pricing Attachment.
- 3.3 Conversion of Live Telephone Exchange Service to Analog 2W Unbundled Local Loops (Analog 2W Loops).
- 3.3.1 The following coordination procedures shall apply to "live" cutovers of Verizon Customers who are converting their Telephone Exchange Services to QuantumShift Telephone Exchange Services provisioned over Analog 2W Loops to be provided by Verizon to QuantumShift:
- 3.3.1.1 Coordinated cutover charges shall apply to conversions of live Telephone Exchange Services to Analog 2W Loops. When an outside dispatch is required to perform a conversion, additional charges may apply. If QuantumShift does not request a coordinated cutover, Verizon will process QuantumShift's order as a new installation subject to applicable standard provisioning intervals.
- 3.3.1.2 QuantumShift shall request Analog 2W Loops for coordinated cutover from Verizon by delivering to Verizon a valid electronic Local Service Request ("LSR"). Verizon agrees to accept from QuantumShift the date and time for

the conversion designated on the LSR ("Scheduled Conversion Time"), provided that such designation is within the regularly scheduled operating hours of the Verizon Regional CLEC Control Center ("RCCC") and subject to the availability of Verizon's work force. In the event that Verizon's work force is not available, QuantumShift and Verizon shall mutually agree on a New Conversion Time, as defined below. QuantumShift shall designate the Scheduled Conversion Time subject to Verizon standard provisioning intervals as stated in the Verizon CLEC Handbook, as may be revised from time to time. Within three (3) Business Days of Verizon's receipt of such valid LSR, or as otherwise required by the Federal Unbundling Rules, Verizon shall provide QuantumShift the scheduled due date for conversion of the Analog 2W Loops covered by such LSR.

- 3.3.1.3 QuantumShift shall provide dial tone at the QuantumShift collocation site at least forty-eight (48) hours prior to the Scheduled Conversion Time.
- 3.3.1.4 Either Party may contact the other Party to negotiate a new Scheduled Conversion Time (the "New Conversion Time"); provided, however, that each Party shall use commercially reasonable efforts to provide four (4) business hours' advance notice to the other Party of its request for a New Conversion Time. Any Scheduled Conversion Time or New Conversion Time may not be rescheduled more than one (1) time in a Business Day, and any two New Conversion Times for a particular Analog 2W Loop shall differ by at least eight (8) hours, unless otherwise agreed to by the Parties.
- 3.3.1.5 If the New Conversion Time is more than one (1) business hour from the original Scheduled Conversion Time or from the previous New Conversion Time, the Party requesting such New Conversion Time shall be subject to the following:
 - 3.3.1.5.1 If Verizon requests to reschedule outside of the one (1) hour time frame above, the Analog 2W Loops Service Order Charge for the original Scheduled Conversion Time or the previous New Conversion Time shall be credited upon request from QuantumShift; and
 - 3.3.1.5.2 If QuantumShift requests to reschedule outside the one (1) hour time frame above, QuantumShift shall be charged an additional Analog 2W Loops Service Order Charge for rescheduling the conversion to the New Conversion Time.
- 3.3.1.6 If QuantumShift is not ready to accept service at the Scheduled Conversion Time or at a New Conversion Time, as applicable, an additional Service Order Charge shall apply. If Verizon is not available or ready to perform the conversion within thirty (30) minutes of the Scheduled

Conversion Time or New Conversion Time, as applicable, Verizon and QuantumShift will reschedule and, upon request from QuantumShift, Verizon will credit the Analog 2W Loop Service Order Charge for the original Scheduled Conversion Time.

- 3.3.1.7 The standard time interval expected from disconnection of a live Telephone Exchange Service to the connection of the Analog 2W Loops to QuantumShift is fifteen (15) minutes per Analog 2W Loop for all orders consisting of twenty (20) Analog 2W Loops or less. Orders involving more than twenty (20) Loops will require a negotiated interval.
- 3.3.1.8 Conversions involving LNP will be completed according to North American Numbering Council (NANC) standards, via the regional Number Portability Administration Center (NPAC).
- 3.3.1.9 If QuantumShift requires Analog 2W Loop conversions outside of the regularly scheduled Verizon RCCC operating hours, such conversions shall be separately negotiated. Additional charges (e.g. overtime labor charges) may apply for desired dates and times outside of regularly scheduled RCCC operating hours.

3.4 [Intentionally Left Blank].

3.5 FTTP Loops.

- 3.5.1 New Builds. Notwithstanding any other provision of the Agreement or any Verizon Tariff, QuantumShift shall not be entitled to obtain access to a FTTP Loop, or any segment thereof, on an unbundled basis when Verizon deploys such a Loop to the Customer premises of an end user that has not been served by any Verizon Loop other than a FTTP Loop.
- 3.5.2 Overbuilds. Notwithstanding any other provision of the Agreement or any Verizon Tariff, if (a) Verizon deploys an FTTP Loop to replace a copper Loop previously used to serve a particular end user's customer premises, and (b) Verizon retires that copper Loop and there are no other available copper Loops or Hybrid Loops for QuantumShift's provision of a voice grade service to that end user's customer premises, then in accordance with, but only to the extent required by, the Federal Unbundling Rules, Verizon shall provide QuantumShift with nondiscriminatory access on an unbundled basis to a transmission path capable of providing DS0 voice grade service to that end user's customer premises.

3.6 Hybrid Loops.

- 3.6.1 Packet Switched Features, Functions, and Capabilities. Notwithstanding any other provision of this Agreement or any Verizon Tariff or SGAT, QuantumShift shall not be entitled to obtain access to the Packet Switched features, functions, or capabilities of any Hybrid Loop on an unbundled basis.

- 3.6.2 Broadband Services. Subject to the conditions set forth in Section 1 of this Attachment, when QuantumShift seeks access to a Hybrid Loop for the provision of "broadband services", as such term is defined by the FCC, then in accordance with, but only to the extent required by, the Federal Unbundling Rules, Verizon shall provide QuantumShift with unbundled access to the existing time division multiplexing features, functions, and capabilities of that Hybrid Loop, including DS1 or DS3 capacity (but only where impairment has been found to exist, which, for the avoidance of any doubt, does not include instances where Verizon is not required to provide unbundled access to a DS1 Loop or a DS3 Loop under Section 1 of this Attachment) to establish a complete time division multiplexing transmission path between the main distribution frame (or equivalent) in a Verizon End Office serving an end user to the demarcation point at the end user's Customer premises. This access includes access to all features, functions, and capabilities of the Hybrid Loop that are not used to transmit packetized information.
- 3.6.3 Narrowband Services. Subject to the conditions set forth in Section 1 of this Attachment, when QuantumShift seeks access to a Hybrid Loop for the provision to its Customer of "narrowband services", as such term is defined by the FCC, then in accordance with, but only to the extent required by, the Federal Unbundling Rules, Verizon shall, in its sole discretion, either (a) provide access to a spare home-run copper Loop serving that Customer on an unbundled basis, or (b) provide access, on an unbundled basis, to a DS0 voice-grade transmission path between the main distribution frame (or equivalent) in the end user's serving End Office and the end user's Customer premises, using time division multiplexing technology.
- 3.6.4 IDLC Hybrid Loops and Loops Provisioned via Loop Concentrator. Subject to the conditions set forth in Section 1 of this Attachment, if QuantumShift requests, in order to provide narrowband services, unbundling of a 2 wire analog or 4 wire analog Loop currently provisioned via Integrated Digital Loop Carrier (over a Hybrid Loop) or via Remote Switching technology deployed as a Loop concentrator Verizon shall, in accordance with but only to the extent required by the Federal Unbundling Rules, provide QuantumShift unbundled access to a Loop capable of voice-grade service to the end user Customer served by the Hybrid Loop.
- 3.6.4.1 Verizon will endeavor to provide QuantumShift with an existing copper Loop or a Loop served by existing Universal Digital Loop Carrier ("UDLC"). Standard recurring and non-recurring Loop charges will apply. In addition, a non-recurring charge will apply whenever a line and station transfer is performed.
- 3.6.4.2 If neither a copper Loop nor a Loop served by UDLC is available, Verizon shall, upon request of QuantumShift, provide unbundled access to a DS0 voice-grade transmission path between the main distribution frame (or equivalent) in the end user's serving End Office and the end user's Customer premises via such technically feasible alternative that Verizon in its sole discretion may elect to employ. In addition to the rates and charges payable in

connection with any unbundled Loop so provisioned by Verizon, QuantumShift shall be responsible for any of the following charges that apply in the event the technically feasible option involves construction, installation, or modification of facilities: (a) an engineering query charge for preparation of a price quote; (b) upon QuantumShift's submission of a firm construction order, an engineering work order nonrecurring charge; and (c) construction charges, as set forth in the price quote. If the order is cancelled by QuantumShift after construction work has started, QuantumShift shall be responsible for cancellation charges and a pro-rated charge for construction work performed prior to the cancellation.

3.6.4.3 Verizon may exclude its performance in connection with providing unbundled Loops pursuant to this Section 3.6.4 from standard provisioning intervals and performance measures and remedies, if any, contained in the Agreement or elsewhere.

4. Line Splitting (also referred to as "Loop Sharing")

- 4.1 Line Splitting is a process in which one CLEC provides narrowband voice service over the low frequency portion of an unbundled copper Loop obtained from Verizon (such CLEC may be referred to as the "VLEC") and a second CLEC provides digital subscriber line service over the high frequency portion of that same Loop (such CLEC may be referred to as the "DLEC"). Line Splitting is accomplished through the use of a splitter collocated at the Verizon central office where the Loop terminates into a distribution frame or its equivalent.
- 4.2 Subject to the conditions set forth in Section 1 of this Attachment, QuantumShift may engage in Line Splitting, in accordance with this Section 4 and the rates and charges provided for in the Pricing Attachment. Verizon shall provide access to Line Splitting in accordance with, but only to the extent required by, the Federal Unbundling Rules.
- 4.3 Any Line Splitting between QuantumShift and another CLEC shall be accomplished by prior negotiated arrangement between QuantumShift and the other CLEC. QuantumShift shall give Verizon written notice of this arrangement through the Verizon Global Wholesale Local Service Customer Profile Form (formerly referred to as the Verizon Partner Solutions Local Service Customer Profile Form) on the Verizon Global Wholesale website (formerly referred to as the Verizon Partner Solutions website), or such other electronic notice mechanism that Verizon may make available, at least thirty (30) days prior to placing an order for a Line Splitting arrangement with such other CLEC. The other CLEC must have an interconnection agreement with Verizon that permits it to engage in Line Splitting with QuantumShift. The VLEC shall be responsible for all rates and charges associated with the subject Loop as well as rates and charges associated with the DLEC's use of the high frequency portion of the Loop, including, but not limited to, service order charges, provisioning and installation charges, central office wiring, loop qualification charges, and OSS charges.
- 4.4 In order to facilitate QuantumShift's engaging in Line Splitting pursuant to this Section 4, QuantumShift may order for use in a Line Splitting arrangement, those Network Elements, Combinations, Collocation arrangements, services, facilities, equipment and arrangements, appropriate for Line Splitting, that are offered to

QuantumShift by Verizon under the other sections of this Agreement. Such Network Elements, Combinations, Collocation arrangements, services, facilities, equipment and arrangements, will be provided to QuantumShift in accordance with, and subject to, the rates and charges and other provisions of this Agreement and Verizon's applicable Tariffs. Verizon shall be obligated to provide Network Elements, Combinations, Collocation arrangements, services, facilities, equipment and arrangements, for Line Splitting only to the extent required by the Federal Unbundling Rules.

- 4.5 QuantumShift and/or the other participating CLEC shall provide any splitters and/or Digital Subscriber Line Access Multiplexers used in a Line Splitting arrangement.
- 4.6 The standard provisioning interval for the Line Splitting arrangement shall be as set out in the Verizon Product Interval Guide; provided that the standard provisioning interval for a Line Splitting arrangement shall not exceed the shortest of the following intervals: (1) the standard provisioning interval for a Line Splitting arrangement if stated in an applicable Verizon Tariff; or, (2) the standard provisioning interval for a Line Splitting arrangement, if any, established in accordance with the Federal Unbundling Rules. The standard provisioning interval for a Line Splitting arrangement shall commence only after any required engineering and conditioning tasks have been completed. The standard provisioning interval shall not apply where a Line and Station Transfer is performed.
- 4.7 Verizon shall not be liable for any claims, damages, penalties, liabilities or the like of any kind for disruptions to either QuantumShift's or the other CLEC's respective voice or data services over a Line Splitting arrangement.

