

Attachment MDP-9

Responses to Interrogatories

- OBJECTIONS TO JOINT PARTIES INTERROGATORIES
ADDRESSED TO VERIZON PENNSYLVANIA INC. AND
VERIZON NORTH INC. SET I
- RESPONSE OF CTSI LLC TO OFFICE OF CONSUMER
ADVOCATE'S FIRST SET OF INTERROGATORIES; OCA-1
- RESPONSE OF PENN TELECOM INC. TO THE OFFICE OF
CONSUMER ADVOCATE'S FIRST SET OF INTERROGATORIES
TO CLEC PARTIES; OCA-1
- FULL SERVICE COMPUTING CORPORATION T/A FULL
SERVICE NETWORK'S AMENDED RESPONSES TO
COMMISSION DISCOVERY
- RESPONSE OF CEI NETWORKS TO OFFICE OF CONSUMER
ADVOICATE'S INTERROGATORIES, SET I; OCA-1
- RESPONSE OF CAVALIER TELEPHONE MID-ATLANTIC, LLC
TO OFFICE OF CONSUMER ADVOICATE'S
INTERROGATORIES, SET I; OCA-1
- VERIZON PENNSYLVANIA INC. AND VERIZON NORTH INC.
SUPPLEMENTAL RESPONSE TO AT&T SET I, NOS. 1, 13, 15-17,
19-21

CONTAINS PROPRIETARY INFORMATION

Direct Testimony of Michael D. Pelcovits
PA PUC Docket No. I-00030099
January 9, 2004

Attachment MDP-10

Press Release:
Broadview Networks Deploys Enkata Customer Insight Analytics Solution

Guido Schlesinger

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[SEARCH](#) • [CONTACT US](#) • [ORDER](#) • [CUSTOMER CENTER](#) •[PRODUCTS & SERVICES](#)[PROMOTIONS & OFFERS](#)[ABOUT US](#)[P](#)**RESIDENTIAL : PRESS & NEWS****PRESS RELEASES**[Press Releases](#)[Archives](#)[News Search](#)**BROADVIEW NETWORKS DEPLOYS ENKATA CUSTOMER INSIGHT ANALYTICS SOLUTION****Guido Schlesinger****CONTACT:** gschlesinger@broadviewnet.com
212-400-1062**Rachel Kim, Andy Oliver,**

LEWIS PR for Enkata

rachelk@lewispr.com / andy@lewispr.com
619-516-2559

San Mateo, CA – February 12, 2003 – Broadview Networks, a network-based electronically integrated communications provider (e-ICP), has selected Enkata's Customer Insight Analytics solution to optimize its Customer Care operations. The implementation is expected to reduce calls while enhancing service across the company's customer base.

Broadview Networks provides communications solutions to commercial and residential customers in the northeastern and mid-Atlantic United States. With Enkata, Broadview Networks will be able to identify and analyze the root-cause of customer calls more quickly and efficiently. As a result, unnecessary inquiries and the number of repeat calls will be minimized, thereby lowering overall operating costs.

"The Enkata solution will allow us to examine customer interactions on a much deeper level, generating insights that other solutions would have never revealed," said Tracy Korman, Executive Vice President, customer relationship management, Broadview Networks. "It will have a direct impact on helping us serve our customers better and faster, while lowering our costs."

"We are excited to be working with such a service-oriented communications company as Broadview Networks," said Michael Chen, Enkata President and CEO. "The telecommunications market is undergoing massive change and only those companies that pay keen attention to the customer experience, while aggressively managing costs, will survive. The deployment of our solution will be a key enabler for Broadview to drive distinctive

...service and maintain a competitive service cost structure.”

Enkata’s Customer Insight Analytics solution combines and enriches customer interaction data from multiple systems, including the use of free-form text classification and financial cost allocation, and uncovers the root-cause drivers behind meaningful groups of interactions so that companies can pinpoint where to take action for maximum results.

About Enkata Technologies

Enkata builds Customer Insight Analytics software that helps businesses uncover valuable insights about their customer interactions so they can improve the customer experience and increase profitability by driving down costs. The Enkata solution is based on an innovative approach to root-cause analysis, which systematically reveals the most significant underlying reasons for customer contacts. With Enkata, companies can uncover cost savings opportunities linked to inefficiencies in products and services, including training, policy and site processes. As a result, organizations can identify and eliminate the obstacles that frustrate their most valued customers.

Headquartered in San Mateo, California, Enkata is backed by leading venture capital groups with more than \$1.5 billion under management. Since its inception in 1999, Enkata has been deployed with leading Fortune 500 companies.

About Broadview Networks

Broadview Networks (www.broadviewnet.com) is a network-based electronically integrated communications provider (e-ICP) serving small and medium-sized businesses and communications-intensive residential customers in the northeastern and mid-Atlantic United States. The New York City-based company offers integrated communications solutions, including local, long-distance and international voice services; data services; and dial-up and high-speed Internet services using digital subscriber line (DSL) and other advanced technologies. Customers receive a single, easy-to-understand bill and have one point of contact for real-time, personal customer care.

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Direct Testimony of Michael D. Pelcovits
PA PUC Docket No. I-00030099
January 9, 2004

Attachment MDP-11

North Pittsburgh Systems, Inc.
Quarterly Report
SEC form 10-Q

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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2003

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 0-13716

NORTH PITTSBURGH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania
(State or other jurisdiction of
incorporation or organization)

25-1485389
(I.R.S. Employer
Identification No.)

4008 Gibsonia Road, Gibsonia, Pennsylvania 15044-9311
(Address of principal executive offices)
(Zip Code)

724.443.9600
(Registrant's telephone number, including area code)

No Change
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. YES NO

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). YES NO

The number of shares of the registrant's Common Stock (par value \$.15625 per share) outstanding as of October 30, 2003 was 15,005,000.

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PART I
FINANCIAL INFORMATION
Independent Auditors' Review Report

The Board of Directors
North Pittsburgh Systems, Inc:

We have reviewed the accompanying condensed consolidated balance sheet of North Pittsburgh Systems, Inc. and subsidiaries as of September 30, 2003, the related condensed consolidated statements of income for the three and nine-month periods ended September 30, 2003 and 2002 and the related condensed consolidated statements of cash flows for the nine-month periods ended September 30, 2003 and 2002. These condensed consolidated financial statements are the responsibility of the Company's management.

We conducted our review in accordance with standards established by the American Institute of Certified Public Accountants. A review of interim financial information consists principally of applying analytical review procedures to financial data and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modifications that should be made to the condensed consolidated financial statements referred to above for them to be in conformity with accounting principles generally accepted in the United States of America.

KPMG LLP

Pittsburgh, Pennsylvania
October 24, 2003

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PART I
FINANCIAL INFORMATION
Item 1. Financial Statements
NORTH PITTSBURGH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Income (Unaudited)
(Amounts in Thousands – Except Per Share Data)

	For the Three Months Ended Sept. 30		For the Nine Months Ended Sept. 30	
	2003	2002	2003	2002
Operating revenues:				
Local network services	\$ 6,450	\$ 5,654	\$18,749	\$16,539
Long distance and access services	16,433	15,124	48,572	44,173
Directory advertising, billing & other services	362	412	980	1,106
Telecommunication equipment sales	611	656	1,655	1,765
Other operating revenues	2,446	1,855	7,667	5,808
Total operating revenues	26,302	23,701	77,623	69,391
Operating expenses:				
Network and other operating expenses	13,634	12,079	43,291	35,521
Depreciation and amortization	4,829	4,485	14,243	13,290
State and local taxes	897	811	2,932	2,452
Telecommunication equipment expenses	417	456	1,164	1,212
Total operating expenses	19,777	17,831	61,630	52,475
Net operating income	6,525	5,870	15,993	16,916
Other expense (income), net:				
Interest expense	528	881	1,614	2,692
Interest income	(42)	(134)	(147)	(426)
Sundry income, net	(540)	(706)	(2,170)	(488)
	(54)	41	(703)	1,778
Income before income taxes	6,579	5,829	16,696	15,138
Income taxes	2,709	2,406	6,883	6,248
Net income	\$ 3,870	\$ 3,423	\$ 9,813	\$ 8,890
Weighted average common shares outstanding	15,005	15,005	15,005	15,005
Basic and diluted earnings per share	\$.26	\$.23	\$.65	\$.59
Dividends per share	\$.17	\$.17	\$.51	\$.51

See accompanying notes to unaudited condensed consolidated financial statements.

Table of Contents**NORTH PITTSBURGH SYSTEMS, INC. AND SUBSIDIARIES**

Consolidated Balance Sheets

(Amounts in Thousands)

	(Unaudited) Sept. 30 2003	Dec. 31 2002
ASSETS		
Current Assets:		
Cash and temporary investments	\$ 25,494	\$ 22,244
Marketable securities available for sale	423	361
Accounts receivable:		
Customer, net of allowance for doubtful accounts of \$628 and \$470, respectively	6,046	5,274
Access service settlements and other	7,501	7,729
Prepaid expenses	1,073	644
Inventories	1,649	2,160
Prepaid taxes other than income taxes	248	—
Prepaid federal and state income taxes	549	—
Deferred income taxes	1,493	1,882
	<u>44,476</u>	<u>40,294</u>
Property, plant and equipment:		
Land	475	475
Buildings	13,733	13,697
Equipment	188,053	181,294
Assets held under capital lease	10,363	10,363
	<u>212,624</u>	<u>205,829</u>
Less accumulated depreciation and amortization	127,704	114,721
	<u>84,920</u>	<u>91,108</u>
Construction in progress	3,152	3,131
	<u>88,072</u>	<u>94,239</u>
Total property, plant and equipment, net	88,072	94,239
Investments	13,745	13,526
Intangible asset	831	1,039
Other assets	1,266	1,305
	<u>\$ 148,390</u>	<u>\$ 150,403</u>

(Continued)

Table of Contents**NORTH PITTSBURGH SYSTEMS, INC. AND SUBSIDIARIES**

Consolidated Balance Sheets

(Amounts in Thousands)

	(Unaudited) Sept. 30 2003	Dec. 31 2002
	<u> </u>	<u> </u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ 3,085	\$ 3,085
Obligation under capital lease	1,053	996
Accounts payable	7,331	7,215
Dividend payable	2,551	2,551
Other accrued liabilities	2,873	2,950
Federal and state income taxes	—	1,760
	<u>16,893</u>	<u>18,557</u>
Long-term debt	25,453	27,767
Obligation under capital lease	5,814	6,611
Deferred income taxes	10,316	9,974
Accrued pension and postretirement benefits	13,578	10,919
Other liabilities	622	1,683
	<u>72,676</u>	<u>75,511</u>
Shareholders' equity:		
Capital stock: authorized 50,000 shares:		
Common stock, par value \$.15625; issued 15,040 and outstanding 15,005 shares	2,350	2,350
Preferred stock, par value \$1.00; none issued	—	—
Capital in excess of par value	2,215	2,215
Retained earnings	74,417	72,257
Less cost of treasury stock (35 shares)	(508)	(508)
Accumulated other comprehensive loss	(2,760)	(1,422)
	<u>75,714</u>	<u>74,892</u>
	<u>\$ 148,390</u>	<u>\$ 150,403</u>

See accompanying notes to unaudited condensed consolidated financial statements.

Table of Contents**NORTH PITTSBURGH SYSTEMS, INC. AND SUBSIDIARIES**Condensed Consolidated Statements of Cash Flows (Unaudited)
(Amounts in Thousands)

	For the Nine Months Ended Sept. 30	
	2003	2002
Cash from operating activities:		
Net income	\$ 9,813	\$ 8,890
Adjustments to reconcile net income to net cash from operating activities:		
Depreciation and amortization	14,243	13,290
Equity income of affiliated companies	(2,284)	(1,934)
Changes in assets and liabilities:		
Accounts receivable	(544)	1,085
Inventories	511	246
Deferred financing costs, prepaid expenses and other assets	(390)	15
Prepaid taxes	(248)	(218)
Accounts payable	116	(933)
Other accrued liabilities	(1,138)	(919)
Accrued pension and postretirement benefits	518	354
Federal and state income taxes	(2,309)	120
Deferred income taxes	1,680	(7)
Other, net	58	118
Total adjustments	10,213	11,217
Net cash from operating activities	20,026	20,107
Cash used for investing activities:		
Expenditures for property and equipment	(8,134)	(8,442)
Purchase of marketable securities available for sale	—	(178)
Proceeds from sale of marketable securities available for sale	—	2
Investments in affiliated entities	(937)	—
Distributions from affiliated entities	3,002	—
Net cash used for investing activities	(6,069)	(8,618)
Cash used for financing activities:		
Cash dividends	(7,653)	(7,653)
Payments of capital lease obligation	(740)	(676)
Retirement of debt	(2,314)	(3,088)
Net cash used for financing activities	(10,707)	(11,417)
Net increase in cash and temporary investments	3,250	72
Cash and temporary investments at beginning of period	22,244	35,299
Cash and temporary investments at end of period	\$ 25,494	\$ 35,371
Interest paid	\$ 1,623	\$ 2,652
Income taxes paid	\$ 7,523	\$ 6,141

See accompanying notes to unaudited condensed consolidated financial statements.

Table of Contents**NORTH PITTSBURGH SYSTEMS, INC. AND SUBSIDIARIES**

Notes to Condensed Consolidated Financial Statements (Unaudited)
(Dollar amounts in Thousands Except Exercise Price in Note 5)

(1) Basis of Presentation and Consolidation

The condensed consolidated financial statements included herein have been prepared by North Pittsburgh Systems, Inc. (hereafter referred to as the Registrant, the Company, we, us or our), without audit, pursuant to the rules and regulations of the Securities and Exchange Commission. Consolidated herein are the financial results of the Company's wholly-owned subsidiaries, North Pittsburgh Telephone Company (North Pittsburgh), Penn Telecom, Inc. (Penn Telecom) and Pinnatech, Inc. (Pinnatech). Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. Nevertheless, the Company believes that its disclosures herein are adequate to make the information presented not misleading and, in the opinion of management, all adjustments necessary to present fairly the results of operations for the interim periods have been reflected. These condensed consolidated financial statements should be read in conjunction with the financial statements and the notes thereto included in the Company's latest Annual Report to the Securities and Exchange Commission on Form 10-K.

Certain amounts in the Company's 2002 condensed consolidated financial statements have been reclassified to conform with the presentation of its 2003 condensed consolidated financial statements. In addition, as of December 31, 2002, we have reclassified certain intraLATA settlement amounts due other telecommunication providers from a contra revenue to an operating expense to conform with current accounting and industry presentation. The reclassification increased both operating revenues and operating expenses by \$578 for the three-month period and \$1,819 for the nine-month period ended September 30, 2002 from that reported in the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2002.

(2) Comprehensive Income

Statement of Financial Accounting Standards (SFAS) No. 130, "Reporting Comprehensive Income", establishes requirements for disclosure of comprehensive income. The objective of SFAS No. 130 is to report all changes in equity that result from transactions and economic events other than transactions with owners. Comprehensive income is the total of net income and all other non-owner changes in equity. The reconciliation of net income to comprehensive income is as follows:

	For the Three Months Ended Sept. 30		For the Nine Months Ended Sept. 30	
	2003	2002	2003	2002
Net income	\$3,870	\$3,423	\$ 9,813	\$8,890
Unrealized gain (loss) on marketable securities including reclassification adjustments, net of tax	6	(33)	36	10
Minimum pension liability adjustment, net of tax	—	—	(1,374)	—
Comprehensive income	\$3,876	\$3,390	\$ 8,475	\$8,900

(3) Transactions with Related Parties

In 1998, we entered into an agreement to outsource certain data processing functions to a third party processor (Processor), which is a member of the Armstrong Group of Companies (the Armstrong Group). We are related to the Armstrong Group by a common shareholder and director. Payments to the Processor under this agreement were \$2,894 and \$2,763 for the nine-month periods ended September 30, 2003 and 2002, respectively. Also, we paid \$135 and \$468 in each of those same periods to the law firm of a member of the Board of Directors for various legal services. As of September 30, 2003, we had amounts outstanding of \$164 and \$47 to the Processor and law firm, respectively.

In addition, in the ordinary course of business, we both provide and receive telecommunication transport services from Boulevard Communications, LLP (Boulevard), a competitive access provider jointly owned by us and a company in the Armstrong Group. Total revenues recognized from providing services to Boulevard were approximately \$19 and \$21 and total expenses incurred from receiving services from Boulevard were approximately \$225 and \$164, for the nine-month

periods ended September 30, 2003 and 2002, respectively. We also provide in the ordinary course of business telecommunication and transport services to other member companies of the Armstrong Group, with total revenues recognized of approximately \$133 and \$214, for those same periods, respectively. The amounts outstanding from and/or due to Boulevard and the companies in the Armstrong Group were negligible as of September 30, 2003.

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(4) Workforce Reduction

During the second quarter of 2003, the Company instituted a workforce reduction program at its North Pittsburgh subsidiary. This program consisted of both layoffs and early retirement incentives and reduced the North Pittsburgh workforce by 37 people, or 15%. The Company recorded severance charges of \$1,076 and \$66 during the second and third quarters of 2003, respectively. No severance accrual remained as of September 30, 2003, as all amounts had been paid prior to that date.

Because of the workforce reduction program, the Company also recorded curtailment charges and completed a re-measurement of its obligations under its pension and postretirement healthcare plans. Curtailment charges totaling \$1,583 were recorded in the second quarter of 2003. Both the \$1,142 in severance charges and \$1,583 in curtailment charges were recorded in the "Network and other operating expenses" line item on the Company's Condensed Consolidated Statement of Income.

As a result of the re-measurement of the Company's pension plan, the Company also recorded adjustments to shareholders' equity (via the "Accumulated other comprehensive loss" line item) and intangible asset. Accounting rules provide that if, at any plan measurement date, the fair value of plan assets is less than the plan's accumulated benefit obligation (ABO), the sponsor must establish a liability at least equal to the amount by which the ABO exceeds the fair value of assets. The liability must be offset by the recognition of an intangible asset and/or charge against shareholders' equity. Due to the retirement of 16 people as a result of the workforce reduction program and a change in the discount rate used for plan measurement purposes from 6.5% as of December 31, 2002 to 6.0% as of May 31, 2003, the date of the re-measurement, an additional after tax amount of \$1,374 was charged as a reduction to shareholders' equity. As a result, the total after tax minimum pension liability amounted to \$2,767 as of September 30, 2003 as compared to \$1,393 as of December 31, 2002. In addition, the intangible asset balance decreased from \$1,039 as of December 31, 2002 to \$831 as of September 30, 2003 due to a decrease in unrecognized prior service costs from the curtailment.

(5) Shareholder Rights Plan

On September 25, 2003, the Board of Directors of the Company (the Board) adopted a Shareholder Rights Plan and declared a dividend of one right for each share of common stock outstanding on October 6, 2003 and to become outstanding thereafter. Each right entitles the holder of the right to buy one one-hundredth of a share of Class A Junior Participating Preferred Stock for \$60 per share if the right becomes exercisable. The rights become exercisable only if a person or group acquires 15% or more of the common stock of the Company then outstanding or commences a tender or exchange offer that, if consummated, would result in the person or group acquiring 15% or more of the Company's common stock then outstanding. If a person or group acquires 15% of the Company's outstanding common stock, right holders (other than the shareholders(s) who acquired 15% of the Company's common stock) become entitled to purchase an amount of common stock of the Company (or Common Stock Equivalents as defined in the Shareholder Rights Plan, or, in certain circumstances, common stock of the acquirer) having a value equal to two times the exercise price of \$60. The rights currently trade with the Company's common stock. The rights may be redeemed by the Board, for one cent per right, at any time before a person or entity acquires 15% or more of the common stock of the Company then outstanding. The rights expire in October 2013.

The Company's articles of incorporation authorize up to 10 million shares of preferred stock, of which 151 thousand shares have been reserved for possible issuance under the Shareholder Rights Plan. As of September 30, 2003, no preferred shares had been issued.

(6) Recent Accounting Pronouncements

In June of 2001, the Financial Accounting Standards Board (FASB) issued SFAS No. 143, "Accounting for Asset Retirement Obligations". The Company adopted this pronouncement on January 1, 2003. SFAS No. 143 requires that we record the fair value of an asset retirement obligation as a liability in the period in which we incur a legal obligation associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development, and/or normal use of the assets. We would also record a corresponding asset that is depreciated over the life of the asset. Subsequent to the initial measurement of the asset retirement obligation, the obligation will be adjusted at the end of each period to reflect the passage of time and changes in the estimated future cash flows underlying the obligation. The adoption of SFAS No. 143 did not have a material effect on our consolidated financial statements.

In June of 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities". SFAS No. 146 eliminates Emerging Issues Task Force, or EITF, Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)". Under SFAS No. 146, liabilities for costs associated with an exit or disposal activity are recognized when the liabilities are incurred,

as

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opposed to being recognized at the date of the entity's commitment to an exit plan under EITF No. 94-3. Furthermore, SFAS No. 146 establishes that fair value is the objective for initial measurement of the liabilities. This Statement is effective for exit or disposal activities that are initiated after December 31, 2002.

Table of Contents**PART I****Item 2. Management's Discussion and Analysis of Financial Condition
and Results of Operations**

(Amounts in Thousands Except Per Share Data and Operating Statistics)

Cautionary Language Concerning Forward-Looking Statements

In addition to historical information, this Quarterly Report on Form 10-Q contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 (Section 27A) and Section 21E of the Securities Exchange Act of 1934 (Section 21E) regarding events, financial trends and critical accounting policies that may affect our future operating results, financial position and cash flows. We intend that such forward-looking statements be subject to the safe harbors within Section 27A and Section 21E as provided by the Private Securities Litigation Act of 1995.

Forward-looking statements are generally accompanied by words such as "believes", "anticipates", "expects", "estimates", "intends" or similar words or expressions. Such statements are based on our assumptions and estimates and are subject to risks and uncertainties. You should understand that various factors, including (but not limited to) those items discussed below and elsewhere in this document, could cause our actual results to differ materially from the results expressed in or implied by these forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which are current only as of the date of this filing. We disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

While the below list of risks and uncertainties is not exhaustive, some factors, in addition to those contained throughout this document, that could affect future operating results, financial position and cash flows and could cause actual results to differ materially from those expressed in the forward-looking statements are:

- a change in economic conditions in the markets in which we operate;
- government and regulatory policies at both the federal and state levels;
- unanticipated higher capital spending for, or delays in, the deployment of new technologies;
- the pricing and availability of equipment, materials and inventories;
- changes in the competitive environment in which we operate, including the intensity of competitive activity, pricing pressures and new and/or alternative product offerings;
- our ability to continue to successfully penetrate our edge-out markets.

Overview

The Registrant, organized May 31, 1985, is a holding company and has no operating function. Its predecessor, North Pittsburgh, a telephone public utility incorporated in 1906, became a wholly-owned subsidiary of the Registrant on May 31, 1985. Penn Telecom became a wholly-owned subsidiary of the Registrant on January 30, 1988. Prior to this date, Penn Telecom was a wholly-owned subsidiary of North Pittsburgh. Penn Telecom is certificated as a Competitive Access Provider (CAP), a Competitive Local Exchange Carrier (CLEC) and an Interexchange Carrier (IXC) and has entered into these businesses. Pinnatech, a wholly-owned subsidiary of the Registrant, formed in 1995, principally provides Internet and broadband related services. The Registrant, North Pittsburgh, Penn Telecom and Pinnatech operate under the provisions of the Pennsylvania Business Corporation Law.

North Pittsburgh Telephone Company

North Pittsburgh, our Incumbent Local Exchange Carrier (ILEC), was founded in 1906 and operates in an approximate 285 square mile territory in Western Pennsylvania, which includes portions of Allegheny, Armstrong, Butler and Westmoreland Counties. North Pittsburgh provides service to approximately 75,500 business and residential access lines in its territory. Over the past decade, North Pittsburgh's territory has experienced very robust population growth due to the continued expansion of suburban communities into the southern portions of the North Pittsburgh serving area, with the southernmost point of North Pittsburgh's territory only 12 miles from the City of Pittsburgh. According to a recent census, the population in North Pittsburgh's service territory grew 14.3% from 1990 to 2000.

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North Pittsburgh operates a 100% digital switching network, comprised of nine central offices and 93 carrier serving areas (CSAs). The core of the network consists of two main host switches, a Nortel DMS 500 and a Nortel DMS 100. The CSA architecture was implemented over the past seven years as part of North Pittsburgh's extensive network modernization plan. The current CSA architecture, in which nearly all loop lengths are kept to 12,000 feet or less, has allowed North Pittsburgh to be able to provide digital subscriber line (DSL) service for over 99% of its access lines. In addition, fiber has been deployed extensively throughout the network, resulting in a 100% Synchronous Optical Network (SONET) that supports all of the inter-office and host-remote links as well as the majority of business parks within the North Pittsburgh serving area. We believe that North Pittsburgh's network is built for the future, in which the ability to satisfy the growing customer demand for broadband and multi-megabit services will be a key critical success factor.

Penn Telecom

Penn Telecom furnishes telecommunication and broadband services south of North Pittsburgh's territory to customers in Pittsburgh and its surrounding suburbs as well as north of North Pittsburgh's territory in the City of Butler and its surrounding areas. Verizon is the ILEC in the Pittsburgh area while Sprint is the ILEC in Butler and its surrounding areas. Penn Telecom's CLEC operation follows a true "edge-out" strategy, in which it has leveraged North Pittsburgh's network, human capital skills and reputation in the surrounding markets.

Penn Telecom operates an extensive SONET network with over 300 route miles of fiber optic facilities in the metro market. Penn Telecom has physical collocation in 27 Verizon central offices and one Sprint central office and primarily serves its customers using unbundled network element (UNE) loops. Twenty-seven of these collocations are connected to Penn Telecom's SONET network using a combination of leased and owned fiber optic facilities. Penn Telecom has also deployed a next-generation switching system to support its rapidly growing Integrated Services Digital Network (ISDN) primary rate interface (PRI) service, achieving significant cost reductions over traditional switching systems. In the Pittsburgh market, a carrier hotel operated by Penn Telecom serves as the hub for the fiber optic network. In addition, Penn Telecom also offers space in the carrier hotel to internet service providers (ISPs), IXCs, other CLECs and other customers who need a carrier-class location to house voice and data equipment as well as gain access to a number of networks, including Penn Telecom's. In the City of Butler, Penn Telecom has overbuilt a portion of the Sprint distribution plant in the central business district and continues to expand these facilities as it increases its penetration of the Butler area business market.

Penn Telecom's sales strategy has been to focus on small to mid-sized business customers (defined as 5 to 500 lines), educational institutions and up-scale apartment/townhouse communities (also referred to as multiple dwelling units, or MDUs), offering local and long distance voice services as well as DSL. Due to its extensive facilities based network containing fiber, Penn Telecom is also able to compete against Verizon and other CAPs to offer transport facilities via high capacity special access circuits (from DS-1s up to OC-48s) to IXCs, ISPs and even other CLECs. As of September 30, 2003, Penn Telecom served 24,512 dial tone access lines and 20,091 access line equivalents¹, for a grand total of 44,603 equivalent access lines² served.

In addition to the CLEC operations, Penn Telecom also provides long distance services and maintains an enterprise equipment business providing traditional key and private branch exchange (PBX) systems to business customers. Prior to its CLEC operations, the majority of Penn Telecom's long distance customers resided in North Pittsburgh's market. However, with the growth of its CLEC customer base and the effective bundling of toll with local dial tone services, Penn Telecom has been able to greatly expand this service offering.

Pinnatech

Pinnatech, an ISP doing business under the Nauticom name, furnishes Internet access and broadband services in Western Pennsylvania. Pinnatech serves the majority of its DSL and other broadband customers over the North Pittsburgh and Penn Telecom networks. In addition, Pinnatech also provides virtual hosting services, web page design and e-commerce enabling technologies to customers.

¹ Access line equivalents represent a conversion of data circuits to an access line basis and are presented for comparability purposes. Equivalents are calculated by converting data circuits (basic rate interface (BRI), PRI, DSL, DS-1 and DS-3) and SONET-based (optical) services (OC-3) to the equivalent of an access line. While the revenues generated by access line equivalents have a directional relationship with these counts, growth rates cannot be compared on an equivalent basis.

² Equivalent access lines include dial tone access lines and access line equivalents.

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For a more complete understanding of our business, industry, principal services rendered, properties and other interests, we suggest you read our Annual Report on Form 10-K for the fiscal year ended December 31, 2002. There have been no significant changes in the mode of conducting business or the properties owned by the Company or its subsidiaries since the filing of that Form 10-K report. Current updates to the regulatory environment under which our subsidiaries operate can be found below in the "Regulatory Matters" section of this Management's Discussion and Analysis of Financial Condition and Results of Operations.

Results of Operations

The following discussion should be read in conjunction with our condensed consolidated financial statements, and the notes thereto, included in this quarterly report and with our audited financial statements, and the notes thereto, included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2002.

Results of Operations for the Nine Months Ended September 30, 2003 and 2002

Net income for the nine-month period ended September 30, 2003 was \$9,813, or \$.65 per share, compared to net income of \$8,890, or \$.59 per share, for the comparable prior year period. These fluctuations were attributable to the following factors:

Operating Revenues

Total operating revenues increased \$8,232, or 11.9%, in the nine-month period ended September 30, 2003 over the comparable period in 2002. This increase was primarily the result of increases in local network services revenues of \$2,210 (13.4%), long distance and access services revenues of \$4,399 (10.0%) and other operating revenues of \$1,859 (32.0%), offset partially by decreases in directory advertising, billing and other services revenues of \$126 (11.4%) and telecommunication equipment sales of \$110 (6.2%).

Increases in local network services revenues of \$2,210, or 13.4%, were mostly attributable to growth in Penn Telecom's access lines and PRIs. Penn Telecom's local dial tone and vertical features revenues increased by \$845 due to continued successful penetration south of North Pittsburgh's territory in the City of Pittsburgh and surrounding areas as well as north of North Pittsburgh's territory in the City of Butler and its surrounding areas. Penn Telecom's access lines installed increased from 14,825 as of September 30, 2002 to 24,512 as of September 30, 2003. In addition, revenues at Penn Telecom for PRI circuits grew approximately \$567 as circuits increased from 273 as of September 30, 2002 to 473 as of September 30, 2003. In association with the growth in terminating traffic generated by the above mentioned increase in access lines and PRIs, local reciprocal compensation revenues increased \$162 from the prior year period. Also, at North Pittsburgh, vertical features revenues increased \$158 as a result of more intensive promotional campaigns in the current year period and local dial tone revenues increased \$319 due to a revenue neutral rate re-balancing in April of 2003, which increased local residential rates and decreased intrastate access rates. Absent the rate re-balancing, North Pittsburgh's local dial tone revenues would have decreased by approximately \$80 as access lines have decreased 2%.

The increase in long distance and access services revenues of \$4,399, or 10.0%, was attributable to increases in access revenues, high capacity circuits sold (special access revenues) and toll revenues. The \$3,630 increase in access revenues was mostly due to an increase in minutes of use (MOUs) generated by the growth in Penn Telecom's access lines and switched circuits. North Pittsburgh's interstate access revenues also increased as a result of changes in the National Exchange Carrier Association (NECA) average schedule settlement formula. In addition, access revenues for the nine-month period ended September 30, 2003 were favorably impacted by \$427 in final inter-carrier settlement adjustments covering a two-year period. Special access revenues increased \$266, mostly as a result of increases at Penn Telecom in the number of DS-1 and DS-3 circuits sold. Overall toll revenues increased \$503, reversing the trend of the last several years of period over period decreases. Penn Telecom's toll revenues (combination of metro area, intraLATA and interLATA toll) increased approximately \$1,129 due to the overall growth in CLEC customers and the successful bundling of toll and local calling packages, with approximately 75% of CLEC dial tone customers subscribing to Penn Telecom's toll plans. North Pittsburgh has experienced a decrease in its intraLATA toll revenues over the last several years, mostly as a result of a decrease in market share and loss of MOUs to such competition as wireless and alternative communication technologies such as e-mail. In addition, the average billed rate for existing customers declined due to increased subscriptions to lower cost calling plans, which were developed over the past several years to meet the competitive environment. However, North Pittsburgh's decrease of approximately \$626, or 9.7%, from the prior year nine-month period has moderated from decreases of 12.7% and 16.3%, respectively, for full year 2002 and 2001 toll revenues, mostly as a result of greater price stabilization in the market. Although this positive trend may last for the next several quarters, the introduction of aggressively priced flat rate toll packages from voice over internet protocol (VOIP) providers may eventually cause the percentage decrease to once again accelerate.