5. [This Section Intentionally Left Blank]

6. Sub-Loop

Subject to the conditions set forth in Section 1 of this Attachment and upon request by QuantumShift, Verizon shall allow QuantumShift to access Sub-Loops unbundled from local switching and transport, in accordance with the terms of this Section 6 and the rates and charges set forth in the Pricing Attachment. Verizon shall allow QuantumShift access to Sub-Loops in accordance with, but only to the extent required by, the Federal Unbundling Rules. The available Sub-Loop types are as set forth below.

6.1 Unbundled Sub-Loop Arrangement– Distribution (USLA).

Subject to the conditions set forth in Section 1 of this Attachment and upon request by QuantumShift, Verizon shall provide QuantumShift with access to a Sub-Loop Distribution Facility in accordance with, and subject to, the terms and provisions of this Section 6.1, the rates set forth in the Pricing Attachment, and the rates, terms and conditions set forth in Verizon's applicable Tariffs. Verizon shall provide QuantumShift with access to a Sub-Loop Distribution Facility in accordance with, but only to the extent required by, the Federal Unbundling Rules.

- 6.1.1 QuantumShift may request that Verizon reactivate (if available) an unused drop and NID or provide QuantumShift with access to a drop and NID that, at the time of QuantumShift's request, Verizon is using to provide service to the Customer (as such term is hereinafter defined).

- 6.1.2 Upon site-specific request, QuantumShift may obtain access to the Sub-Loop Distribution Facility at a technically feasible access point located near a Verizon remote terminal equipment enclosure at the rates and charges provided for in the Pricing Attachment. It is not technically feasible to access the Sub-Loop Distribution Facility if a technician must access the facility by removing a splice case to reach the wiring within the cable. QuantumShift may obtain access to a Sub-Loop Distribution Facility through any method required by the Federal Unbundling Rules, in addition to existing methods such as from a Telecommunications outside plant interconnection cabinet (TOPIC) or, if QuantumShift is collocated at a remote terminal equipment enclosure and the FDI for such Sub-Loop Distribution Facility is located in such enclosure, from the collocation arrangement of QuantumShift at such terminal. If QuantumShift obtains access to a Sub-Loop Distribution Facility from a TOPIC, QuantumShift shall install a TOPIC on an easement or Right of Way obtained by QuantumShift within 100 feet of the Verizon FDI to which such Sub-Loop Distribution Facility is connected. A TOPIC must comply with applicable industry standards. Subject to the terms of applicable Verizon easements, Verizon shall furnish and place an interconnecting cable between a Verizon FDI and a QuantumShift TOPIC and Verizon shall install a termination block within such TOPIC. Verizon shall retain title to and maintain the interconnecting cable. Verizon shall not be responsible for building, maintaining or servicing the TOPIC and shall not provide any power that might be required by QuantumShift for any of QuantumShift's electronics in the TOPIC. QuantumShift shall provide any easement, Right of Way or trenching or supporting structure required for any portion of an interconnecting cable that runs beyond a Verizon easement.
- 6.1.3 QuantumShift may request from Verizon by submitting a loop make-up engineering query to Verizon, and Verizon shall provide to QuantumShift, the following information regarding a Sub-Loop Distribution Facility that serves an identified Customer: the Sub-Loop Distribution Facility's length and gauge; whether the Sub-Loop Distribution Facility has loading and bridged tap; the amount of bridged tap (if any) on the Sub-Loop Distribution Facility; and, the location of the FDI to which the Sub-Loop Distribution Facility is connected.
- 6.1.4 To order access to a Sub-Loop Distribution Facility from a TOPIC, QuantumShift must first request that Verizon connect the Verizon FDI to which the Sub-Loop Distribution Facility is connected to a QuantumShift TOPIC. To make such a request, QuantumShift must submit to Verizon an application (a "Sub-Loop Distribution Facility Interconnection Application") that identifies the FDI at which QuantumShift wishes to access the Sub-Loop Distribution Facility. A Sub-Loop Distribution Facility Interconnection Application shall state the location of the TOPIC, the size of the interconnecting cable and a description of the cable's supporting structure. A Sub-Loop Distribution Facility Interconnection Application shall also include a five-year forecast of QuantumShift's demand for access to Sub-Loop Distribution Facilities at the requested FDI. QuantumShift must submit the application fee set forth in the Pricing Attachment attached hereto and Verizon's applicable Tariffs (a "Sub-Loop Distribution Facility Application Fee") with Sub-Loop Distribution Facility Interconnection

Application. QuantumShift must submit Sub-Loop Interconnection Applications to:

Collocation Applications
Verizon
Room 503
185 Franklin Street
Boston, MA 02110
E-Mail: collocation.applications@Verizon.com

- 6.1.5 Within sixty (60) days after it receives a complete Sub-Loop Distribution Facility Interconnection Application for access to a Sub-Loop Distribution Facility and the Sub-Loop Distribution Facility Application Fee for such application, Verizon shall provide to QuantumShift a work order that describes the work that Verizon must perform to provide such access (a "Sub-Loop Distribution Facility Work Order") and a statement of the cost of such work (a "Sub-Loop Distribution Facility Interconnection Cost Statement").
- 6.1.6 QuantumShift shall pay to Verizon fifty percent (50%) of the cost set forth in a Sub-Loop Distribution Facility Interconnection Cost Statement within sixty (60) days of QuantumShift's receipt of such statement and the associated Sub-Loop Distribution Facility Work Order, and Verizon shall not be obligated to perform any of the work set forth in such order until Verizon has received such payment. A Sub-Loop Distribution Facility Interconnection Application shall be deemed to have been withdrawn if QuantumShift breaches its payment obligation under this Section. Upon Verizon's completion of the work that Verizon must perform to provide QuantumShift with access to a Sub-Loop Distribution Facility, Verizon shall bill QuantumShift, and QuantumShift shall pay to Verizon, the balance of the cost set forth in the Sub-Loop Distribution Facility Interconnection Cost Statement for such access.
- 6.1.7 After Verizon has completed the installation of the interconnecting cable to a QuantumShift TOPIC and QuantumShift has paid the full cost of such installation, QuantumShift can request the connection of Verizon Sub-Loop Distribution Facilities to the QuantumShift TOPIC. At the same time, QuantumShift shall advise Verizon of the services that QuantumShift plans to provide over the Sub-Loop Distribution Facility, request any conditioning of the Sub-Loop Distribution Facility and assign the pairs in the interconnecting cable. QuantumShift shall run any crosswires within the TOPIC.
- 6.1.8 If QuantumShift requests that Verizon reactivate an unused drop and NID, then QuantumShift shall provide dial tone (or its DSL equivalent) on the QuantumShift side of the applicable Verizon FDI at least twenty-four (24) hours before the due date. On the due date, a Verizon technician will run the appropriate cross connection to connect the Verizon Sub-Loop Distribution Facility to the QuantumShift dial tone or equivalent from the TOPIC. If QuantumShift requests that Verizon provide QuantumShift with access to a Sub-Loop Distribution Facility that, at the time of QuantumShift's request, Verizon is using to provide service to a Customer, then, after QuantumShift has looped two interconnecting pairs through the TOPIC and at least twenty four

(24) hours before the due date, a Verizon technician shall crosswire the dial tone from the Verizon central office through the Verizon side of the TOPIC and back out again to the Verizon FDI and Verizon Sub-Loop Distribution Facility using the "loop through" approach. On the due date, QuantumShift shall disconnect Verizon's dial tone, crosswire its dial tone to the Sub-Loop Distribution Facility and submit QuantumShift's LNP request.

6.1.9 Verizon will not provide access to a Sub-Loop Distribution Facility if Verizon is using the loop of which the Sub-Loop Distribution Facility is a part to provide line sharing service to another CLEC or a service that uses derived channel technology to a Customer unless such other CLEC first terminates the Verizon-provided line sharing or such Customer first disconnects the service that utilizes derived channel technology.

6.1.10 Verizon shall provide QuantumShift with access to a Sub-Loop Distribution Facility in accordance with negotiated intervals

6.1.11 Verizon shall repair and maintain a Sub-Loop Distribution Facility at the request of QuantumShift and subject to the time and material rates set forth in Pricing Attachment and the rates, terms and conditions of Verizon's applicable Tariffs. QuantumShift accepts responsibility for initial trouble isolation for Sub-Loop Distribution Facilities and providing Verizon with appropriate dispatch information based on its test results. If (a) QuantumShift reports to Verizon a Customer trouble, (b) QuantumShift requests a dispatch, (c) Verizon dispatches a technician, and (d) such trouble was not caused by Verizon Sub-Loop Distribution Facility facilities or equipment in whole or in part, QuantumShift shall pay Verizon the charges set forth in the Pricing Attachment and Verizon's applicable Tariffs for time associated with said dispatch. In addition, these charges also apply when the Customer contact as designated by QuantumShift is not available at the appointed time. If as the result of QuantumShift instructions, Verizon is erroneously requested to dispatch to a site on Verizon company premises ("dispatch in"), the charges set forth in Pricing Attachment and Verizon's applicable Tariffs will be assessed per occurrence to QuantumShift by Verizon. If as the result of QuantumShift instructions, Verizon is erroneously requested to dispatch to a site outside of Verizon company premises ("dispatch out"), the charges set forth in Pricing Attachment and Verizon's applicable Tariffs will be assessed per occurrence to QuantumShift by Verizon.

6.2 [Intentionally Left Blank].

6.3 Collocation in Remote Terminals.

To the extent required by Applicable Law, Verizon shall allow QuantumShift to collocate equipment in a Verizon remote terminal equipment enclosure in accordance with, and subject to, the rates, terms and conditions set forth in the Collocation Attachment and the Pricing Attachment.

7. Sub-Loop for Multiunit Tenant Premises Access

[Intentionally Left Blank].

8. Dark Fiber Transport

- 8.1 Subject to the conditions set forth in Section 1 of this Attachment and upon request by QuantumShift, Verizon shall provide QuantumShift with access to unbundled Dark Fiber Transport in accordance with, and subject to, the rates, terms and conditions provided in the Pricing Attachment and rates, terms and conditions of Verizon's applicable Tariffs. Verizon shall not be required to provide, and QuantumShift shall not request or obtain, unbundled access to any dark fiber facility that does not meet the definition of Dark Fiber Transport. For the avoidance of any doubt, notwithstanding any other provision of this Agreement, a Verizon Tariff, or otherwise, Verizon shall not be required to provide, and QuantumShift shall not request or obtain, Dark Fiber Transport that does not connect a pair of Verizon UNE Wire Centers. Access to unbundled Dark Fiber Transport will be provided by Verizon only where existing facilities are available except as provided in Section 17 below. Access to Dark Fiber Transport will be provided in accordance with, but only to the extent required by, the Federal Unbundling Rules. Dark Fiber Transport consists of Verizon optical transmission facilities without attached multiplexers, aggregation or other electronics. To the extent Verizon's Dark Fiber Transport contains any lightwave repeaters (e.g., regenerators or optical amplifiers) installed thereon, Verizon shall not remove the same. Except as otherwise required by the Federal Unbundling Rules, the following terms and conditions apply to Verizon's Dark Fiber Transport offerings.
- 8.2 In addition to the other terms and conditions of this Agreement, the following terms and conditions shall apply to Dark Fiber Transport:
- 8.2.1 [Intentionally Left Blank].
- 8.2.2 QuantumShift may access Dark Fiber Transport only at a pre-existing Verizon accessible terminal of such Dark Fiber Transport, and QuantumShift may not access Dark Fiber Transport at any other point, including, but not limited to, a splice point or case. Dark Fiber Transport is not available to QuantumShift unless such Dark Fiber Transport is already terminated on an existing Verizon accessible terminal. Unused fibers located in a cable vault or a controlled environment vault, manhole or other location outside the Verizon UNE Wire Center, and not terminated to a fiber patch panel, are not available to QuantumShift.
- 8.2.3 Except if and, to the extent required by, the Federal Unbundling Rules and Section 17 below, Verizon will not perform splicing (e.g., introduce additional splice points or open existing splice points or cases) to accommodate QuantumShift's request.
- 8.2.4 Verizon shall perform all work necessary to install a cross connect or a fiber jumper from a Verizon accessible terminal to a QuantumShift collocation arrangement.
- 8.2.5 A "Dark Fiber Inquiry Form" must be submitted prior to submitting an ASR. Upon receipt of QuantumShift's completed Dark Fiber Inquiry Form, Verizon will initiate a review of its cable records to determine whether Dark Fiber Transport may be available between the locations and in the quantities specified. Verizon will respond within fifteen (15) Business Days from receipt of the QuantumShift's Dark Fiber Inquiry Form, indicating whether Dark Fiber Transport may be available (if so available, an "Acknowledgement") based on the records search except that for voluminous requests or large, complex projects, Verizon reserves the right to negotiate a different interval. The Dark Fiber