We believe that the current growth rate in long distance and access services revenues of 10% will most likely not be sustainable in the fourth quarter of 2003 and full year 2004. Penn

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Telecom is currently investigating a revision made by Verizon in the percent local use (PLU) factor used to settle traffic between the companies. According to the Verizon traffic study, the PLU factor change would result in an approximate \$250 per month decrease in intrastate access revenues recognized by Penn Telecom. Penn Telecom has the right to audit the Verizon traffic study and conduct a traffic study of its own. However, due to the fact that our analysis had not been completed by the filing date of this document, we cannot be certain of the ultimate outcome and effect on access revenues in the fourth quarter of 2003 and beyond. As the PLU factor change was effective September 1, 2003, we have made the assumption for financial reporting purposes that the Verizon traffic study is materially accurate and, as such, have incorporated the \$250 September revenue decrease in the third quarter and year-to-date 2003 results reported in this Quarterly Report on Form 10-Q.

The increase in other operating revenues of \$1,859, or 32.0%, was primarily due to two factors, one of which was the growth in DSL revenues of approximately \$1,102 as combined DSL lines (both wholesale and retail) increased from 6,689 as of September 30, 2002 to 9,333 as of September 30, 2003. As for the second factor, the prior year period included approximately \$694 in charges associated with the bankruptcies of carriers, most notably WorldCom and Global Crossings. These charges were recorded by the Company as reductions in revenue.

The decrease in directory advertising, billing and other services revenues of \$126 was mostly attributable to a decrease in directory advertising revenues, due to greater competition in a relatively soft advertising market. The decrease in telecommunication equipment sales of \$110 was due to lower post-sale support revenues.

Operating Expenses and Net Operating Income

Total operating expenses increased \$9,155, or 17.4%, in the nine-month period ended September 30, 2003 over the comparable period in 2002. The change was primarily the result of increases in network and other operating expenses of \$7,770 (21.9%), depreciation and amortization expenses of \$953 (7.2%) and state and local taxes of \$480 (19.6%), offset partially by a minor decrease in telecommunications equipment expenses of \$48 (4.0%).

The increase in network and other operating expenses of \$7,770, or 21.9%, was due to several factors, one of which was a \$2,456 increase in operational expenses at Penn Telecom. This increase was mostly due to the underlying growth in Penn Telecom's CLEC variable costs associated with the overall growth in access line equivalents and revenue. UNE costs in the nine-month period ended September 30, 2003 for non-facilities based access lines, broadband circuit costs and DSL costs increased approximately \$1,208 from the comparable prior year period to support the overall growth in the network, access lines, high capacity circuits and DSL lines in service. In addition, personnel and sales expenses grew approximately \$1,162 in order to support the revenue and organizational growth.

At North Pittsburgh, network and other operating expenses for the nine-month period ended September 30, 2003 increased \$4,646 from the prior year comparable period. The largest contributing factor to the increase was \$2,725 in charges recorded in association with a workforce reduction program. The charges consisted of \$1,142 in severance and early retirement incentives and \$1,583 in non-cash curtailment charges associated with the acceleration of pension and postretirement healthcare obligations. \$2,659 of the workforce reduction program expenses were recorded in the second quarter of 2003, with the remaining \$66 recorded in the third quarter of 2003.

In addition to the workforce reduction charges, there was an approximate \$1,250 increase in labor and benefit expenses, mostly as a result of increases in benefit costs due to higher pension and healthcare expenses. NPTC also experienced decreases in the amount of capitalized labor due to lower construction levels. Increases in corporate insurance premiums and Universal Service Fund (USF) contributions further contributed to the increase in network and other operating expenses.

At Pinnatech, network and other operating expenses for the nine-month period ended September 30, 2003 increased \$594 from the prior year comparable period. The increase was mostly attributable to the rise in network infrastructure expense and costs to provide DSL related to Pinnatech's DSL and higher capacity broadband circuit growth.

The increase in consolidated depreciation and amortization expenses of \$953, or 7.2%, was the result of an increase in the depreciable asset base (gross property, plant and equipment) of 5.0% over the September 30, 2002 balance. Furthermore, a higher ratio of the new additions reflected data centric equipment, which have shorter useful lives than the Company's average depreciable base.

The increase in state and local taxes of \$480, or 19.6%, was attributable to increases in a variety of taxes, including the public utility realty tax assessment (PURTA) tax, gross receipts tax (which grows as intrastate revenues increase), capital stock tax, and payroll related taxes.

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Overall, the increase in total operating revenues of \$8,232, coupled with the increase in total operating expenses of \$9,155, resulted in a \$923, or 5.5%, decrease in net operating income for the nine-month period ended September 30, 2003 over the comparable prior year period.

Other Items

Interest expense decreased for the nine-month period ended September 30, 2003 by \$1,078 due to the prepayment of Rural Telephone Bank (RTB) notes in December of 2002 and the continued scheduled pay-down of North Pittsburgh's remaining Federal Financing Bank (FFB) notes. Interest income decreased \$279 due to lower temporary investment balances, as a result of the above-mentioned debt prepayment, as well as the general decrease in short-term money market rates for temporary investments. The \$1,682 change in Sundry Income, Net was due to two main factors, a \$312 increase in equity income for the current period from our investments in three wireless partnerships and \$1,220 of costs expended by the Company in the prior year comparable period exploring strategic alternatives and business arrangements. In addition, the prior year comparable period included an investment loss of \$140 associated with the other-than-temporary decline in value of several equity securities.

Results of Operations for the Three Months Ended September 30, 2003 and 2002

Fluctuations in revenue and expenses for the three-month period ended September 30, 2003, as compared to the same quarterly period in 2002, were generally attributable to the same reasons discussed in the nine-month comparisons above with the exceptions of the following:

Network and other operating expenses increased \$1,555, or 12.9%, for the three-month period ended September 30, 2003 as compared to the same quarterly period in 2002 versus a nine-month year-to-date increase of 21.9%, as previously described. The lower rate of increase for the current year quarterly period as compared to the year-to-date period was due to the fact that the majority of the workforce reduction charges (\$2,659 of the \$2,725 total) occurred in the second quarter of 2003.

Sundry Income, Net decreased \$166 for the three-month period ended September 30, 2003 as compared to the same quarterly period in 2002 versus a nine-month year-to-date increase of \$1,682, as previously described. The fluctuation was attributable to several factors, the largest of which was the fact that the all of the \$1,220 of costs expended by the Company in the prior year-to-date comparable period exploring strategic alternatives and business arrangements were incurred in the first two quarters of 2002. In addition, the entire investment loss of \$140 associated with the other-than-temporary decline in value of several equity securities was recorded in the second quarter of 2002. As such, the third quarter of 2002 was not negatively impacted by either of those above-mentioned charges. Furthermore, equity income recorded from our investments in three wireless partnerships for the third quarter of 2003 was \$182 less than the prior year comparable quarter as the 2002 third quarter contained an approximate \$102 multi-period positive true-up. Also, 2003 third quarter results for the Rural Service Area (RSA) 6(I) partnership decreased due to conversion costs incurred with the transition of the majority partnership interest from Alltel Communications to Verizon Wireless, increases in network investments and much higher customer growth in the current quarter, which leads to temporary decreases in income due to higher up-front customer acquisition costs, such as equipment subsidies and commissions.

Liquidity and Capital Resources

	<u>September 30, 2003</u>	<u>December 31, 2002</u>
Cash and temporary investments	\$ 25,494	\$ 22,244
Working capital	\$ 27,583	\$ 21,737
Long-term debt (including current maturities)	\$ 28,538	\$ 30,852

Cash and temporary investments were \$25,494 at September 30, 2003 as compared to \$22,244 at December 31, 2002. The increase was a result of cash flows from operations of \$20,026 exceeding investment and financing requirements. The Company's capital additions, which were 100% internally financed, totaled \$8,134 for the nine-month period ended September 30, 2003, a 3.6% decrease from the prior year-to-date figure. The decrease was mostly a result of less demand in the North Pittsburgh territory and the fact that the recent network upgrades made by North Pittsburgh (from 1997 through 2001) have resulted in a subsequent lower level of capital expenditures. The Company's cash flow has also been positively impacted by an increase of \$2,065 in net proceeds received from its wireless partnerships. The Company expended \$10,707 during the nine-month period ended September 30, 2003 for financing activities, which included cash dividends and the scheduled repayments of debt and capital lease obligations. The \$710 decrease in cash expenditures for financing activities from the comparable prior year period was mostly due to the retirement of \$16,349 of RTB notes in December of 2002,

which has decreased current year scheduled debt repayments.

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Cash flows from operations were \$20,026 for the nine-month period ended September 30, 2003, an \$81 decrease from the prior year comparable period. Although net income and non-cash charges (depreciation) increased \$923 and \$953, respectively, these factors were offset primarily by contributions made to the North Pittsburgh retirement plan totaling \$2,991 during the current year versus \$625 in the prior year. The \$2,991 of contributions to the North Pittsburgh retirement plan consisted of the required minimum contribution of \$991 made during the first quarter of 2003 and an elective additional tax-deductible contribution of \$2,000 made during the second quarter of 2003.

Temporary excess funds were invested in short-term cash equivalents with maturity dates scheduled to coincide with tax payment due dates, debt principal payments, dividend payment dates and other predictable cash needs. We expect to continue the investment of such excess funds through the remainder of 2003 and throughout 2004, which should enable us to satisfactorily meet all short-term obligations.

Working capital levels at September 30, 2003 increased \$5,846 from December 31, 2002, mostly due to operating cash flows continuing to be sufficient to reduce both short-term and long-term liabilities and a net cash flow of \$2,065 from affiliated entities.

The decrease in long-term debt was a result of the scheduled \$2,314 of principal repayments in the nine-month period ended September 30, 2003. As mentioned above, we funded 100% of our 2003 year-to-date expenditures for property and equipment from operations cash flows and cash reserves. Therefore, no additional advances were requested from our available debt facilities. In 1996, North Pittsburgh was granted approval for a loan from the FFB guaranteed by the Rural Utilities Service (RUS) in the maximum principal amount of \$75,000. The total amount outstanding at September 30, 2003 to the FFB under this loan was \$28,538, with all advances having a maturity date of December 31, 2012. The unadvanced amount of this facility as of September 30, 2003 was \$34,764. North Pittsburgh can make draws against this facility through June 30, 2012 for qualified capital expenditure projects, as defined in the loan agreement, to furnish and improve telephone service in rural areas. As of September 30, 2003, North Pittsburgh had approximately \$2,447 of qualified capital expenditures that were eligible to be drawn against this facility.

The notes payable to the FFB are secured by a supplemental Mortgage Agreement executed by North Pittsburgh, which provides that substantially all of the assets of North Pittsburgh, which approximate a net book value of \$105,000, are subject to a lien or a security interest. Such agreement contains restrictions regarding dividends and other distributions by North Pittsburgh. Under these restrictions, unless certain working capital levels, net worth levels, and interest expense ratios are maintained, North Pittsburgh is not permitted to pay dividends on its capital stock (other than in shares of capital stock), or to make any other distributions to its shareholder or purchase, redeem or retire any of its capital stock or make any investment in affiliated companies. As a result of these restrictions, approximately \$7,082 of North Pittsburgh's retained earnings were available for dividends to the Registrant as of September 30, 2003. Taking into consideration the North Pittsburgh restrictions, consolidated retained earnings of approximately \$36,995 were available for dividends and other distributions to our shareholders as of September 30, 2003.

North Pittsburgh also has available through June of 2004 a \$10,000 line of credit with the Rural Telephone Finance Cooperative at a rate of prime plus 1 1/2%. No borrowings have taken place against the line of credit.

A summary of our contractual obligations and commitments as of September 30, 2003 is as follows:

	<u>Debt Principal</u>	<u>Capital Lease*</u>
Remainder of 2003	\$ 771	\$ 398
2004	3,085	1,592
2005	3,085	1,450
2006	3,085	1,272
2007	3,085	1,254
Thereafter	15,427	3,108

* Represents total minimum lease commitments (interest and executory costs are included).

Consolidated capital expenditure commitments for the purchase and installation of new equipment at September 30, 2003 amounted to approximately \$817, with such amount being part of the 2003 construction program, which is projected to be in the range of \$11,000 to \$12,000. The Company had made expenditures of \$8,134 in association with this construction program through September 30, 2003. We currently expect a construction program for 2004 in the range of \$12,000 to \$13,000.

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We expect cash flows provided by operating activities and cash reserves over the next twelve months to be sufficient to service long-term debt and capital lease obligations, to pay dividends and to finance all non-RUS qualified projects. We expect to continue to have the necessary cash flows from operations and cash reserves to internally finance 100% of our projected capital expenditures. However, due to the low cost financing available through the RUS for qualified North Pittsburgh capital expenditures, we may request advancements from the RUS facility in the future.

Critical Accounting Policies

Certain accounting policies are very important to the portrayal of our financial condition and results of operations and require management's most subjective or complex judgments. These policies are as follows:

Revenue Recognition

Revenues are recognized when local network, long distance, and access services are provided. Local service and intrastate long distance and access service revenues are subject to the jurisdiction of the Pennsylvania Public Utility Commission (PA PUC). North Pittsburgh participates in interstate pooling arrangements with other telephone companies. Such pools are funded by access service charges regulated by the Federal Communications Commission (FCC). Revenue earned through pooling is initially recorded based on estimates. North Pittsburgh has settled substantially all access service arrangements through 2000 and expects to settle substantially all access service arrangements through 2002 during the fourth quarter of 2003. Revenues from equipment sales are recorded after equipment has been installed and accepted by the customer.

Impairment of Long-Lived Assets

Based upon the provisions of SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", we review assets for impairment whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. A determination of impairment (if any) is made based on estimates of future undiscounted cash flows. We determined, based on our reviews, that there had been no impairment to the carrying value of such assets in 2002 or for the nine-month period ended September 30, 2003.

Valuation of Accounts Receivable

We review accounts receivable to determine which are doubtful of collection. In making the determination of the appropriate allowance for doubtful accounts, we consider our accounts receivable aging schedules, history of write-offs, relationships with our customers and the overall credit worthiness of our customers.

Income Taxes

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment.

Pension and Other Postretirement Benefits

We calculate the costs of providing retiree benefits under the provisions of SFAS No. 87 and SFAS No. 106. The key assumptions used in making these calculations are the discount rate used to value the future obligation, expected return on plan assets and health care cost trend rates. We select discount rates commensurate with current market interest rates on high-quality, fixed-rate debt securities. The expected return on assets is based on our current view of the long-term returns on assets held by the plan, which is influenced by historical averages. The medical cost trend rate is based on our actual medical claims and future projections of medical cost trends.

The judgments used in applying the above policies are based on our evaluation of the relevant facts and circumstances as of the date of the financial statements. Actual results may differ from those estimates.

Regulatory Matters

Both North Pittsburgh and Penn Telecom are subject to regulatory oversight by the PA PUC for intrastate services and the FCC for interstate services. The PA PUC and the FCC have broad powers of supervision and regulation over public utilities with respect to service and facilities, rates and charges, securities, the encumbering or disposition of public utility properties, accounting and various other matters.

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In 1996, Congress passed the Telecommunications Act of 1996 (the 1996 Act), which has the goal of opening the telecommunications industry to further competition for all services. The 1996 Act prohibits state legislative or regulatory restrictions or barriers to entry regarding the provision of local telephone service. It also requires most ILECs to interconnect with the networks of other telecommunications carriers, unbundle their services into network elements, offer their telecommunications services at wholesale rates to allow the resale of such services and other telecommunications carriers to locate equipment on their premises. Local exchange telephone carriers are also required to compensate each other for the transport and termination of calls.

The FCC has issued a number of Rulemakings that continue to implement the requirements of the 1996 Act. The general intent of the 1996 Act was to open up the local exchange market to competition, including permitting the resale of services at wholesale rates and providing number portability, dialing parity, interconnection to any requesting carrier and access to network elements.

However, North Pittsburgh's wireline operations are considered Rural under the 1996 Act and are exempt from certain of the foregoing obligations unless, in response to a bona fide request for interconnection, the PA PUC removes that exemption. North Pittsburgh, along with a number of other rural companies in Pennsylvania, was granted a temporary suspension until July 10, 2002 of certain interconnection requirements in the 1996 Act applicable to ILECs as they relate to non-facilities based competition. In that proceeding, however, facilities based competition was permitted in the North Pittsburgh service area. North Pittsburgh, along with a number of other rural companies in Pennsylvania, filed a Petition with the PA PUC on June 7, 2002 requesting an additional three (3) year extension of the suspension to July 10, 2005.

On January 15, 2003, the PA PUC denied the request for the extension of the suspension. In response to the PA PUC denial, North Pittsburgh and other rural companies on January 30, 2003 filed a Petition for Clarification and Modification of the denial order. The Petition asked for clarification and modification of portions of the order in regard to the potential future issues dealing with burden of proof when reviewing whether to remove a rural exemption. In addition, on February 14, 2003, North Pittsburgh and other rural companies also filed a Petition for Review in the Commonwealth Court of Pennsylvania, which requests that the court reverse the PA PUC decision as the order was not supported by the evidence, was contrary to law and was arbitrary and capricious. The PA PUC acted on the Petition for Clarification and Modification on March 21, 2003 granting it in part and confirming that the burden of proof in a proceeding challenging a rural exemption rests with the competitor. The PA PUC also clarified that total economic burden in such a proceeding includes consideration of the economic burden typically associated with competitive entry. As a result of the PA PUC Clarification Order, North Pittsburgh and the other rural companies filed, on May 1, 2003, a request with the Commonwealth Court to discontinue the appeal of the denial order. While North Pittsburgh no longer retains its previous suspension of certain interconnection obligations, it still retains its rural exemption under the 1996 Act as mentioned above.

In March of 2003, North Pittsburgh received a request from a CLEC to negotiate an interconnection agreement. It appears that North Pittsburgh will be able to accommodate the request for interconnection and retain its rural exemption under the 1996 Act. Accompanying the request for interconnection by the CLEC was a request for Local Number Portability (LNP). North Pittsburgh was originally scheduled to be LNP capable in September of 2003. However, due to third party delays in scheduling training, testing and access to the LNP database, referred to as the Number Portability Administration Center Services Management Systems (NPAC/SMS), North Pittsburgh is now scheduled to be LNP capable sometime in the fourth quarter of 2003. As a result of this first request for interconnection and the introduction of LNP, North Pittsburgh expects to experience some loss of customers and the associated revenues to this and possibly other competitors.

In addition, North Pittsburgh and Penn Telecom have received requests from Cellular Mobile Radio Service (CMRS) providers requesting wireline to wireless LNP, beginning November 24, 2003. On November 10, 2003, the FCC released an Order wherein it requires local exchange carriers (LECs) that provide service in the top 100 metropolitan statistical areas to provide wireline to wireless LNP on November 24, 2003. The Company, along with most LECs, is reviewing whether the Order should be challenged. If the ultimate outcome of the FCC Order (and/or subsequent challenges) is that wireline to wireless LNP is applicable to North Pittsburgh and Penn Telecom, then the ability for an end user to transfer his or her wireline number to a wireless phone may cause both North Pittsburgh and Penn Telecom to experience some loss of customers and the associated revenues as it will be easier for a customer to migrate from wireline service to a wireless service.

The provision of interstate toll and access services by North Pittsburgh and Penn Telecom is subject to the regulatory scrutiny of the FCC. Terms, conditions and rates for interstate toll and access services are filed in interstate tariffs for review and approval by the FCC. However, since August 1, 2001, the FCC has no longer required non-dominant interstate toll providers, including Penn Telecom, to file tariffs for their interstate toll services. Penn Telecom now informs its toll

customers of the rates, terms and conditions through written notice.

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In October of 2001, the FCC adopted an Order referred to as the Multi Association Group, or MAG Order, that modified the interstate access charge rules and universal service support system for rate-of-return (ROR) ILECs. North Pittsburgh is subject to this Order. According to the FCC, the new rules, which went into effect January 1, 2002, are intended to accomplish the following three (3) goals: 1) align the interstate access rate structure more closely with the manner in which costs for access are incurred; 2) replace implicit support for universal service with explicit support that is portable to all eligible telecommunications carriers on a competitively neutral basis; and 3) provide certainty and stability for small and mid-sized local telephone companies serving rural and high-cost areas by permitting these carriers to continue to set interstate access rates based on a ROR of 11.25%, thereby encouraging investment in rural America.

The MAG Order had the following effects: 1) increased flat rate charges referred to as Subscriber Line Charges (SLCs) that are billed to residential and business customers; and 2) decreased per minute of use switched access charges billed to interexchange toll providers that originate and terminate traffic on a ILEC's network.

The MAG Order also created a new universal service support mechanism, Interstate Common Line Support (ICLS). The ICLS replaces the Carrier Common Line (CCL) charge, which was previously billed to interexchange toll providers. The ICLS was phased in beginning July of 2002 and the CCL was eliminated as of July of 2003. The initial effect of the implementation of the MAG Order on North Pittsburgh was revenue neutral.

At the same time the MAG Order was adopted, the FCC also issued a Further Notice of Proposed Rulemaking seeking comment on an incentive regulation plan for ILECs which are now under ROR regulation in the interstate jurisdiction. Because the outcome of this proceeding is not yet known, we are not able to predict the effect that it may have on our operations and revenues.

In February of 2002, the FCC issued a Notice of Proposed Rulemaking (NPRM) regarding the possible classification of wireline broadband Internet access as an information service rather than a telecommunications service. Should the FCC adopt this proposed rule, it may cause network based broadband offerings such as DSL services to be more lightly regulated by the FCC. However, in the NPRM, the FCC also asked whether it should extend USF requirements to not only facilities based wireline Broadband Internet Service Providers (BISPs) but also wireless, cable TV and satellite BISPs.

Should the FCC extend a USF contribution requirement to all BISPs, North Pittsburgh, Penn Telecom and Pinnatech would be affected. Because the outcome of this proceeding is unknown at this time, we are unable to determine the effect such action may have on our operations and revenues.

In February of 2002, the FCC also issued a Further Notice of Proposed Rulemaking regarding the possible reformation of the system for assessing and recovering USF funds. In that proceeding, the FCC has asked for comment on whether it should assess carrier contributions based on the number and capacity of connections that contributing carriers provide to customers, rather than on the current method, which is based on the interstate revenues they earn.

Should the FCC reform the current system for assessing and recovering USF funds, North Pittsburgh, Penn Telecom and Pinnatech would be affected by the change. Because the outcome of this proceeding is unknown at this time, we are unable to determine the effect such action may have on our operations and revenues.

On February 20, 2003, the FCC released its decision regarding the Triennial Review of the 1996 Act. The decision dealt with several issues that may affect North Pittsburgh and Penn Telecom. Generally, it appears that the decision eliminates unbundling requirements for ILECs in regard to broadband services provided over fiber facilities but continues unbundled access to mass market narrowband loops. In addition, ILECs are not required to unbundle packet switching services. Also, the FCC found that the high frequency portion of the loop, also referred to as line sharing, is no longer required to be provided as an UNE and will therefore be phased out over three years. The FCC also found that ILECs will no longer have to offer the local switching UNE for business customers served by high-capacity loops. The States have 90 days to rebut this finding. For mass market customers served by narrowband loops, the FCC set out specific criteria that States shall apply to determine if switching should no longer be available as an UNE. Upon a State ruling eliminating switching as an UNE for mass market customers, the FCC set forth a three-year period for carriers to transition off Unbundled Network Element Platform (UNE-P), which is a service that bundles UNE switching with other UNEs such as UNE loop to provide the entire local service platform. The FCC order explaining the decision was released August 21, 2003. The PA PUC, on October 3, 2003, entered an order which initiated two proceedings that will eventually implement the requirements set forth in the FCC's Triennial Review Order in a manner specific to Pennsylvania. North Pittsburgh believes that the proceedings do not apply so long as it has its rural exemption. Until the proceedings are completed and a final order is issued, we are unable to gauge the eventual effect that these decisions will have on North Pittsburgh or Penn Telecom. In that North Pittsburgh is not required to

offer UNEs to competitors, there should be no immediate effect on North Pittsburgh due to the decision. In regard to Penn Telecom, because it does not currently utilize line sharing, the line sharing portion of the decision will have no effect on Penn Telecom's operations or revenues for its existing customer base.

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However, Penn Telecom began to utilize UNE-P in the third quarter of 2003 in the following three capacities: 1) to convert approximately 470 existing customers from resell to UNE-P, thereby decreasing the monthly recurring line charge Penn Telecom must pay to the ILEC and increasing revenue by allowing Penn Telecom to earn access fees; 2) to provision a portion of new non-facilities based customers, which now allows Penn Telecom to decrease its current provisioning process by approximately twenty days as well as more efficiently manage the eventual porting of customers to UNE loop; and 3) to expand geographically outside its existing 28 collocations without significant capital risk as collocation investments can be deferred until a critical mass of customers is obtained. As of September 30, 2003, Penn Telecom had approximately 1,161, or 4.7%, of its dial tone access lines served utilizing UNE-P. Should the PA PUC, as a result of the pending proceedings, change the current UNE-P environment, either in terms of restricting availability or revising pricing formulas/methodologies to allow for price increases, the margin improvement, provision efficiencies and low risk geographical expansion which Penn Telecom is expecting may not be realized.

Effective January 22, 2001, under PA PUC regulations referred to as Chapter 30, North Pittsburgh moved from ROR regulation in the intrastate jurisdiction to an alternative form of regulation, which is a price cap plan. Under North Pittsburgh's price cap plan, rates for non-competitive intrastate services are allowed to increase based on an index that measures economy-wide price increases less a productivity offset. There is no limitation on earnings under this plan. The terms of the plan also allow North Pittsburgh to rebalance rates once each year to allow North Pittsburgh to gradually realign its intrastate rate structure on a more rational cost and market basis in order to meet future competition. In addition, as competition develops in the future, North Pittsburgh may file with the PA PUC to declare certain services competitive and thereby be freed from all rate regulation for those services. In return for approval of the alternative form of regulation, North Pittsburgh has committed to continue to upgrade its network in the future to ensure that all its customers will have access to broadband services. On April 30, 2003, North Pittsburgh filed its annual Price Stability Mechanism (PSM) compliance filing under its approved price cap plan. While the application of the PSM formula in the plan normally would have required North Pittsburgh to reduce some rates for non-competitive services resulting in an annual revenue decrease of approximately \$160, North Pittsburgh has proposed that this rate reduction be delayed for 24 months until North Pittsburgh recovers those intrastate uncollectible revenues that were experienced in 2002 due to the Global Crossing and WorldCom bankruptcies. Exogenous event claims, such as this proposal to recoup intrastate uncollectible losses not generally reflected in the Gross Domestic Product-Price Index, are permitted under the North Pittsburgh PSM. Various parties have, however, opposed the recovery of those losses. North Pittsburgh expects the PA PUC, which must act on the claim, to rule on the filing sometime in the first quarter of 2004.

The Chapter 30 legislation, which enables North Pittsburgh to operate under an alternative price-cap form of regulation, is scheduled to sunset on December 31, 2003. Competing versions of new proposed legislation reauthorizing and revising the Chapter 30 regulations have been introduced in both the Pennsylvania House and Senate. Legislative action reauthorizing Chapter 30, with some revisions, is expected by the end of 2003. Because the outcome of this legislative initiative is unknown at this time, we are unable to determine the effect that the new legislation reauthorizing Chapter 30 will have on our operations and revenues.

If the legislature fails to act on the new legislation by December 31, 2003, it is our understanding that North Pittsburgh will remain under its current Chapter 30 plan until such time as the PA PUC orders changes in the plan and/or the legislature acts to authorize new Chapter 30 legislation.

The provision of intrastate toll and access services is subject to regulatory scrutiny by the PA PUC. Terms, conditions and rates for intrastate toll and access services are filed in intrastate tariffs for PA PUC review and approval.

On September 30, 1999, the PA PUC issued an Order, referred to as the Global Order, dealing with a variety of issues impacting LECs in Pennsylvania. Specifically, the Order allowed North Pittsburgh to rebalance and lower access charges in order to assist North Pittsburgh in meeting competition in its serving area. The reduction in access charges was offset in part by reimbursements from a PA Universal Service Fund (PA USF) that is funded by all telecommunications providers (excluding wireless) in the State. Because the rebalancing and reduction of access charges were offset by reimbursement from the fund, North Pittsburgh has not experienced any significant impact on operations or revenues as a result of the Global Order. The PA PUC, in the Global Order, indicated that it would commence another proceeding on or after January 2, 2001 to examine further changes to the PA USF and possible additional access charge reform. By Secretarial Letter dated February 1, 2002, the PA PUC granted a coalition of rural telephone companies, including North Pittsburgh, a ninety (90) day extension until April 15, 2002 in which to submit a proposal to the PA PUC outlining proposed changes in access charges and the fund along with a timeline for these changes. The rural coalition submitted its proposal on April 15, 2002. Other parties also submitted proposals, including the local exchange carrier division of Sprint.

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Upon review of the initial proposals filed in the access charge reform proceeding, the rural coalition and Sprint, through negotiation, combined and then on December 16, 2002 filed a Joint Access Proposal in Response to the Access Charge Investigation. The Joint Access Proposal was supported in filed statements by the PA Office of Consumer Advocate, the PA Office of Small Business Advocate and the PA PUC Office of Trial Staff. Under the Joint Access Proposal, the PA USF would generally continue through 2005 with only minor changes. The proposed plan allows for all the local exchange companies in Pennsylvania, with the exception of Verizon and Verizon North, to continue gradual revenue neutral rate rebalancings. As proposed, companies would be allowed to reduce access charges and offset the reductions through increases in local rates. In an Order entered July 15, 2003, the PA PUC approved the Joint Access Proposal. Under that Order, North Pittsburgh will file in the fourth quarter of 2003 to reduce intrastate access charges billed to IXC's by approximately \$65 on a monthly basis and raise end user rates for local dial tone services by approximately 5% to recover the same amount. North Pittsburgh, under the Order, will have the option to make additional revenue neutral rate rebalancings in future years as permitted by the July 15, 2003 Order and its Chapter 30 plan.

The 1996 Act, FCC and PA PUC regulatory proceedings and the thrust toward a fully competitive marketplace have created some uncertainty in respect to the levels of North Pittsburgh's revenue in the future. However, its unique location in a growing commercial/residential suburban traffic corridor to the north of the City of Pittsburgh, its state-of-the-art switching, transmission and transport facilities and its extensive fiber network place North Pittsburgh in a solid position to meet competition and minimize loss of revenues. In addition, North Pittsburgh continues to make its network flexible and responsive to the needs of its customers to meet competitive threats. At the same time, Penn Telecom continues its CLEC edge-out strategy in the Pittsburgh metropolitan area and the City of Butler and its surrounding areas, while taking advantage of the opportunities afforded by the 1996 Act and the introduction of competition into the toll, local wireline and broadband markets.

Recent Accounting Pronouncements

In June of 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations". The Company adopted this pronouncement on January 1, 2003. SFAS No. 143 requires that we record the fair value of an asset retirement obligation as a liability in the period in which we incur a legal obligation associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development, and/or normal use of the assets. We would also record a corresponding asset that is depreciated over the life of the asset. Subsequent to the initial measurement of the asset retirement obligation, the obligation will be adjusted at the end of each period to reflect the passage of time and changes in the estimated future cash flows underlying the obligation. The adoption of SFAS No. 143 did not have a material effect on our consolidated financial statements.

In June of 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities". SFAS No. 146 eliminates Emerging Issues Task Force, or EITF, Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)". Under SFAS No. 146, liabilities for costs associated with an exit or disposal activity are recognized when the liabilities are incurred, as opposed to being recognized at the date of the entity's commitment to an exit plan under EITF No. 94-3. Furthermore, SFAS No. 146 establishes that fair value is the objective for initial measurement of the liabilities. This Statement is effective for exit or disposal activities that are initiated after December 31, 2002.

Table of Contents**PART I****Item 3. Quantitative And Qualitative Disclosures About Market Risk**

There have been no material changes in reported market risks faced by the Company since the end of the preceding fiscal year on December 31, 2002.

Item 4. Controls and Procedures

Under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial and Accounting Officer, the Company evaluated the effectiveness of the design and operation of its disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q, and, based on their evaluation, the Chief Executive Officer and Chief Financial and Accounting Officer concluded that these disclosure controls and procedures are effective. There were no significant changes in the Company's internal controls or in other factors that could significantly affect these controls subsequent to the date of their evaluation.

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PART II
OTHER INFORMATION

Item 6. Exhibits and Reports on Form 8-K

(a) Exhibit Index for Quarterly Reports on Form 10-Q

<u>Exhibit Number</u>	<u>Subject</u>	<u>Applicability</u>
(2)	Plan of acquisition, reorganization, arrangement, liquidation or succession	Not Applicable
(3) (i)	Articles of Incorporation	Attached Hereto
(3) (ii)	Amended and Restated By-Laws	Attached Hereto
(4)	Instruments defining the rights of security holders including indentures	
	(a) Agreement of Reorganization and Plan of Merger	Provided in Registration of Securities of Certain Successor Issuers on Form 8-B filed on June 25, 1985 and Incorporated Herein by Reference
	(b) Rights Agreement dated as of September 25, 2003	Provided as Exhibit 1 to the Registration of Certain Classes of Securities on Form 8-A filed on October 3, 2003 and Incorporated Herein by Reference
(10)	Material Contracts	Provided in Quarterly Report on Form 10-Q for the quarter ended March 31, 2002 and Incorporated Herein by Reference.
(11)	Statement of computation of earnings per share	Attached Hereto
(15)	Letter re unaudited interim financial information	Not Applicable
(18)	Letter re change in accounting principles	Not Applicable
(19)	Report furnished to security holders	Not Applicable
(22)	Published report regarding matters submitted to a vote of security holders	Not Applicable
(23)	Consents of experts and counsel	Not Applicable
(24)	Power of attorney	Not Applicable

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<u>Exhibit Number</u>	<u>Subject</u>	<u>Applicability</u>
(31.1)	Certification of President and Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Attached Hereto
(31.2)	Certification of Vice President, Treasurer and Chief Financial and Accounting Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Attached Hereto
(32.1)	Certification of President and Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Attached Hereto
(32.2)	Certification of Vice President, Treasurer and Chief Financial and Accounting Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Attached Hereto

(b) Reports on Form 8-K

During the quarter ended September 30, 2003, we furnished one Report on Form 8-K, dated July 30, 2003, reporting under Item 12, Results of Operations and Financial Condition, the Company's press release announcing earnings for the second quarter of 2003.

Table of Contents**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

NORTH PITTSBURGH SYSTEMS, INC.
(Registrant)

Date November 14, 2003

/s/ H. R. Brown

H. R. Brown, President and Chief Executive Officer

Date November 14, 2003

/s/ A. P. Kimble

A. P. Kimble, Vice President, Treasurer and
Chief Financial and Accounting Officer

Direct Testimony of Michael D. Pelcovits
PA PUC Docket No. I-00030099
January 9, 2004

Attachment MDP-13

Number of Wire Centers Served by CLECs with the Three Largest
Presences, by MSA-Density Zone Market

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SECRETARY'S BUREAU

Number of Wire Centers Served by CLECs with the Three Largest Presences, by MSA-Density Zone Market

CLECs Serving Residential or Business Customers

Market	Total # Wire Centers	# of Wire centers served by:		
		1st CLEC	2nd CLEC	3rd CLEC
ABE3	6	6	6	4
HC3	9	9	6	4
L3	3	3	2	2
LB3	1	1	1	1
P1	5	5	5	5
P2	12	12	8	7
P3	26	25	18	14
PCW1	5	5	4	3
PCW2	17	14	13	12
PCW3	44	35	28	20
R3	5	5	4	1
SWB3	8	8	7	2

CLECs Serving Residential Customers

Market	Total # Wire Centers	# of Wire centers served by:		
		1st CLEC	2nd CLEC	3rd CLEC
ABE3	6	6	1	0
HC3	9	1	0	0
L3	3	0	0	0
LB3	1	0	0	0
P1	5	5	1	0
P2	12	12	0	0
P3	26	25	4	0
PCW1	5	4	1	0
PCW2	17	14	6	3
PCW3	44	35	16	4
R3	5	1	1	0
SWB3	8	3	2	0

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)

Docket No. I-00030099

REBUTTAL TESTIMONY
OF
MICHAEL D. PELCOVITS
ON BEHALF OF

MCI WORLDCOM NETWORK SERVICES, INC.

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JAN 30 2004

MCI STATEMENT 1.1

1-00030099
Hof 1/27/04

DOCUMENT

January 20, 2004

PROPRIETARY INFORMATION HAS BEEN REDACTED

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

3 A. My name is Michael D. Pelcovits. I am a principal with the economic consulting
4 firm of Microeconomic Consulting and Research Associates (MiCRA). My
5 business address is 1155 Connecticut Avenue, N.W., Washington, D.C. 20036.

6 **Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS**
7 **PROCEEDING?**

8 A. Yes. I filed direct testimony on January 9, 2004 on behalf of MCI.

9 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

10 A. My rebuttal testimony will address the issue of market definition for the switching
11 impairment and trigger analysis. Specifically, I will respond to the positions on
12 market definition taken by Dr. Mayo testifying on behalf of AT&T, Dr. Loube
13 and Mr. Curry testifying on behalf of the Pennsylvania Office of Consumer
14 Advocate, Mr. Gillan testifying on behalf of the CLEC Coalition, Mr. Myers
15 testifying on behalf of Penn Telecom Inc., and Mr. Sywenki testifying on behalf
16 of Sprint.

17 All of these witnesses, with the exception of Mr. Myers, propose a more
18 expansive geographic market definition than the wire center definition that I
19 proposed in my direct testimony. In this rebuttal testimony, I will explain the
20 basis for my disagreement with the other witnesses' positions on geographic
21 market definition. I must emphasize, however, that this disagreement only
22 extends to the manner in which we approach our analysis of the trigger and

1 impairment issues. We agree, almost entirely, in our assessment of the evidence
2 presented by Verizon on the extent of actual CLEC competition in the mass
3 market in Pennsylvania, and on whether this evidence proves that triggers have
4 been met in many geographic areas of Pennsylvania.

5 For the most part, I also agree with these other parties on the scope of the
6 mass market, and on whether a CLEC that serves only the business market should
7 be counted as a trigger with respect to residential customers. I wish to clarify my
8 position on the DS0/DS1 crossover issue, however, in light of the analysis
9 provided by Mr. Dunbar (on behalf of Sprint) and Mr. Kirchberger and Mr. Nurse
10 (on behalf of AT&T), and Mr. Gillan (on behalf of the CLEC Coalition).

11
12 **II. GEOGRAPHIC MARKET DEFINITION**

13 **Q. WHAT POSITIONS HAVE THE OTHER PARTIES TAKEN**
14 **CONCERNING THE GEORAPHIC MARKET DEFINITION FOR MASS**
15 **MARKET SWITCHING IN PENNSYLVANIA?**

16 A. Mr. Myers, testifying on behalf of Penn Telecom Inc., states that “a geographic
17 market for Penn Telecom is at the wire center level, not the MSA or the Density
18 Cell.”¹ He explains that Penn Telecom operates at a wire center level and
19 evaluates whether to extend its network on a “very micro basis.”² Mr. Myers

¹ Direct Testimony of Wayne C. Myers, at 16.

² *Id.*, at 17.

1 explains that the high costs of collocation constitute a major barrier to entry into
2 new wire centers, **[BEGIN PROPRIETARY INFORMATION]**

3 **[END PROPRIETARY INFORMATION]**

4 Mr. Gillan, testifying on behalf of the CLEC Coalition, recommends that
5 the Commission use LATAs to evaluate impairment, “at least as a preliminary
6 matter.”³ Mr. Gillan favors use of a broad geographic area to evaluate impairment
7 in order to assure that the “Commission not mistake some limited entry in a
8 relatively small area as evidence of impairment.”⁴ Mr. Gillan agrees with me that
9 the MSA should not be used for evaluating impairment, and that “as a practical
10 matter, even the most basic information that must be considered in an impairment
11 analysis .. is collected by wire center, and any decision to modify Verizon’s
12 unbundling obligation would have to be implemented on a wire center basis.”⁵

13 Dr. Mayo, testifying on behalf of AT&T, explains that there is unlikely to
14 be a “specific, unambiguous conclusion regarding the appropriate geographic
15 market definition. Specifically, the supply-side substitutability criterion appears
16 capable of supporting a number of alternative market definitions ranging in size
17 from as small as individual Verizon wire centers to as large as entire LATAs.”⁶

³ Direct Testimony of Joseph Gillan, at 26.

⁴ *Id.*, at 27.

⁵ *Id.*, at 28.

⁶ Direct Testimony of John W. Mayo, at 19.

1 Mr. Sywenki, testifying on behalf of Sprint, supports the use of MSAs as
2 the appropriate geographic unit for examination of impairment.⁷ He cautions,
3 however, that a granular analysis must examine impairment throughout the
4 defined geographic market, not just in some portion of that market.⁸

5 Finally, Dr. Loube proposes that the PUC should define the markets as the
6 density cells within the MSAs.⁹ He states that this definition is consistent with
7 the FCC's guidelines and would also be suitable for the analysis of potential
8 deployment. Dr. Loube reasons that the factors affecting a CLEC's opportunity to
9 earn a profit are relatively constant across wire centers within the same density
10 zone. These factors, he explains, include retail rates, UNE loop rates, and the
11 efficiency of building a backhaul network to bring traffic back from the
12 incumbent's wire centers to the CLEC switch.¹⁰

13 **Q. WHY DO YOU BELIEVE THAT THE ANALYSIS OF IMPAIRMENT**
14 **AND TRIGGERS SHOULD BE CONDUCTED ON A WIRE CENTER**
15 **BASIS?**

16 A. As I explained in my direct testimony, and as other witnesses have pointed out,
17 the same geographic market definition should be used for a trigger analysis and
18 for a potential deployment analysis. I can explain the difference between my

⁷ Direct Testimony of Peter N. Sywenki

⁸ *Id.*, at 9.

⁹ Direct Testimony of Robert Loube and Rowland Curry.

¹⁰ *Id.*, at 15.

1 position and the other witnesses most effectively by considering the issue of
2 potential deployment.

3 As Dr. Loubé explains, the key issue for potential deployment, is whether
4 a hypothetical CLEC could earn a profit without access to unbundled switching.
5 There are many factors that would influence profitability, and although some are
6 similar across wire centers in a single density zone/MSA combination, a number
7 are different. Among these factors are the revenue potential from the typical
8 customer served out of a wire center, the size of the customer base, the proportion
9 of customers' loops provisioned with various types of Digital Loop Carrier
10 equipment, and the distance to the CLEC's switch.¹¹ Moreover, contrary to Dr.
11 Loubé's observation that a CLEC should be able to build a reasonably efficient
12 backhaul network to connect the wire centers to the CLEC's switch, there are
13 likely to be circumstances when building a backhaul network to serve all wire
14 centers is not possible and the CLEC's backhaul facilities will serve only some
15 wire centers. Furthermore, whenever a CLEC relies on the ILEC for transport, its
16 backhaul costs will be a function of the distance and capacity rate structure of the
17 ILEC's tariffs. As a result, transport costs will not be constant across all wire
18 centers within the same density zone.

¹¹ See pg. 46 of my Direct Testimony, which discusses the revenue variations by wire center, and Attachment MDP-4, which accounts for revenue variations by wire center.

1 I believe it is conceptually more correct and analytically more precise to
2 undertake a trigger or potential deployment analysis by starting with a geographic
3 market that corresponds to a CLEC's decision to enter discrete geographic
4 markets. As Mr. Myers explained, Penn Telecom has decided in the past, and will
5 decide in the future, whether to enter markets as a UNE-L-based CLEC on a wire
6 center basis. Entry into a wire center market requires a CLEC to incur substantial
7 sunk costs, and prior to making this commitment a CLEC will evaluate the
8 potential return from wire center-specific investment.

9 It should also be evident from the data submitted in this proceeding by the
10 CLECs that offer UNE-L-based service to business customers, that they serve
11 only some wire centers within a Density Zone/MSA combination. As I
12 demonstrated in my direct testimony, it is very unusual for a CLEC to serve every
13 wire center in a single Density Zone/MSA.¹² This proves that there are important
14 factors that vary across wire centers and have a significant effect on the entry
15 decisions of the CLECs.

¹² See, Attachment MDP-13. See also Direct Testimony of Rebecca Sommi, where she describes that Broadview Networks, Inc. is only serving a limited number of wire centers in the Philadelphia MSA.

1 **Q. DO YOU BELIEVE THAT IT IS ADMINISTRATIVELY MOST**
2 **EFFICIENT FOR THE COMMISSION TO EVALUATE TRIGGERS ON A**
3 **WIRE CENTER BASIS?**

4 A. Yes. Most of the data submitted in this proceeding has been provided on a wire
5 center basis. In my direct testimony, I used this data to analyze whether the retail
6 switching trigger has been satisfied in any wire center market where Verizon has
7 applied for relief in Pennsylvania,¹³ and determined that it has not been met. By
8 comparison, if the Commission uses a broader geographic market, it will need to
9 decide whether a CLEC is actively serving this market, even if it does not serve
10 all of the wire centers in the market. I believe that any CLEC must serve all the
11 wire centers to count as trigger in the broader geographic market, but as Dr.
12 Loube indicates, it is possible that the Commission could count a CLEC serving
13 18 out of 20 exchanges as a trigger CLEC for the entire market.¹⁴ This could
14 result in broad market “triggering-out” even though entry has not occurred, and
15 may not occur, in a significant part of the market. I believe that the use of a wire
16 center market definition will prevent this situation from occurring.

¹³ See, Attachment MDP-12.

¹⁴ Direct Testimony of Loube and Curry, at 26.

1 **Q. YOU HAVE STATED THAT YOU AND THE OTHER CLEC WITNESSES**
2 **HAVE REACHED THE SAME CONCLUSION ABOUT WHETHER THE**
3 **SWITCHING TRIGGERS HAVE BEEN MET IN PENNSYLVANIA.**
4 **WHAT DOES THIS IMPLY ABOUT THE DIFFERENCE OF OPINION**
5 **ABOUT GEOGRAPHIC MARKET DEFINITION?**

6 A. I believe that the difference in opinion among the CLEC witnesses about
7 geographic market definition is fundamentally a difference in analytical approach,
8 rather than a difference of opinion about the economic conditions in the
9 marketplace. Especially in the context of a trigger case, the analysis comes out the
10 same way, whether it is approached on a “macro” or “micro” level. I have
11 examined each of the wire centers as a separate market, and assessed whether
12 there are three active CLECs that satisfy the trigger criteria (e.g. comparable to
13 the ILEC in cost, quality and maturity).¹⁵ Since the wire center market is
14 relatively small on a geographic basis, it will be easier for the CLEC to satisfy the
15 requirement to serve the entire geographic area. On the other hand, CLECs not
16 currently serving a wire center will not be included in the list of potential triggers
17 for that particular market.

18 By comparison, another economist using a broader geographic market
19 definition might start out with a larger list of potential CLECs operating
20 somewhere in the market, but then would exclude the CLECs that do not serve the
21 entire geographic market. The result, in terms of determining whether the triggers
22 are satisfied, would likely come out the same way in most circumstances.

¹⁵ See, Attachment MDP-5 to my Direct Testimony.

1 **Q. DOES THIS IMPLY THAT ECONOMISTS CANNOT PROVIDE AN**
2 **UNAMBIGUOUS ANSWER TO THE ISSUE OF MARKET DEFINITION?**

3 A. I believe that there are many valid ways to analyze competition issues, and these
4 approaches may use differing market definitions. Market definition is not an end
5 in itself, but a framework for analyzing issues of competition and consumer
6 welfare. What is important is to analyze properly the factors that influence the
7 prices and quantities of goods and services provided under different market
8 structures.

9 In this case, I have come to similar conclusions as many of the other
10 CLEC witnesses and OCA witnesses, even though we have conducted
11 independent assessments of the economic factors that shape marketplace
12 outcomes. And regardless of our perspective on market-definition glasses, we
13 have all found that the trigger criteria have not been met. There is no well-
14 defined market within Pennsylvania within which mass market customers have a
15 real choice among three facilities-based CLECs that are comparable in cost and
16 quality to Verizon.

17

18 **III. DS-0/DS-1 CROSSOVER**

19 **Q. WHAT POSITIONS HAVE THE SPRINT AND AT&T WITNESSES**
20 **TAKEN ON THE DS0/DS1 CROSSOVER?**

21 A. Mr. Dunbar, testifying on behalf of Sprint, presents an economic crossover
22 analysis, which attempts to estimate the point at which it is more economical to

1 serve a multi-line DS-0 customer with a single DS-1. He concludes that the
2 cross-over occurs above 15 DS-0s.

3 Mr. Kirchberger and Mr. Nurse, testifying on behalf of AT&T, present a
4 similar analysis and conclude that a “conservative and simplified” cost
5 comparison shows that the crossover would be not less than the range of 14 to 16
6 lines.¹⁶ They recommend however, that a cutoff number should not be applied to
7 the number of UNE-P lines available to a CLEC to serve a customer in a given
8 location. The reason they give is that Verizon appears to believe that there is no
9 absolute cutoff between the market served using DS-0s and the market served
10 using DS-1s, but rather that “it is the objective behavior of the CLECs that should
11 drive the determination of whether or not it ‘makes economic sense’ for the
12 CLEC to serve particular customers over DS1 loops.”¹⁷ According to AT&T, if
13 this standard is applied to the cutoff, there should be no limit on a CLEC’s ability
14 to use UNE-P to serve its customers.

15 **Q. WHAT POSITION HAS MR. GILLAN TAKEN WITH RESPECT TO THE**
16 **CROSSOVER ISSUE?**

17 A. Mr. Gillan agrees with AT&T that Verizon’s “no-cutoff” position with respect to
18 the mass market definition should also apply to the DS-0/DS-1 crossover, and that

¹⁶ Direct Testimony of Robert J. Kirchberger and E. Christopher Nurse, at 67.

¹⁷ Direct Testimony of Berry and Peduto, at 17.

1 there should be no limitation placed on a customer's ability to order multiple
2 UNE-P lines at a specific location.

3 **Q. WHAT IS YOUR RECOMMENDATION ON THE CROSSOVER ISSUE?**

4 A. I agree that it is not necessary to set an explicit crossover for making UNE-P
5 available to customers served by analog loops. Since Verizon has not chosen to
6 conduct a crossover analysis, and has adopted a market definition that lumps all of
7 the DS-0 customer market together for purposes of its trigger application, the
8 Commission should not set a specific crossover point for purposes of limiting a
9 CLEC's ability to use UNE-P to serve customers in a single location. This policy
10 would provide the greatest benefits to telephone customers in Pennsylvania.

11 **Q. DOES THIS CHANGE YOUR TESTIMONY ON WHETHER CLECS**
12 **SERVING BUSINESS CUSTOMERS WITH DS-0 LOOPS SHOULD BE**
13 **COUNTED AS TRIGGER COMPANIES FOR RESIDENTIAL**
14 **CUSTOMERS?**
15

16 A. No. As I explained in my direct testimony, Verizon's position to include business
17 customers (especially those served with many DS0 loops) in the same market as
18 residential customers, and then count business-only CLECs as triggers for all
19 mass market customers, makes absolutely no sense. There are many important
20 differences between the characteristics of business and residential service, and a
21 firm that is successful in the business market may not anticipate success and
22 therefore will not enter the residential market. This is evident from the fact that
23 many CLECs in Pennsylvania serve business customers with their own switches,

1 but do not serve residential customers at all or with their own switches that are
2 used to serve their business customers.

3 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY AT THIS**
4 **TIME?**

5 **A.** Yes, it does.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)

Docket No. I-00030099

DOCUMENT

DIRECT TESTIMONY

OF

EARLE JENKINS

ON BEHALF OF

MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

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January 9, 2004

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**DIRECT TESTIMONY OF EARLE JENKINS
ON BEHALF OF MCI NETWORK SERVICES, INC.**

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1 **I. INTRODUCTION**
2

3 **Q. PLEASE STATE YOUR FULL NAME, OCCUPATION AND BUSINESS**
4 **ADDRESS.**
5

6 A. My name is Earle Jenkins. I am President of SHS Consulting, a consulting practice
7 specializing in telecommunications issues. My business address is PO Box 192,
8 Holderness, N.H.

9 **Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

10 A. I received a B.A. *cum laude* from Franklin Pierce College and an M.B.A. from Boston
11 University.

12 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL BACKGROUND.**

13 A. I have over thirty-five years of operations experience in the telecommunications
14 industry. My consulting practice, which I established in June 1996, focuses on Telco
15 operations management, process evaluation and improvement. My consulting clients
16 have included equipment manufacturers, CLECs, long distance carriers and large telcos
17 in the United States as well as in Holland, England, Hungary and Canada.
18 Prior to launching my consulting business, I was employed by NYNEX Corp. for 29
19 years. My career spanned all levels of operations responsibility, as I progressed from
20 central office craft technician to Vice President. As Vice President, I was responsible for
21 the implementation of maintenance and workforce management process improvements
22 throughout the NYNEX footprint.

23 In 2001, I was recruited by a United Kingdom-based company, FLAG Telecom,
24 to establish a field, customer care, provisioning, and Network Operations Center
25 ("NOC") organization. As Vice President-Operations, I supervised the successful

1 development and implementation of an Operations Plan for a worldwide organization
2 responsible for the management of a global fiber-optic submarine and terrestrial network.
3 In 2002, I returned to the United States and resumed my private consulting practice.
4 I have testified a number of times before state regulatory commissions on matters
5 regarding nonrecurring charges and unbundled network element pricing. The details of
6 my background are included in my curriculum vitae, attached hereto as Attachment 1.

7 **Q. ON WHOSE BEHALF WAS THIS TESTIMONY PREPARED?**

8 A. This testimony was prepared on behalf of MCI WorldCom Network Services, Inc.
9 ("MCI").

10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. The purpose of this testimony is to describe why operational, network and in some cases
12 technological factors give rise to impairment, and to describe how CLECs generally, and
13 MCI specifically, are impaired in their effort to serve the mass market without access to
14 unbundled switching in today's environment.

15 To the extent that Verizon has identified carriers who Verizon believes qualify
16 as trigger companies, this testimony demonstrates why identifying such companies is not
17 a mere counting exercise. Specifically, the FCC required that a trigger company "should
18 be actively providing voice service to mass market customers in the market."¹ If a carrier
19 is only providing a small amount of service in a particular market, it is questionable
20 whether such carrier is "actively" providing voice service. As described in this
21 testimony, providing local service via unbundled loops is an extremely difficult endeavor
22 that involves substantial manual work. If a carrier is not actively providing service, it is

¹ *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, and Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-

1 difficult to determine that such carrier has overcome the barriers to entry that exist in an
2 unbundled loop world that are described in this testimony.

3 Similarly, in conducting the trigger analysis, state commissions must determine
4 whether the identified trigger companies “are currently offering and able to provide
5 service, *and are likely to continue to do so.*”² If the operational issues described in this
6 testimony are not overcome, then it is highly unlikely that carriers, including the current
7 unbundled loop providers, will be able to continue providing service, as Verizon is
8 unable to handle the large volumes of unbundled loop orders that will be placed if all
9 carriers provide service via unbundled loops instead of the Unbundled Network Element-
10 Platform (“UNE-P”). Thus, so long as the impairment issues in this testimony are not
11 overcome, it is difficult to argue that companies meet the triggering criteria.

12 At paragraph 419 of its *Triennial Review Order*, the FCC found, on a national
13 basis, that competitive local exchange carriers (“CLECs”) are impaired without access to
14 unbundled local switching (“ULS”) when attempting to serve the “mass market.” The
15 FCC pointed specifically to certain economic and operational criteria that served as the
16 basis for its impairment finding, and asked state commissions to review these issues in
17 more detail as they contemplate whether the finding of impairment should be overturned
18 in any of the telecommunications markets within their jurisdictions.³ At paragraph 476
19 of its *TRO*, the FCC describes a number of economic and operational factors, including
20 for example, issues related to ILEC unbundling performance, collocation and the lack of
21 processes and procedures facilitating the transfer of loops from one CLEC’s switch to
22 another CLEC’s switch. The FCC specifically identified these types of issues as those it

338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36 (rel. Aug. 21, 2003) (“*Triennial Review Order*” or “*TRO*”), ¶499.

² *Id.* at ¶500.

³ *Id.*, ¶493

1 believed could add to the impairment faced by CLECs attempting to provide services via
2 a UNE loop ("UNE-L") as compared to the relative ease with which CLECs can provide
3 such services utilizing the UNE platform. I understand that Verizon is requesting the
4 Pennsylvania Public Utility Commission ("hereafter "Commission") to enter a finding of
5 "non impairment" with respect to ULS for mass market customers in certain areas within
6 the state, which would remove ULS from the list of available UNEs.

7 **Q. IS YOUR TESTIMONY PERTINENT TO THE TRIGGERS ISSUES?**

8 **A.** Absolutely. As Mr. Pelcovits discusses in his testimony, the trigger analysis is meant to
9 examine whether mass markets consumers have three real and current choices available
10 to them by facilities-based carriers in a given market. The stated intention of the trigger
11 analysis is to give weight to evidence that carriers in the real world are actually providing
12 service to mass market customers without UNE-P, and that those carriers could continue
13 to serve mass market customers within the identified market if UNE-P were
14 discontinued. These operational issues are also relevant in determining the proper
15 definition of the market, as discussed more fully in the testimony of MCI witness,
16 Michael Pelcovits. If "triggering" carriers are able to actively provide services without
17 UNE-P throughout the relevant market today (and have the ability to continue providing
18 it in the future) those alleged "triggering" companies must have overcome, in some way,
19 operational issues related to accessing the ILEC's loop facility. Nonetheless, to qualify
20 as a legitimate "trigger," the carrier would be required to overcome these obstacles on a
21 going forward basis,⁴ and perhaps to overcome them in areas of the market wherein it

⁴ See *Triennial Review Order*, ¶500 wherein it states: "The key consideration to be examined by state commissions is whether the providers are currently offering and able to provide service, *and are likely to continue to do so.*" [emphasis added]

1 does not currently offer services.⁵ As such, in evaluating the legitimacy of an identified
2 trigger, the Commission needs to understand what operational issues exist relative to a
3 UNE-L delivery strategy, and how the identified trigger company fares relative to
4 overcoming those obstacles throughout the market, both today and in the future.

5 **Q. BEFORE SUMMARIZING YOUR TESTIMONY, DO YOU HAVE ANY**
6 **GENERAL COMMENTS?**

7
8 A. Yes, I do. I believe it is critical to highlight the fact that UNE-P is successful today as a
9 tool for mass market competition in large part because (1) a host of talented people and
10 an enormous number of resources (Commission resources, CLEC resources and ILEC
11 resources alike) were dedicated to its development as a commercially viable delivery
12 platform over a period of many years (with the last four years exhibiting the most
13 focused efforts) and (2) because it involves the end to end lease of ILEC facilities, UNE-
14 P provides CLECs access to the customer's loop in much the same manner as that
15 available to the ILEC. Further, it should be noted that much of the success of UNE-P
16 must be attributed to the cooperation (however reluctant) on the part of the ILECs to
17 overcome operational and business-related barriers, based almost solely on their desire
18 for §271 relief.

19 To assume that UNE-L, which requires the connection of an unbundled loop
20 facility with the CLEC's switch, will overcome more challenging operational, technical
21 and network hurdles in a mere 9 month timeframe is not sensible. Further, to assume
22 such hurdles can be overcome in this limited timeframe without similar incentives on the
23 part of the ILECs who have, for the most part, already been released from market
24 restrictions via §271 is even more difficult to support. Similar to our experience with

⁵ See *Triennial Review Order*, ¶499 wherein it states: "They should be capable of economically serving the entire market, as that market is defined by the state commission. This prevents counting switch providers that provide services that are desirable only to a particular segment of the market."

1 UNE-P, it is more logical to assume that the operational and technological issues giving
2 rise to impairment will be resolved over time, and true loop portability – as described
3 throughout this testimony - will become a reality only with the guidance and oversight of
4 state commissions and proper incentives for ILEC cooperation.

5 **Q. ARE THERE PARTICULAR ISSUES THE COMMISSION SHOULD KEEP IN**
6 **MIND RELATIVE TO PROVIDING SERVICE THROUGH AN UNBUNDLED**
7 **LOOP SERVICE DELIVERY METHOD?**

8
9 **A.** Yes. To the extent this Commission determines that the UNE-L strategy should become
10 more widely implemented, it must recognize that transferring a customer's service from
11 the local switch of one carrier to that of another relies upon numerous Operational
12 Support Systems ("OSS"), processes and procedures as well as the availability and
13 reliability of network elements, comprising a chain of connectivity between the customer
14 and his/her local service provider of choice. Because of this necessary chain of
15 connectivity, even if one assumes that ILEC hot cut processes can become seamless at
16 some point in the future, CLECs are likely to remain impaired as a result of not one, but
17 numerous other operational and technological issues affecting loops, collocation and
18 transport.⁶ Hence, it is absolutely imperative that the Commission remain focused on
19 each of these individual issues when evaluating whether companies are actively serving
20 the market and will be able to continue actively serving the market through unbundled
21 loops, and keep an unwavering eye on the primary objective - to ensure that when
22 moving to an unbundled loop world, mass market consumers can, at ever increasing
23 volumes, transfer their services from one facilities-based local service provider to
24 another without service disruption or other service impacting problems.
25

⁶ Indeed, the FCC found that hot cuts are not the only issue which may give rise to impairment. See *TRO*, ¶476.

1 **Q. ARE THERE BENCHMARKS AGAINST WHICH UNE-L PROVISIONING**
2 **PROCESSES LIKE THE BATCH HOT CUT PROCESS SHOULD BE**
3 **MEASURED RELATIVE TO THE SEAMLESSNESS AND RELIABILITY YOU**
4 **ALLUDE TO ABOVE?**

5
6 **A.** I will, throughout this testimony, point the Commission to the largely seamless and
7 reliable nature of the existing UNE-P process as the benchmark to which UNE-L
8 provisioning processes should be held if impairment is to be overcome. A move to UNE-
9 L as a mass market delivery method simply cannot occur until the ILEC's daily processes
10 can support the seamless and reliable provisioning of loops to multiple carriers at
11 commercial volumes on a day-to-day basis consistent with the manner in which they
12 currently accommodate CLEC orders via UNE-P.

13 **Q. PLEASE BRIEFLY SUMMARIZE YOUR CONCLUSIONS.**

14 **A.** The Commission must carefully look at the details related to a company's provisioning
15 of service to mass markets customers via unbundled loops before determining that a
16 company is indeed a trigger company. First, if a company is using its switch to only
17 serve business customers and is not serving any residential customers, that should speak
18 volumes as to the company's ability to overcome the impairment issues discussed
19 throughout this testimony and should be indicative of the fact that the company is not
20 actively serving the market. Second, even if a company is serving residential customers
21 in a market, if it is only a small amount of residential customers, that company should
22 not be deemed to be actively serving the market. Further, the Commission must evaluate
23 whether companies will be able to continue providing service and are likely to continue
24 providing service if the entire competitive local residential market in Pennsylvania is
25 forced to move to an unbundled loop service delivery method. If the impairment issues
26 raised in this testimony related to using unbundled loops are not resolved, the
27 Commission should find that carriers are not likely to continue providing service to local

1 customers via unbundled loops. It is not just the current UNE-P providers who will be
2 affected by a premature forced move to unbundled loops – it is also the current UNE-L
3 providers who will now have to share Verizon’s resources as the numbers of orders
4 manually handled by Verizon will grow astronomically.

5 MCI’s own conduct in using its switches in Pennsylvania is a good indicator of
6 the inability to serve residential customers in Pennsylvania through an unbundled loop
7 strategy, even though a company may have its own switch and may be ordering a limited
8 number of unbundled loops. MCI is not actively serving the residential market (or even
9 the small business market) in Pennsylvania through its own switches, and therefore
10 contrary to Verizon’s testimony and exhibits, MCI should not be deemed a triggering
11 company in Pennsylvania.

12 As discussed in Ms. Chapman’s testimony, MCI does intend to move toward
13 serving its mass market customers using its own switching, collocation and transport
14 facilities in combination with ILEC provided unbundled loops. MCI intends to pursue
15 this strategy aggressively in locations where certain operational and economic hurdles
16 can be overcome. However, this strategy is critically dependent upon reliable access to
17 the customer’s loop and the OSSs, processes, procedures and other facilities needed to
18 ensure that loops can be successfully extended to CLEC switching facilities and
19 maintained on an on-going basis. That reliable access does not exist today, which is why
20 MCI cannot and does not actively serve mass markets customers in Pennsylvania through
21 unbundled loops.

22 The Commission must also carefully evaluate the other companies identified by
23 Verizon as triggering companies because, similar to MCI, they may not actually be
24 actively serving the mass market via unbundled loops, and therefore should not be
25 considered as trigger companies.