Inquiry is a record search and does not guarantee the availability of Dark Fiber Transport. Where a direct Dark Fiber Transport route is not available, Verizon will provide, where available, Dark Fiber Transport via a reasonable indirect route that passes through intermediate Verizon Central Offices at the rates set forth in the Pricing Attachment. In cases where Verizon provides Dark Fiber Transport via an indirect route as described in this section, QuantumShift shall not be permitted to access the Dark Fiber Transport at any intermediate central office between the two Verizon central offices that are the end points of the route. In no event shall Verizon be required to provide Dark Fiber Transport between two central offices that are the end points of a route on which Verizon is not required under the Federal Unbundling Rules to provide Dark Fiber Transport to QuantumShift. Verizon reserves the right to limit the number of intermediate Verizon Central Offices on an indirect route consistent with limitations in Verizon's network design and/or prevailing industry practices for optical transmission applications. Any limitations on the number of intermediate Verizon Central Offices will be discussed with QuantumShift. If access to Dark Fiber Transport is not available, Verizon will notify QuantumShift, within fifteen (15) Business Days, that no spare Dark Fiber Transport is available over the direct route nor any reasonable alternate indirect route, except that for voluminous requests or large, complex projects, Verizon reserves the right to negotiate a different interval. Where no available route was found during the record review, Verizon will identify the first blocked segment on each alternate indirect route and which segment(s) in the alternate indirect route are available prior to encountering a blockage on that route, at the rates set forth in the Pricing Attachment.

- 8.2.5.1 QuantumShift shall indicate on the Dark Fiber Inquiry Form whether the available Dark Fiber should be reserved, at the rates set forth in the Pricing Attachment, pending receipt of an order for the Dark Fiber.
- 8.2.5.2 Upon request from QuantumShift as indicated on the Dark Fiber Inquiry Form, Verizon shall hold such requested Dark Fiber Transport for QuantumShift's use for ten (10) Business Days from QuantumShift's receipt of Acknowledgement and may not allow any other party (including Verizon) to use such fiber during that time period.
- 8.2.5.3 QuantumShift shall submit an order for the reserved Dark Fiber Transport as soon as possible using the standard ordering process or parallel provisioning process as described in Section 8.2.5.5. The standard ordering process shall be used when QuantumShift does not have additional requirements for collocation. The parallel provisioning process shall be used when QuantumShift requires new collocation facilities or changes to existing collocation arrangements.
- 8.2.5.4 If no order is received from QuantumShift for the reserved Dark Fiber Transport within ten (10) Business Days from QuantumShift's receipt of Acknowledgement, Verizon shall return to spare the reserved Dark Fiber Transport that Verizon previously notified QuantumShift are available.

Should QuantumShift submit an order to Verizon after the ten (10) Business Day reservation period for access to Dark Fiber Transport that Verizon has previously notified QuantumShift was available, QuantumShift assumes all risk that such Dark Fiber Transport will no longer be available.

- 8.2.5.5 Upon QuantumShift's request, the Parties will conduct parallel provisioning of collocation and Dark Fiber Transport in accordance with the following terms and conditions:
 - 8.2.5.5.1 QuantumShift will use existing interfaces and Verizon's current applications and order forms to request collocation and Dark Fiber Transport.
 - 8.2.5.5.2 Verizon will parallel process QuantumShift's requests for collocation, including augments, and Dark Fiber Transport.
 - 8.2.5.5.3 Before QuantumShift submits a request for parallel provisioning of collocation and Dark Fiber Transport, QuantumShift will:
 - 8.2.5.5.3.1 submit a Dark Fiber Inquiry Form and receive an Acknowledgement from Verizon; and
 - 8.2.5.5.3.2 submit a collocation application for the Verizon Central Office(s) where the Dark Fiber Transport terminates and receive confirmation from Verizon that QuantumShift's collocation application has been accepted.
 - 8.2.5.5.4 QuantumShift will prepare requests for parallel provisioning of collocation and Dark Fiber Transport in the manner and form reasonably specified by Verizon.
 - 8.2.5.5.5 If Verizon rejects QuantumShift's Dark Fiber Transport request, QuantumShift may cancel its collocation application within five (5) Business Days of such rejection and receive a refund of the collocation application fee paid by QuantumShift, less the costs Verizon incurred to date.
 - 8.2.5.5.6 If Verizon accepts QuantumShift's Dark Fiber Transport request, Verizon will parallel provision the Dark Transport to a temporary location in Verizon's Central Office(s). Verizon will charge and QuantumShift will pay for parallel provisioning of such Dark Fiber Transport at the rates specified in the Pricing Attachment beginning on the date that Verizon accepts each Dark Fiber Transport request.

- 8.2.5.5.7 Within ten (10) days after Verizon completes a QuantumShift collocation application, QuantumShift shall submit a Dark Fiber change request to reposition Dark Fiber Transport from the temporary location in that Verizon Central Office(s) to the permanent location at QuantumShift's collocation arrangement in such Verizon Central Office(s). QuantumShift will prepare such request(s) in the manner and form specified by Verizon.
- 8.2.5.5.8 If QuantumShift cancels its collocation application, QuantumShift must also submit a cancellation for the unbundled Dark Fiber Transport provisioned to the temporary location in the Verizon Central Office(s).
- 8.2.6 QuantumShift shall order Dark Fiber Transport by sending to Verizon a separate ASR for each A to Z route.
- 8.2.7 Where a collocation arrangement can be accomplished in a Verizon premises, access to Dark Fiber Transport that terminates in a Verizon premises must be accomplished via a collocation arrangement in that Verizon premises. In circumstances where a collocation arrangement cannot be accomplished in a Verizon premises, the Parties agree to negotiate for possible alternative arrangements.
- 8.2.8 Except as provided in Section 17 below, Dark Fiber Transport will be offered to QuantumShift in the condition that it is available in Verizon's network at the time that QuantumShift submits its request (i.e., "as is"). In addition, Verizon shall not be required to convert lit fiber to Dark Fiber Transport for QuantumShift's use.
- 8.2.9 Spare wavelengths on fiber strands, where Wave Division Multiplexing (WDM) or Dense Wave Division Multiplexing (DWDM) equipment is deployed, are not considered to be Dark Fiber Transport, and, therefore, will not be offered to QuantumShift as Dark Fiber Transport.
- 8.2.10 Fiber that has been assigned to fulfill a Customer order for maintenance purposes or for Verizon's lit fiber optic systems will not be offered to QuantumShift as Dark Fiber Transport.
- 8.2.11 QuantumShift shall be responsible for providing all transmission, terminating and lightwave repeater equipment necessary to light and use Dark Fiber Transport.
- 8.2.12 QuantumShift may not resell Dark Fiber Transport, purchased pursuant to this Agreement to third parties.
- 8.2.13 Except to the extent that Verizon is required by the Federal Unbundling Rules to provide Dark Fiber Transport to QuantumShift for use for Special or Switched Exchange Access Services, QuantumShift shall not use Dark Fiber Transport, for Special or Switched Exchange Access Services.
- 8.2.14 In order to preserve the efficiency of its network, Verizon may, upon a showing of need to the Commission, limit QuantumShift to leasing up

to a maximum of twenty-five percent (25%) of the Dark Fiber Transport in any given segment of Verizon's network. In addition, except as otherwise required by the Federal Unbundling Rules, Verizon may take any of the following actions, notwithstanding anything to the contrary in this Agreement:

- 8.2.14.1 Revoke Dark Fiber Transport leased to QuantumShift upon a showing of need to the Commission and twelve (12) months' advance written notice to QuantumShift; and
 - 8.2.14.2 Verizon reserves and shall not waive, Verizon's right to claim before the Commission that Verizon should not have to fulfill a QuantumShift order for Dark Transport because that request would strand an unreasonable amount of fiber capacity, disrupt or degrade service to Customers or carriers other than QuantumShift, or impair Verizon's ability to meet a legal obligation.
- 8.2.15 Except as expressly set forth in this Agreement, QuantumShift may not reserve Dark Fiber Transport.
- 8.2.16 QuantumShift shall be solely responsible for: (a) determining whether or not the transmission characteristics of the Dark Fiber Transport accommodate the requirements of QuantumShift; (b) obtaining any Rights of Way, governmental or private property permit, easement or other authorization or approval required for access to the Dark Fiber Transport; (c) installation of fiber optic transmission equipment needed to power the Dark Fiber Transport to transmit permitted traffic; and (d) except as set forth with respect to the parallel provisioning process addressed above, QuantumShift's collocation arrangements with any proper optical cross connects or other equipment that QuantumShift needs to access Dark Fiber Transport before it submits an order for such access. QuantumShift hereby represents and warrants that it shall have all such rights of way, authorizations and the like applicable to the location at which it wishes to establish a demarcation point for Dark Fiber Transport, on or before the date that QuantumShift places an order for the applicable Dark Fiber Transport, and that it shall maintain the same going forward.
- 8.2.17 QuantumShift is responsible for trouble isolation before reporting trouble to Verizon. Verizon will restore continuity to Dark Fiber Transport that has been broken. Verizon will not repair Dark Fiber Transport that is capable of transmitting light, even if the transmission characteristics of the Dark Fiber Transport has changed.
- 8.2.18 [Intentionally Left Blank].
- 8.2.19 QuantumShift may request the following, which shall be provided on a time and materials basis (as set forth in the Pricing Attachment):
- 8.2.19.1 [Intentionally Left Blank].
 - 8.2.19.2 A field survey that shows the availability of Dark Fiber Transport between two or more Verizon Central Offices, shows whether or not such Dark Fiber Transport is defective, shows whether or not such Dark Fiber Transport has been used by Verizon for emergency restoration

activity, and tests the transmission characteristics of Verizon's Dark Fiber Transport. If a field survey shows that Dark Fiber Transport is available, QuantumShift may reserve the Dark Fiber Transport, as applicable, for ten (10) Business Days from receipt of Verizon's field survey results. If QuantumShift submits an order for access to such Dark Fiber Transport after passage of the foregoing ten (10) Business Day reservation period, Verizon does not guarantee or warrant the Dark Fiber Transport will be available when Verizon receives such order, and QuantumShift assumes all risk that the Dark Fiber Transport will not be available. Verizon shall perform a field survey subject to a negotiated interval. If a QuantumShift submits an order for Dark Fiber Transport without first obtaining the results of a field survey of such Dark Fiber Transport, QuantumShift assumes all risk that the Dark Fiber Transport will not be compatible with QuantumShift's equipment, including, but not limited to, order cancellation charges.

9. Network Interface Device

- 9.1 Subject to the conditions set forth in Section 1 of this Attachment and upon request by QuantumShift, Verizon shall permit QuantumShift to connect a QuantumShift Loop to the Inside Wiring of a Customer's premises through the use of a Verizon NID in accordance with this Section 9 and the rates and charges provided in the Pricing Attachment. Verizon shall provide QuantumShift with access to NIDs in accordance with, but only to the extent required by, the Federal Unbundling Rules. QuantumShift may access a Verizon NID either by means of a connection (but only if the use of such connection is technically feasible) from an adjoining QuantumShift NID deployed by QuantumShift or, if an entrance module is available in the Verizon NID, by connecting a QuantumShift Loop to the Verizon NID. When necessary, Verizon will rearrange its facilities to provide access to an existing Customer's Inside Wire. An entrance module is available only if facilities are not connected to it.
- 9.2 In no case shall QuantumShift access, remove, disconnect or in any other way rearrange Verizon's Loop facilities from Verizon's NIDs, enclosures, or protectors.
- 9.3 In no case shall QuantumShift access, remove, disconnect or in any other way rearrange, a Customer's Inside Wiring from Verizon's NIDs, enclosures, or protectors where such Customer Inside Wiring is used in the provision of ongoing Telecommunications Service to that Customer.
- 9.4 In no case shall QuantumShift remove or disconnect ground wires from Verizon's NIDs, enclosures, or protectors.
- 9.5 In no case shall QuantumShift remove or disconnect NID modules, protectors, or terminals from Verizon's NID enclosures.
- 9.6 Maintenance and control of premises Inside Wiring is the responsibility of the Customer. Any conflicts between service providers for access to the Customer's Inside Wiring must be resolved by the person who controls use of the wiring (e.g., the Customer).
- 9.7 When QuantumShift is connecting a QuantumShift-provided Loop to the Inside Wiring of a Customer's premises through the Customer's side of the Verizon NID,

QuantumShift does not need to submit a request to Verizon and Verizon shall not charge QuantumShift for access to the Verizon NID. In such instances, QuantumShift shall comply with the provisions of Sections 9.2 through 9.7 of this Attachment and shall access the Customer's Inside Wire in the manner set forth in Section 9.8 of this Attachment.

- 9.8 Due to the wide variety of NIDs utilized by Verizon (based on Customer size and environmental considerations), QuantumShift may access the Customer's Inside Wiring, acting as the agent of the Customer by any of the following means:
- 9.8.1 Where an adequate length of Inside Wiring is present and environmental conditions permit, QuantumShift may remove the Inside Wiring from the Customer's side of the Verizon NID and connect that Inside Wiring to QuantumShift's NID.
- 9.8.2 Where an adequate length of Inside Wiring is not present or environmental conditions do not permit, QuantumShift may enter the Customer side of the Verizon NID enclosure for the purpose of removing the Inside Wiring from the terminals of Verizon's NID and connecting a connectorized or spliced jumper wire from a suitable "punch out" hole of such NID enclosure to the Inside Wiring within the space of the Customer side of the Verizon NID. Such connection shall be electrically insulated and shall not make any contact with the connection points or terminals within the Customer side of the Verizon NID.
- 9.8.3 QuantumShift may request Verizon to make other rearrangements to the Inside Wiring terminations or terminal enclosure on a time and materials cost basis to be charged to the requesting party (i.e. QuantumShift, its agent, the building owner or the Customer). If QuantumShift accesses the Customer's Inside Wiring as described in this Section 9.8.3, time and materials charges will be billed to the requesting party (i.e. QuantumShift, its agent, the building owner or the Customer).

10. [This Section Intentionally Left Blank]

11. Dedicated Transport

- 11.1 Subject to the conditions set forth in Section 1 of this Attachment, where facilities are available, at QuantumShift's request, Verizon shall provide QuantumShift with Dedicated Transport unbundled from other Network Elements at the rates set forth in the Pricing Attachment. Verizon shall provide QuantumShift with such Dedicated Transport in accordance with, but only to the extent required by, the Federal Unbundling Rules. Except as provided in Section 17 below, Verizon will not install new electronics, and Verizon will not build new facilities. For the avoidance of any doubt, notwithstanding any other provision of this Agreement, Verizon shall not be required to provide, and QuantumShift shall not request or obtain, unbundled access to shared (or common) transport, or any other interoffice transport facility that does not meet the definition of Dedicated Transport.
- 11.2 If and, to the extent that, QuantumShift has purchased (or purchases) transport from Verizon under a Verizon Tariff or otherwise, and QuantumShift has a right under the Federal Unbundling Rules to convert (and wishes to convert) such transport to unbundled Dedicated Transport under this Agreement, it shall give Verizon written notice of such request (including, without limitation, through

submission of ASRs if Verizon so requests) and provide to Verizon all information (including, without limitation, a listing of the specific circuits in question) that Verizon reasonably requires to effectuate such conversion. In the case of any such conversion, QuantumShift shall pay any and all conversion charges (e.g., non-recurring charges), as well as any and all termination liabilities, minimum service period charges and like charges in accordance with Verizon's applicable Tariffs. If the transport to be converted comprises a portion of a High Capacity EEL (as defined in Section 16.2.1 below), the applicable provisions of Section 16 below shall apply.

12. [This Section Intentionally Left Blank]

13. Operations Support Systems

Subject to the conditions set forth in Section 1 of this Attachment and in Section 8 of the Additional Services Attachment, Verizon shall provide QuantumShift with access via electronic interfaces to databases required for pre-ordering, ordering, provisioning, maintenance and repair, and billing. Verizon shall provide QuantumShift with such access in accordance with, but only to the extent required by, the Federal Unbundling Rules. All such transactions shall be submitted by QuantumShift through such electronic interfaces.

14. Availability of Other Network Elements on an Unbundled Basis

14.1 Any request by QuantumShift for access to a Verizon Network Element that is not already available and that Verizon is required by the Federal Unbundling Rules to provide on an unbundled basis shall be treated as a Network Element Bona Fide Request pursuant to Section 14.3, of this Attachment. QuantumShift shall provide Verizon access to its Network Elements as mutually agreed by the Parties or as required by the Federal Unbundling Rules.

14.2 Notwithstanding anything to the contrary in this Section 14, a Party shall not be required to provide a proprietary Network Element to the other Party under this Section 14 except as required by the Federal Unbundling Rules.

14.3 Network Element Bona Fide Request (BFR).

14.3.1 Each Party shall promptly consider and analyze access to a new unbundled Network Element in response to the submission of a Network Element Bona Fide Request by the other Party hereunder. The Network Element 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. Oct. 19, 1992) ¶ 259 and n.603 or subsequent orders.

14.3.2 A Network Element Bona Fide Request shall be submitted in writing and shall include a technical description of each requested Network Element.

14.3.3 The requesting Party may cancel a Network Element Bona Fide Request at any time, but shall pay the other Party's reasonable and demonstrable costs of processing and/or implementing the Network Element Bona Fide Request up to the date of cancellation.

14.3.4 Within ten (10) Business Days of its receipt, the receiving Party shall acknowledge receipt of the Network Element Bona Fide Request.

- 14.3.5 Except under extraordinary circumstances, within thirty (30) days of its receipt of a Network Element Bona Fide Request, the receiving Party shall provide to the requesting Party a preliminary analysis of such Network Element Bona Fide Request. The preliminary analysis shall confirm that the receiving Party will offer access to the Network Element or will provide a detailed explanation that access to the Network Element is not technically feasible and/or that the request does not qualify as a Network Element that is required to be provided by the Federal Unbundling Rules.
- 14.3.6 If the receiving Party determines that the Network Element Bona Fide Request is technically feasible and access to the Network Element is required to be provided by the Federal Unbundling Rules, it shall promptly proceed with developing the Network Element Bona Fide Request upon receipt of written authorization from the requesting Party. When it receives such authorization, the receiving Party shall promptly develop the requested services, determine their availability, calculate the applicable prices and establish installation intervals. Unless the Parties otherwise agree, the Network Element requested must be priced in accordance with Section 252(d)(1) of the Act.
- 14.3.7 As soon as feasible, but not more than ninety (90) days after its receipt of authorization to proceed with developing the Network Element Bona Fide Request, the receiving Party shall provide to the requesting Party a Network Element Bona Fide Request quote which will include, at a minimum, a description of each Network Element, the availability, the applicable rates, and the installation intervals.
- 14.3.8 Within thirty (30) days of its receipt of the Network Element Bona Fide Request quote, the requesting Party must either confirm its order for the Network Element Bona Fide Request pursuant to the Network Element Bona Fide Request quote or seek arbitration by the Commission pursuant to Section 252 of the Act.
- 14.3.9 If a Party to a Network Element Bona Fide Request believes that the other Party is not requesting, negotiating or processing the Network Element 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 pursuant to Section 252 of the Act.

15. Maintenance of Network Elements

If (a) QuantumShift reports to Verizon a Customer trouble, (b) QuantumShift requests a dispatch, (c) Verizon dispatches a technician, and (d) such trouble was not caused by Verizon's facilities or equipment in whole or in part, then QuantumShift shall pay Verizon a charge set forth in the Pricing Attachment for time associated with said dispatch. In addition, this charge also applies when the Customer contact as designated by QuantumShift is not available at the appointed time. QuantumShift accepts responsibility for initial trouble isolation and providing Verizon with appropriate dispatch information based on its test results. If, as the result of QuantumShift instructions, Verizon is erroneously requested to dispatch to a site on Verizon company premises ("dispatch in"), a charge set forth in the Pricing Attachment will be assessed per occurrence to QuantumShift by Verizon. If as the result of QuantumShift instructions, Verizon is erroneously requested to dispatch to a site outside of Verizon company premises ("dispatch out"), a charge set forth in the Pricing Attachment will be assessed per occurrence to QuantumShift by Verizon. Verizon agrees to respond to QuantumShift

trouble reports on a non-discriminatory basis consistent with the manner in which it provides service to its own retail Customers or to any other similarly situated Telecommunications Carrier.

16. Combinations, Commingling, and Conversions

- 16.1 Subject to and without limiting the conditions set forth in Section 1 of this Attachment:
 - 16.1.1 Verizon will not prohibit the commingling of a Qualifying UNE with Qualifying Wholesale Services, but only to the extent and so long as commingling and provision of such Network Element (or combination of Network Elements) is required by the Federal Unbundling Rules. Moreover, to the extent and so long as required by the Federal Unbundling Rules, Verizon shall, upon request of QuantumShift, perform the functions necessary to commingle Qualifying UNEs with Qualifying Wholesale Services. The rates, terms and conditions of the applicable access Tariff or separate non-251 agreement will apply to the Qualifying Wholesale Services, and the rates, terms and conditions of the Agreement or the Verizon UNE Tariff, as applicable, will apply to the Qualifying UNEs; provided, however, that a nonrecurring charge will apply for each UNE circuit that is part of a commingled arrangement, as set forth in the Pricing Attachment. In addition, if any commingling requested by QuantumShift requires Verizon to perform physical work that Verizon is required to perform under the Federal Unbundling Rules, then Verizon's standard charges for such work shall apply or, in the absence of a standard charge, a fee calculated using Verizon's standard time and materials rates shall apply until such time as a standard charge is established pursuant to the terms set forth in the Pricing Attachment.
 - 16.1.2 Ratcheting, i.e., a pricing mechanism that involves billing a single circuit at multiple rates to develop a single, blended rate, shall not be required. UNEs that are commingled with Wholesale Services are not included in the shared use provisions of the applicable Tariff, and are therefore not eligible for adjustment of charges under such provisions. Verizon may exclude its performance in connection with the provisioning of commingled facilities and services from standard provisioning intervals and from performance measures and remedies, if any, contained in the Agreement or elsewhere.
 - 16.1.3 Limitation on Section 16.1. Section 16.1 is intended only to address the Parties' rights and obligations as to combining and/or commingling of UNEs that Verizon is already required to provide to QuantumShift under the Agreement and the Federal Unbundling Rules. Nothing contained in Section 16.1 shall be deemed to limit any right of Verizon under the Agreement to cease providing a facility that is or becomes a Discontinued Facility.
- 16.2 Service Eligibility Criteria for Certain Combinations and Commingled Facilities and Services. Subject to the conditions set forth in Sections 1 and 16.1 of this Attachment:
 - 16.2.1 Verizon shall not be obligated to provide:

- 16.2.1.1 an unbundled DS1 Loop in combination with unbundled DS1 or DS3 Dedicated Transport, or commingled with DS1 or DS3 access services;
- 16.2.1.2 an unbundled DS3 Loop in combination with unbundled DS3 Dedicated Transport, or commingled with DS3 access services;
- 16.2.1.3 unbundled DS1 Dedicated Transport commingled with DS1 channel termination access service;
- 16.2.1.4 unbundled DS3 Dedicated Transport commingled with DS1 channel termination access service; or
- 16.2.1.5 unbundled DS3 Dedicated Transport commingled with DS3 channel termination service,

(individually and collectively “High Capacity EELs”) except to the extent Verizon is required by the Federal Unbundling Rules to do so, and then not unless and until QuantumShift, using an ASR, certifies to Verizon that each combined or commingled DS1 circuit or DS1 equivalent circuit of a High Capacity EEL satisfies each of the service eligibility criteria on a circuit-by-circuit basis as set forth in 47 C.F.R. § 51.318. QuantumShift must remain in compliance with said service eligibility criteria for so long as QuantumShift continues to receive the aforementioned combined or commingled facilities and/or services from Verizon and QuantumShift shall immediately notify Verizon at such time as a certification ceases to be accurate. The service eligibility criteria shall be applied to each combined or commingled DS1 circuit or DS1 equivalent circuit of a High Capacity EEL. If any combined or commingled DS1 circuit or DS1 equivalent circuit of a High Capacity EEL is, becomes, or is subsequently determined to be, noncompliant, the noncompliant High Capacity EEL circuit will be treated as described in Section 16.2.2 below. The foregoing shall apply whether the High Capacity EEL circuits in question are being provisioned to establish a new circuit or to convert an existing wholesale service, or any part thereof, to unbundled network elements. For existing High Capacity EEL circuits, QuantumShift, within thirty (30) days of the Effective Date to the extent it has not already done so prior to the Effective Date of this Agreement, must re-certify, using an ASR, that each DS1 circuit or DS1 equivalent circuit satisfies the service eligibility criteria on a circuit-by-circuit basis as set forth in 47 C.F.R. § 51.318. Any existing High Capacity EEL circuits that QuantumShift leased from Verizon as of the Effective Date of this Agreement that QuantumShift fails to re-certify as required by this Section by the end of such 30-day period shall be treated as a non-compliant circuit as described under Section 16.2.2 below effective as of the Effective Date of this Agreement.

- 16.2.2 Without limiting any other right Verizon may have to cease providing circuits that are or become Discontinued Facilities, if a High Capacity EEL circuit is or becomes noncompliant as described in this Section 16.2 and QuantumShift has not submitted an LSR or ASR, as appropriate, to Verizon requesting disconnection of the noncompliant facility and has not separately secured from Verizon an alternative arrangement to replace the noncompliant High Capacity EEL circuit, then Verizon, to the extent it has not already done so prior to execution of this Agreement, shall reprice the subject High Capacity

EEL circuit (or portion thereof that had been previously billed at UNE rates), effective beginning on the date on which the circuit became non-compliant by application of a new rate (or, in Verizon's sole discretion, by application of a surcharge to an existing rate) to be equivalent to an analogous access service or other analogous arrangement that Verizon shall identify in a written notice to QuantumShift.

- 16.2.3 Each certification to be provided by QuantumShift pursuant to Section 16.2.1 above must contain the following information for each DS1 circuit or DS1 equivalent: (a) the local number assigned to each DS1 circuit or DS1 equivalent; (b) the local numbers assigned to each DS3 circuit (must have 28 local numbers assigned to it); (c) the date each circuit was established in the 911/E-911 database; (d) the collocation termination connecting facility assignment for each circuit, showing that the collocation arrangement was established pursuant to 47 U.S.C. § 251(c)(6), and not under a federal collocation tariff; (e) the interconnection trunk circuit identification number that serves each DS1 circuit. There must be one such identification number per every 24 DS1 circuits; and (f) the local switch that serves each DS1 circuit. When submitting an ASR for a circuit, this information must be contained in the Remarks section of the ASR, unless provisions are made to populate other fields on the ASR to capture this information.
- 16.2.4 The charges for conversions are as specified in the Pricing Attachment and apply for each circuit converted.
- 16.2.5 All ASR-driven conversion requests will result in a change in circuit identification (circuit ID) from access to UNE or UNE to access. If such change in circuit ID requires that the affected circuit(s) be retagged, then a retag fee per circuit will apply as specified in the Pricing Attachment.
- 16.2.6 All requests for conversions will be handled in accordance with Verizon's conversion guidelines. Each request will be handled as a project and will be excluded from all ordering and provisioning metrics.
- 16.3 Once per calendar year, Verizon may obtain and pay for an independent auditor to audit QuantumShift's compliance in all material respects with the service eligibility criteria applicable to High Capacity EELs. Any such audit shall be performed in accordance with the standards established by the American Institute for Certified Public Accountants, and may include, at Verizon's discretion, the examination of a sample selected in accordance with the independent auditor's judgment. To the extent the independent auditor's report concludes that QuantumShift failed to comply with the service eligibility criteria, then (without limiting Verizon's rights under Section 16.2.2 above) QuantumShift must convert all noncompliant circuits to the appropriate service, true up any difference in payments, make the correct payments on a going-forward basis, and reimburse Verizon for the cost of the independent auditor within thirty (30) days after receiving a statement of such costs from Verizon. Should the independent auditor confirm QuantumShift's compliance with the service eligibility criteria, then QuantumShift shall provide to the independent auditor for its verification a statement of QuantumShift's out-of-pocket costs of complying with any requests of the independent auditor, and Verizon shall, within thirty (30) days of the date on which QuantumShift submits such costs to the auditor, reimburse QuantumShift for its out-of-pocket costs verified by the auditor. QuantumShift shall maintain records adequate to support its compliance with the

service eligibility criteria for each DS1 or DS1 equivalent circuit for at least eighteen (18) months after the service arrangement in question is terminated.

17. Routine Network Modifications

- 17.1 General Conditions. In accordance with, but only to the extent required by, the Federal Unbundling Rules, and subject to the conditions set forth in Section 1 of this Attachment:
- 17.1.1 Verizon shall make such routine network modifications, at the rates and charges set forth in the Pricing Attachment, as are necessary to permit access by QuantumShift to the Loop, Dedicated Transport, or Dark Fiber Transport facilities available under the Agreement (including DS1 Loops and DS1 Dedicated Transport, and DS3 Loops and DS3 Dedicated Transport), where the facility has already been constructed. Routine network modifications applicable to Loops or Transport are those modifications that Verizon regularly undertakes for its own Customers and may include, but are not limited to: rearranging or splicing of in-place cable at existing splice points; adding an equipment case; adding a doubler or repeater; installing a repeater shelf; deploying a new multiplexer or reconfiguring an existing multiplexer; accessing manholes; and deploying bucket trucks to reach aerial cable. Routine network modifications applicable to Dark Fiber Transport are those modifications that Verizon regularly undertakes for its own Customers and may include, but are not limited to, splicing of in-place dark fiber at existing splice points; accessing manholes; deploying bucket trucks to reach aerial cable; and routine activities, if any, needed to enable QuantumShift to light a Dark Fiber Transport facility that it has obtained from Verizon under the Agreement. Verizon shall not be obligated to provide optronics for the purpose of lighting Dark Fiber Transport. Routine network modifications do not include the construction of a new Loop or new Transport facilities, trenching, the pulling of cable, the installation of new aerial, buried, or underground cable for a requesting telecommunications carrier, the placement of new cable, securing permits or rights-of-way, or constructing and/or placing new manholes or conduits. Verizon shall not be required to build any time division multiplexing (TDM) capability into new packet-based networks or into existing packet-based networks that do not already have TDM capability. Verizon shall not be required to perform any routine network modifications to any facility that is or becomes a Discontinued Facility.
- 17.2 Performance Plans. Verizon may exclude its performance in connection with the provisioning of Loops or Transport (including Dark Fiber Transport) for which routine network modifications are performed from standard provisioning intervals and performance measures and remedies, if any, contained in the Agreement or elsewhere.
- 17.3 Nothing contained in this Section 17 shall be deemed: (a) to establish any obligation of Verizon to provide on an unbundled basis under the Federal Unbundling Rules any facility that this Agreement does not otherwise require Verizon to provide on an unbundled basis under the Federal Unbundling Rules, (b) to obligate Verizon to provide on an unbundled basis under the Federal Unbundling Rules, for any period of time not required under the Federal Unbundling Rules, access to any Discontinued Facility, or (c) to limit any right of Verizon under the Agreement, any Verizon Tariff or SGAT, or otherwise, to cease providing a Discontinued Facility.

18. Rates and Charges

The rates and charges for UNEs, Combinations, Commingling, routine network modifications, and other services, facilities and arrangements, offered under this Attachment shall be as provided in this Attachment and the Pricing Attachment.

19. Good Faith Performance

If and, to the extent that, Verizon, prior to the Effective Date of this Agreement, has not provided in the Commonwealth of Pennsylvania a Service offered under this Attachment, Verizon reserves the right to negotiate in good faith with QuantumShift reasonable terms and conditions (including, without limitation, rates and implementation timeframes) for such Service; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.

COLLOCATION ATTACHMENT

1. Verizon's Provision of Collocation

Verizon shall provide to QuantumShift, in accordance with this Agreement, Verizon's applicable federal and state Tariffs and the requirements of Applicable Law, Collocation for the purpose of facilitating QuantumShift's interconnection with Verizon under 47 U.S.C. § 251(c)(2) or access to Unbundled Network Elements of Verizon; provided, that notwithstanding any other provision of this Agreement or a Tariff, Verizon shall be obligated to provide Collocation to QuantumShift only to the extent required by Applicable Law and may decline to provide Collocation to QuantumShift to the extent that provision of Collocation is not required by Applicable Law. Notwithstanding any other provision of this Agreement or a Tariff, nothing in this Agreement or a Tariff shall be deemed to require Verizon to provide (and, for the avoidance of any doubt, Verizon may decline to provide and/or cease providing) Collocation that, if provided by Verizon, would be used by QuantumShift to obtain unbundled access to any network element: (a) that Verizon is not required to unbundle under 47 U.S.C. § 251(c)(3) or (b) that Verizon is not required to unbundle under 47 C.F.R. Part 51.

911 ATTACHMENT

1. 911/E-911 Arrangements

- 1.1 911/E-911 arrangements provide a caller access to the appropriate PSAP by dialing a 3-digit universal telephone number "911". Verizon provides and maintains such equipment and software at the 911/E-911 Tandem Office(s)/Selective Router(s), Verizon interface point(s) and ALI Database as is necessary for 911/E-911 Calls in areas where Verizon is the designated 911/E-911 Service Provider.
- 1.2 Verizon shall make the following information available to QuantumShift, to the extent permitted by Applicable Law. Such information is provided at the Verizon Global Wholesale website (formerly referred to as the Verizon Partner Solutions website):
 - 1.2.1 a listing of the CLLI code (and SS7 point code when applicable) of each 911/E-911 Tandem Office(s)/Selective Router(s) and associated geographic location served for areas where Verizon is the designated 911/E-911 Service Provider;
 - 1.2.2 a listing of appropriate Verizon contact telephone numbers and organizations that currently have responsibility for operations and support of Verizon's 911/E-911 network and ALI Database systems; and
 - 1.2.3 where Verizon maintains a Master Street Address Guide (MSAG) on behalf of the Controlling 911 Authority, Verizon shall provide to QuantumShift a complete copy of such MSAG annually upon written request for each county within the LATA(s) in the Commonwealth of Pennsylvania, where QuantumShift is providing Telephone Exchange Service, provided that Verizon is permitted to do so by Controlling 911 Authority. A letter is required from the PSAP director before the release of the MSAG by Verizon to QuantumShift.