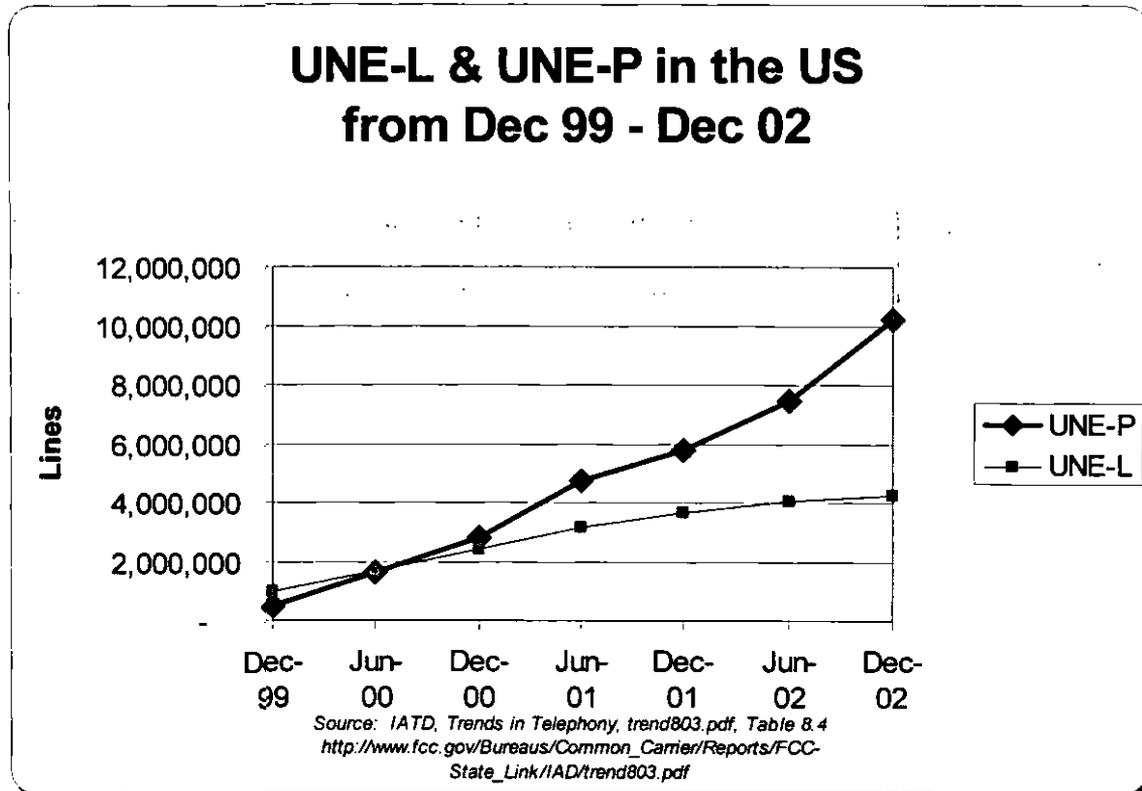
1 Q. ARE THE ISSUES RELATED TO OPERATIONAL PROBLEMS WITH
2 UNBUNDLED LOOPS ALLEVIATED WITH AN EFFECTIVE HOT CUT
3 PROCESS?
4

5 A. No, they are not. While an improved hot cut process is critical to a workable UNE-L
6 platform, there are numerous other operational issues that also exist which give rise to
7 the impairment CLECs face today without access to UNE switching. The Commission
8 should recognize that moving from a UNE-P to a UNE-L strategy requires a true
9 paradigm shift for both the CLEC and its underlying loop provider, the ILEC. And,
10 based upon the operational issues described in this testimony, as well as the customer
11 impacting issues discussed in Ms. Chapman's testimony, MCI is wholly uncomfortable
12 sanctioning a migration of its sizeable UNE-P customer base to a UNE-L strategy in the
13 near future. MCI simply has no confidence that were it required to rely upon the ILEC
14 for timely provisioning of high quality loop facilities, outside of a UNE-P arrangement,
15 that its customers would continue to receive the quality of service they have come to
16 expect. Simply put, MCI sees no reasonable way in which it can, in the near term,
17 migrate its approximately *****BEGIN MCI PROPRIETARY** **END MCI**
18 **PROPRIETARY***** Pennsylvania UNE-P customers to a UNE-L delivery platform
19 without massive service disruption, service impacting errors and a dramatic decrease in
20 general customer service. Moreover, it is unlikely that it would be economic for MCI to
21 do so. Further, to the extent that all of MCI's current UNE-P customers are required to
22 migrate to UNE-L, much less all new customers that may be acquired, such volumes
23 must be taken into consideration when determining whether other UNE-L companies will
24 be able to continue providing service to their own mass markets customers given the
25 dramatic impact that will inevitably affect Verizon's ability to provision orders. Until
26 the UNE-L process becomes as seamless as UNE-P, MCI, as well as other CLECs,

1 remain operationally impaired without access to unbundled local switching as a means to
2 access the ILECs' local loops.

3 **Q. WILL THE PARADIGM SHIFT YOU DISCUSSED IN YOUR PREVIOUS**
4 **ANSWER HAVE A MAJOR IMPACT ON COMPETITION NATIONALLY AND**
5 **IN PENNSYLVANIA?**

6
7 **A.** It certainly has the potential to do so. The seamlessness and efficiency associated with
8 UNE-P has, for the first time, made it possible for CLECs to enter the marketplace in a
9 meaningful way, with UNE-P based market penetration outpacing UNE-L based market
10 penetration by about 2.5 to 1 on a national basis as depicted below.

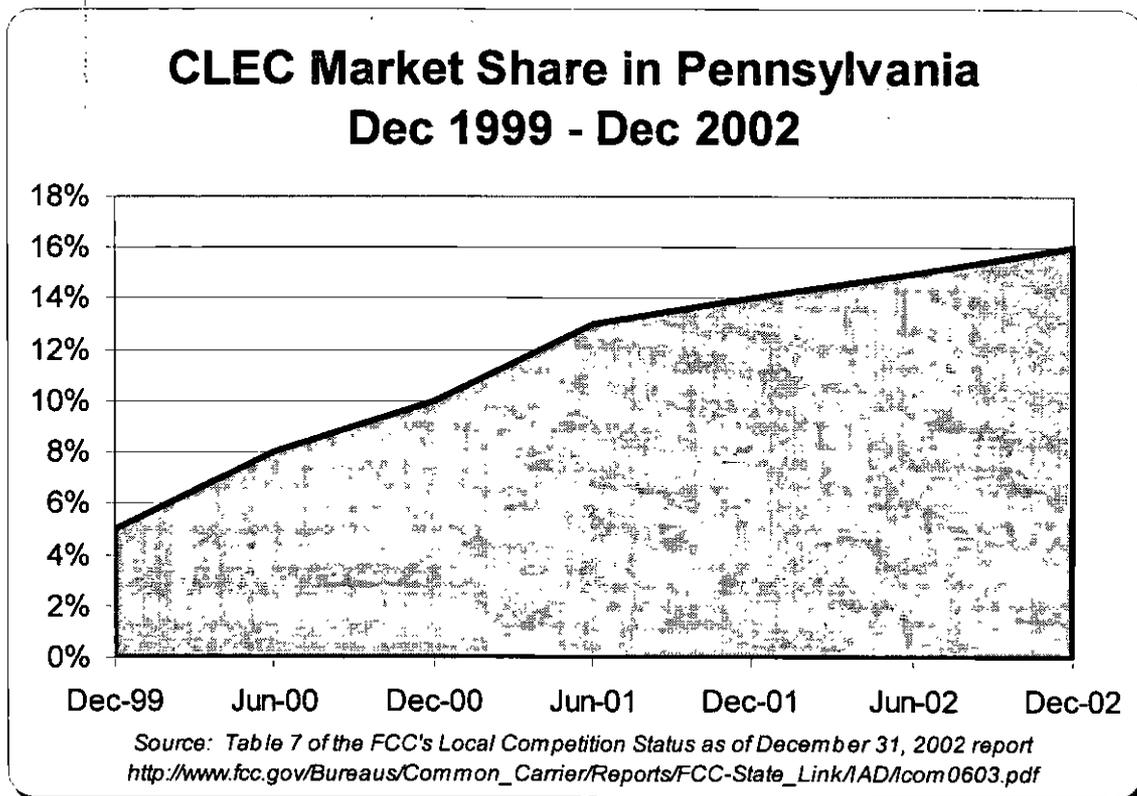


11
12 In order for this type of entry to remain sustainable, and for customers to enjoy the
13 resultant economic benefits, the ease by which CLECs can participate in the market via
14 UNE-P must be reproduced via the UNE-L strategy. That is, loop portability must
15 become an operational and economic reality. If that benchmark is not attained, the

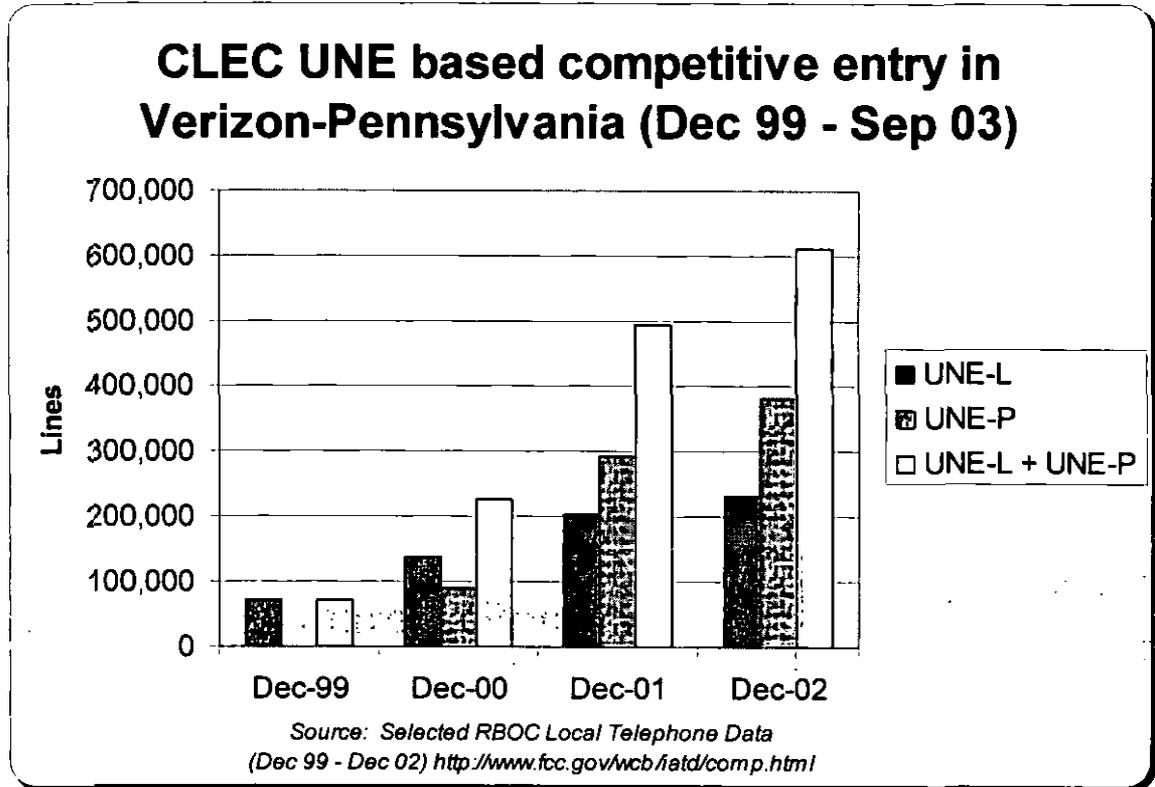
1 competitive market, and more importantly, consumers will suffer. Indeed, CLEC market
2 share would likely take a significant step backward and the benefits attributable to CLEC
3 entry would likely diminish accordingly.

4 **Q. HAS THE SEAMLESSNESS AND EFFICIENCY OF UNE-P HAD AN IMPACT**
5 **ON COMPETITION IN THE LOCAL EXCHANGE MARKET IN**
6 **PENNSYLVANIA IN MUCH THE SAME MANNER AS IT HAS NATIONALLY?**

7
8 A. It certainly has. In fact, as the charts included below demonstrate, CLEC penetration
9 rates for Pennsylvania have more than tripled during this same time period while UNE-P
10 growth has comprised nearly all of Verizon's competitive losses even after accounting
11 for the declining resale market. Indeed, the CLEC penetration rate in Pennsylvania as
12 depicted in the chart below has increased from 5% to 16% over the past three years,
13 according to FCC data.



1 Moreover, the chart below highlights the fact that this aggressive growth results directly
2 from UNE-P and its success in overcoming the operational (and economic) barriers that
3 had restrained growth from resale and UNE-L alternatives previously.



4
5
6 **Q. ARE THERE IMPORTANT AREAS OF CONCERN UPON WHICH THE**
7 **COMMISSION SHOULD FOCUS IN EVALUATING THE CHALLENGES THAT**
8 **EXIST WITH A UNE-L DELIVERY STRATEGY, AND THE ABILITY OF**
9 **CARRIERS TO ACTIVELY SERVE THE MARKET?**

10
11 **A.** Yes, there are. For purposes of clarity, I have identified three broad areas of concern the
12 Commission should consider when evaluating the operational and technical impairment
13 that exists for carriers attempting to utilize UNE-L in order to serve mass market
14 customers:

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(1) Loop Provisioning Issues:

While the FCC in its *TRO* focused primarily on “hot cuts” and the impairment resulting from the inability of CLECs to reliably, seamlessly and economically cut loops in large numbers (i.e., in a “batch”), this is but one of the provisioning issues giving rise to impairment without UNE switching. Issues related to untested provisioning processes operating at dramatically increased volumes on a day-to-day basis (not only for “batch” cuts but for future provisioning requirements), the increased reliability issues associated with substantial manual intervention in the provisioning process when compared to UNE-P which is largely automated, and the need to manage multiple provisioning scenarios (i.e., CLEC-to-CLEC, UNE-L to Line Splitting, etc.) are also worth noting. Solutions to all of these issues must be in place (and tested for proper performance) before UNE-L can be said to exist as a viable mass market delivery platform.

(2) Loop Facilities:

ILECs have argued for years that end user loops served via Integrated Digital Loop Carrier (“IDLC”) technology cannot be unbundled and provided to CLECs for UNE-L provisioning, because those loops are permanently combined (i.e., “integrated”) with their local switching facilities. Instead of admitting that IDLC can technically be unbundled and thereafter working to address the remaining operational aspects of any necessary solutions, they insist “work-arounds” must be implemented before a customer served via IDLC can be reached by a competitor. These workarounds are often time consuming, costly and fraught with technological deficiencies. To further exacerbate this problem, ILECs appear to be employing IDLC technology with increasing frequency. For example, it has been our experience that IDLC is used to serve as many as 40% to 60% of the end users in some central offices.⁷

Because of these technological challenges associated with unbundling IDLC loops, ILECs have consistently suggested that UNE-L requests for loops served via IDLC must “fall out” of any provisioning process (including “batch” hot cuts) and be provisioned via an extremely expensive and time-consuming manual process. These issues must be addressed and resolved in determining whether a carrier is actively providing service to customers throughout a particular market, and in determining the proper definition of the market.

⁷ Pennsylvania wire center specific data relative to IDLC deployment is unavailable, and DLC/IDLC data is provided on an aggregate basis only. For example, see the proprietary attachment to Verizon’s response to MCI I-26: 73% of working lines in Bushkill C.O. are served via DLC/IDLC. See Attachment #2 to this testimony.

1 It is worth noting that these issues do not arise in a UNE-P environment.
2 Because IDLC loops are integrated with the ILEC's switch and UNE-P
3 uses both the loop and switch facility, this connection between the two
4 need not be broken to provide a working circuit in a UNE-P
5 environment. For this reason, the myriad issues that arise with respect to
6 unbundling IDLC are unique to a UNE-L strategy and, clearly, these
7 issues must be addressed and resolved before it can be decided that
8 carriers providing service via UNE-L are able to actively provide service
9 throughout the entire market.

10
11 Moreover, there are specific concerns regarding the ability of CLECs
12 who employ UNE-L to provision xDSL services or dial up services at
13 comparable levels of quality as the ILECs are able to provide. As such,
14 the CLEC's ability to offer adequately "bundled" packages of services
15 which are increasingly demanded by customers is threatened.

16 17 (3) Collocation/Transport Complexities

18
19 A workable UNE-L architecture requires the CLEC to procure and place
20 numerous telecommunications assets for purposes of aggregating and
21 transporting UNE loops from the ILEC's central office to its own
22 switching facility. Many of these facilities can be purchased and
23 managed by the CLEC itself (i.e., loop aggregation equipment), while
24 others are likely to be purchased from the ILEC and managed consistent
25 with interconnection agreements and tariffs (e.g., collocation, transport
26 and EEL capacity). The Commission should consider that both of these
27 types of facilities are unique to a UNE-L architecture and are not
28 required either by the ILEC in serving its own retail customers, or by a
29 CLEC relying upon UNE-P. As such, the operational processes and
30 resultant costs of procuring, placing and managing these facilities are
31 over-and-beyond those costs incurred by the ILEC or by a CLEC using
32 UNE-P. This is important to understand because the additional
33 complexity associated with procuring and managing these facilities is
34 not only important from a perspective of operational impairment (in
35 some circumstances), but must also be considered for purposes of
36 economic impairment.

37
38 Additionally, the availability and extent to which such services are
39 currently deployed in relationship to the mass market must be
40 contemplated when addressing impairment from an operational
41 standpoint, particularly if ILEC policies, procedures and abilities are
42 limiting factors.
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1
2 **II. HOT CUT PROCESSES AND TRIGGERS**

3
4 **Q. HOW DO HOT CUT ISSUES RELATE TO THE TRIGGERS?**

5 A. As discussed above, the Commission must evaluate whether a company identified as a
6 trigger is actively serving the mass market and whether it is likely to continue actively
7 serving that market. First, the Commission must look at the data regarding how many
8 customers a carrier is actually serving in a defined market. Remember that the entire
9 point of the triggers analysis is that if a company is a trigger, then there is an assumption
10 that the company was able to overcome the impairment issues and barriers to entry that
11 are associated with an unbundled loop strategy. If a company is only serving a small
12 number of local customers in a market, and is not serving any residential customers at all
13 in that market, then it is improper to assume that the company has overcome the barriers
14 to entry associated with hot cuts. As discussed further in this testimony, because hot cuts
15 are a highly manual process, it may be possible for Verizon to handle smaller volumes,
16 but not handle the large volumes that would come from multiple carriers placing
17 numerous orders in a given market.

18 Second, the Commission must look at whether UNE-L providers will be able to
19 continue actively serving the market if every single competitor is forced to use
20 unbundled loops. As discussed above, UNE-P is the primary entry vehicle and has led to
21 competitive growth in Pennsylvania. All of those competitors, if they want to stay in the
22 market, will have to change their service delivery methods and become UNE-L
23 providers. In addition, the current UNE-L providers will no longer be the only carriers
24 using Verizon's manual labor resources, and will be affected by the substantial increase
25 in UNE-L orders that Verizon would have to handle. Thus, the Commission must

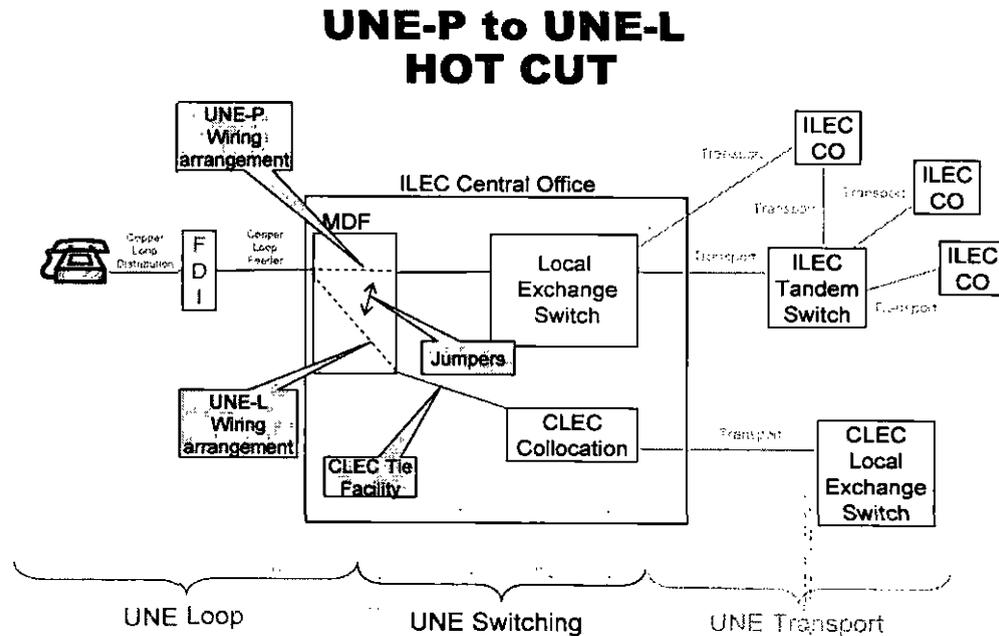
1 evaluate what that means for the market and whether the trigger companies will in fact
2 be able to continue serving customers if all other competitive carriers in Pennsylvania
3 begin serving customers via UNE-L.

4 **Q. WHAT IS A HOT CUT AND WHY IS IT SO DIFFICULT TO DO IN MASS**
5 **VOLUMES?**

6
7 **A.** The term "hot cut" describes the near-simultaneous disconnection of a working loop
8 from a port on one carrier's switch and the reconnection of that loop to a port on a
9 different carrier's switch, without any significant out-of-service period. A hot cut must
10 also include some type of notification made to the appropriate number administrator
11 informing the administrator that the customer's telephone number is now assigned to a
12 different carrier, thereby allowing the customer to receive incoming calls at his/her
13 existing telephone number. Generally, in a hot-cut scenario, regardless of whose switch
14 the customer is moving from, and to, the ILEC must perform two manual wiring
15 activities at the main distributing frame ("MDF"); (1) pre-wiring and (2) the actual loop
16 cutover.

17 During the pre-wiring stage the technician places a jumper between the CLEC tie
18 facility connecting the CLEC's collocation cage to the ILEC central office, and the
19 customer loop. The jumper is terminated at the tie facility but not at the loop side. When
20 the cut is scheduled to begin, the jumper (cross-wire) that is connected to the loop side of
21 the existing loop/port (UNE-P) arrangement is disconnected and the jumper connected to
22 the receiving CLEC's tie facility is terminated in its place. This completes a circuit
23 between the CLEC facility in its collocation cage and the customers loop, thereby
24 accomplishing the cut. Local Number Portability ("LNP") translation activities are
25 typically involved with this type of transaction and have traditionally been the

1 responsibility of the receiving carrier. The diagram below provides a high level
2 depiction of the process described above.
3



4
5
6
7 **Q. WHAT IS A BATCH HOT CUT PROCESS?**

8 **A.** The batch hot cut process would be a new process to be implemented in Pennsylvania.
9 MCI uses the term *Transition Batch Hot Cut Process* to address the FCC's requirements
10 that a "seamless, low-cost batch cut process for switching mass market customers from
11 one carrier to another" be approved which – when implemented – will allow CLECs an
12 opportunity to compete effectively in the mass market. (*TRO* at paragraph 487). This
13 process should be implemented in order to effectuate a transition of customers off of

1 UNE-P and onto UNE-L in large quantities, or “batches.” A variant of this process
2 should also transcend migrations *en masse* in order for CLECs to be able to effectively
3 compete for mass market customers on an ongoing, day-to-day basis. This daily process
4 is referred to as a *Mass Market Hot Cut Process*. To the extent that ILECs are unable
5 to implement *Transitional Batch Hot Cut Processes*, the initial mass transitioning of
6 customers from UNE-P to UNE-L will not be manageable. Moreover, if an effective,
7 permanent process is not established, current UNE-L providers will be hampered in their
8 ability to continue providing service while Verizon attempts to handle the massive
9 amount of orders that will come from all CLECs.

10 The Commission has opened a separate proceeding on hot cuts and electronic
11 loop provisioning at Docket No. M-00031754, where it is MCI’s hope that the
12 Commission will actively pursue and require the implementation of a seamless and
13 efficient hot cut process for both transitioning existing customers and handling new
14 customer orders. Prior to determining that a carrier is able to continue serving mass
15 markets customers via unbundled loops, the Commission should ensure that hot cut
16 processes are not only “identified” and “documented,” but that they are actually tested
17 and implemented.

18
19 **Q. IS THE COMMISSION SOMEHOW CONFINED TO AN EXAMINATION OF**
20 **HOT CUT PROCESSES WITHIN THE CONTEXT OF “TRIGGER ANALYSES”**
21 **OR LIMITED TO ANALYSIS OF “BATCH” PROCESSES THAT ARE**
22 **DESIGNED TO ADDRESS THE BATCH MIGRATION DESCRIBED ABOVE?**
23

24 **A.** No. The Commission is not restricted in either sense. As described above, state
25 Commissions must approve hot cut processes independent of trigger analyses.
26 Moreover, the FCC found that carriers are impaired without access to ULS when
27 attempting to address mass market customers due - in part – to inadequate hot cut
28 processes. In directing the commissions to examine issues of impairment more

1 generally, the FCC indicated that state commissions should perform more granular
2 analyses to determine whether a finding of “no impairment” should be granted and, in
3 doing so, directed the commissions to examine other factors which include – in part –
4 “difficulties in performing customer migrations between competitive LECs.” (*TRO*, ¶
5 424 at footnote 1298.). Such difficulties may well arise outside of the “batch” concept
6 discussed above and will likely lead to impairment absent some intervention by the
7 Commission. Hence, the Commission should view its responsibility relative to hot cuts
8 as twofold: (1) The Commission must, within 9 months, approve a *Transition Batch Hot*
9 *Cut* process that would, given a finding of non-impairment, allow carriers to migrate
10 customers en masse from UNE-P to UNE-L, however, the Commission should also (2)
11 evaluate the extent to which on a going forward, day-to-day basis, carriers would still be
12 impaired unless a seamless, efficient and low cost *Mass Market Hot Cut* process was
13 also in place (it is my understanding that no similar 9 month window constrains the
14 Commission review in this regard). Without the successful implementation of both
15 processes, the type of loop portability needed to make UNE-L a suitable replacement for
16 UNE-P cannot become an operational and economic reality. Moreover, the extent to
17 which UNE-L is viable for the mass market will be dependent, at least in part, on the
18 costs incurred during the hot cut process, and the Commission must also look at such
19 cost issues when evaluating hot cut processes.

20 **Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW THE EXISTING HOT CUT**
21 **PROCESSES USED BY VERIZON?**

22 **A.** To some degree, given that the processes are the same in all jurisdictions.⁸ Nonetheless,
23 as discussed in Ms. Chapman’s testimony, MCI believes the existing processes are
24 inadequate and would not effectively measure-up to the FCC’s requirements. In fact,
25

1 Ms. Chapman identifies many customer impacting, operational issues that involve the
2 exchange of information that must take place in a UNE-L migration that make the current
3 processes unworkable for the mass market in particular. MCI has serious concerns
4 regarding the extent to which ILECs will be successful in designing, testing and
5 implementing *Transitional Batch Hot Cut* processes which will be capable of seamlessly
6 transferring customers' loops from one carrier's switch to another carrier's switch, to
7 which I refer as loop portability, on an economic basis. Likewise, MCI is concerned
8 about the extent to which ILECs will successfully implement a *Mass Market Migration*
9 *Hot Cut* process that will be necessary to address the increasing daily migration and
10 churn related volumes that will no doubt exist in a dynamic competitive market where
11 UNE-L is used to serve the mass market.

12
13 **Q. GENERALLY SPEAKING, WHAT ARE SOME OF THE MAIN ISSUES THE COMMISSION SHOULD CONTEMPLATE WHEN DETERMINING WHETHER THE HOT CUT PROCESS WILL IMPEDE A CARRIER'S ABILITY TO ACTIVELY SERVE THE MARKET, AND CONTINUE SERVING THE MARKET IF THE TRIGGERS ARE MET?**

14
15
16
17
18
19 A. In addition to the numerous issues described in Ms. Chapman's testimony, MCI's
20 concerns regarding the ILEC hot cut process can generally be categorized as follows: (1)
21 workability; (2) availability; and (3) scalability.

22
23 **Q. PLEASE PROVIDE ADDITIONAL DETAIL REGARDING EACH OF MCI'S CONCERNS.**

24
25
26 A. Given that in markets where MCI chooses to serve its substantial mass market customer
27 base via UNE-L, a hot cut will be required for each new customer it wins, in addition to
28 the migration of existing UNE-P customers to UNE-L *en masse*, the capabilities of the
29 ILECs' systems and processes to accommodate this substantially increased volume of hot

⁸ Verizon acknowledged that the same process is being introduced in all jurisdictions in their DC direct

1 cuts in a timely manner without customer service interruption is paramount. Using
2 existing ILEC processes, manual intervention will be required for each loop cutover. In
3 other words, an ILEC technician will need to be dispatched to accommodate the frame
4 manipulation for every single loop that must be transitioned from one carrier to another.
5 Using Verizon's own data provided in response to MCI's interrogatory, there are
6 currently 444,411 UNE-P lines in service as of June 2003.⁹ This is a substantial amount
7 of UNE-P customers that would have to be transitioned to UNE-L – not to mention the
8 on-going new orders that would have to be processed. Concerns regarding the ILECs'
9 ability to handle hundreds of thousands of these types of manual orders on an ongoing
10 basis are legitimate. This is especially troubling given that the data shows that for
11 virtually all markets in Pennsylvania, Verizon has not had to provide a substantial
12 amount of hot cuts in a short period of time for a large amount of carriers, especially for
13 carriers that serve residential customers.

14
15 **Q. PLEASE EXPLAIN YOUR CONCERNS RELATIVE TO "WORKABILITY."**

16 A. A hot cut is, by definition, a coordinated effort on the part of Verizon and the CLEC to
17 "cut" a loop with minimal disconnection time (i.e., the time wherein the customer is
18 connected to no switch or is connected to a switch wherein his/her telephone number is
19 no longer active). For this reason, the Verizon hot cut process must be specifically
20 designed to minimize not only the time and cost specific to Verizon's activities, but also
21 those associated with the CLEC (both CLEC representatives and CLEC systems). In
22 short, the Verizon process must work well not only for Verizon, but for the CLEC as
23 well.

panel testimony associated with case 1024 dated Dec. 15, 2003 Ins. 3-5
⁹ See Verizon's response to MCI I-41, attached hereto as Attachment #3.

1 **Q. PLEASE EXPLAIN YOUR CONCERNS ABOUT “AVAILABILITY.”**

2 A. As Verizon’s proposed batch hot cut process begins to be better understood, it is
3 becoming clear that Verizon intends to limit its hot cut process such that: (1) CLEC-to-
4 CLEC, UNE-L based migrations would not be available via the batch hot cut process; (2)
5 lines currently involved in a “line splitting” arrangement could not be cut via the hot cut
6 process; (3) hot cuts for loops served via IDLC will require special engineering and
7 potentially extended provisioning timeframes; (4) lines to be provisioned over Enhanced
8 Extended Links (“EELs”) would not be available; and (5) long holding periods would, in
9 most circumstances, replace negotiated and normal provisioning intervals. All of these
10 restrictions, and others, substantially reduce the benefit provided by the hot cut process
11 and could severely limit the efficiency by which CLECs could offer mass market
12 services on a UNE-L basis. In short, hot cut processes with these types of restrictions
13 would severely harm a carrier’s ability to continue providing service via unbundled loops
14 and would do very little to help overcome the FCC’s national finding of impairment.

15 **Q. HAVEN’T ILECS MADE STATEMENTS TO THE EFFECT THAT THESE HOT**
16 **CUT MIGRATIONS WILL NOT POSE ANY PROBLEMS?**

17 A. Yes. Though ILECs claim that they can handle large volumes of hot cuts if the triggers
18 are met, the facts simply don’t support their bravado. For example, in New York, even
19 based upon its own calculations, Verizon anticipates the need to hire and train literally
20 thousands of new employees just to accommodate the increased volume of hot cut
21 demands.¹⁰ It seems clear that this type of substantial force increase will also be required
22 in Pennsylvania since Verizon’s manually intensive process is the same in this
23 jurisdiction. In addition, given the fact that the new hot cut processes will be largely
24 untested and untried, and in many circumstances, be performed by new employees with
25

1 limited training and experience, there can be no assurance these processes will meet even
2 today's hot cut standards, let alone standards comparable to the relatively seamless UNE-
3 P provisioning standard which has fueled the level of competition that exists for mass
4 market customers today.

5 **Q. PLEASE EXPLAIN IN MORE DETAIL.**

6 A. The information I've seen to date, taken from Verizon's interval guide, clearly states that
7 only basic individual coordinated hot cuts consisting of 20 lines or less are given
8 standard completion intervals.¹¹ Bulk hot cut project completion due dates are normally
9 negotiated, which allows the ILEC to spread its work load to meet the throughput
10 restraints of the underlying process. The manual requirements of the process dictate the
11 need to match the appropriate number of technicians and other personnel with the
12 volume of work that is requested and, as such, it is the manned workforce that provides
13 the restraining factor in upward scalability. As volumes increase, a workload strain is
14 placed on the existing work force, eventually leading to transfers from other jobs within
15 the ILEC or through new hires, in order to meet demand. Unfortunately, simply
16 "throwing more bodies" at the problem is only helpful to a limited degree, as real-world
17 constraints on the number of technicians that can work on a given frame at a given time
18 come into play. To the extent the ILEC's process cannot keep up with the dramatically
19 increased demand for hot cuts, the compounding effect of missed cut dates would create
20 long UNE-L provisioning intervals and an enormous backlog of hot cut requests.