2. ALI Database

- 2.1 Where Verizon manages the ALI Database, information regarding the ALI Database is provided electronically at the Verizon Global Wholesale website (formerly referred to as the Verizon Partner Solutions website).
- 2.2 Where Verizon manages the ALI Database, Verizon shall:
 - 2.2.1 store QuantumShift end user data provided by QuantumShift in the ALI Database;
 - 2.2.2 provide QuantumShift access to the ALI Database for the initial loading and updating of QuantumShift end user records in accordance with information contained in the Verizon Global Wholesale website (formerly referred to as the Verizon Partner Solutions website); and
 - 2.2.3 provide QuantumShift an error and status report based on updates to the ALI Database received from QuantumShift.
- 2.3 Where Verizon manages the ALI Database, QuantumShift shall:

- 2.3.1 provide MSAG valid E-911 data for each of its end users for the initial loading of, and any and all updates to the ALI database;
 - 2.3.2 utilize the appropriate Verizon electronic interface to update E-911 data in the ALI Database related its end users (and all such database information in the ALI Database shall conform to Verizon standards, which are provided at the Verizon Global Wholesale website (formerly referred to as the Verizon Partner Solutions website));
 - 2.3.3 use its company ID on all end user records in accordance with NENA standards;
 - 2.3.4 correct any errors that occur during the entry of E-911 data in the ALI Database; and
 - 2.3.5 enter E-911 data into the ALI Database in accordance with NENA standards for LNP. This includes, but is not limited to, using QuantumShift's NENA ID to lock and unlock records and the posting of the QuantumShift NENA ID to the ALI Database record where such locking and unlocking feature for E-911 records is available, or as defined by local standards. QuantumShift is required to promptly unlock and migrate its E-911 records in accordance with NENA standards. In the event that QuantumShift discontinues providing Telephone Exchange Service to any of its end users, it shall ensure that its E-911 records for such end users are unlocked in accordance with NENA standards.
- 2.4 In the event QuantumShift uses an Agent to input its end user's E-911 data to the ALI Database through the appropriate Verizon electronic interface, QuantumShift shall provide a Letter of Authorization, in a form acceptable to Verizon, identifying and authorizing its Agent.

3. 911/E-911 Interconnection

- 3.1 QuantumShift may, in accordance with Applicable Law, interconnect to the Verizon 911/E-911 Tandem Office(s)/Selective Router(s) or Verizon interface point(s). Verizon shall designate interface point(s), e.g., digital cross connect systems (DCS), where QuantumShift may interconnect with Verizon for the transmission and routing of 911/E-911 Calls to all subtending PSAPs that serve the areas in which QuantumShift provides Telephone Exchange Services.
- 3.2 In order to interconnect with Verizon for the transmission and routing of 911/E-911 Calls, QuantumShift shall:
 - 3.2.1 interconnect with each Verizon 911/E-911 Tandem Office/Selective Router or Verizon interface point that serves the exchange areas in which QuantumShift is authorized to and will provide Telephone Exchange Service;
 - 3.2.2 provide a minimum of two (2) one-way outgoing 911/E-911 trunks over diversely routed facilities that are dedicated for originating 911/E-911 Calls from the QuantumShift switch to each designated Verizon 911/E-911 Tandem Office/Selective Router or Verizon interface point, using SS7 signaling where available, as necessary;
 - 3.2.3 [Intentionally Left Blank];

- 3.2.4 provide sufficient trunks and facilities to route 911/E-911 Calls from QuantumShift to the designated Verizon 911/E-911 Tandem Office(s)/Selective Router(s) or Verizon interface point(s). QuantumShift is responsible for requesting that trunks and facilities be routed diversely for 911/E-911 interconnection;
- 3.2.5 determine the proper quantity of trunks and facilities from its switch(es) to the Verizon 911/E-911 Tandem Office(s)/Selective Router(s) or Verizon interface point(s);
- 3.2.6 engineer its 911/E-911 trunks and facilities to attain a minimum P.01 grade of service as measured using the "busy day/busy hour" criteria or at such other minimum grade of service as required by Applicable Law or the Controlling 911 Authority;
- 3.2.7 monitor its 911/E-911 trunks and facilities for the purpose of determining originating network traffic volumes. If the QuantumShift traffic study indicates that additional trunks and/or facilities are needed to meet the current level of 911/E-911 Call volumes, QuantumShift shall order or otherwise provide adequate additional trunks and/or facilities;
- 3.2.8 promptly test all 911/E-911 trunks and facilities between the QuantumShift network and the Verizon 911/E-911 Tandem Office(s)/Selective Router(s) or Verizon interface point(s) to assure proper functioning of 911/E-911 arrangements. QuantumShift shall not transmit or route live 911/E-911 Calls until successful testing is completed; and
- 3.2.9 isolate, coordinate and restore all 911/E-911 network maintenance problems from its switch(es) to the Verizon 911/E-911 Tandem Office(s)/Selective Router(s) or Verizon interface points. QuantumShift shall advise Verizon of the circuit identification when notifying Verizon of a failure or outage.

4. 911/E-911 General

- 4.1 Verizon and QuantumShift shall work cooperatively to arrange meetings with the Controlling 911 Authorities to answer any technical questions the PSAPs, or county or municipal coordinators may have regarding the initial 911/E-911 arrangements
- 4.2 QuantumShift shall compensate Verizon for provision of 911/E-911 Services pursuant to the Pricing Attachment of this Agreement.
- 4.3 QuantumShift and Verizon shall comply with all Applicable Law (including 911 taxes and surcharges as defined by Applicable Law) pertaining to 911/E-911 arrangements.
- 4.4 QuantumShift shall collect and remit, as required, any 911/E-911 applicable surcharges from its end users in accordance with Applicable Law.

5. Good Faith Performance

If and, to the extent that, Verizon, prior to the Effective Date, has not provided in the Commonwealth of Pennsylvania a Service offered under this Attachment, Verizon reserves the right to negotiate in good faith with QuantumShift reasonable terms and

conditions (including, without limitation, rates and implementation timeframes) for such Service; and, if the Parties cannot agree to such terms and conditions (including, without limitation, rates and implementation timeframes), either Party may utilize the Agreement's dispute resolution procedures.

PRICING ATTACHMENT

1. General

- 1.1 As used in this Attachment, the term "Charges" means the rates, fees, charges and prices for a Service.
- 1.2 Except as stated in Section 2 or Section 3 of this Attachment, Charges for Services shall be as stated in this Section 1.
- 1.3 The Charges for a Service shall be the Charges for the Service stated in the Providing Party's applicable Tariff.
- 1.4 In the absence of Charges for a Service established pursuant to Section 1.3 of this Attachment, the Charges shall be as stated in Appendix A of this Pricing Attachment. For rate elements provided in Appendix A of this Pricing Attachment that do not include a Charge, either marked as "TBD" or otherwise, Verizon is developing such Charges and has not finished developing such Charges as of the Effective Date of this Agreement ("Effective Date"). When Verizon finishes developing such a Charge, Verizon shall notify QuantumShift in writing of such Charge in accordance with, and subject to, the notices provisions of this Agreement and thereafter shall bill QuantumShift, and QuantumShift shall pay to Verizon, for Services provided under this Agreement on the Effective Date and thereafter in accordance with such Charge. Any notice provided by Verizon to QuantumShift pursuant to this Section 1.4 shall be deemed to be a part of Appendix A of this Pricing Attachment immediately after Verizon sends such notice to QuantumShift and thereafter.
- 1.5 The Charges stated in Appendix A of this Pricing Attachment shall be automatically superseded by any applicable Tariff Charges. The Charges stated in Appendix A of this Pricing Attachment also shall be automatically superseded by any new Charge(s) when such new Charge(s) are required by any order of the Commission or the FCC, approved by the Commission or the FCC, or otherwise allowed to go into effect by the Commission or the FCC (including, but not limited to, in a Tariff that has been filed with the Commission or the FCC), provided such new Charge(s) are not subject to a stay issued by any court of competent jurisdiction.
- 1.6 In the absence of Charges for a Service established pursuant to Sections 1.3 through 1.5 of this Attachment, if Charges for a Service are otherwise expressly provided for in this Agreement, such Charges shall apply.
- 1.7 In the absence of Charges for a Service established pursuant to Sections 1.3 through 1.6 of this Attachment, the Charges for the Service shall be the Providing Party's FCC or Commission approved Charges.
- 1.8 In the absence of Charges for a Service established pursuant to Sections 1.3 through 1.7 of this Attachment, the Charges for the Service shall be mutually agreed to by the Parties in writing.

2. Verizon Telecommunications Services Provided to QuantumShift for Resale Pursuant to the Resale Attachment

- 2.1 Verizon Telecommunications Services for which Verizon is Required to Provide a Wholesale Discount Pursuant to Section 251(c)(4) of the Act.

- 2.1.1 The Charges for a Verizon Telecommunications Service purchased by QuantumShift for resale for which Verizon is required to provide a wholesale discount pursuant to Section 251(c)(4) of the Act shall be the Retail Price for such Service set forth in Verizon's applicable Tariffs (or, if there is no Tariff Retail Price for such Service, Verizon's Retail Price for the Service that is generally offered to Verizon's Customers), less, to the extent required by Applicable Law: (a) the applicable wholesale discount stated in Verizon's Tariffs for Verizon Telecommunications Services purchased for resale pursuant to Section 251(c)(4) of the Act; or (b) in the absence of an applicable Verizon Tariff wholesale discount for Verizon Telecommunications Services purchased for resale pursuant to Section 251(c)(4) of the Act, the applicable wholesale discount stated in Appendix A for Verizon Telecommunications Services purchased for resale pursuant to Section 251(c)(4) of the Act.
- 2.1.2 The Charges for a Verizon Telecommunications Service Customer Specific Arrangement ("CSA") purchased by QuantumShift for resale pursuant to Section 3.3 of the Resale Attachment for which Verizon is required to provide a wholesale discount pursuant to Section 251(c)(4) of the Act shall be the Retail Price for the CSA, less, to the extent required by Applicable Law: (a) the applicable wholesale discount stated in Verizon's Tariffs for Verizon Telecommunications Services purchased for resale pursuant to Section 251(c)(4) of the Act; or (b) in the absence of an applicable Verizon Tariff wholesale discount for Verizon Telecommunications Services purchased for resale pursuant to Section 251(c)(4) of the Act, the applicable discount stated in Appendix A for Verizon Telecommunications Services purchased for resale pursuant to Section 251(c)(4) of the Act. Notwithstanding the foregoing, in accordance with, and to the extent permitted by Applicable Law, Verizon may establish a wholesale discount for a CSA that differs from the wholesale discount that is generally applicable to Telecommunications Services provided to QuantumShift for resale pursuant to Section 251(c)(4) of the Act.
- 2.1.3 Notwithstanding Sections 2.1 and 2.2 of this Attachment, in accordance with, and to the extent permitted by Applicable Law, Verizon may at any time establish a wholesale discount for a Telecommunications Service (including, but not limited to, a CSA) that differs from the wholesale discount that is generally applicable to Telecommunications Services provided to QuantumShift for resale pursuant to Section 251(c)(4) of the Act.
- 2.1.4 The wholesale discount stated in Appendix A shall be automatically superseded by any new wholesale discount when such new wholesale discount is required by any order of the Commission or the FCC, approved by the Commission or the FCC, or otherwise allowed to go into effect by the Commission or the FCC, provided such new wholesale discount is not subject to a stay issued by any court of competent jurisdiction.
- 2.1.5 The wholesale discount provided for in Sections 2.1.1 through 2.1.3 of this Attachment shall not be applied to:
- 2.1.5.1 Short term promotions as defined in 47 CFR § 51.613;

- 2.1.5.2 Except as otherwise provided by Applicable Law, Exchange Access services;
 - 2.1.5.3 Subscriber Line Charges, Federal Line Cost Charges, end user common line Charges, taxes, and government Charges and assessment (including, but not limited to, 9-1-1 Charges and Dual Party Relay Service Charges).
 - 2.1.5.4 Any other service or Charge that the Commission, the FCC, or other governmental entity of appropriate jurisdiction determines is not subject to a wholesale discount under Section 251(c)(4) of the Act.
- 2.2 Verizon Telecommunications Services for which Verizon is Not Required to Provide a Wholesale Discount Pursuant to Section 251(c)(4) of the Act.
- 2.2.1 The Charges for a Verizon Telecommunications Service for which Verizon is not required to provide a wholesale discount pursuant to Section 251(c)(4) of the Act shall be the Charges stated in Verizon's Tariffs for such Verizon Telecommunications Service (or, if there are no Verizon Tariff Charges for such Service, Verizon's Charges for the Service that are generally offered by Verizon).
 - 2.2.2 The Charges for a Verizon Telecommunications Service customer specific contract service arrangement ("CSA") purchased by QuantumShift pursuant to Section 3.3 of the Resale Attachment for which Verizon is not required to provide a wholesale discount pursuant to Section 251(c)(4) of the Act shall be the Charges provided for in the CSA and any other Charges that Verizon could bill the person to whom the CSA was originally provided (including, but not limited to, applicable Verizon Tariff Charges).
- 2.3 Other Charges.
- 2.3.1 QuantumShift shall pay, or collect and remit to Verizon, without discount, all Subscriber Line Charges, Federal Line Cost Charges, and end user common line Charges, associated with Verizon Telecommunications Services provided by Verizon to QuantumShift.