¹⁰ See Verizon's Panel Testimony filed October 24, 2003, New York Case No. 02-C-1425, Exhibit V-A, Force Load Model ("FLM").

¹¹ Hot cut intervals are published at: www22.verizon.com/wholesale/attachments/une_intervals.xls

1 **Q. WHAT IS THE MAJOR OBSTACLE TO A SCALABLE HOT CUT PROCESS**
2 **ON THE PART OF THE ILECS?**

3
4 **A.** The major bottleneck in the hot cut processes advocated by the ILECs exists at the Main
5 Distribution Frame (“MDF”). As described before, from an operational standpoint, in a
6 UNE-L environment each customer’s line must be rewired manually for purposes of
7 connecting the UNE loop to the receiving CLEC’s collocation cage or EEL arrangement.
8 This raises another important factor specific to scalability, i.e., differences between large
9 hot cut jobs undertaken today (or in the past) by the ILECs, versus the very different hot
10 cut requirements they will face in a market without UNE-P. Currently, large project hot
11 cuts typically involve one or a limited number of individual multi-line business
12 customers wherein the cut, though potentially impacting many loops, is specific to a
13 given customer. Frequently, the loop MDF connections for these groups of multiple
14 lines are centrally located on the frame and typically, all of the customers’ loops are
15 relatively concentrated geographically on the frame, because they terminate at the same
16 premises. Conversely, a hot cut for a large group of residential, single line customers
17 will generally appear at random frame locations. It is easy to envision multiple frame
18 technicians working on a number of individual large business hot cuts concentrated on a
19 given loop count; however, it is equally as easy to envision the potentially chaotic
20 situation that could develop as a result of multiple technicians working simultaneously
21 on a number of large residential single line hot cut projects involving loops appearing in
22 random locations on the frame.

23 That is one of the reasons it is so important to exclude companies that do not
24 provide service to residential customers via UNE-L as trigger companies. Although MCI
25 has ordered and processed some unbundled loops in Pennsylvania, none of those are for
26 residential customers due in part to the problems with hot cuts. When MCI does order

1 unbundled loops for business customers, MCI has a dedicated team to handle the account
2 because of the problems with the hot cut process, and MCI is required to have an open
3 bridge with Verizon to deal with any problems that may be encountered. This is simply
4 not transferable to thousands of residential customers. The Commission must evaluate
5 whether the same is true for all trigger companies identified by Verizon, and if so,
6 whether such companies are likely to continue providing local service to customers if
7 Verizon's resources are even further strained with all competitive carriers ordering
8 unbundled loops.

9 **Q. ARE PROBLEMS ASSOCIATED WITH HOT CUTS EXACERBATED WHEN**
10 **THE MIGRATION IS FROM ONE CLEC TO ANOTHER?**

11
12 **A.** Yes. The potential for increased complication for CLEC-to-CLEC cuts certainly exists.
13 The amount of coordination, the information required and a number of other
14 complicating factors are magnified with the introduction of CLEC-to-CLEC hot cuts as
15 well as with myriad other scenarios (e.g., hot cut from a line sharing CLEC to a CLEC
16 handling both the broadband and narrowband application, moves from one CLEC to
17 another wherein the receiving CLEC is serving via the ILEC's resale services and many
18 others). In many of these scenarios, three or more individual carriers as well as providers
19 of ancillary services such as NPAC¹², are required to cooperate, in real time, for purposes
20 of accommodating this largely manual process. A failure at any one of the numerous
21 steps can result in a customer losing service.

22 **Q. HOW IS THE ISSUE OF CLEC-TO-CLEC HOT CUTS RELEVANT TO THE**
23 **TRIGGERS ANALYSIS?**

24
25 **A.** Because many of the CLECs that are listed as triggering companies have not had to
26 operate in a world where they can only obtain customers from other CLECs via
27 unbundled loops. Thus, many of the procedures that must be implemented in order to

1 seamlessly switch customers from one CLEC's unbundled loop to another CLEC's
2 unbundled loop simply do not exist. Thus, it is highly questionable and in fact doubtful
3 that CLECs would be able to continue functioning normally and continue to actively
4 serve the market when these procedures are not in place.

5 **Q. TO THE EXTENT UNE-L BECOMES MORE WIDELY IMPLEMENTED; WILL**
6 **CHURN IMPACT THE ILEC'S ABILITY TO KEEP-UP WITH THE DEMAND**
7 **FOR HOT CUTS?**

8
9 A. Absolutely. As Ms. Chapman describes in more depth, churn is increasingly important
10 and will ultimately drive the rate at which UNE-L migrations grow. Moreover, this
11 Commission should not ignore CLEC- to- CLEC UNE-L migrations. In fact, the FCC
12 specifically cited such migrations as a potential area of impairment. (See, e.g., TRO, at
13 paragraph 476.) Based upon Verizon's positions as stated at the multi-state batch hot cut
14 collaboratives, Verizon does not intend to support CLEC-to-CLEC migrations within
15 their new batch hot cut process. As such, once a customer is served by a CLEC on UNE-
16 L facilities, the ability of that particular customer to move to another carrier in the future
17 without significant service-impacting problems is in doubt. All of the issues which lead
18 to the FCC's finding of impairment without ULS come into play in such a situation and
19 are compounded by the fact that a third carrier is now involved.

20 **Q. DO THE ISSUES BRIEFLY OUTLINED ABOVE ADDRESS ALL ATTRIBUTES**
21 **BY WHICH THE ILEC HOT CUT PROCESSES SHOULD BE EVALUATED?**

22
23 A. No, they do not. Ms. Chapman addresses a number of additional issues in her testimony.
24 Likewise, the Commission has established a separate hot cut proceeding and MCI
25 intends to participate in that proceeding, whereby MCI will present its position on
26 Verizon's proposed procedures and MCI's proposed procedures for handling unbundled
27 loops. Hence, this testimony should not be considered the final word on the topic of hot

¹² Number portability administration center.

1 cuts. Additionally, I intend to address issues pertaining specifically to loops, collocation
2 and transport later in this testimony.

3 **Q. DO YOU ADDRESS COST RELATED ISSUES PERTINENT TO THE ILEC'S**
4 **HOT CUT PROPOSALS?**

5
6 A. Not in this testimony. However, it is important to remember that the FCC specifically
7 cited economic impairment resulting from hot cut costs as a concern, and requires that
8 future hot cut processes ordered to be implemented by the state public utility
9 commissions be more efficient and have lower costs than the processes currently in
10 place. (See, for example, *TRO* at paragraph 473). Further, the FCC requires that the
11 rates for any hot cut process be established based upon its existing TELRIC rules which
12 require a strict adherence to a forward looking network assumption. Moreover, I
13 recommend the Commission contemplate whether the expenses incurred by CLECs, if
14 required to pay for hot cuts through NRCs give rise to economic impairment where it
15 would not otherwise exist.

16
17 **III. UNBUNDLING OF LOOPS SERVED BY INTEGRATED DIGITAL**
18 **LOOP CARRIERS, IMPAIRMENT AND TRIGGERS**

19
20 **Q. IN THE SECTION ABOVE, YOU DISCUSSED DIFFICULTIES ASSOCIATED**
21 **WITH OBTAINING ACCESS TO LOOPS VIA THE HOT CUT PROCESS. ARE**
22 **THERE OTHER LOOP-RELATED ISSUES THAT ALSO GIVE RISE TO**
23 **IMPAIRMENT?**

24
25 A. Yes. In an environment wherein CLECs must rely upon a UNE-L delivery strategy to
26 serve the mass market, the physical process of accessing the unbundled loop, and
27 thereafter using that loop to provide a comparable service to its customer, is likely to be
28 the most important and difficult obstacle to overcome. In the following section, I
29 identify a number of operational obstacles that plague the existing UNE-L delivery

1 strategy, and lead to increased operational complexities, diminished quality, and
2 increased costs when compared to the existing retail and/or UNE-P arrangements.

3 Clearly, these issues give rise to impairment.

4 **Q. CAN YOU BRIEFLY SUMMARIZE THESE OPERATIONAL CONCERNS?**

5 A. The operational concerns that I raise affect the trigger analysis in much the same way as
6 the hot cuts. To the extent that the issues are not resolved before forcing the entire
7 industry to an unbundled loop strategy, the ability of carriers to actively serve the market
8 on a going forward basis will be severely affected. In addition, the problems I raise
9 below are directly related to the proper definition of the market, as more fully discussed
10 in the testimony of Mr. Pelcovits.

11 The majority of the operational issues I describe below result directly from the
12 fact that in a UNE-L environment, Verizon will be separating network elements that it
13 had specifically combined in order to provide its own retail service in as efficient a
14 manner as possible (and currently maintains in a combined fashion to provide UNE-P).

15 The intentional separation of a combined loop and port combination required by any
16 UNE delivery strategy other than UNE-P generates at least the following two types of
17 problems:

18 (1) Verizon insists that its integrated DLC facilities (IDLC) cannot be unbundled
19 at the DS-0 (individual line) level. This means that when a CLEC orders a loop
20 which is served via IDLC, there are two possibilities: either Verizon will refuse
21 to provide it because there are no alternate facilities available, or Verizon will
22 move the CLEC line to an alternate facility. This is true even though that same
23 customer as a Verizon retail end user, or even as an MCI customer served via
24 UNE-P, may have been using the facility currently supporting his/her service for
25 years. Worse yet, in many circumstances the facility to which the customer is re-
26 assigned is technologically inferior to the existing facility, or may simply be a
27 facility that has been poorly maintained. Further, even the presumably simple
28 process of reassigning a new facility is anything but simple, and can cause
29 numerous service-impacting problems for the customer (problems the customer
30 will undoubtedly identify with switching service providers) that would be
31 avoided absent the need to "un-combine" the existing facilities used for
32 retail/UNE-P.

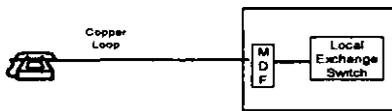
(2) As greater and greater numbers of competitors are moved from more efficient fiber-based services to copper-based services via the reassignment process described above, this Commission will undoubtedly begin to see two networks develop, each exhibiting dramatically different levels of quality: i.e., the network used by the ILEC to serve its retail customers, and the network leased to CLECs by the ILEC for purposes of competing against it. As CLECs in this environment compete for limited numbers of inferior quality facilities (as the ILEC begins to retire its copper plant), situations of "no facilities" or facilities that will require costly repair before they can be used will undoubtedly become more prominent for the CLEC, thereby increasing the amount of time required to service any single customer, and dramatically increasing the CLEC's customer acquisition costs.

These problems specifically impact the ability of carriers to actively serve the local mass market using unbundled loops.

Q. PLEASE DESCRIBE IN MORE DETAIL THE TWO PRIMARY ISSUES YOU SUMMARIZE ABOVE.

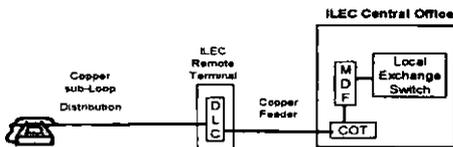
A: Before the Commission can fully appreciate the operational barriers I've summarized above, a brief overview of the existing outside plant network, focusing on different types of loop architectures is in order. The diagrams below depict the three most common outside local loop serving arrangements.

(1) All-copper outside plant; no digital loop carrier (DLC)

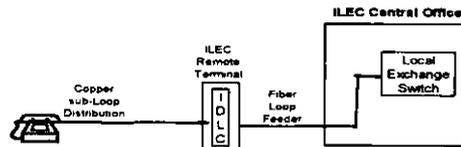


 **Local Voice Network**

(2) Copper loop plant with UDLC



(3) Copper & fiber loop plant with IDLC



1 In the case depicted at the top portion of the diagram, the copper loop enters the central
2 office where it is manually cross connected from the vertical side of the main distributing
3 frame (generally considered the "outside plant" or OSP appearance) to the horizontal
4 side of the frame (generally considered the "central office" or CO appearance).

5 The lower portion of the diagram shows two alternate serving arrangements that
6 utilize more advanced "pair gain" platforms known as universal digital loop carrier
7 (UDLC) on the left, and integrated digital loop carrier (IDLC) on the right. In a general
8 sense, the purpose of both DLC applications is to aggregate the traffic of literally
9 hundreds of individual customers and then multiplex those individual signals into a
10 single, higher bandwidth signal that can be transported more efficiently between the
11 remote terminal ("RT") and the CO.

12 In the UDLC scenario, the copper loop leaves the customer connected to a DLC
13 RT which is likely located in the customer's own neighborhood. The electronics in the
14 DLC convert the analog signals to a digital multiplexed format, and then send the digital
15 signal over a feeder cable (copper in this case) to the central office (CO).¹³ The cable
16 terminates in the CO on a Central Office Terminal (COT), which converts the signal
17 back to an analog format, at a voice grade (individual line) level, ultimately terminating
18 at the MDF for manual wiring purposes. The MDF wiring appearances serve as a point
19 of interface for the carriers' switching equipment (and as a point of interconnection for a
20 CLEC).

21 In the third example, the loop from the customer connects to a remote terminal
22 equipped with IDLC technology. With this application, the electronics in the RT convert
23 the analog signals to a digital multiplexed format, and then send the digital signal over

¹³ Note that UDLC may utilize either fiber or copper feeder facilities.

1 fiber feeder cable to the CO, terminating directly in the ILECs' digital switch without
2 converting the signal back to analog.¹⁴

3 **Q. CAN YOU EXPLAIN THE DIFFERENCE BETWEEN UDLC AND IDLC IN**
4 **MORE DETAIL?**

5
6 A. Older UDLC technology consists of an RT, a transmission (transport) facility to link the
7 RT to the CO, and a COT. The RT aggregates the copper distribution pairs and
8 performs conversions -- converting the customer's analog signal to a digital multiplexed
9 format going to the central office, and (in the opposite direction) converting the digital
10 signal from the central office to the customer to an analog signal. The transport carries
11 the digital signal from the RT to the COT, and vice versa. The COT equipment converts
12 the digital signal from the RT to an analog signal before the signal is terminated on the
13 MDF and cross-connected to the switch port.

14 With the introduction of digital switches, an additional conversion was needed at
15 the MDF. The signal that was converted from digital to analog at the COT had to be
16 converted back to a digital signal by an Analog Interface Unit ("AIU") resident in the
17 switch. The required digital-to-analog conversion at the CO was unnecessary, inefficient,
18 and expensive, as more and more digital switches were deployed. IDLC addressed these
19 inefficiencies by eliminating the need for the additional analog-to digital conversions at
20 the CO. The analog signal originating at the customer's premises still is converted to
21 digital at the RT, but no other analog/digital conversions are necessary as digital
22 switches can accept the digitally formatted signal without conversion (something older
23 analog switches could not do). Unlike traditional copper loops or UDLC lines, IDLC
24 lines do not typically have termination appearances on the MDF.

¹⁴ While certain fiber termination equipment actually exists between the RT and the switch, the point of the diagram is that equipment required to convert the signal from digital to analog (or any other format) is not required.

1
2 **Q. OTHER THAN THE LACK OF DIGITAL/ANALOG CONVERSION, ARE**
3 **THERE OTHER ADVANTAGES SPECIFIC TO IDLC OVER UDLC?**
4

5 A. The answer to that question is strongly influenced by whether you ask it relative to
6 retail/bundled services, or if the question is specific to unbundled services, and therein
7 lies the problem. With respect to bundled services (retail and/or UNE-P), there are
8 undisputable advantages to IDLC. For bundled services, IDLC allows local loops to be
9 connected to a digital circuit switch more efficiently and cost effectively when compared
10 to UDLC, because IDLC requires neither an analog conversion at the CO, nor the AIU
11 line card at the switch, nor manual MDF wiring. As a result, compared to today's IDLC
12 technology, older UDLC systems require unnecessary investment for digital-to-analog
13 and analog-to-digital conversion equipment and MDF wiring in the central office.

14 **Q. DO THESE ADVANTAGES ACCRUE TO CLECS UTILIZING UNE-L?**

15 A. Typically not. To the extent that IDLC has advantages over UDLC and ILECs continue
16 to insist that they will not unbundle IDLC systems for use by their CLEC competitors,
17 these advantages accrue only to retail and UNE-P services that rely upon the combined
18 nature of the IDLC system. By effectively eliminating UNE-P with a finding of no
19 impairment and by refusing to require Verizon to unbundle IDLC loops, this
20 Commission ensures that only Verizon and its retail customers will enjoy the benefits of
21 IDLC, and CLECs are either left with no ability to serve customers, or are relegated to
22 serving customers via facilities that are inferior to those used by Verizon.

23 **Q. EARLIER YOU MENTIONED THAT VERIZON MAY REPLACE AN IDLC**
24 **LINE WITH EITHER A COPPER LOOP OR A UDLC LINE WHEN ASKED TO**
25 **PROVIDE A UNE LOOP TO A CUSTOMER SERVED VIA IDLC. ARE THERE**
26 **PROBLEMS ASSOCIATED WITH THIS APPROACH?**
27

28 A. Yes, there are several. First, converting the line from IDLC to UDLC takes time,
29 requires the order generally to fall out of any flow-through process, requires a technician

1 dispatch and is often expensive. As an example, in its recent New York testimony,
2 Verizon proposed a surcharge of \$131.18 per IDLC loop, **plus** field installation/dispatch
3 charges.¹⁵

4 Further, Section 12.13.3 of *Telcordia Notes on the Networks* (SR-2275, Issue 4,
5 October 2000) which is entitled "Unbundling Issues Associated with UDLC and IDLC
6 Systems" indicates that UDLC contributes to multiple problems including (a) increased
7 dial tone delay, (b) degradation of on-hook transmission services, such as caller ID, (c)
8 degradation of signal quality as a result of multiple A/D and D/A conversions and (d)
9 reduction in analog modem operation speeds due to the number of A/D conversions.

10 **Q. CAN YOU EXPLAIN THE LAST ISSUE ABOVE— REDUCED MODEM SPEED —**
11 **IN GREATER DETAIL?**

12 **A.** As described above, IDLC avoids additional analog-to-digital and digital-to-analog
13 conversions inherent in the UDLC system. In doing so, the IDLC system avoids
14 problems associated with dramatically reduced bit rate speeds for voice band data
15 connections (e.g. dial-up Internet access and fax machines) that plague UDLC systems.
16 This issue is described more fully at Microsoft's Windows 2000 support website, where
17 Microsoft explains that: "there can be only one analog connection between your modem
18 and the host computer" if a PC modem is to support a V.90 dial-up connection capable of
19 operating at speeds of 56 kilobits per second.¹⁶ Moreover, customers served by UDLC
20 cannot receive ISDN and ADSL services without the installation of additional external
21 loop electronics to increase digital transmission bandwidth at the UDLC. These
22 limitations do not exist with most IDLC configurations. In short, UDLC systems can
23

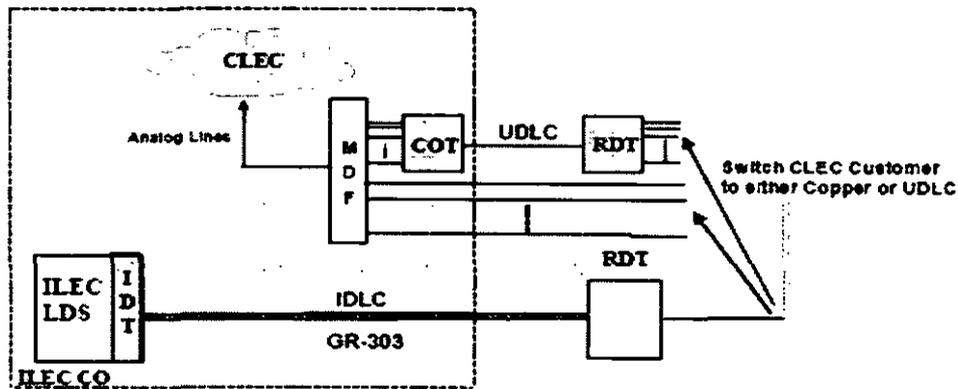
¹⁵ Verizon Panel Testimony, filed October 24, 2003, New York Case No. 02-C-1425, Exhibit III-F.

¹⁶ Microsoft Windows 2000 Server documentation. Available at <http://www.microsoft.com/windows2000/>
(included with this testimony as Attachment #4)

1 dramatically reduce the access speed enjoyed by dial-up Internet customers, while IDLC
2 systems avoid these problems entirely.

3 **Q. ASSUMING THAT VERIZON MOVES A CLEC TO ALTERNATE FACILITIES,**
4 **PLEASE EXPLAIN HOW A TRANSFER IS ACCOMPLISHED?**

5
6 **A.** The diagram taken from *Telcordia Notes on the Network* Issue 4 section 12.13.2.1
7 provides an illustrative example of the two “work arounds” described above.



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13 **Figure 12-33. IDLC Unbundling - Bypass the IDLC System**

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25 A field technician dispatch in this scenario (contrasted with only a frame dispatch for a
26 normal hot cut) is required to the RT, in the outside plant (not only in the CO). As such,
27 the time and resultant costs required to accomplish the transfer are notably increased, as
28 is the chance for error (in many cases assignment records for facilities at an RT or at an
29 accompanying serving area interface – “SAI” – are less accurate than those for central
30 office facilities).

31 **Q. UNDER THE COPPER SCENARIO DESCRIBED ABOVE, DO ILECS AND/OR**
32 **CLECS NEED TO DISPATCH TECHNICIANS FOR LOOP INSTALLATIONS?**

33
34 **A.** The technician dispatch is required in either a copper or UDL transfer situation. ILEC
35 technicians are involved with CO work in this scenario but in most cases technicians are

1 also dispatched to the RT and even to the end-user premise in some instances in order to
2 change facilities. In addition, in some situations CLECs must also visit the customer's
3 premises to change/validate wiring and test customer equipment. In comparison, a UNE-
4 P environment involving an "as is" or "as ordered" migration does not typically require
5 the ILEC or CLEC to dispatch technicians to the CO or field.

6 **Q. DO THESE WORK AROUNDS GIVE RISE TO IMPAIRMENT?**

7 **A.** Absolutely. Clearly the CLEC faces both technical and provisioning disadvantages
8 relative to either work around identified above. The process almost invariably entails
9 additional provisioning time, additional costs and the result is often an inferior facility.
10 Likewise, all of these difficulties and increased costs appear to the customer to be a
11 direct result of choosing a competitor's service. It goes without saying that an ILEC
12 customer who is currently being served by IDLC (a growing probability) is more likely
13 to convert to a CLEC if the transition is quick and seamless, but not if the new service is
14 technologically inferior and takes an extended period of time to provision.

15 Additionally, as the industry moves to an entire UNE-L world, the
16 problems with providing loops where IDLC exists will be exacerbated. Although
17 current UNE-L CLECs may be willing to work through the problems that occur
18 with IDLC loops, those CLECs are operating at low volumes and are currently
19 able to demand more of Verizon's time and resources. Once all CLECs are forced
20 to provide service via unbundled loops only and Verizon's resources become
21 more and more strained, the problems discussed above with regard to delayed
22 provisioning will only get worse and CLECs may not be willing to subject their
23 customers to this inferior treatment.

1
2 **Q. HOW DOES THIS ISSUE OF IDLC LOOPS RELATE TO THE TRIGGERS**
3 **ANALYSIS?**

4
5 **A.** To the extent that CLECs are either refused IDLC loops all together, or are relegated to
6 inferior services at these astronomical costs and highly manual, labor intensive and time-
7 consuming processes, and Verizon has to go through this process for all CLEC orders,
8 CLECs will be unable to actively serve the market wherever IDLC loops exist.

9 **Q. WOULD THE COSTS YOU'VE DESCRIBED ABOVE BE INCURRED IF**
10 **CARRIERS WERE ALLOWED TO MAINTAIN ACCESS TO UNE-P?**

11
12 **A.** No, they wouldn't. Because UNE-P allows CLECs to use the actual IDLC facility in its
13 integrated form, neither the ILEC, nor the CLEC, would incur the hundreds of dollars in
14 increased labor time required to accomplish one of the workarounds required to provide
15 an alternate facility. Indeed, the costs associated with this type of hot cut transfer
16 represent costs specific to UNE-L that neither carriers nor customers would have to incur
17 where UNE-P remains available.

18 **Q. IF HOT CUTS COULD BE ACCOMPLISHED IN A RELATIVELY TIMELY**
19 **AND LOW COST FASHION, WOULD THE ISSUES YOU'VE DESCRIBED**
20 **ABOVE, AND POTENTIALLY OTHERS, REMAIN?**

21
22 **A.** Yes. The operational obstacles I've described above will exist regardless of how
23 effective any hot cut process is today or eventually becomes. These operational
24 difficulties that were largely mitigated by a UNE-P framework, can only be overcome in
25 a UNE-L framework by requiring the ILECs to unbundle their IDLC facilities on a
26 digital basis.

27 **Q. CAN THE COMMISSION HELP TO ADDRESS THE OPERATIONAL**
28 **IMPAIRMENT ISSUES YOU'VE DESCRIBED ABOVE?**

29
30 **A.** Yes. However, addressing these issues relative to IDLC technology will require diligent
31 efforts on the part of the Commission as well as Verizon. This results from the fact that

1 the only way to ensure CLECs are not impaired is to ensure that they have access to the
2 same facilities the ILECs use to serve their own end-user customers. In the case of
3 IDLC, that can only be accomplished by unbundling the IDLC technology in an
4 electronic (seamless, no dispatch) manner that provides the CLEC with access to
5 individual customer circuits at a digital level. Short of achieving this solution, it seems
6 clear that CLECs will continue to be impaired in the marketplace (absent UNE-P) as
7 they'll be saddled with less effective facilities to be used in competing for the very same
8 end user customers.

9 MCI raised this issue in Verizon's Chapter 30 network modernization plan
10 case.¹⁷ Although the Administrative Law Judge recommended that Verizon be required
11 to implement the necessary technology to unbundle IDLC loops, Verizon excepted to this
12 decision and the Commission deferred a decision on the issue. To my knowledge, the
13 Commission has yet to render a final decision on this issue.

14 **Q. WHY IS THIS SUCH AN IMPORTANT ISSUE?**

15 A. It has been our experience in other states that IDLC technology is used to provide
16 services to upwards of 40%-60% of residential and small business customers in some
17 exchanges.¹⁸ As a result, absent some resolution of the problems we've identified above,
18 a significant percentage of the end users in some exchanges would likely experience
19 either decreased service quality if they switch to a CLEC's service accommodated by
20 UNE-L (because their loop will be changed to a less efficient technology), or they could
21 experience significant delays in service availability from the CLEC as the ILEC "works
22 around" the IDLC technology for purposes of providing an alternative facility. In a
23 worse case, such as where Verizon retires its copper plant, there may be no alternate

¹⁷ Verizon Pennsylvania, Inc. Petition and Plan for Alternative Form of Regulation Under Chapter 30, 2000 Biennial Update to Network Modernization Plan, Docket No. P-00930715 (hereinafter "Chapter 30 NMP")

1 facility available and therefore no way for a CLEC to serve customers at all in those
2 places served by IDLC loops.¹⁹

3 **Q. ARE IDLC DEPLOYMENTS INCREASING?**

4 A. Yes. All indications are that the number of ILEC customers served via IDLC is
5 increasing, in some circumstances dramatically.²⁰ In fact, Verizon's primary method of
6 meeting its network modernization obligations in Pennsylvania is through the
7 deployment of IDLC in its remote terminals.²¹ As such, the IDLC-related issues
8 identified above are becoming more and more important on a daily basis.

9 **Q. HOW CAN THE COMMISSION ADDRESS THIS ISSUE?**

10 A. As a general matter, the Commission should find that CLECs are impaired without
11 access to unbundled switching and cannot actively any market containing IDLC loops
12 until significant progress is made toward unbundling IDLC. Second, MCI believes this
13 Commission has a unique opportunity to take a leadership role on this very important
14 issue and require Verizon to provide a *digital* handoff to CLECs when their customers
15 are served by IDLC. While the actual implementation of such a ruling will take time and
16 collaborative effort, the rewards to customers are plentiful. A marketplace wherein each
17 customer's loop is truly portable between carriers will provide the real world benefits of
18 competition.

19

¹⁸ See Attachment 2 to this testimony.

¹⁹ MCI asked Verizon in discovery about Verizon's plans to retire copper. Verizon refused to answer, claiming that such information is irrelevant. See Verizon response to MCI I-28, attached hereto as Attachment 5.

²⁰ Pennsylvania wire center specific data relative to IDLC deployment is unavailable, however data provided by Verizon reveals that presently >20% of the working lines in Pennsylvania are served via DLC/IDLC.

²¹ See Third Supplement filed by Verizon in Chapter 30 NMP case, and see also Commission's final Order of September 17, 2003.

1 **Q. ARE THERE OTHER AREAS THE COMMISSION SHOULD ALSO BE**
2 **FOCUSED ON SPECIFIC TO UNBUNDLED LOOPS THAT WILL HELP TO**
3 **EASE IMPAIRMENT?**

4
5 A. Yes, there are. Until IDLC can be digitally unbundled, and even thereafter for those
6 facilities not served by IDLC, issues relative to accessing high quality, copper facilities
7 will continue to exist. As fiber-based facilities continue to expand in use in the network,
8 and as the ILECs continue to retire copper facilities that have been replaced by those
9 newer technologies, available, high quality copper loops will become less prevalent and
10 “no facilities available” notices for UNE loop orders will become more common.
11 As noted earlier, Verizon refused to provide information about its copper retirement
12 plans. However, Verizon told the FCC that it does intend to retire copper throughout its
13 network specifically due to the fiber upgrades it is making to that network. Thus, CLECs
14 and the Commission have no way of knowing when copper will become unavailable,
15 thereby entirely precluding CLECs from obtaining unbundled loops. As a result,
16 Verizon has not met its burden of proof in showing that CLECs will be able to continue
17 providing service in the future as Verizon could retire copper anywhere it no longer
18 serves retail customers over such copper.

19 **Q. IS THE AVAILABILITY OF COPPER FACILITIES THE ONLY ISSUE?**

20 A. No. One of the most disturbing consequences of the FCC’s *TRO* is that it realistically
21 establishes two separate networks: (1) an ILEC network (packet-based, fiber facilities),
22 and (2) a largely copper and Time Division Multiplexed – “TDM” – network available to
23 competitors. The FCC’s decision in this regard has numerous negative consequences for
24 the continued development of competition, not the least of which is its impact on an
25 ILEC’s incentive to maintain its copper/TDM network at a level equal to that reserved
26 for its fiber/packet network. The potential exists for situations wherein even if spare
27 copper loops are available, they will not have been maintained at a level that makes them

1 immediately usable for service (i.e., the facilities are effectively “retired in place” and
2 useable only with significant maintenance or restore activities and resultant expenses).

3 These activities – which must be undertaken on behalf of the CLECs, but not the ILECs
4 – delay CLEC access to not only the loops, but the entire market served by those loops.

5 **Q. GIVEN THE FCC’S TRIENNIAL REVIEW ORDER, ARE THERE STEPS THIS**
6 **COMMISSION CAN TAKE TO ADDRESS THE ISSUE OF AVAILABLE**
7 **COPPER FACILITIES?**

8
9 **A.** Yes, there are. While the underlying incentive is difficult to properly address within the
10 context of the FCC’s *TRO*, this Commission can actively ensure that ILECs maintain and
11 retire their facilities in a non-discriminatory manner, thereby ensuring that maintenance
12 and facility retirements are undertaken pursuant to proper engineering management, not
13 at the control of competitive strategy. Indeed, the FCC’s *TRO* also encourages this type
14 of non-discriminatory treatment:

15 “We require incumbent LECs to make routine network modifications to
16 unbundled transmission facilities used by requesting carriers where the requested
17 transmission facility has already been constructed. By ‘routine network
18 modifications’ we mean that incumbent LECs must perform those activities that
19 incumbent LECs regularly undertake for their own customers.”²²
20

21 **IV. COLLOCATION RELATED IMPAIRMENT**
22

23 **Q. IS MCI IMPAIRED AS A RESULT OF ISSUES PERTAINING TO**
24 **COLLOCATION?**

25
26 **A.** As a practical matter, the answer to that question is “yes.” As it stands today, MCI, and
27 many other CLECs do not currently have collocation arrangements (whether they be
28 physical, virtual, etc.) in as ubiquitous a fashion as would be necessary to serve their
29 UNE-P based mass market customers throughout the state. Indeed, MCI serves
30 approximately **BEGIN MCI PROPRIETARY** **END MCI**

1 **PROPRIETARY** customers via UNE-P in **BEGIN MCI PROPRIETARY** **END**
2 **MCI PROPRIETARY** of the 504 Verizon Central Offices in Pennsylvania. By way of
3 comparison, MCI is collocated in only **BEGIN PROPRIETARY** **END**
4 **PROPRIETARY** Pennsylvania central offices.²³ If the Commission were to reach a
5 conclusion that MCI was not impaired without UNE-P, literally thousands of MCI's
6 customers would be stranded until MCI could extend its network in order to serve them
7 via UNE-L.

8 **Q. CAN'T MCI UTILIZE EELS IN THE NEAR TERM TO SERVE THESE**
9 **CUSTOMERS AND THEN BUILD OUT ITS FACILITIES TO THOSE OFFICES**
10 **OVER TIME IF REQUIRED?**

11 A. It is best to take those two issues one at a time. First, I discuss the enhanced extended
12 link ("EEL") and its potential for assisting UNE-L carriers later in this testimony.
13 Suffice it to say for now that much development work remains before EELs can
14 realistically be relied upon to service mass market customers. Second, it is likely that
15 given proper time, financial wherewithal and potential profitability, MCI could build out
16 its network and collocate in additional central offices. However, if the Commission is
17 not able to assist the industry in overcoming the operational issues I've identified above
18 relative to a UNE-L delivery platform (i.e., hot cuts, IDLC, etc.), there is little incentive
19 for MCI to expend resources for collocation space that cannot be used to its fullest
20 potential. Moreover, setting aside questions regarding the extent to which mass market
21 customers can be economically served based upon a network which includes collocation,
22 it's currently unclear whether the CLECs as a whole will be able to obtain collocation
23 arrangements in conjunction with the necessary transport facilities on a timely basis such
24 that a migration can be supported (keep in mind that in some Pennsylvania wire centers,
25

²² FCC TRO, ¶632.

1 a number of existing providers may need to procure incremental collocation space to
2 serve their UNE-P customers). Further, collocation is a time consuming process that
3 requires CLECs to perform numerous complex functions and activities that are not
4 required where ULS is available. Each step taken by the CLEC in order to reach the end
5 user customer through collocation adds time and cost to the process and introduces a
6 probability of error and customer dissatisfaction that is not associated with the ILEC's
7 provision of service to the same customer on a retail basis or UNE-P. Finally, questions
8 remain as to whether Verizon will develop hot cut processes whereby it will cut a UNE
9 loop to an EEL arrangement via the batch hot cut process, thereby, further limiting the
10 applicability of EELs in situations wherein collocation is not available.

11 **Q. HOW COULD THE COMMISSION REMEDY THESE POTENTIAL**
12 **PROBLEMS?**

13
14 **A.** To the extent the Commission enters at some future date a finding of non-impairment
15 relative to ULS, it is my recommendation that the Commission implement backstop
16 measures related to collocation. Specifically, to the extent that a CLEC's ability to
17 access its end-users is effectively delayed or otherwise impeded as a result of the ILEC's
18 collocation performance, the Commission should mandate that ULS remain available to
19 such carriers and in such locations where mass market customers are concerned.
20 Moreover, to the extent that collocation is ultimately implemented in such a location, the
21 CLEC should have the choice to leave any remaining customers on UNE-P until such
22 time as a migration to UNE-L is operationally feasible.
23
24
25

²³ A map of MCI's collocation facilities in Pennsylvania as compared to its UNE-P customer base in the

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V. TRANSPORT RELATED IMPAIRMENT

Q. WHY HAVE YOU INCLUDED TRANSPORT IN THE SAME SECTION OF YOUR TESTIMONY AS COLLOCATION?

A. Transport and collocation are intrinsically related in terms of the functions they perform in a typical CLEC network. Availability of and access to collocation space is meaningless in a CLEC network unless the CLEC is able to reach the end user customer's loop and extend it to its own switch via available transport capacity. Therefore, collocation without available transport, and vice versa, renders a UNE-L framework unusable. Indeed, this Commission can consider the UNE-L framework to be a very complex chain, each link of which must be procured, assigned, provisioned and maintained in order for customers to receive telephone services without disruption. Each link is subject to its own issues and complications, but each link is equally important in terms of providing the ultimate service (a break in any single link is a break in the chain). Any single component of the service, including transport, has the potential to take the customer out of service if something goes wrong.

Q. DOES TRANSPORT POSE CHALLENGES IN AND OF ITSELF?

It certainly can. In a situation where CLECs are replacing UNE-P with UNE-L, they'll rely heavily on their ability to utilize ILEC provided transport in order to extend individual customer loops to their own local switching facilities. Additionally, CLECs will be largely dependent upon ILEC provided transport in order to originate and terminate local, intraLATA and interLATA traffic on behalf of their end users that, heretofore, had been carried within the ILEC network via shared transport. Moreover, CLECs will likely utilize ILEC provided transport in order to establish 911 trunk groups

1 and, albeit to a lesser extent, OS and DA trunk groups. The sheer magnitude of
2 blanketing a state or even a LATA with collocation arrangements and the transport
3 facilities described herein can become daunting from a logistic and economic
4 perspective. Given that these transport requirements are, for the most part, over and
5 above those already required by a UNE-P based CLEC, the logistical and financial
6 ramifications flowing from these requirements may lead to real operational and/or
7 economic impairment.

8 **Q. PLEASE DISCUSS SPECIFIC OPERATIONAL ISSUES WHICH MAY GIVE**
9 **RISE TO IMPAIRMENT.**

10
11 A. It is unclear whether the ILEC's network is currently set up to accommodate the CLECs'
12 need for transport both in terms of their need to extend loops (whether via collocation
13 and interoffice transport arrangements or via Enhanced Extended Links, or EELs) to
14 their own switches or in terms of meeting demand for the transport necessary to originate
15 and terminate traffic. As such, it's unclear whether the ILECs will claim that "facilities
16 are not available," rendering a migration from UNE-P to UNE-L doubtful at best.
17 Moreover, it's unclear whether the ILECs will claim that as a result of the *TRO*, they're
18 not required to provide transport to requesting carriers in any or all of the circumstances
19 identified above. Indeed, if the necessary physical connections cannot be obtained, or
20 are substantially delayed, CLECs will be operationally impaired, if not physically
21 precluded from accessing customers.

22 **Q. PLEASE EXPLAIN IN MORE DETAIL YOUR CONCERNS RELATED TO**
23 **TRANSPORT CAPACITY REQUIRED TO ORIGINATE AND/OR TERMINATE**
24 **TRAFFIC.**

25
26 A. The latest statistics indicate CLECs control over 869,000 lines in Verizon
27 Pennsylvania's territory. Those same statistics indicate that the 51% of those

1 competitively provided lines rely upon UNE-P.²⁴ When a customer is served via UNE-P,
2 his/her local calls are routed just as any other ILEC retail customer's calls would be
3 routed. As such, the majority of that traffic is routed either within the same ILEC switch
4 (i.e., an intra-switch call) or to another switch within the same local calling area, which
5 is connected to the caller's originating switch via a direct-trunked connection. As local
6 networks have evolved, trunk groups directly connecting end office switches within a
7 local area have become more common and most ILEC networks today rely heavily on
8 substantial levels of inter-office direct trunking. Absent these direct trunks, tandem
9 switches would be required to route all inter-switch calls.

10 **Q. WILL THESE TRAFFIC PATTERNS CHANGE IF CLECS ARE REQUIRED TO**
11 **UTILIZE A UNE-L DELIVERY STRATEGY?**

12
13 **A.** Yes, they will change. As described above, in a UNE-L strategy, the CLEC collocates
14 equipment in the ILEC's central office and routes the customer's traffic back to its own
15 switching facility. Hence, every call made by the customer (local, long distance, etc.)
16 will be routed through the CLEC's switch instead of the ILEC's switch. Likewise, the
17 CLEC's switch is then interconnected with the ILEC's network either at the tandem (the
18 vast majority of connections occur at the tandem), or via direct connections to high
19 volume end offices. The entirety of the customer's local traffic that is intended for ILEC
20 customers (presumably the majority of the customer's calls given that the ILEC will still
21 serve the majority of local customers) must now pass through the interconnection trunks
22 established by the CLEC and the ILEC, instead of through the ILEC's direct end office
23 trunks as has historically been the case. In short, moving as much as 25% of the local
24 customer base from UNE-P to UNE-L will immediately and dramatically change the
25 traffic patterns for millions of customers. I simply don't believe the implications relative

²⁴ All information taken from Verizon's response to MCI I-41 (51% equals 444,411 UNE-P lines divided

1 to this type of fundamental shift in traffic patterns, and the additional trunking resources
2 required to accommodate it, have been thoroughly examined.²⁵

3 **Q. DO THESE TRAFFIC PATTERN CHANGES HAVE THE POTENTIAL TO**
4 **IMPAIR CLECS AND AFFECT A CLEC'S ABILITY TO ACTIVELY PROVIDE**
5 **SERVICE TO LOCAL CUSTOMERS VIA UNBUNDLED LOOPS?**

6
7 A. Absolutely. Even if (1) the hot cut process worked smoothly, (2) the CLEC could
8 somehow gain unfettered access to the customer's loop, (3) collocation could be
9 arranged and (4) the CLEC could transport the customer's traffic back to its own switch,
10 the CLEC could still face severe, customer impacting problems if the ILEC failed to
11 provide adequate trunking for purposes of terminating traffic originated on the CLEC
12 network. Unfortunately, where the ILEC fails to meet this benchmark, it is the CLEC
13 who bears the brunt of the failure because it is the CLEC's customers who will
14 experience network busy signals when they attempt to place local calls to an ILEC
15 customer.

16 **Q. CAN YOU QUANTIFY THE POTENTIAL IMPACT OF THIS PROBLEM IN**
17 **TERMS OF QUALITY DEGRADATION?**

18
19 A. No. We are continuing to assess this issue and its potential impact on service quality
20 standards.

21 **Q. CAN THE ISSUES LEADING TO IMPAIRMENT RELATIVE TO TRANSPORT**
22 **BE ADDRESSED IN SUCH A WAY THAT MCI COULD PURSUE ITS PLAN TO**
23 **MOVE TO A UNE-L STRATEGY?**

24
25 A. To the extent the Commission intends to foster the expansion of a UNE-L strategy and,
26 therefore, intends to minimize transport related issues which may give rise to
27 impairment, it should consider, at a minimum, initiating proceedings which examine and
28 ultimately provide for EELs as discussed more fully later in this testimony, continued

by 869,198 total CLEC lines) attached hereto as Attachment 3.

²⁵ Not to mention the potential for stranded transport capacity that will be evident on the ILEC interoffice network.

1 availability of transport and backstop measures which provide for use of ULS for mass
2 market customers where transport is not reasonably available. Specifically, the
3 following issues must be addressed:

4 1. MCI requires access to enhanced links (EELs). I will discuss this in the next
5 section of my testimony in detail, but a great deal of the impairment issues
6 surrounding transport may be alleviated if EELs allowing access to ILEC
7 transport were made available to MCI under the UNE-P benchmark conditions.
8

9 2. MCI must rely on ILECs to provide UNE transport where requested for local
10 purposes, particularly to and from COs where ULS is unavailable and for
11 purposes of carrying end-user traffic necessary to support a UNE-L entry
12 strategy.
13

14 3. If the ILEC is unable or unwilling to meet the transport needs of MCI and
15 other CLECs, unbundled local switching must remain available in order to serve
16 mass market customers in Pennsylvania.
17

18 **VI. THE ENHANCED EXTENDED LINK ("EEL") AS A DS0 LOOP**
19 **TRANSPORT TOOL**
20

21 **Q. IF A STATE COMMISSION FINDS THAT MCI AND OTHER CLECS ARE**
22 **IMPAIRED, IN PART BECAUSE OF TRANSPORT RELATED PROBLEMS,**
23 **CAN STATE COMMISSIONS WORK TOWARD REDUCING THAT**
24 **IMPAIRMENT?**
25

26 A. Yes, they can and MCI would encourage them to do so. Toward that end, MCI has
27 identified a number of transport-related issues that should be addressed. For example,
28 MCI believes that EELs could play a large role in overcoming issues contributing to
29 impairment relative to transport facilities; however, MCI also believes that EELs have a
30 long way to go in terms of continued development before they can be realistically used to
31 serve mass market customers. In short, while there are areas wherein continued
32 development on the part of the industry could mitigate the issues that lead to today's
33 impairment, direct and continuous Commission involvement will be required to make

1 any realistic progress in these areas. MCI has identified the following actions that state
2 commissions should undertake relative to transport and its potential impact on
3 impairment for mass market switching:

4
5 (1) Review the testimony and evidence relative to loop and transport impairment
6 in an attempt to spot areas wherein the ILEC insists triggers have been met for
7 mass market switching, yet the ILEC may be attempting to remove the very UNE
8 transport those triggering carriers use to provide the local services constituting
9 the mass market switching trigger. In other words, if the ILEC insists a carrier
10 providing UNE-L service in a given area should constitute a mass market
11 switching trigger, the Commission should take a close look at whether the ILEC
12 is likewise attempting to remove its obligation to provide UNE transport to that
13 very same carrier. It is likely that the financial and operational issues associated
14 with that "triggering" CLEC will change dramatically (perhaps even
15 fundamentally altering its ability to continue to provide service), if that carrier
16 can no longer purchase transport from the ILEC on a UNE basis.

17
18 (2) State commissions should work with ILECs and CLECs alike to provide
19 UNE transport arrangements aimed more directly at serving the mass market.
20 EELs are a primary example. To this point, EELs have been used primarily for
21 high volume customers with substantial amounts of access traffic. Their use in
22 supporting local services to multiple, individual customers requiring only a few
23 DS0 circuits is largely untested. Nonetheless, EELs have the potential to
24 substantially reduce the costs that could be avoided relative to collocation.
25
26

27 **Q. PLEASE EXPLAIN YOUR POINT REGARDING THE POTENTIAL**
28 **CONNECTION BETWEEN MASS MARKET SWITCHING IMPAIRMENT AND**
29 **UNE TRANSPORT IMPAIRMENT.**
30

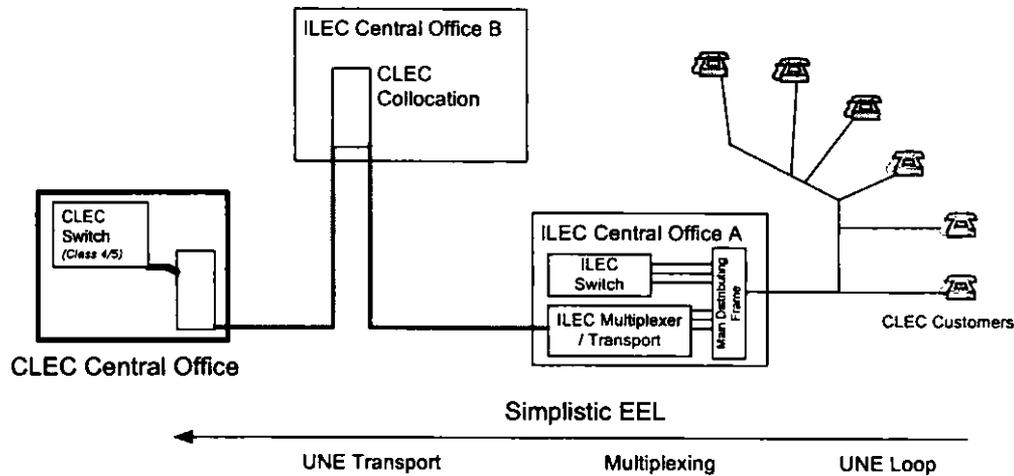
31 **A.** Because UNE transport is governed by the Telecommunications Act of 1996, and it is
32 provided via interconnection agreements that are mediated and/or arbitrated by state
33 commissions, changes in the availability of UNE transport for existing CLECs providing
34 facilities based services could dramatically alter those CLECs' capabilities to continue
35 providing services. Removing the ILEC's obligation to provide UNE transport within a
36 given market has the potential to dramatically affect the process by which those
37 "triggering" carriers access transport capacity. They would largely be left to fend for
38 transport in a wholesale transport environment or potentially pay substantially higher

1 ILEC special access rates. As such, a decision to remove UNE transport from the UNE
2 list in a given market has the potential to dramatically impact whether a carrier could be
3 considered a “trigger” with respect to the FCC’s analysis specific to mass market
4 switching impairment. This Commission should be cognizant of this relationship as they
5 evaluate the evidence provided by ILECs specific to impairment in both regards.

6 **Q. PLEASE EXPLAIN YOUR SECOND CONSIDERATION ABOVE RELATIVE**
7 **TO DS0-RELATED TRANSPORT ARRANGEMENTS BY DESCRIBING AND**
8 **DEFINING AN EEL.**

9
10 **A.** EELs are nothing more than a combination of unbundled loops, the potential for
11 multiplexing, and unbundled interoffice transport. The diagram below provides a
12 simplistic example:

Simple EEL²⁶



As noted above, the primary advantage of an EEL is that a competitive carrier using an EEL need not collocate in every ILEC central office within which it chooses to serve a customer (consistent with FCC rules, EELs generally would require only one collocation per LATA). By combining the unbundled loop with interoffice transport (and the ability to multiplex smaller capacity, customer-specific circuits onto larger, more efficient interoffice circuits), the CLEC is able to “extend” the loop directly to its own central office (please note that in most cases multiple transport facilities from multiple ILEC end offices - each carrying multiple loops - would terminate in one ILEC central office before being transported to the CLEC’s Central Office). This advantage is important for several reasons. First, EELs allow a carrier to build a customer concentration in an ILEC central office before expending considerable resources to build a collocation cage. This

²⁶ The diagram depicts the transport facility from Central Office A ultimately reaching the CLEC’s Central Office via routing through the CLEC’s collocation space in Central Office B. While no operational benefit is achieved through this architecture (i.e., the need for a collocation somewhere in the LATA), the FCC’s

1 not only speeds the competitive carrier's products to market (without the need for an
2 expensive and sometimes time-consuming collocation process), but also allows the
3 carrier to make an economically rational decision (based primarily upon customer take
4 rates) relative to allocating finite collocation resources. Second, without the need for a
5 costly collocation in each central office, the economics of a UNE-L strategy can be
6 improved. Finally, and most importantly, EELs are but another method by which
7 competing carriers can attempt to gain economies of scale and scope similar to that of
8 their primary competitors, the ILECs. By spreading the costs of switching equipment
9 over a greater number of customers (by gaining access to numerous central offices
10 without incurring corresponding collocation costs) competitors can substantially reduce
11 their average costs per-customer, hopefully approaching average cost levels enjoyed by
12 the incumbent (who enjoys a network built and engineered to accommodate 100% of the
13 market).

14 **Q. DOES THE INDUSTRY HAVE MUCH EXPERIENCE WITH EELS USED TO**
15 **SUPPORT DS0-BASED SERVICES LIKE THOSE THAT WOULD BE**
16 **REQUIRED TO PROVIDE MASS MARKET OFFERINGS?**

17
18 A. No. This is highly troubling given the FCC's implicit (if not explicit) reliance upon the
19 EEL for purposes of making UNE-L a more attractive delivery mechanism in lieu of
20 continued availability of UNE-P. While UNE-P is a proven mechanism by which to
21 provide competitive services to mass market customers in an efficient and economical
22 manner, UNE-L fueled by increased reliance on DS0-based EELs is almost completely
23 untried and certainly unproven. Very little, if any, real world experience exists in
24 support of the notion that EELs can actually be used effectively as a DS0 transport
25 option on any scalable, commercially viable basis.

TRO appears to require at least one collocation arrangement in the LATA for purposes of terminating an EEL.

1
2 **Q. WHAT CAN THE COMMISSION DO TO ENHANCE THE ABILITY OF CLECS**
3 **TO USE EELS EFFECTIVELY IN A UNE-L ENVIRONMENT?**
4

5 A. Commissions can focus their attention on two primary EEL related objectives that will
6 dramatically increase the likelihood that EELs can , in the future, be used effectively in a
7 mass market scenario: (1) Commissions can ensure that any approved ILEC Transitional
8 Batch Hot Cut and Mass Market Migration Hot Cut processes include detailed
9 information and processes related to “cutting” a UNE loop to an EEL arrangement, and
10 (2) the Commission can (and should) explore arrangements related to “concentrated”
11 EELs. Despite the FCC’s failure to properly evaluate real-world experience with DS0-
12 based EELs in a UNE-L environment, there is an opportunity for this commission to
13 elevate EELs to a more effective platform capable of enhancing the likelihood of UNE-L
14 success (and as such, the likelihood mass market customers will enjoy competitive
15 alternatives from carriers other than those relying solely on UNE-P). The Commission
16 already requires Verizon to provide concentrated EELs, however, Verizon refuses to
17 provide such EELs, stating that the CLEC must purchase the concentration equipment.
18 This negates the entire purpose of concentrated EELs. MCI raised this issue in the
19 Chapter 30 NMP case. The ALJ agreed with MCI that Verizon should provide the
20 concentration equipment. Verizon excepted and a decision on this issue was deferred.
21 To my knowledge, the Commission has not rendered a final decision on this issue, but
22 the issue must be further explored.
23

24 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

25 A. Yes, it does.

Earle S. Jenkins

Summary of qualifications

Mr. Jenkins' comprehensive consulting skills are the result of over thirty-five years of operations experience in the telecommunications industry. His successful career has spanned all levels of responsibility as he progressed from craft technician to Vice President, corporate process owner and Industry Consultant.

Work experience

Feb 2002 SHS Consulting Holderness, N.H.

Management Consultant

- Returned to private consulting practice. Current engagements include strategic planning initiatives associated with broadband deployment, operations cost reduction, and regulatory witness support.

2001 – Jan 2002 FLAG Telecom London, UK

Vice President - Operations

- Established a field, customer care, provisioning, and NOC organization in response to FLAG's change in strategy from serving as a carrier's carrier, to a worldwide end-end internet and application service provider. Successfully developed and implemented an Operations Plan for the management of a global fiber-optic submarine and terrestrial network consisting of 42 landing stations, POPs and collocation arrangements.

1996 - 2001 SHS Consulting Holderness, N.H.

Management Consultant

- Telecommunications industry consultant and regulatory subject matter expert, specializing in operations and work force management issues. Consulting engagements ranged from process assessments through redesign and business case preparation. Noteworthy clients and utility customers include: MCI Worldcom, Providence Gas, British Telecom, Nortel Networks, BCG, and Harris Corporation.

1993 - 1996 NYNEX Manhattan, N.Y.

Vice President - Operations

- Leader of process reengineering effort associated with design and implementation of maintenance and technician related workflows. Improved efficiency coupled with the introduction of new technology produced the capability of handling 1M additional work requests with 4,000 fewer people.

1992 - 1993 New England Telephone Boston, MA.

Managing Director - ICSC

- In charge of New England organization responsible for developing and managing customer service relationships with Interexchange Carriers, Cellular Service providers, and other common carriers. Annual Revenue stream of \$850M.

1990 - 1992 New England Telephone Boston, MA.

Managing Director - Central Artery Division

- In charge of Engineering and Construction of largest outside plant project in the USA. Responsible for internal logistics and external negotiations with State and Federal Agencies.

1985 - 1990 New England Telephone Eastern, MA.

Director of Operations (3 Positions)

- Assignments responsible for managing three tier operations consisting of 225-300 people. Responsible for outside telecommunication services in major metropolitan areas. Three assignments during this period include areas north and south of Route 128 in Eastern Massachusetts and the City of Boston.

1983 - 1985 New England Telephone Manchester, N.H.

District Manager Operations - External Affairs

- In charge of service oversight for State of New Hampshire and all regulatory contact with The Public Utilities Commission regarding service issues. Responsibility included management of the State appeals group and facilitation of community service hearings.

1977- 1983 New England Telephone N.H. and Mass.

Plant Service Manager (Numerous assignments)

- In charge of supervisor and craft work groups (range 100-150) employees responsible for installation and maintenance activities in specific geographic area (100,000 line range). Assignments both center and field based.

1971- 1977 New England Telephone New Hampshire

Supervisory Assignments (Numerous)

- Supervised work groups responsible for operations associated with telephone installation and maintenance. Assignments both center and field based.

1964- 1971 US Army & New England Telephone

Craft Technician

- NCOIC of two Dial Central Offices and associated plant. Duties included supervising several technicians.
- NET rated SXS switching technician.

Education

1987 - 1990 Franklin Pierce College Salem, N.H.

Bachelor of Science Magna Cum Laude

1991 - 1992 Boston University Boston, Mass.

Master of Business Administration

Other experience

Present Board of Directors positions: N.H. Electric Cooperative, and Supervisory Committee for Telephone Workers Credit Union

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)**

Docket No. I-00030099

ATTACHMENT 4

**TO
DIRECT TESTIMONY**

OF

EARLE JENKINS

ON BEHALF OF

MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

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- Users and Computers
- Files and Printers
- Connections
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- Network Interoperability
- Client Services
- IntelliMirror
- Storing Data
- Disaster Protection
- Monitoring and Diagnostics Tools
- Internet Tools and Services
- Automating Administrative Tasks
- Application and Programming Tools
- Troubleshooting and Additional Resources

Attaining fast speeds with a 56 Kbps modem

A modem connection must fulfill three requirements to support a 56 kilobits per second (Kbps) (also called V.90) connection.

1. The host server must use a digital connection to the network. Your Internet service provider can tell you if they support 56 Kbps service.
2. Both ends of the connection must support the same protocol, the V.90 standard or either of its predecessors, K56flex, or 3COM/USR X2. For example, if your Internet service provider has a V.90 device, your modem must support the V.90 protocol.
3. There can only be one analog connection between your modem and the host computer. The phone line in most homes is an analog line.

If a connection does not meet these requirements, a modem falls back to the fastest protocol that works for the connection. For example, a 56 Kbps V.90 modem falls back to the 33.6 Kbps V.34 protocol if it cannot make a V.90 connection. Even if your connection fulfills these requirements, other factors may reduce either the transmission speed or the number of times that you successfully obtain the highest speed connection. For example, old lines or lines that are subject to interference may reduce transmission speeds. Maximum throughput speeds of 26 Kbps are not unusual in these cases.

Devices to improve the quality of your telephone service may also hamper 56 Kbps V.90 modem connections. Load coils found on long wire lengths to improve voice quality do not usually prevent V.90 connections, but can reduce the speed. Digital pads, which balance the volume of voice calls, usually do not prevent V.90 connections, but they can reduce the speed. Analog pads prevent V.90 connections, because they convert the digital data to analog to balance the volume and then back to digital. This inserts an additional analog section in the line.

In practice, the 56 Kbps speed supported by the V.90 and other protocols is unattainable. U.S. government regulations to safeguard public phone systems right now limit transmission speeds to 53 Kbps. Phone-line noise and other limitations of phone systems usually keep average transmissions in the 40 to 50 Kbps range.

For more information, see [The V.90 modulation protocol](#), [Data transfer speed](#), [Improving modem throughput speeds](#), [Optimizing data transfer speed](#), and [Protocols and standards](#)

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RESPONSE OF VERIZON PENNSYLVANIA INC. TO SET I, INTERROGATORY NO. 28 OF MCI
WORLD COM NETWORK SERVICES, INC. DATED NOVEMBER 25, 2003 SUBMITTED IN DOCKET
I-00030099 BEFORE THE PA PUC (UNE)

ANSWERED BY:
POSITION:

REQUEST:

Please provide, on a CLLI-code-specific basis, any and all documentation that
shows copper feeder plant that 1) has been retired since January 1, 2000 or
2) Verizon plans to or is considering retiring in the next three years.

VERIZON STATED THE FOLLOWING OBJECTION ON 12/05/03:

See Specific Objections 6 & 7. Based on this objection, Verizon will not be
providing a response to this interrogatory.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)

Docket No. I-00030099

DOCKETED

JAN 30 2004

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

MCI WORLDCOM NETWORK SERVICES, INC.

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**DIRECT TESTIMONY OF MINDY CHAPMAN
ON BEHALF OF MCI NETWORK SERVICES, INC.**

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1 **Q. PLEASE STATE YOUR NAME, EMPLOYER AND TITLE.**

2

3 A. My name is Mindy Chapman. I am the Director of Order Processing Operations
4 for MCI.

5 **Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.**

6 A. I have over 20 years experience in the telecommunications field, all of it with
7 MCI. My current responsibilities include tracking data and order activity for all Mass
8 Markets local orders and all MCI Long Distance orders nationwide. I also have
9 responsibility for interfacing with all of the other Local carriers that MCI does business
10 with to assure compliance to intervals, data integrity etc. Previously, I was Senior
11 Manager for LEC Interface Operations with many of the same responsibilities. Between
12 1993 and 1997, I was a Senior Manager with nationwide responsibility for monitoring
13 and error processing. Prior to 1993, I had a number of different jobs that included
14 supervisory authority over groups responsible for: (1) error processing (working orders
15 rejected by the LECs); (2) analysis of order processing systems; (3) tracking and
16 troubleshooting customer orders, and (4) overseeing LEC compliance.

17

18 **I. INTRODUCTION**

19

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 A. The purpose of my testimony in this proceeding is to discuss the state of the
22 industry and to describe for the Commission solutions to the numerous current customer
23 impacting operational barriers that must be eliminated in order for the market to fully
24 make a transition into a facilities-based world. My testimony also explains that if
25 competitors were forced to switch to their own facilities on a flashcut basis because

1 unbundled local switching was prematurely eliminated, customers and competitors would
2 face severe negative consequences. That includes competitors and consumers currently
3 being served via unbundled loops.

4 I also discuss why these customer impacting operational issues are critical in a
5 triggers only case such as the one filed by Verizon in Pennsylvania. To the extent that
6 Verizon has identified carriers who it believes are “trigger” companies, this testimony
7 illustrates why identifying these companies is much more than a simple counting
8 exercise. The Federal Communications Commission (“FCC”) requires that a trigger
9 company be “actively” providing voice service to the mass market and that the carrier
10 must have the ability to serve the mass market “economically and efficiently.”¹ If a
11 carrier is only providing service to business customers; catering to a limited portion of the
12 market; providing service to a relatively small number of consumers; or precluded from
13 serving portions of the market, it is questionable whether such a carrier can be described
14 as “actively” serving that market “economically and efficiently.” As is described in this
15 testimony and in the testimony of MCI witness Earle Jenkins, providing service to the
16 mass market via unbundled loops is very difficult. If a carrier falls into any one of the
17 above categories, it will be impossible to determine if that carrier has overcome the
18 barriers to entry that exist in utilizing UNE-L as a service delivery method for the mass
19 market.

20 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

21 **A.** Verizon is asking the Commission to remove switching as an unbundled network
22 element (“UNE”) in various parts of Pennsylvania. In practical terms, if the Commission

¹ Triennial Review Order at ¶495.

1 grants that request, it means that the unbundled network element platform (“UNE-P” or
2 “UNE-Platform”) as we know it today will be provided in only limited areas or will
3 disappear altogether, reducing or withdrawing mass market competition in large portions
4 of the state. In the long term, if MCI is able to move to its own facilities to provide
5 service to mass market customers in a methodical and coordinated manner, elimination of
6 ILEC switching may not have significant consequences for customers, depending on
7 when and where the cutover occurs. However, premature withdrawal of switching before
8 the appropriate processes and systems are in place will have significant adverse
9 consequences for consumers, carriers and competition.

10 The Commission must carefully examine the details related to a company’s
11 provisioning of UNE-L service to mass market customers before determining that a
12 company is a trigger company. The Commission must address the operational issues
13 raised in this testimony to determine whether the alleged triggering companies have
14 overcome the technical and customer impacting issues related to connecting the ILEC’s
15 loops to the CLEC’s switching facilities to determine if they are actively serving the mass
16 market economically and efficiently.

17 In this testimony, I discuss some of the operational challenges (and proposed
18 solutions) that exist for an industry that would move to a facilities-based service delivery
19 method for mass markets customers. (Other operational challenges relating directly to
20 network and technology challenges are presented in Mr. Jenkins’s Testimony). The
21 operational issues addressed in my testimony relate to the “customer’s experience” as he
22 or she attempts to switch carriers, not just to MCI from the ILEC, but to MCI from other
23 CLECs, and away from MCI to the ILEC or other CLECs. These issues stem from, in

1 one way or another, the physical changes required when a CLEC uses its own facilities in
2 conjunction with the ILEC unbundled loop (“UNE-L”), and the difficulty in exchanging
3 information about customers between all carriers in the seamless manner that mass
4 market customers (who tend to switch carriers frequently) have come to expect.
5 Specifically, the issues that we have identified here (as well as those in the testimony of
6 Mr. Jenkins) must be fully defined and resolved before UNE-L can become a reality for
7 the mass market.

8 These issues are directly relevant to a triggers analysis because the Commission
9 must determine whether the triggering carriers will be able to continue offering service
10 via unbundled loops if the industry moves to unbundled loops only, and UNE-P is
11 eliminated.² It is my position that unless these issues are resolved, not only will UNE-P
12 customers be left in the dark in terms of not having competitive alternatives, but UNE-L
13 customers will also be harmed because the processes are simply not in place to handle an
14 entire industry of UNE-L competitive providers.