3. QuantumShift Prices

Notwithstanding any other provision of this Agreement, the Charges that QuantumShift bills Verizon for QuantumShift's Services shall not exceed the Charges for Verizon's comparable Services, except to the extent that QuantumShift's cost to provide such QuantumShift's Services to Verizon exceeds the Charges for Verizon's comparable Services and QuantumShift has demonstrated such cost to Verizon, or, at Verizon's request, to the Commission or the FCC.

4. [This Section Intentionally Left Blank]

5. Regulatory Review of Prices

Notwithstanding any other provision of this Agreement, each Party reserves its respective rights to institute an appropriate proceeding with the FCC, the Commission or other governmental body of appropriate jurisdiction: (a) with regard to the Charges for its Services (including, but not limited to, a proceeding to change the Charges for its services, whether provided for in any of its Tariffs, in Appendix A, or otherwise); and (b)

with regard to the Charges of the other Party (including, but not limited to, a proceeding to obtain a reduction in such Charges and a refund of any amounts paid in excess of any Charges that are reduced).

APPENDIX A TO THE PRICING ATTACHMENT¹
(PENNSYLVANIA EAST)
v1.18

A. INTERCONNECTION²

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>	<u>Non-Recurring Charge:</u>
I. Reciprocal Compensation Traffic Termination		
Reciprocal Compensation Traffic End Office Rate	\$.000987/MOU	Not Applicable
Reciprocal Compensation Traffic Tandem Rate	\$.002439/MOU	Not Applicable
II. Entrance Facilities and Transport for Interconnection		
A. Entrance facilities, and transport, as appropriate, for Interconnection at Verizon End Office, Tandem Office, or other Point of Interconnection	Per Verizon FCC Interstate Tariff No. 1 Section 6 for Feature Group D service, as amended from time to time	Per Verizon FCC Interstate Tariff No. 1 Section 6 for Feature Group D service, as amended from time to time
	Per intrastate Verizon PA PUC No. 302 Section 6 access tariff for Feature Group D service, as amended from time to time	Per intrastate Verizon PA PUC No. 302 Section 6 access tariff for Feature Group D service, as amended from time to time

¹ This Appendix may contain rates for (and/or reference) services, facilities, arrangements and the like that Verizon does not have an obligation to provide under the Agreement (e.g., services, facilities, arrangements and the like that Verizon is not required to provide under Section 251 of the Act). Notwithstanding any such rates (and/or references) and, for the avoidance of any doubt, nothing in this Appendix shall be deemed to require Verizon to provide a service, facility, arrangement or the like that the Agreement does not require Verizon to provide, or to provide a service, facility, arrangement or the like upon rates, terms or conditions other than those that may be required by the Agreement.

All rates and charges set forth in this Appendix shall apply until such time as they are replaced by new rates and/or charges as the Commission or the FCC may approve or allow to go into effect from time to time, subject however, to any stay or other order issued by any court of competent jurisdiction. In addition to any rates and charges set forth herein, Verizon, effective as of March 11, 2005, may, but shall not be required to, charge (and QuantumShift shall pay) any rates and charges that apply to a CLEC's embedded base of certain UNEs pursuant to the FCC's Order on Remand, *Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, WC Docket No. 04-313, CC Docket No. 01-338 (FCC rel. Feb. 4, 2005) (the "TRRO"), the foregoing being without limitation of other rates and charges that may apply under subsequent FCC orders or otherwise. In addition, as set forth in Industry Notices, access tariff rates and/or other applicable non-UNE rates may apply equivalent for certain facilities and arrangements that are no longer available as unbundled network elements or combinations thereof.

Unless a citation is provided to a generally applicable Verizon tariff, all listed rates and services are available only to QuantumShift when purchasing these services for use in the provision of Telephone Exchange Service, and apply only to Reciprocal Compensation Traffic and local Ancillary Traffic. Verizon rates and services for use by QuantumShift in the carriage of Toll Traffic shall be subject to Verizon's tariffs for Exchange Access Service. Adherence to these limitations is subject to a reasonable periodic audit by Verizon.

² All rates and charges specified herein are pertaining to the Interconnection Attachment.

Service or Element Description:

Recurring Charges:

Non-Recurring Charge:

III. Exchange Access Service

Interstate

Per Verizon FCC Interstate Tariff No. 1, Section 6 for Feature Group D service, as amended from time to time.

Intrastate

Per intrastate Verizon PA PUC No. 302, Section 6 access tariff for Feature Group D service, as amended from time to time

IV. Fiber Meet

To be charged in accordance with the requirements of the Interconnection Attachment.

V. Tandem Transit Traffic Service

Tandem Switching

\$.001146/MOU

Per Section II. above, as applicable

Switched Transport

\$.000206/MOU
\$.000010/MOU/Mile

B. UNBUNDLED NETWORK ELEMENTS^{3 4}

Service or Element Description:

I. Interoffice Facilities

II. Digital Cross-Connect System

Recurring Charges:

Non-Recurring Charge:

As applicable per Verizon PA PUC 216 as amended from time to time.

As applicable per Verizon PA PUC 216 as amended from time to time.

³ All rates and charges specified herein are pertaining to the Network Elements Attachment. The rates set forth herein are subject to, and shall not have the effect of limiting, footnote 1 above. Verizon does not agree that UNE prices must be based solely on forward-looking costs, and Verizon reserves the right to change UNE prices to conform to any modification of the FCC's UNE pricing rules.

⁴ For the avoidance of any doubt, in addition to any rates and charges set forth herein, Verizon, effective as of March 11, 2005, may, but shall not be required to, charge (and QuantumShift shall pay) any rates and charges that apply to a CLEC's embedded base of certain UNEs pursuant to the TRRO, the foregoing being without limitation of other rates and charges that may apply under subsequent FCC orders or otherwise; in addition, as set forth in Industry Notices, access tariff rates and/or other applicable non-UNE rates may apply for certain facilities and arrangements that are no longer available as unbundled network elements or combinations thereof.

III. Unbundled Loops

2 Wire ADSL compatible Loops
 2 Wire HDSL compatible Loops
 2 Wire SDSL compatible Loops
 2 Wire IDSL compatible Loops

With the exception of 2 Wire HDSL, SDSL and IDSL, as applicable per Verizon PA PUC 216 as amended from time to time.

Density Cell:
 1 - \$6.77/Month
 2 - \$9.25/Month
 3 - \$12.39/Month
 4 - \$22.39/Month

Service Order: \$0.00
 Installation:
 If premises visit not required - \$1.44 initial and each additional loop; Not Applicable if existing loop & port together

If premises visit required - \$1.44, initial and each additional loop

Disconnect:
 \$1.30 per loop

Cooperative Testing, per loop-\$0.00

Engineering query, \$0.00

Engineering Work Order, \$0.00

Manual Pre-Qualification, per loop \$0.00

Line and Station Transfer⁵ (for xDSL Loops)

N/A

\$0.00/Loop

Line and Station Transfer⁶ (for HotCut)

N/A

\$147.75/Loop

IV. Intrastate Collocation

As Applicable Per Verizon PA PUC No. 218 as amended from time to time

⁵ Line and Station Transfer applies where Verizon swaps facilities in order to provision a Copper Facility.

⁶ Line and Station Transfer applies where Verizon swaps facilities in order to provision a Copper Facility

V. Line Splitting (also referred to as “Loop Sharing”⁷)

A. Unbundled Local Loops

As Applicable per this Appendix A for UNE Local 2-Wire Digital (DSL qualified) Loops Monthly Recurring Charges and Non-Recurring Charges as amended from time to time. Includes, without limitation, Recurring 2-Wire Digital (DSL qualified) Loop Charges, Service Order Charge (per order), Service Connection Charge* (per loop), Service Connection-Other Charge* (per loop), and Provisioning charges. Also includes, without limitation, if applicable, Field Dispatch, TC Not Ready, Loop Qualification, Engineering Query, Engineering Work Order, Trouble Dispatch, Misdirects, Dispatch In, Out, and Dispatch Expedites, Installation Dispatch, Manual Intervention, Expedited, Digital Designed Recurring and Non-Recurring Charges.

B. Other Charges

i. Regrade \$ 3.28 NRC

**ii. *Service Connection
*Service Connection/Other**

A second Service Connection NRC and Service Connection/Other NRC applies on New Loop Sharing Arrangements involving the connection of both voice and data connections.

iii. Disconnect A disconnect NRC applies, as applicable, on total Loop Sharing disconnects.

iv. Line and Station Transfers/Pair Swaps An LST/Pair Swap NRC applies, as applicable, on LST activity performed on New Loop Sharing Arrangements.

C. Collocation Rates

Collocation Rates (including, without limitation, Splitter Connection and Installation Rates)

As applicable per Verizon PA PUC No. 218 as amended from time to time.

D. Applicable rates for Line Splitting are as set forth in Verizon’s PA PUC No. 216 Tariff as amended from time to time.

⁷ This Pricing Attachment incorporates by reference the rates set forth in the Agreement for the services and charges referenced herein. In the event this Pricing Attachment refers to a service that is not available under the Agreement, the Agreement shall control. Nothing in this Appendix A shall be deemed to require Verizon to provide a service that the Agreement does not require Verizon to provide.

VI. EEL

As applicable per Verizon PA PUC 216 as amended from time to time.

VII. DARK FIBER

Records Review, per inquiry		\$0.00
Records Review with Reservation, per inquiry		TBD
Dark Fiber – IOF		
Verizon C.O. to Verizon C.O		
Service Order		\$55.22
Serving Wire Center (“SWC”) Charge/SWC/Pair	\$15.95	\$42.59
IOF Mileage/Pair/mile		
	\$149.32	
IOF Mileage Installation Charge/Pair		\$204.94
Expedited Handling		\$94.34
Intermediate Office Routing Charge	\$10.66	\$36.23
Dark Fiber - LOOP		
Service Order		\$55.22
SWC Charge/SWC/Pair	\$15.95	\$38.53
Loop Charge/Pair		
Rate Group A1	\$71.66	\$566.97
Rate Group A2	\$117.04	\$566.97
Rate Group B1	\$169.14	\$566.97
Rate Group B2	\$200.95	\$566.97
Expedited Handling		\$317.43

VIII. Unbundled Sub-Loop Arrangement (USLA)

As applicable per Verizon PA PUC 216 as amended from time to time.

IX. Unbundled Drop Sub-Element (UDSE)

As applicable per Verizon PA PUC 216 as amended from time to time.

X. Network Interface Device (NID)

Except as below for NID-to-NID as applicable per Verizon PA PUC 216 as amended from time to time.