15 The issues identifying why a UNE-L provider will not be able to continue actively
16 serving the mass market if the Commission prematurely eliminates UNE-P, and therefore
17 forces the entire industry to operate in a UNE-L environment, are summarized below as
18 well as the proposed solutions or first steps recommended by MCI to address these
19 issues. MCI proposes these first steps in order to demonstrate that the problems can be
20 overcome, but that there is more work to do for the entire industry.

² Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carrier*, CC Docket No. 01-338, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, FCC 03-36 (rel. Aug. 21, 2003) (“*Triennial Review Order*” or “*Order*”) at ¶500.

- 1 1. *Standard processes and procedures must be developed for obtaining and*
2 *sharing customer service records ("CSR").*

3 MCI proposes that a distributed database be developed and shared and
4 maintained by incumbents and competitors alike.

- 5 2. *Loop information databases must be accurate and current.*

6 MCI proposes that these databases be audited for accuracy and a process be
7 developed to ensure timely maintenance.

- 8 3. *Trouble handling processes must be adapted for a mass market world.*

9 MCI proposes that all parties develop internal processes (if they do not
10 already exist) to ensure that trouble handling functions properly in a world
11 with mass market volumes.

- 12 3. *The industry must ensure that required E911 changes are sequenced correctly*
13 *and occur efficiently.*

14 MCI proposes that a collaborative be convened to ensure compliance with
15 existing standards as well as coordination among industry participants.

- 16 4. *The industry must ensure that number portability processes that are in place*
17 *are coordinated and can handle mass market volumes.*

18 MCI proposes that the commission convene a collaborative that includes the
19 third party administrator to determine the systems capabilities in a mass
20 market environment. In addition, MCI proposes that a scalability analysis be
21 conducted to confirm that capability.

- 22 5. *The directory listing process must be evaluated for efficiency in a mass market*
23 *UNE-L environment.*

1 MCI proposes that a process be developed to limit the number of times the
2 directory information must be inserted and deleted from the directory.

3 *6. The industry must ensure that the caller name and line information databases*
4 *are able to be accessed and loaded with minimal inaccuracy.*

5 MCI proposes that competitors be allowed to obtain a “dump” of the
6 incumbent’s databases to ensure accuracy and quality service.

7 For CLECs, these operational barriers impair their ability to use their own
8 facilities effectively to actively serve mass market customers. But even more important,
9 these operational difficulties create frustration and potentially serious problems for
10 consumers, including the inability to make or receive calls, errors in the 911 address data
11 base, and the need to re-program/re-install some programmable features. Although these
12 issues may be manageable today when there are few UNE-L providers to mass market
13 customers, such issues could quickly become a nightmare when the entire industry is
14 required to use unbundled loops.

15 In discussing the complex technical issues involved in transitioning carriers from
16 existing UNE-P arrangements to UNE loops connected to CLEC switches, it is easy,
17 sometimes, to forget about the effect of such transition on the customer. Competitive
18 carriers, like MCI, must place an emphasis on minimizing negative effects on customers
19 who want to transition onto or off of MCI’s services. Ultimately, all of this is about
20 people and the kinds of competitive choices that will be available to them.

21 It is one thing to identify problems that CLECs encounter in a dynamic and
22 rapidly shifting market, but it is another to find solutions to these problems. As part of
23 this proceeding, MCI will be asking for this Commission’s help in removing operational

1 barriers and impairments so MCI (and other CLECs) can use their own facilities to
2 interconnect economically and efficiently with the ILEC to actively provide service to
3 mass markets customers (instead of always having to rely on leasing the ILECs'
4 facilities).

5

6 **II. TRIENNIAL REVIEW ORDER**

7 **Q. DID THE FCC'S TRIENNIAL REVIEW ORDER RECOGNIZE THESE**
8 **OPERATIONAL BARRIERS?**

9

10 A. Yes. The Triennial Review Order issued by the FCC on August 21, 2003 clearly
11 recognizes that both operational and economic barriers to UNE-L competition exist
12 today. Unlike UNE-P migrations, in which the CLEC uses the same facilities as the
13 ILEC in providing local service, UNE-L migrations are complicated by the necessity of
14 physically reconfiguring facilities so that CLECs can use their own switches. To this
15 end, a physical network change as well as a greater exchange of customer and other
16 information must occur between local providers for UNE-L provisioning as opposed to
17 UNE-P. The FCC made a national finding of "impairment" with respect to unbundled
18 local switching at the mass market level based on the existence of these operational and
19 economic barriers.

20 **Q. ARE THESE OPERATIONAL ISSUES RELEVANT IN A TRIGGERS**
21 **ONLY CASE?**

22

23 A. Absolutely. These operational issues must be considered in evaluating the
24 relevant product market as well as in determining whether or not a company can be
25 considered a triggering company that is actively serving the mass market economically
26 and efficiently. Additionally, the Commission must determine whether current UNE-L

1 providers will be able to continue serving customers if the entire industry were thrown
2 into disarray by forcing all carriers to use unbundled loops prior to resolving the issues
3 raised in my testimony.

4 **Q. HOW DOES YOUR TESTIMONY ON OPERATIONAL ISSUES TIE IN**
5 **TO THE TRIGGER ANALYSIS?**

6
7 A. State commissions must define the market that they are going to analyze in the
8 context of “trigger” only cases. Accordingly, mass market customers must have a real
9 and current choice between three carriers providing local service via their own switches
10 and utilizing the ILEC loop plant within the defined market. As the FCC noted in its
11 discussion of market definition, in conducting their granular analysis, state commissions
12 must take into consideration “competitors’ ability to target and serve specific markets
13 economically and efficiently using currently available technologies.”³ To understand that
14 requires the Commission to examine the details to determine if competitors can target and
15 serve the market as defined economically and efficiently. This analysis would require an
16 examination of whether those alleged “triggering” companies have overcome the
17 technical and customer impacting issues related to connecting the ILEC’s loops to the
18 CLEC's switching facilities.

19 In addition, whether a company identified by the ILEC as a triggering company is
20 an active mass market competitor, and whether it will continue to be an active mass
21 market competitor, requires an analysis of technical and operational issues. The FCC
22 notes that the identified competitive switch providers should be actively providing voice
23 service to the mass market.⁴ The Commission must delve into the details to determine if

³ Id. ¶ 495.

⁴ Id. ¶ 499.

1 suggested triggering companies can be considered to be “actively” serving the market.
2 These determinations require the states to consider the technical and operational
3 impairments that these named companies face in serving the mass market utilizing UNE-
4 L.

5 If a carrier is not providing unbundled loop service to residential customers at all,
6 but is providing service to business customers, that alone says a lot about the fact that the
7 carrier may perceive too many barriers associated with using its switch to serve
8 residential customers, and the market should separate out residential and business
9 customers for the market definition. MCI falls into that category. MCI does not use
10 unbundled loops to serve residential customers. When MCI does order unbundled loops
11 for business customers, MCI is required to have a dedicated team handle any unbundled
12 loop orders for business customers. This obviously is not realistic in a residential setting.

13 Similarly, as discussed in the testimony of MCI witness Michael Pelcovits, some
14 companies provide only minimal residential service in Pennsylvania or in a particular
15 wire center using unbundled loops. Again, this may be specifically because of the
16 barriers mentioned in this testimony.

17 If a carrier is not actively serving the market, then it cannot be assumed that the
18 CLEC has overcome the operational and technical barriers described in MCI’s testimony,
19 and the CLEC should not be counted as a triggering company. Basically, the
20 Commission must address these operational issues to determine whether the alleged
21 “triggering” companies have overcome the technical and customer impacting issues
22 related to connecting the ILEC’s loops to the CLEC's switching facilities to determine if
23 they are active in the market and can economically and efficiently serve the mass market,

1 and to determine whether the CLECs who are currently providing service via unbundled
2 loops will be able to continue providing such service if these issues are not resolved for
3 the entire industry.

4 **Q. THE FCC APPEARED TO FOCUS A GREAT DEAL OF ATTENTION ON**
5 **THE “HOT CUT” PROCESS.⁵ HOW DOES THE HOT CUT PROCESS**
6 **RELATE TO IMPAIRMENT?**

7
8 A. Although the ILECs may be able to handle hot cuts on the minimal basis that
9 exists today, the situation would be completely different if the entire industry were forced
10 to move to unbundled loops, and every single competitor’s install is a hot cut instead of a
11 seamless UNE-P transition. The existing process of moving customers to UNE loops,
12 one or a few at a time, absolutely could not handle the volume of UNE loop migrations
13 that would occur if UNE switching were eliminated. Thus, the FCC found that until
14 ILECs develop and implement a process that can handle very high volumes, seamlessly
15 and in sizeable “batches,” CLECs would not be able to move all of their customers from
16 the existing UNE-P arrangement to UNE loops, and thus CLECs would be impaired in
17 their ability to compete without UNE switching.

18 **Q. WHY ARE HOT CUTS A PROBLEM IF SWITCHING WAS**
19 **ELIMINATED AS A UNE?**

20
21 A. The FCC cited as barriers related to hot cuts “the associated non-recurring costs,
22 the potential for disruption of service to the customer, and our conclusion, as
23 demonstrated by our record, that incumbent LECs appear unable to handle the necessary
24 volume of migrations to support competitive switching in the absence of unbundled
25 switching.”⁶ The FCC explained that because of the manual, labor-intensive nature of the

⁵ The Hot Cut process is described fully in the testimony of MCI witness Earle Jenkins.

⁶ *Id.* ¶ 459.

1 hot cut process, “hot cuts frequently lead to provisioning delays and service outages, and
2 are often priced at rates that prohibit facilities-based competition for the mass market.”⁷

3 In other words, the FCC concluded that the existing hot cut process, which can handle
4 only a few loops at a time, could not handle the high volume of loop migrations that
5 would occur if UNE switching were withdrawn, and thus posed an insurmountable
6 barrier to entry using UNE-L.

7 **Q. DID THE FCC DISCUSS THE FATE OF CUSTOMERS IN ITS ORDER?**

8 **A.** Yes. In addition to discussing the technical aspect of these network and
9 operational issues, the FCC also explained how these issues negatively impact the
10 customer’s experience itself. The FCC noted that the delay that accompanies a UNE-L
11 migration prevents competitors from providing service in a way that mass market
12 customers have come to expect.⁸ At a basic level, a UNE-L migration (characterized by
13 hot cuts) will always have a potentially more negative effect on a customer than a UNE-P
14 migration, because “[f]rom the time the technician disconnects the subscribers loop until
15 the competitor reestablishes service, the subscriber is without service.”⁹ Similarly, the
16 UNE-L process of “porting” the customer’s number from the CLEC switch to the ILEC
17 switch “also potentially subjects the customer to some period of time where incoming
18 calls will not be received,”¹⁰ because absent proper porting (a task that requires two
19 separate inputs to the national number portability administration data base), calls will not
20 be routed to the customer’s new number on the CLEC switch. In addition to these risks,
21 a cut over to UNE-L is not automatic and automated, but depends on an ILEC (or losing

⁷ *Id.* ¶ 465.

⁸ *Id.* ¶ 466.

⁹ *Id.* ¶ 465 n.1409.

1 CLEC) responding to a winning CLEC (or winning ILEC) request for a change of
2 service, which generally takes several days longer than a UNE-P order.¹¹

3 The FCC explicitly recognized that because “mass market customers generally
4 demand reliable, easy-to-operate service and trouble-free installation,”¹² such disruptions
5 and delays negatively affect customers’ perceptions of the CLEC’s ability to provide
6 service. Indeed, the FCC found in the *Triennial Review Order* that the record indicated
7 that customers experiencing such difficulties are likely to blame the CLEC, not the ILEC
8 – even if the problem is caused by the ILEC.¹³ Moreover, because customers view the
9 ILEC as a baseline alternative to the CLEC for local service, customers’ negative
10 perception of a CLEC’s service directly hampers a CLEC’s ability to win and retain
11 customers.¹⁴

12 **Q. THE FCC ALSO REQUIRES THE STATES TO APPROVE AND**
13 **IMPLEMENT A “BATCH” HOT CUT PROCESS. WHAT IS THE**
14 **PURPOSE OF THE “BATCH” HOT CUT PROCESS?**

15
16 A. I’m aware that the Commission is addressing this issue in Case No. M-00031754
17 so I will only address this generally here.

18 In an effort to alleviate some of the operational barriers to using UNE-L and
19 CLEC switching, the *Triennial Review Order* requires that the states investigate, approve
20 and implement a batch hot cut process (“Transition Batch Hot Cut Process”) to “cut over”
21 unbundled loops in high volumes from the ILEC to CLECs.¹⁵ The FCC expected that

¹⁰ *Id.*

¹¹ For example, a UNE-P migration takes 1 business day in Pennsylvania, while migrating the same customer to UNE-L takes at least 5 business days, assuming the ILEC has the ability to schedule the cutover on the requested date.

¹² *Id.* ¶ 467

¹³ *See id.*

¹⁴ *See id.* ¶ 466.

¹⁵ *See, e.g., id.* ¶¶ 487-490.

1 such a process would enable groups of UNE-P customers to be transitioned to UNE-L
2 simultaneously (in batches), thus “result[ing] in efficiencies associated with performing
3 tasks once for multiple lines that would otherwise have been performed on a line-by-line
4 basis.”¹⁶ Yet, although the FCC recognized that such “a seamless, low-cost batch cut
5 process for switching mass market customers from one carrier to another is necessary, at
6 a minimum, for carriers to compete effectively in the mass market,”¹⁷ it did not view this
7 transitioning process as a panacea.¹⁸ Indeed, because this Transition Batch Hot Cut
8 Process only addresses the issue of transitioning to UNE-L the base of customers that
9 competitors like MCI have acquired on UNE-P, it is merely one discrete piece of the
10 much larger puzzle that must be assembled before UNE-L can be seen as a viable service
11 delivery method for the mass market. In practical terms, eliminating the operational
12 barriers associated with the everyday hot cut process (“Mass Market Hot Cut Process”)
13 which will be used to move customers to and from multiple carriers in a dynamic
14 competitive market – is far more critical than implementing a Transition Batch Hot Cut
15 Process that is only useful for simultaneously moving blocks of UNE-P customers to
16 UNE-L.

17 **Q. WHAT DO YOU SUGGEST THE COMMISSION DOES TO ADDRESS**
18 **THE ISSUES WITH THE HOT CUT PROCESS?**

19
20 A. Although states must evaluate and approve a Transition Batch Hot Cut Process, to
21 fully address the barriers to using UNE-L, they must also work toward alleviating the
22 distinct operational issues associated with subsequent carrier migrations by developing
23 and implementing the Mass Market Hot Cut Process. Although it is likely that the two

¹⁶ *Id.* ¶ 489.

¹⁷ *Id.* ¶ 487.

1 processes will be similar in some respects, they are not identical. What MCI refers to as
2 the “Transition Batch Hot Cut Process,” because it involves the transition of large
3 numbers of customers at once, will necessarily require a number of coordinated steps and
4 scheduling with the ILEC, and thus substantial ILEC involvement and oversight. In
5 contrast, the Mass Market Hot Cut Process will need to be a standardized, simple, and
6 low-cost process that can take place on a day-to-day basis. And it will have to function at
7 the same time that the other migration processes are working as well, including
8 migrations to and from retail, UNE-P, and resale, disconnections, suspensions, feature
9 additions and changes. Thus, although a batch hot cut process is critical, it simply will not
10 address the everyday operational barriers that exist in migrating UNE-L customers from
11 CLEC to CLEC, from ILEC to CLEC, and from CLEC to ILEC, in various serving
12 configurations. To address these more fundamental difficulties with UNE-L migrations,
13 the state must streamline the standard Mass Market Hot Cut process (known as the
14 coordinated hot cut process and the frame due time process) as well, so that it is as
15 effective, efficient, seamless, low cost and as scalable as possible, but without the special
16 scheduling and ILEC handling necessary for the Transition Batch Hot Cut Process. For it
17 is only when day-to-day migrations among all carriers, using all service delivery
18 methods, take place quickly, efficiently and successfully, that a truly competitive market
19 can develop.

20 **Q. THE FCC ALSO REFERS TO THE CONCEPT OF “ROLLING ACCESS”**
21 **IN ITS ORDER. WHAT IS “ROLLING ACCESS”?**

22
23 A. In the *Triennial Review Order*, the FCC also raises the possibility of a state
24 commission granting CLECs “rolling access” to mass market switching, if the state

¹⁸ See, e.g., ¶ 423 (describing the batch process as mitigating, not necessarily eliminating impairment).

1 commission determines that such access would cure a finding of CLEC impairment.¹⁹
2 With rolling access, CLECs would have “access to unbundled local circuit switching for
3 a temporary period [at least 90 days], permitting carriers first to acquire customers using
4 unbundled incumbent LEC local circuit switching and later to migrate these customers to
5 the competitive LECs’ own switching facilities.”²⁰ In other words, rolling access allows
6 CLECs to use UNE-P to acquire customers at the outset, but then requires that the CLEC
7 transition (i.e., “roll off”) those customers to UNE-L within a specified time period after
8 acquisition. The FCC envisioned that this process would enable the CLEC to avoid the
9 delays and disruptions of service that would occur if a CLEC had to acquire the customer
10 via UNE-L at the outset, because the customers are first acquired and then transferred to
11 UNE-L via the Transition Batch Hot-Cut Process.

12 **Q. WILL ROLLING ACCESS CURE THE OPERATIONAL BARRIERS**
13 **FACING A MOVE TO UNE-L?**

14
15 A. No, as this description makes clear, rolling access does not ultimately alleviate the
16 operational impairments presented by the everyday Mass Market Hot Cut Process,
17 because it is simply a time-delayed batch hot cut process that focuses solely on
18 transferring UNE-P customers to UNE-L. As discussed above, the Mass Market Hot Cut
19 Process will be essential for all day-to-day ongoing customer transfers. For instance,
20 even if CLECs have rolling access, they will not, unless explicitly required to be included
21 in the process by state commissions, be able to rely on the Transition Batch Hot Cut
22 Process for acquiring and losing customers to other CLECs. Also, CLECs will not be able
23 to rely on the Transition Batch Hot Cut Process if the ILECs have their way, for a number

¹⁹ See *id.* ¶¶ 521-524.

²⁰ *Id.* ¶¶ 521.

1 of migration scenarios that are truly necessary to offer customers a choice of a bundled
2 set of services. Therefore, at best, the Transition Batch Hot Cut Process or rolling access
3 could alleviate only some operational barriers that exist with respect to the hot cut
4 process. It is critical that state commissions investigate and resolve the substantial
5 operational barriers associated with the Mass Market Hot Cut process as well.

6 **Q. ARE THERE ANY OTHER ISSUES WITH THE CONCEPT OF**
7 **“ROLLING ACCESS” TO UNBUNDLED SWITCHING?**

8
9 **A.** Yes, not only does rolling access not cure the operational issues involved with
10 utilizing UNE-L to serve the mass market, but it also creates an additional impairment. If
11 MCI develops a new and innovative product offering using its own switches and other
12 facilities, the customer would not immediately be able to purchase that product because
13 customers must first have their loop provisioned on UNE-P, which limits MCI to
14 providing whatever features the ILEC supports. Customers would be deprived of the
15 product offering until MCI could migrate them on a rolling basis to UNE-L. This can
16 create a perception problem – i.e. the CLEC cannot immediately provide the services it is
17 selling.

18 **III. STATE OF THE TELECOMMUNICATIONS INDUSTRY**

19 **Q. WHAT IS HAPPENING IN THE TELECOMMUNICATIONS INDUSTRY**
20 **TODAY?**

21
22 **A.** The telecommunications industry is in a state of flux. It is slowly moving from an
23 industry controlled by large monopolies to an industry with multiple carriers offering
24 multiple services to a dynamic customer base. The trend in the industry is toward
25 bundled services, which allows consumers to select one carrier that meets all of their
26 communications needs.

1 **Q. WHAT IS TODAY'S TYPICAL TELECOMMUNICATIONS CUSTOMER**
2 **LIKE?**

3
4 A. In light of the nature of these evolving markets, and the increasing choices
5 available to consumers, today's telecommunications consumer is savvier than consumers
6 of the past. Today's consumer moves frequently between carriers and expects seamless
7 migrations and quality bundled service offerings. The consumer expects that changing
8 local service providers will be as simple and efficient as changing long distance
9 providers. Consumers want to purchase bundles of services – local voice and long
10 distance, features such as Caller ID, call forwarding and call waiting, broadband, and in
11 some instances wireless and video services as well.

12 In order to survive and flourish, given these industry conditions, telecommunications
13 providers must be able to meet and exceed these consumer expectations. Providers must
14 be able to provide consumers with seamless and efficient migration between carriers,
15 robust bundled service offerings, and timely repair and maintenance. If a provider is
16 unable to meet the customer's increasingly high expectations, that provider will be
17 pushed out of the market.

18 **Q. DOES MCI INTEND TO MOVE TO A UNE-L STRATEGY?**

19 A. Yes, because it makes sense. The UNE-L service delivery method would allow
20 MCI both to utilize its state of the art network and to promote further innovation of its
21 products and services through further development and deployment of new technology.
22 MCI metro – an MCI CLEC-- installed its first switch in 1995 in Baltimore, MD and grew
23 from there over time. Since 1995, MCI has installed local switches, installed collocations
24 in ILEC central offices and installed fiber rings in major metropolitan areas throughout
25 the country. MCI uses these facilities (along with leased high capacity loop facilities or

1 their equivalent) to provide competitive local exchange service to business customers
2 today.

3 **Q. DOES MCI INTEND TO USE UNE-L EVERYWHERE IT HAS MASS**
4 **MARKET CUSTOMERS?**

5
6 A. No. I can't imagine that would happen. For one thing, there are locations where
7 MCI does not have any facilities. Generally, MCI will use UNE-L with its own switches
8 wherever it makes economic and operational sense to do so. It is highly unlikely that
9 UNE-L will make economic and operational sense everywhere in every state.

10 **Q. WHAT ARE THE IMPLICATIONS OF MCI MOVING TO A**
11 **FACILITIES-BASED STRATEGY FOR MASS MARKET CUSTOMERS?**

12
13 A. The implications for MCI (and hopefully for consumers, eventually) will be
14 enormous. First, no carrier has ever attempted to do what MCI is trying to do now. MCI
15 operates in 49 jurisdictions, dealing with the 4 major ILECs, interfacing with the 7 or
16 more different ILEC Operations Support Systems ("OSS") across the country. MCI has
17 over 3 million mass market local customers nationally (practically all on UNE-P now).
18 MCI has *****BEGIN MCI PROPRIETARY END MCI PROPRIETARY**
19 customers in Pennsylvania as of October 1, 2003. Those customers are spread out
20 geographically across the state; we have customers in *****BEGIN MCI**
21 **PROPRIETARY END MCI PROPRIETARY** central offices in Pennsylvania.
22 Having a carrier as large as MCI provide service and place orders solely via UNE-L will
23 affect not only MCI and its customers, but will also affect the ILEC. The ILEC will have
24 to have the resources to handle the substantial increase in orders. In addition, other UNE-
25 L CLECs will be unable to receive the same level of service from Verizon if systems are
26 not changed, and they will have to interact with MCI directly whenever each company's

1 customers want to switch. The size, scope, and dynamics of residential customers are
2 significant factors in MCI's determination of where it is feasible to use its own facilities.
3 Matching MCI's customer base with its facilities will be a significant challenge but the
4 rewards could be huge.

5 **Q. WHY DO YOU SAY THAT?**

6 A. As the testimony of MCI witness Pelcovits demonstrates, many facilities-based
7 CLECs, to the extent they are still in business, continue to focus mostly, if not solely, on
8 business customers. Business customers not only tend to be more profitable, but they
9 also tend to be concentrated in specific locations and more stable. Other than a very
10 limited exception, the few facilities-based CLECs that are attempting to serve residential
11 customers do so on a small scale and in such a highly manual world that expansion for
12 them has been slow (at least compared to the expansion MCI has been able to accomplish
13 with the availability of UNE-P in recent years). Cable companies have started offering
14 residential local exchange service, but not on any grand scale yet, and they do not face
15 the same operational challenges as CLECs because they are using their own monopoly
16 cable plant for loops instead of fighting with the ILECs to get access to UNE loops.

17 Simply stated, it is no small challenge to match our existing local network to our
18 large and dynamic customer base. No carrier has yet attempted the kind of nationwide
19 facilities-based approach for mass market customers that MCI is embarking on.

20 **Q. ARE THERE OTHER IMPLICATIONS INVOLVING MCI'S MOVE TO A**
21 **FACILITIES-BASED STRATEGY IN THE MASS MARKET?**

22
23 A. Yes. In order to utilize UNE-L, MCI's network will need to be "interconnected"
24 with the ILEC network in a much more integrated fashion than ever before. Beyond OSS
25 connectivity, "interconnection" in this sense also means that MCI will be physically

1 connecting its local network to the ILEC local network to get access to the ILEC loops
2 that MCI needs to serve its customers. That means growing the network that MCI
3 already has by establishing more collocations and building (or leasing) more transport
4 facilities from those collocations to connect to MCI's network. The testimony of MCI
5 witness Earle Jenkins describes these issues in greater detail.

6 **Q. WILL MCI'S MOVE TO ITS OWN FACILITIES HAVE ANY EFFECT**
7 **ON MASS MARKET CUSTOMERS?**

8
9 **A. Yes, definitely. As noted above, when I talked about MCI's customer base, the**
10 **move to a facilities-based world is not simply about customers moving from the**
11 **incumbent monopoly to MCI. Customers will also move from other CLECs to MCI.**

12 **(Those CLECs may be UNE-L CLECs, or resellers, cable companies, or UNE-P**
13 **CLECS.) And those same customers will also move away from MCI. Today, customers**
14 **are won back to the ILEC and they can (and do) go to other CLECs (UNE-L CLECs,**
15 **resellers, cable companies, and UNE-P CLECs), but the processes to implement these**
16 **migrations (particularly among facilities providers and from and to facilities providers**
17 **and UNE-P providers) are still in the nascent stage. Most mass markets competition is**
18 **UNE-P today, but as CLECs move to their own facilities, the "simple" UNE-P migration**
19 **process will need to be enhanced with processes to allow customers to move among all**
20 **types of serving arrangements. The point here is that MCI's move to facilities-based**
21 **competition will not be limited to establishing and maintaining the relationship between**
22 **MCI and the ILEC; it involves (either now or in the future) the entire industry -- MCI, the**
23 **ILEC, and every other CLEC offering service in the state.**

24 **And in reality, it's more than that. As I will discuss in greater detail later, the**
25 **move to facilities-based competition will have implications for third parties that provide**

1 necessary, but ancillary services, such as the E911 providers and the local number
2 portability provider.

3 **Q. WHAT ARE OTHER CONSIDERATIONS IN THIS ANALYSIS?**

4
5 A. This testimony talks a lot about systems or processes, but we should never lose
6 sight of the customer. As a Public Utility Commission, the Commission must always be
7 concerned greatly about the “customer experience” as he or she attempts to move
8 between carriers. To the extent it is difficult for customers to come to a CLEC for
9 service, or, for that matter, to leave a CLEC, then customers will not be happy and will be
10 more reluctant to switch to a competitive provider in the future. This is bad not just for
11 MCI, but for the entire competitive market. To the extent customers have bad
12 experiences switching to or from other carriers, those customers may be reluctant to
13 switch to MCI or any other CLEC.

14 **Q. WHAT EXPECTATIONS DO CONSUMERS HAVE TODAY WITH**
15 **RESPECT TO SWITCHING CARRIERS?**

16 A. Customers expect seamless transitions among carriers like they have experienced
17 in the long-distance industry for years and more recently in the UNE-P world.

18 **Q. HOW DOES THE LONG DISTANCE TRANSITION WORK TODAY?**

19
20 A. With the ILECs, the entire process takes approximately 12 hours. Thus, because
21 of a standard, automated process, created through 15 years of refinement and
22 cooperation, transitioning between long distance providers is the quick and relatively
23 hassle-free process that customers have come to expect. Indeed, it has taken nearly two
24 decades of constant effort and enhancement of the PIC process for transitions between
25 long distance providers to be as smooth as they are today. This process is not even as
26 difficult as moving a customer’s local network facilities, which is required by UNE-L.

1 **Q. IS THERE A SIMILAR EXPERIENCE TODAY IN THE LOCAL**
2 **SERVICE ARENA?**

3
4 A. Yes, to some extent UNE-P transitions are also relatively seamless to the
5 customer. CLECs and ILECs have worked together over the last seven years – since the
6 passage of the 1996 Act – and this work continues today to develop an automated process
7 for the smooth migration to UNE-P of retail, resale, and CLEC-served UNE-P local voice
8 customers.²¹ The migration process is transparent to the customer until it is completed
9 and the new provider's new features and functionalities (*e.g.*, voice mail) appear on his
10 line. There is for the most part no loss of dial tone, no need for coordination between the
11 ILEC and the CLEC, and, most importantly, no manual intervention at the central office
12 distribution frame or other loop interface. Rather, just as in the long distance world, the
13 CLEC sends a request (usually automated) to the ILEC for the migration of the new
14 CLEC customer, and the change is made. As a result of the industry efforts concerning
15 UNE-P, millions of customers have been migrated successfully from the ILEC to UNE-P
16 CLECs, from one UNE-P CLEC to another UNE-P CLEC with relatively little loss of
17 dial tone and no need to coordinate multiple installation and maintenance teams.

18
19 **Q. HOW LONG DOES THE UNE-P MIGRATION PROCESS GENERALLY**
20 **TAKE?**

21
22 A. CLECs and the ILECs have worked together to ensure that the migration of
23 customers from retail to UNE-P and from UNE-P to UNE-P is typically completed
24 within 1 business day (unless the CLEC specifies a later date), regardless of the features
25 ordered. Depending on the rules established with the ILEC, fully automated CLECs, like

²¹ It must be noted that it has taken seven years of considerable effort and expense to arrive at a process that is relatively seamless to the customer and allows for frequent migrations.

1 MCI, can send (and receive) up to 2000 transactions (including migrations,
2 disconnections, and feature changes) per hour, because the process is almost wholly
3 electronic.

4 **Q. IS IT IMPORTANT THAT CUSTOMERS BE ABLE TO CHANGE**
5 **PROVIDERS RAPIDLY AND SEAMLESSLY?**

6
7 A. Yes. As noted above, today's consumer changes carriers more frequently than
8 consumers of the past and expects to be able to do so in an efficient and timely manner.
9 In the telecommunications industry, this movement of customers to and from carriers is
10 commonly referred to as "churn." Churn generally describes the behavior of customers
11 as they move not just from ILEC to CLEC but also from CLEC to ILEC and from CLEC
12 to CLEC. Even in the case of UNE-P, migrations between CLECs today are not
13 seamless, quick or efficient. In most regions, CLEC to CLEC migration processes and
14 procedures are in the nascent stages of being developed and will require extensive work
15 by industry participants to result in viable seamless processes.

16 **Q. IS CHURN A BAD THING OR A GOOD THING?**

17 A. It's really both. Churn is a good thing for consumers, because it allows them to
18 try new products and services from various providers. Such consumer movement
19 encourages carriers to innovate and become more efficient, which in turn, attracts new
20 customers so that carriers are rewarded for innovation and efficiency. In a very real
21 sense, churn is the proof that the competitive process is working. Although good for
22 consumers, churn is problematic for industry players: not only is it expensive when
23 consumers pick a provider for only a short period of time and then leave for another
24 provider, but churn also complicates both the provider's record keeping and billing
25 process that accompany acquiring and losing a customer and those of the underlying

1 network service provider. However, competitors realize that the customer's ability to
2 move amongst providers quickly and efficiently is a necessary and integral part of a
3 competitive telecommunications landscape. Consumers cannot be "locked in" to a single
4 provider or "stranded" on a single service delivery platform. They must be able to make
5 choices and migrate among providers at will.

6 **Q. IS THERE A LOT OF CHURN IN THE INDUSTRY TODAY?**

7 A. Yes. Customers are more educated and savvy today and move more frequently
8 among carriers to get better service packages. Churn rates today are fairly high in the
9 telecommunications industry, in both long distance and UNE-P local markets. Customers
10 are switching to and from carriers frequently. These high churn rates have been enabled
11 by regulatory requirements and changes in the OSS of the carriers. Specifically, equal
12 access in the long distance arena, and UNE-P and electronic data interface ("EDI") based
13 order processing in the local service arena, are milestones that have facilitated customer
14 migrations and permitted churn to exist and accelerate.