NID - 2 Wire per NID/month - NID-to-NID	\$1.04
NID - 4 Wire per NID/month - NID-to-NID	\$1.12

Service or Element Description:	Recurring Charges:	Non-Recurring Charges:
XI. Routine Network Modifications⁸		
Clear Defective Pair (Where feasible)	N/A	TBD
Reassignment of Non-Working Cable Pair	N/A	TBD
Binder Group Rearrangement	N/A	TBD
Repeater – Installation	N/A	TBD
Apparatus Case – Installation	N/A	TBD
Range Extenders – DS0 Installation	N/A	TBD
Range Extenders – DS1 Installation	N/A	TBD
Channel Unit to Universal/Cotted DLC System (existing)	N/A	TBD
Serving Terminal – Installation/Upgrade	N/A	TBD
Activate Dead Copper Pair	N/A	TBD
Multiplexer – 1/0 - Installation	N/A	TBD
Multiplexer – 1/0 – Reconfiguration	N/A	TBD
Multiplexer – 3/1 - Installation	N/A	TBD
Multiplexer – 3/1 – Reconfiguration	N/A	TBD
Multiplexer – Other – Installation	N/A	TBD
Move Drop	N/A	TBD
Cross-Connection – Existing Fiber Facility	N/A	TBD
Line Card – Installation	N/A	TBD
Copper Rearrangement	N/A	TBD
Central Office Terminal – Installation	N/A	TBD
IDLC Only Condition	N/A	TBD
Other Required Modifications	N/A	TBD
No Facilities - Confirmation	N/A	TBD
OTHER		TBD
Commingled Arrangements – per circuit NRC	N/A	TBD
Conversion – Service Order	N/A	TBD
Conversion - Installation per circuit	N/A	TBD
Circuit Retag – per circuit	N/A	TBD
	N/A	
Dark Fiber – Dark Fiber Routine Network Modifications	N/A	TBD

⁸ This Appendix may contain rates and charges for (and/or reference) services, facilities, arrangements and the like that Verizon does not have an obligation to provide under the Agreement (e.g., services, facilities, arrangements and the like for which an unbundling requirement does not exist under 47 U.S.C. Section 251(c)(3)). Notwithstanding any such rates and/or charges (and/or references) and, for the avoidance of any doubt, nothing in this Appendix shall be deemed to require Verizon to provide a service, facility, arrangement or the like that the Agreement does not require Verizon to provide, or to provide a service, facility, arrangement or the like upon rates, terms or conditions other than those that may be required by the Agreement.

C. RESALE⁹

Service or Element Description:

Recurring Charges:

Non-Recurring Charge:

I. Wholesale Discount for Resale of Retail Telecommunications Services¹⁰

Resale of retail services if QuantumShift provides own operator services platform 22.00% (Inclusive of PA gross receipts tax)

Resale of retail services if QuantumShift uses Verizon operator services platform 18.34% (Inclusive of PA gross receipts tax)

D. OPERATIONS SUPPORT SYSTEM

As applicable per Verizon PA PUC 216 as amended from time to time.

E. 911/E911

Access pass-through to number portability purchaser

Transport
Data Entry and Maintenance

Per section A. above.
No Charge

⁹ All rates and charges specified herein are pertaining to the Resale Attachment.

¹⁰ Excludes telecommunications services designed primarily for wholesale, such as switched and special exchange access service, and, subject to the provisions of the Resale Attachment, 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 Verizon 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 Verizon 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 Verizon.

Service or Element Description:

Recurring Charges:

Non-Recurring Charge:

F. TIME AND MATERIALS

As applicable per Verizon PA PUC 216 as amended from time to time.

G. DIRECTORY LISTINGS & BOOKS

Primary Listing (on initial UNE service 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 Verizon-PA end user business customers for which no specific charge applies.

Not Applicable

Not Applicable

Other Tariffed Listing Services (For listings ordered in excess of the primary listings provided or other listing types, or listings ordered at a time other than initial UNE service order, or listings ordered not associated with a UNE service order, or for changes made to existing listings.)

Retail rates apply. For retail rates see Verizon-PA Tariff No. 1 sec. 5.B.

Books & delivery (annual home area directories only)

No charge for normal numbers of books delivered to end users; bulk deliveries to QuantumShift per separate arrangement

**EXHIBIT A TO SECTION 3.1 (FIBER MEET ARRANGEMENT) OF THE INTERCONNECTION
ATTACHMENT**

Technical Specifications and Requirements

for

**QuantumShift - VERIZON PENNSYLVANIA INC.
Fiber Meet Arrangement No. [XX]**

The following technical specifications and requirements will apply to QuantumShift - Verizon Pennsylvania Inc. Fiber Meet Arrangement [NUMBER] ("FM No. [XX]"):

1. FM No. [XX] will provide interconnection facilities for the exchange of applicable traffic (as set forth in the Amendment) between Verizon's [NAME OF TANDEM/END OFFICE] and QuantumShift's [NAME OF TANDEM/END OFFICE] in the Commonwealth of Pennsylvania. A diagram of FM No. [XX] is included as Exhibit A-1.
2. Fiber Meet Points ("FMPs").
 - 2.1 FM No. [XX] will be configured as shown on Exhibit A-1. FM No. [XX] will have two FMPs. Neither FMP is more than three (3) miles from the nearest Verizon Tandem or End Office.
 - 2.2 Verizon will provision a Fiber Network Interface Device ("FNID") at [POLE XX, STREET YY, TOWN ZZ, STATE] and terminate [____] strands of its fiber optic cable in the FNID. The FNID provisioned by Verizon will be a [MANUFACTURER, MODEL]. Verizon will bear the cost of installing and maintaining its FNID. The fiber patch panel within Verizon's FNID will serve as FMP No. 1. Verizon will provide a fiber stub at the fiber patch panel in Verizon's FNID for QuantumShift to connect [____] strands of its fiber cable [____] connectors. Verizon's FNID will be locked, but Verizon and QuantumShift will have 24 hour access to their respective side of the fiber patch panel located in Verizon's FNID.
 - 2.3 QuantumShift will provision a FNID at [POLE XX, STREET YY, TOWN ZZ, STATE] and terminate [____] strands of its fiber optic cable in the FNID. The FNID provisioned by QuantumShift will be a [MANUFACTURER, MODEL]. QuantumShift will bear the cost of installing and maintaining its FNID. The fiber patch panel within QuantumShift's FNID will serve as FMP No. 2. QuantumShift will provide a fiber stub at the fiber patch panel in QuantumShift's FNID for Verizon to connect [____] strands of its fiber cable. QuantumShift's FNID will be locked, but QuantumShift and Verizon will have 24 hour access to their respective side of the fiber patch panel located in QuantumShift's FNID.
3. Transmission Characteristics.
 - 3.1 FM No. [XX] will be built [as a ring configuration].
 - 3.2 The transmission interface for FM No. [XX] will be [Synchronous Optical Network ("SONET")].

- 3.3 Terminating equipment shall comply with [SONET transmission requirements as specified in Telcordia Technologies document GR-253 CORE (Tables 4-3 through 4-11)].
 - 3.4 The optical transmitters and receivers shall provide adequate power for the end-to-end length of the fiber cable to be traversed.
 - 3.5 The optical transmission rate will be [Unidirectional] OC-[XX].
 - 3.6 The path switch protection shall be set as [Non-Revertive].
 - 3.7 Verizon and QuantumShift shall provide [Primary Reference Source traceable timing].
4. Add Drop Multiplexer.
- 4.1 Verizon will, at its own cost, obtain and install (at its own premise) its own Add Drop Multiplexer. Verizon will use a [MANUFACTURER, MODEL] Add Drop Multiplexer with firmware release of [X.X] at the network level. Before making any upgrade or change to the firmware of its Add Drop Multiplexer, Verizon must provide QuantumShift with fourteen (14) days advance written notice that describes the upgrade or change to its firmware and states the date on which such firmware will be activated in Verizon's Add Drop Multiplexer.
 - 4.2 QuantumShift will, at its own cost, obtain and install (at its own premise) its own Add Drop Multiplexer. QuantumShift will use a [MANUFACTURER, MODEL] Add Drop Multiplexer with firmware release of [X.X] at the network level. Before making any upgrade or change to the firmware of its Add Drop Multiplexer, QuantumShift must provide Verizon with fourteen (14) days advance written notice that describes the upgrade or change to its firmware and states the date on which such firmware or software will be activated in QuantumShift's Add Drop Multiplexer.
 - 4.3 QuantumShift and Verizon will monitor all firmware upgrades and changes to observe for any failures or anomalies adversely affecting service or administration. If any upgrade or change to firmware adversely affects service or administration of FM No. [XX], the firmware will be removed from the Add Drop Multiplexer and will revert to the previous version of firmware.
 - 4.4 The Data Communication Channel shall be disabled between the Verizon and QuantumShift Add Drop Multiplexers of FM No. [XX].
5. Testing.
- 5.1 Prior to turn-up of FM No. [XX], Verizon and QuantumShift will mutually develop and implement testing procedures for FM No. [XX]
6. Connecting Facility Assignment ("CFA") and Slot Assignment Allocation ("SAA").
- 6.1 For one-way and two-way trunk arrangements, the SAA information will be turned over to QuantumShift as a final step of turn up of the FM No. [XX].
 - 6.2 For one-way trunk arrangements, Verizon will control the CFA for the subtending facilities and trunks connected to Verizon's slots and QuantumShift will control the CFA for the subtending facilities and trunks connected to QuantumShift's

slots. QuantumShift will place facility orders against the first half of the *fully configured* slots (for example, slots 1-6 of a fully configured OC12) and Verizon will place orders against the second half of the slots (for example, slots 7-12). If either Party needs the other Party's additional slot capacity to place orders, this will be negotiated and assigned on a case-by-case basis. For SAA, Verizon and QuantumShift shall jointly designate the slot assignments for Verizon's Add Drop Multiplexers and QuantumShift's Add Drop Multiplexer in FM No. [XX].

- 6.3 For two-way trunk arrangements, QuantumShift shall control the CFA for the subtending facilities and trunks connected to FM No. [XX]. QuantumShift shall place facility and trunk orders against the total available SAA capacity of FM No. [XX].

7. Inventory, Provisioning and Maintenance, Surveillance, and Restoration.

- 7.1 Verizon and QuantumShift will inventory FM No. [XX] in their operational support systems before the order flow begins.
- 7.2 Verizon and QuantumShift will notify each other's respective Maintenance Control Office of all troubleshooting and scheduled maintenance activity to be performed on FM No. [XX] facilities prior to undertaking such work, and will advise each other of the trouble reporting and maintenance control point contact numbers and the days and hours of operation. Each Party shall provide a timely response to the other Party's action requests or status inquiries.
- 7.3 Verizon will be responsible for the provisioning and maintenance of the FM No. [XX] transport facilities on Verizon's side of the FMPs, as well as delivering its applicable traffic to the FMPs. QuantumShift will be responsible for the provisioning and maintenance of the FM No. [XX] transport facilities on the QuantumShift's side of the FMPs, as well as delivering its applicable traffic to the FMPs. As such, other than payment of any applicable intercarrier compensation charges pursuant to the terms of the Agreement, neither Party shall have any obligation to pay the other Party any charges in connection with FM No. [XX].
- 7.4 Verizon and QuantumShift will provide alarm surveillance for their respective FM No. [XX] transport facilities. Verizon and QuantumShift will notify each other's respective maintenance control office of all troubleshooting and scheduled maintenance activity to be performed on the facility prior to undertaking such work, and will advise each other of the trouble reporting and maintenance control point contact numbers and the days and hours of operation.

8. Cancellation or Modification of FM No. [XX].

- 8.1 Except as otherwise provided in this Section 8, all expenses and costs associated with the construction, operation, use and maintenance of FM No. [XX] on each Party's respective side of the FMPs will be borne by such Party.
- 8.2 If either Party terminates the construction of the FM No. [XX] before it is used to exchange traffic, the Party terminating the construction of FM No. [XX] will compensate the other Party for that Party's reasonable actual incurred construction and/or implementation expenses.
- 8.3 If either Party proposes to move or change FM No. [XX] as set forth in this document, at any time before or after it is used to exchange traffic, the Party requesting the move or change will compensate the other Party for that Party's

reasonable actual incurred construction and/or implementation expenses.
Augments, moves and changes to FM No. [XX] as set forth in this document
must be mutually agreed upon by the Parties in writing.

QUANTUMSHIFT COMMUNICATIONS, INC.

VERIZON PENNSYLVANIA INC.

By: _____

Date: _____

TO BE EXECUTED AT A LATER DATE

Exhibit A-1

**QuantumShift - VERIZON PENNSYLVANIA INC.
Fiber Meet Arrangement No. [XX]**

City, State