15 **Q. CAN YOU GIVE A MORE REAL WORLD EXAMPLE OF CHURN IN**
16 **THE LOCAL MARKET TODAY?**

17
18 A. Yes. As of October 1, 2003, MCI had *****BEGIN MCI PROPRIETARY**
19 **END MCI PROPRIETARY** residential UNE-P customers in Pennsylvania. These
20 customers are distributed over *****BEGIN MCI PROPRIETARY** **END MCI**
21 **PROPRIETARY** central offices in Verizon's territory in Pennsylvania. But that is a
22 very static – and not completely accurate – picture of MCI's customers in Pennsylvania.
23 MCI's customers in Pennsylvania (and elsewhere) are very dynamic.

24

1 **Q. PLEASE PROVIDE AN EXAMPLE OF HOW DYNAMIC MCI'S**
2 **CUSTOMER BASE IS IN PENNSYLVANIA.**

3
4 A. MCI's customers are dynamic in three respects. MCI adds customers every day
5 and loses customers every day. For example, for the month ending October 1, 2003, we
6 added*****BEGIN MCI PROPRIETARY** **END MCI PROPRIETARY** new
7 UNE-P customers in Verizon territory in Pennsylvania. We also had *****BEGIN MCI**
8 **PROPRIETARY** **END MCI PROPRIETARY** customers leave us for another
9 carrier or to disconnect service. Given those numbers, our churn rate in Pennsylvania for
10 the month ending October 1, 2003 was *****BEGIN MCI PROPRIETARY** **END**
11 **MCI PROPRIETARY**. While churn means that customers are reaping the benefits of
12 competition, as discussed above, this churn creates significant issues as we move to a
13 UNE-L service delivery mechanism.

14 **Q. IS THERE "CHURN" IN THE UNE-L MARKET TODAY?**

15 A. Not on a significant level. In contrast to the telecommunications markets just
16 described, there is no widespread churn or competition today in the UNE-L market for
17 mass-market customers.

18 **Q. WHY IS THAT?**

19 A. First of all, as MCI witness Michael Pelcovits points out in his testimony, there
20 are very few UNE-L providers from which mass market customers can choose, and these
21 providers exist in limited areas and support a limited range of customers. A second, and
22 equally compelling reason for this lack of churn is that a migration to and from the UNE-
23 L service delivery method is anything but simple. In fact, it's really difficult. The systems
24 and processes involved in a UNE-L migration, as opposed to a UNE-P migration, are
25 complex, manually intensive and cumbersome. It is important to remember that it took

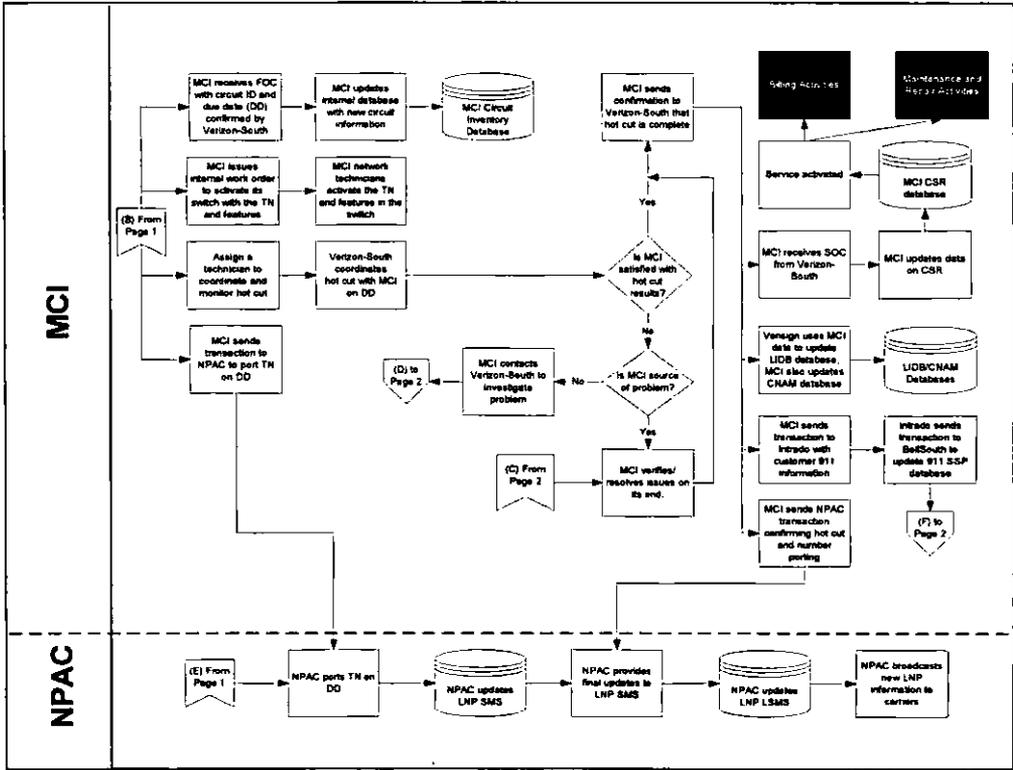
1 seven years, from the passage of the Act, to achieve the type of success that has been
2 achieved with UNE-P in the mass-market and UNE-P does not require a physical facility
3 change like UNE-L.

4 The importance of this issue cannot be overemphasized. UNE-L providers today
5 do not have to worry about transitioning their customers from another UNE-L provider
6 on a mass basis, as would be required if all carriers were forced to move to a UNE-L
7 strategy. Thus, the Commission cannot assume that a UNE-L provider actively serving
8 the mass market today will be able to continue offering that service in the future if these
9 industry operational issues are not resolved before forcing the entire industry to UNE-L.

10 **Q. WHAT MAKES THE UNE-L MIGRATION PROCESS SO COMPLEX?**

11 A. Unlike UNE-P, UNE-L requires both a physical change to the facilities involved
12 in providing service to the customer (the loop serving the customer must be physically
13 disconnected from the ILEC/UNE-P facilities and then connected to the UNE-L carrier's
14 facilities in the ILEC central office),²² as well as an unprecedented exchange of
15 information between the multiple parties involved, including providers not generally
16 involved in the processes reviewed and tested by this Commission. The process flow
17 shown below indicates the pre-ordering, ordering, provisioning, maintenance and repair
18 and billing steps involved in a typical ILEC Retail to CLEC UNE-L migration.

²² The technical aspects of the hot cut process are discussed in the testimony of MCI witness Earle Jenkins.



1

2

3 **Q. ARE THERE COMPLEXITIES THAT THIS PROCESS FLOW DOES**
 4 **NOT DIAGRAM?**

5

6 A. While this process flow can outline the steps in a typical ILEC Retail to CLEC
 7 UNE-L migration, there are several things that this process flow simply cannot illustrate
 8 adequately: 1) at numerous points in this process, manual handling of the UNE-L
 9 migration tasks is required, which can result in errors and delay; 2) UNE-L flow through
 10 rates are lower than for UNE-P, causing still more manual work and, hence, more delay
 11 and potentially more manually introduced errors (and this problem would only get worse
 12 if all CLECs had to use UNE-L); 3) there is a significant amount of information that must
 13 be exchanged among various parties to the migration (not just the ILEC and the CLEC or
 14 CLECs), and the failure of this information to reach its destination in a timely and
 15 accurate manner could significantly affect a customer's service; and 4) the scalability of

1 this process to meet mass market volumes is doubtful and untested (because loops have
2 never been migrated at mass market volumes) at this time. All four of these issues
3 individually or in combination, if left unresolved, have the potential to impact customer
4 service and derail a competitor's ability to viably utilize UNE-L to actively serve mass-
5 market customers.

6 **Q. PLEASE EXPLAIN.**

7 **A.** The process of migrating an ILEC customer to CLEC UNE-L service proceeds as
8 follows:

9 The CLEC issues an electronic order to the ILEC requesting that the customer be
10 moved from the ILEC switch to the CLEC switch. Unlike a UNE-P order which
11 requires only the customer's name and telephone number and the features that the
12 customer will be purchasing, the UNE-L order must include the customer's name
13 and telephone number, and information on the collocation cage to which the loop
14 will be transferred and the channel facility assignment (pair) to which the loop
15 will be terminated.

16
17 The CLEC will also create internal orders to send to the National Number
18 Portability Assignment Center, the LIDB provider, and the E911 center serving
19 the customer to establish ownership of the customer's number at the appropriate
20 time. These orders must be timed to coordinate with the orders issued by the
21 ILEC. For example, the ILEC order to unlock the E911 database should be
22 complete prior to the CLEC order to accept responsibility for the record and lock
23 the database. These orders may fall out at any time causing additional customer
24 problems.

25
26 The ILEC EDI translation software will accept or reject the order and return a
27 FOC or clarification/reject to the CLEC. The ILEC service order processor may
28 now be able to create the internal orders necessary to migrate the customer to
29 UNE-L. If it cannot, the orders will need to be entered manually by service center
30 personnel. Fallout rates for UNE-L orders are higher than those for UNE-P. If the
31 order does not flow through the system, the ILEC service order personnel will
32 need to type the orders. Unlike a UNE-P migration, multiple related service
33 orders must be created for a UNE-L transition – generally, the local service center
34 personnel must create a Disconnect (D) order to remove the customer from the
35 ILEC switch; a New (N) order to move the loop from the MDF to the CLEC
36 collocation equipment; and a Change (C) order to change the billing to the CLEC
37 from UNE-P to UNE-L. Directory listing orders may also have to be created, as
38 well as a request to unlock the E911 data base to allow the CLEC to “claim” the

1 customer and a “trigger” order to route calls to the customer via the local number
2 portability data base rather than the ILEC switch.

3
4 The internal ILEC service orders are routed to the technicians responsible for the
5 UNE-L cutover. These technicians must “find” the customer’s circuit at the main
6 distribution frame by manually clipping onto the loop and “listening” for dial
7 tone, wire in a jumper cable which will allow the loop to be extended to the
8 CLEC’s collocation equipment, and prepare for the cutover. The frame personnel
9 should also check for dial tone at the CLEC end, ensuring that the CLEC switch
10 will have dial tone for the customer when he/she migrates.

11
12 On the day of the cut, the ILEC connects the jumper from the CLEC collocation
13 cage to the frame and notifies the CLEC that the cut has been made.

14
15 When the CLEC receives the cut notification, it must complete the local number
16 portability transaction by issuing a “claiming” order to the NPAC. The customer
17 will have dial tone and be able to call out during this process but will be unable to
18 receive calls until the NPAC transaction is completed.

19
20 The ILEC will issue a service order completion notification to the CLEC.

21
22 The ILEC will complete the internal work required to change the billing to the
23 CLEC from UNE-P (loop and port) to UNE-L (loop only). The customer’s CSR
24 will be removed from the ILEC systems.

25
26
27 **Q. IS THE UNE-L MIGRATION PROCESS READY FOR MASS MARKET**
28 **USE?**

29
30 **A.** No. If carriers move to a UNE-L service delivery method before the processes
31 and procedures are in place to allow migrations to take place quickly and efficiently, the
32 churn that is a trademark of competition in the long distance and UNE-P markets will
33 create significant problems both for carriers and customers. Without seamless and
34 efficient migration processes in all directions and among all carriers, customer attempts
35 to migrate away from their existing carriers could overwhelm the ability of carriers (both
36 the losing carrier as well as the acquiring carrier) to accommodate that move. The result
37 could be chaos as customers are in effect, held hostage to cumbersome untested processes
38 that cannot support the volume of orders being issued.

1 In addition, the description and process flow discussed above only outlines the
2 ILEC retail to CLEC UNE-L migration. This migration is only one of 8 core migration
3 scenarios (and the most simple one) that MCI believes it will encounter in a dynamic
4 competitive UNE-L market. One of the remaining seven standard migration scenarios is
5 UNE-P to UNE-L for existing CLEC customers, the migration that the FCC's
6 requirement for a transition batch cut process is intended to address. Other migration
7 process flows are more complex involving CLEC UNE-L to CLEC UNE-L migrations as
8 well as moving customers with DSL service either from the ILEC to the CLEC or
9 between CLECs. MCI has attached the seven remaining migration process flows to this
10 testimony as Attachments MC-1 to MC-7. Included in these process flows are numbered
11 points in the process where potential challenges may well exist as well as a glossary of
12 relevant acronyms.

13 **Q. DOES THIS MEAN THAT UNE-L WILL NEVER BE A VIABLE**
14 **SERVICE DELIVERY METHOD FOR THE MASS MARKET?**

15
16 **A. No.** As discussed in more detail below (and in the testimony of MCI witness
17 Earle Jenkins), these issues are not insurmountable, but they must be resolved before
18 UNE-L can be considered a viable service delivery method for the mass market.
19 Otherwise, not just competitors, but customers will be hurt. And that is not an acceptable
20 outcome. The processes and procedures for migrating to and from UNE-L must be
21 improved and advanced, so that the UNE-L customer experience is as good or better than
22 customers' experiences today in the long distance and UNE-P arenas.

23
24

1 **Q. WHAT WOULD HAPPEN IF COMPETITORS WERE REQUIRED TO**
2 **MOVE TO UNE-L TODAY?**

3
4 A. There would be chaos. The UNE-L migration process today is manually intensive
5 and cumbersome with multiple points of failure that could result in delay, loss of features,
6 inability to receive calls and worse yet loss of dial tone for the consumer. If the transition
7 to UNE-L is made prematurely, the progress that has been made toward a dynamic,
8 competitive telecommunications market since the passage of the 1996 Act will be erased.
9 Again, this will not just affect UNE-P providers, but will also affect current UNE-L
10 providers who will no longer enjoy the privilege of being “one of a few” and having
11 access to all of Verizon’s resources.

12 **Q. SO, IT IS NOT VIABLE FOR MCI TO UTILIZE UNE-L TODAY FOR ITS**
13 **MASS-MARKET CUSTOMERS?**

14
15 A. No. Use of UNE-L is not viable today for the mass market because of the
16 significant operational barriers that remain. If competitors were immediately required to
17 utilize UNE-L – with the existing processes and procedures for accessing and installing
18 an unbundled loop – it would be impossible for them to meet customer expectations, and,
19 more likely than not, customers would experience a delay or loss of service when
20 switching carriers. This is simply not acceptable in today’s telecommunications
21 environment, in which consumers expect quality service and the ability to move among
22 providers quickly and efficiently. In order for UNE-L to be a viable service delivery
23 method, it must allow competitors to meet (and exceed) customers’ expectations. In
24 particular, migrations between carriers utilizing UNE-L must be seamless and the
25 systems and processes of the entire industry – ILECs, CLECs and third parties – must be

1 fully functional and capable of working together effectively. Today these systems and
2 processes are highly manual and are untested in a mass market environment.

3

4 **IV. OPERATIONAL BARRIERS**

5 **Q. PLEASE EXPLAIN THE SPECIFIC OPERATIONAL BARRIERS TO**
6 **UTILIZING UNE-L THAT EXIST TODAY.**

7

8 A. There are multiple points where there are changes to customer records and
9 information in both internal and external databases that are required for migration to a
10 UNE-L service delivery method. Many of these changes result from the fact that the
11 CLEC switch will be utilized in the provision of service with UNE-L versus the ILEC
12 switch that is used with UNE-P. Because there is very little mass market UNE-L
13 competition today, there are a great many unanswered questions surrounding these
14 transfers and information exchanges. These exchanges of information all represent
15 potential points of failure in the UNE-L world that do not exist today with UNE-P.
16 While it appears that they do not represent major technical network barriers that must be
17 overcome, these coordination, database, and ordering issues represent operational barriers
18 that are of critical importance to both the customer and the service provider and until they
19 are resolved, the industry cannot actively serve the mass market with UNE-L.

20 As noted above, in this testimony MCI is focusing on the customer impacting
21 operational issues that involve the necessary exchange of information that needs to take
22 place quickly and efficiently in a UNE-L world. The testimony of Mr. Jenkins deals with
23 the more technical operational issues such as the hot cut itself and the presence of
24 integrated digital loop carrier ("IDLC") in the ILEC's network. Specifically, the
25 customer impacting operational issues MCI lays out for the Commission involve

1 Customer Service Records (“CSR”), Local Facilities Administration and Control System
2 (“LFACS”), E911, National Number Portability Administration Center (“NPAC”), Line
3 Information Database (“LIDB”) and Caller Name Database (“CNAM”) and Directory
4 Listing/Directory Assistance (“DL/DA”). All of these customer record/information
5 changes must take place as efficiently and seamlessly as possible in a UNE-L
6 environment. In addition, MCI will discuss the changes in trouble handling that must
7 take place before CLECs can operate effectively in a UNE-L world.

8 **Q. WHAT IS THE ISSUE INVOLVING CUSTOMER SERVICE RECORDS?**
9 **WHY IS THE CSR SO IMPORTANT?**

10
11 A. Obtaining accurate and complete customer information is essential to a CLEC’s
12 ability to submit a valid order. CSRs are used to identify address, features, directory and
13 other information for migrating customers. CSRs show the most current customer
14 configuration based on the switch port and the ILEC’s internal billing systems. During
15 the pre-order phase of a migration, the CLEC representative needs to obtain current
16 customer and service information in order to create the order. While this information can
17 be retrieved on a real time basis for ILEC customers, the systems and processes required
18 to obtain and share this information have not been developed for all migration scenarios –
19 most notably CLEC to CLEC migrations.

20 **Q. ARE MIGRATIONS TO CLECS FROM VERIZON AN ISSUE IN A UNE-**
21 **P WORLD?**

22
23 A. No. This is not an issue in initial migrations from the ILEC whether they are to
24 UNE-P or UNE-L because CSRs are not required in initial migrations. ILECs currently
25 support migrations by telephone number and customer name or telephone number and
26 house number. In these initial migrations, the ILEC systems contain the relevant

1 customer information and the CLEC representative has electronic access to the ILEC
2 systems and can retrieve the information.

3 **Q. IS THIS PROCESS THE SAME WITH ALL MIGRATIONS?**

4 A. No. Obtaining this type of customer information becomes much more
5 complicated in a CLEC to CLEC UNE-L migration because the ILEC no longer has the
6 current CSR information (because the customer is being served off of a CLEC switch)
7 and MCI must contact the other carrier by email, fax, or through a web site to obtain the
8 relevant information. At this time there are no standard processes for the exchange of
9 CSR data between CLECs, which renders this process much less efficient.²³

10 **Q. WHAT MAKES UNE-L CSR REQUIREMENTS DIFFERENT?**

11 A. Since the customer is currently a UNE-L customer with another CLEC, the
12 representative cannot run pre-order queries against ILEC databases to validate the
13 information needed to initiate an order. The MCI representative must at this point
14 contact the other CLEC to obtain the relevant information, including the circuit ID for the
15 loop facility currently providing service to the customer, the most important piece of data
16 needed to move a customer from UNE-L to another provider.

17 Today's CSR alone does not provide all of the information necessary for
18 migrations in a UNE-L environment – other than the initial migration from ILEC to
19 CLEC. In a UNE-L world, the departing customer gains new information from the
20 CLEC that the ILEC does not – and has no means to obtain. For example, when an ILEC
21 customer initially migrates to CLEC-1 (a UNE-L provider), that CLEC obtains the
22 customer's CSR from the ILEC, but this CSR does not include the "circuit ID," which

²³ There are agreements and proposals that exist today but they do not address transfer protocols, etc.

1 will be used by the ILEC to track where the customer's loop appears on the ILEC MDF
2 after the migration. The circuit ID information is critical, since MCI will need that
3 information to ensure that the same physical loop can be used to serve the customer. This
4 information is returned to the winning CLEC-1 with the Firm Order Confirmation (FOC)
5 and must be passed on to the next service provider to allow the re-use of the customer's
6 facility. Once the customer has migrated to the UNE-L carrier (CLEC-1), the ILEC is
7 generally no longer able to associate a customer's CSR with the circuit ID – only CLEC-
8 1 can do that. Because all information needed for UNE-L migrations is not readily
9 available – either because the ILEC cannot provide it, or because there are not reliable,
10 comprehensive systems for transferring this information among CLECs – the CSR
11 system must be revised and expanded to function properly for UNE-L.

12 **Q. WHAT HAS BEEN DONE THUS FAR AT THE STATE LEVEL TO ADDRESS THIS ISSUE?**

13
14
15 **A.** While CLECs, ILECs, and the states continue to work collaboratively to attempt
16 to develop CLEC to CLEC migration procedures, the ability to share CSRs and obtain
17 circuit ID information is not yet in place. While CLEC to CLEC migration processes
18 have been worked out on paper, each company can provide CSR information as it
19 chooses using its own transmission method (fax, website, email) and no quality assurance
20 processes have been developed. Today, there is no standard CSR framework to support
21 a UNE-L environment. This CSR issue must be addressed and the infrastructure
22 developed prior to the implementation of UNE-L. Unless we do so, customers will be
23 stuck where they land in their first migration (because other carriers have no means to
24 obtain the information necessary to migrate the customer to another carrier) or ILECs

1 will be forced to install more and more facilities to compensate for the inability to
2 identify the current circuit being used.

3 **Q. DOES MCI AGREE WITH THE GUIDELINES THAT THE STATES ARE**
4 **ESTABLISHING FOR CSRS?**

5
6 **A.** Some states, such as New York and Florida, have established requirements for the
7 data to be included in the CSR. Under the New York rules, for example, there are 13
8 pieces of information that must be included in a CSR record: billing telephone number;
9 working telephone number; billing name and address; directory listing information
10 (including listing type); complete service address; current PICs (for both inter and
11 intraLATA, including freeze status); local freeze status, if applicable; all vertical features;
12 options (such as toll blocking and remote call forwarding); tracking or transaction
13 number; service configuration information (*i.e.*, whether customer is served via resale,
14 UNE-P, UNE-L, etc.); the identification of the network service provider, and the
15 identification of any line sharing or line splitting on the line.

16 While MCI agrees with the New York Guidelines as far as they go, we propose
17 that additional information be added to New York's list of requirements. Specifically,
18 MCI recommends that the list include: 1) the ILEC feature name and USOC for vertical
19 features and blocking options to ensure that CLECs can understand each other's CSRs; 2)
20 circuit ID information (currently provided in a second step in the process); and
21 identification of line sharing/line splitting providers. In addition, CLECs must be
22 required to provide contact information for requesting CSRs and must commit to
23 providing CSR data within specific timeframes.

24

1 **Q. ASIDE FROM THE ADDITIONS TO THE NEW YORK**
2 **REQUIREMENTS, DOES MCI HAVE A PROPOSAL TO RESOLVE THE**
3 **CSR ISSUE?**

4
5 A. Yes. Going forward, it will be necessary to implement a solution to these
6 problems. MCI proposes the establishment of a distributed CSR database, shared and
7 maintained by CLECs and ILECs alike. These database improvements may take a
8 considerable amount of time, expense, and effort to accomplish, but are necessary before
9 UNE-L migrations can be handled on the same basis as UNE-P migrations.

10 **Q. PLEASE EXPLAIN YOUR DISTRIBUTED DATABASE PROPOSAL IN**
11 **MORE DETAIL.**

12
13 A. MCI recommends that a central clearinghouse be maintained to identify the owner
14 of a particular customer and to launch a query to retrieve that customer's service
15 information. The central database would function similarly to the current CARE
16 clearinghouse, directing requests to the proper providers following a single data
17 communications protocol. Under this proposal, CLECs would maintain CSRs in a
18 standard format and would agree to standard delivery methods and time frames.
19 Companies that did not want to maintain their own CSRs or could not develop the
20 software necessary to electronically transmit that information to other carriers could
21 contract with the 3rd party clearinghouses that would inevitably spring up to support this
22 process. State commissions would need to develop metrics and enforcement procedures
23 to ensure that information is exchanged within the appropriate time frames. Until such a
24 distributed method is developed, MCI believes that the ILEC can continue to provide
25 access to the information they have about customers on their network as well as the
26 information remaining after a customer leaves the network.

1 **Q. ARE THERE OTHER DATABASE ISSUES?**

2 A. Yes, work is required on all the databases utilized to configure and provide UNE-
3 L to mass markets customers, including LFACS, E-911, LIDB, CNAM, DA/DL, and
4 potentially others.

5 **Q. WHAT IS THE PROBLEM WITH LFACS?**

6 A. In the pre-order phase, MCI may submit a loop qualification inquiry (to LFACS)
7 to determine loop make-up information. The accuracy of the data is critical to the
8 CLEC's ability to determine if it can serve the customer. For example, the CLEC needs
9 to know if the customer's loop is all-copper (and can be unbundled) or is served through
10 an integrated digital loop carrier ("IDLC") system, which the ILECs claim cannot be
11 unbundled, or whether the customer has fiber to the home. The ILECs require that loops
12 served by IDLC be handled separately and will not unbundle fiber to the home.

13 **Q. IS THE DATA CONTAINED IN LFACS ACCURATE?**

14 A. At this point, we truly don't know. There has been evidence in other proceedings
15 (various 271 proceedings as well as the Virginia arbitration proceeding at the FCC) that
16 LFACS does not contain accurate data. Given the current low level of UNE-L and DSL
17 competition, it is difficult to know how inaccurate that data is, despite testing done during
18 the 271 process.

19 **Q. HOW DOES MCI PROPOSE TO RESOLVE THIS ISSUE?**

20 A. MCI proposes that LFACS be audited for accuracy and a process developed to
21 ensure that it is accurately maintained (real time) when the ILEC alters or changes its
22 loop plant. This is particularly important as ILECs take down their copper plant and
23 replace it with fiber. In addition, CLECs must be able to "reserve" a spare copper facility

1 when a customer is migrating to ensure that that migration can take place. Currently,
2 while LFACS will allow a CLEC to determine whether there is spare copper to support
3 the unbundling of the customer's service, that copper loop may be "taken" by another
4 CLEC or the ILEC itself to serve another customer in the process of migrating or
5 changing his loop to allow the provision of data services.

6 **Q. IS TROUBLE HANDLING DIFFERENT IN A UNE-L VERSUS A UNE-P**
7 **WORLD?**

8

9 A. Yes. When providing UNE-L service, each company is responsible for
10 maintaining its respective portions of the network. The CLEC is responsible for their
11 switch, collocation space and transport. The ILEC is responsible for the loop, frame and
12 connectivity to the CLEC collocation space. This is a notable difference from UNE-P
13 where the ILEC is fully responsible for making repairs to the switch and network.

14 **Q. SPECIFICALLY, WHAT IS DIFFERENT ABOUT TROUBLE**
15 **HANDLING IN A UNE-L WORLD?**

16

17 A. In a UNE-L environment, MCI representatives gather the appropriate information
18 from the customer and make an initial trouble assessment. In order to do this, MCI must
19 "sectionalize" the trouble and determine whether a dispatch in to the switch or frame, or a
20 dispatch out to the field is required. If no trouble is found after a "dispatch in," the initial
21 ticket may be closed and a new ticket must be opened. If the problem is in the MCI
22 portion of the network, MCI must either dispatch a technician to its collocation cage or
23 work with the ILEC to clear the problem. This process could increase out of service
24 times and the multiple handoffs between companies could harm customers by putting
25 them in the middle of "finger pointing" exercises.

26

1 **Q. WHY IS THIS AN ISSUE?**

2 A. Since few mass markets customers today have UNE-L service, this trouble
3 handling process has not yet been adapted for a world where customer service outages
4 must be repaired rapidly so that residential customers can continue to be able to receive
5 dial tone with the same reliability as ILEC customers.

6 **Q. HOW DOES MCI PROPOSE TO HANDLE THIS ISSUE?**

7 A. In order for trouble handling in a UNE-L environment to be viable, CLECs need
8 to obtain newer and more advanced test equipment as well as develop internal processes
9 to address this trouble handling and the anticipated volumes. In addition, all parties need
10 to make sure that the dispatch rules surrounding trouble handling are adequate and
11 function properly under mass market volume constraints.

12 **Q. ARE THERE CHANGES INVOLVING A CUSTOMER'S E911**
13 **INFORMATION?**

14
15 A. Yes. When a consumer migrates from the ILEC (or another CLEC) to MCI, the
16 911 database must be updated to reflect the new switching provider. This change occurs
17 shortly after the loop is cutover to the CLEC and requires the ILEC to "unlock" the E911
18 database. This allows the CLEC record to overlay the existing ILEC record with updated
19 information, including the CLEC company code and 7x24 emergency number as well as
20 the current customer address information (if necessary).

21 **Q. WHAT HAPPENS IF THE CHANGE IS NOT MADE CORRECTLY?**

22 A. If this change is not made correctly, the customer's E911 information in the
23 Automatic Line Identification ("ALI") database will not include the CLEC's company ID
24 or the customer's correct address if the customer has moved or the record required some

1 other correction. It is essential that this change to E911 be done correctly and also that it
2 be seamless and transparent to the migrating consumer.

3 **Q. IS THIS CHANGE REQUIRED IN A UNE-P WORLD?**

4 A. No such change is required in a UNE-P world where the ILEC retains control
5 over the 911-database information for the UNE-P CLEC.

6 **Q. COULD YOU EXPLAIN THE NECESSARY E911 CHANGE IN MORE
7 DETAIL?**

8
9 A. Specifically, in a UNE-L environment there are two orders required for changes
10 to the 911 ALI database.²⁴ One order must go from the ILEC to the 911 provider to
11 unlock the record in the ALI database. This allows the CLEC to overlay the existing
12 record with the updated 911 ALI record, once the migration has been successfully
13 processed.

14 The second order must go through the CLEC's vendor (or the ILEC if the CLEC
15 has contracted with them) to overlay the existing 911 record with the new record. It is
16 essential that these orders are coordinated so that the ILEC unlock order arrives before
17 the CLEC "Migrate" order to newly populate the database.

18 A critical issue here is the timing of the "unlock" order. In MCI's experience in
19 providing UNE-L to business customers, we have discovered that many ILECs do not
20 send the "unlock" order until the CLEC's migration order has actually closed in the ILEC
21 billing system. Since this will necessarily be sometime **after** the physical completion of
22 the order, there could be a time lag where the 911 system has incorrect information on the

²⁴ The ILEC in most cases maintains the 911 Selective Router used for routing a 911 call to the appropriate PSAP. The PSAP dips into the ALI database when a 911 call is received to retrieve the address of the caller. The PSAP is the custodian of the data required to dispatch emergency personnel. The PSAP must have a record for each customer a facilities CLEC owns and must be able to contact that carrier.

1 network service provider. The National Network Numbering Association (“NENA”)
2 standard is to send the 911 order at the time of port. MCI follows that standard. This
3 discrepancy between the ILEC and CLEC processes could lead to major problems
4 regarding the accuracy of the 911 database and the ability of CLECs to provide current
5 information to update the database. The ILEC systems should be revised so as to send
6 the 911 record at the time of porting. This change would greatly improve the timeliness
7 of the 911 record process and further ensure that accurate customer information is in the
8 911 database.

9 **Q. WHAT HAPPENS IF THE ORDERS ARE NOT SEQUENCED**
10 **CORRECTLY?**

11
12 A. If the sequence of the orders is disrupted, the 911 database cannot be updated.
13 While the customer will be able to dial 911, the Public Safety Answering Position
14 (“PSAP”) will only see the old customer record, which may or may not be accurate and
15 will contain the wrong company ID for correction or trap and trace requests. As the
16 number of UNE-L orders increases and particularly during the bulk transition of
17 customers from UNE-P to UNE-L, the problem will become more severe. Most
18 importantly, the CLEC will be required to manually check the ALI database information
19 to determine if the update has been accepted and has passed the myriad of required edits.

20 **Q. DOES MCI HAVE A SUGGESTION ON HOW TO FIX THIS PROBLEM?**

21 A. Yes. Aside from requiring the ILECs to comport with the NENA guidelines as
22 discussed above, these critical 911 orders must be coordinated through the various
23 systems and processes of all industry players in order to ensure that migration to UNE-L
24 does not result in E911 problems. MCI suggests that the states convene some type of
25 collaborative to ensure that the orders are coordinated. Today, these 911 changes take

1 place for a limited number of consumers because UNE-L is not used predominantly in the
2 mass market. However, if UNE-L were to become a viable mass-market service delivery
3 method, it would be essential to ensure that the 911 changes required with such a
4 migration are accurate as well as seamless and transparent to the consumer. In addition,
5 CLECs, State Commissions, and the PSAPs need to work together to ensure that the
6 PSAP database can handle the increased volume of unlock and lock requests issued in a
7 UNE-L environment.

8 **Q. ARE THERE ISSUES INVOLVING NPAC IN A UNE-L MIGRATION?**

9 A. Yes. The National Number Portability Administration Center handles the
10 database updates necessary to determine the “home switch” for each UNE-L (and cable)
11 customer -- i.e. the switch that customer is associated with.

12 **Q. ARE NPAC CHANGES NECESSARY WITH UNE-P?**

13 A. No. Since UNE-P utilizes ILEC switching, there is no need to send transactions
14 for UNE-P migrations to the NPAC, keeping the number administration task to a
15 manageable level. When CLECs move to UNE-L, however, this becomes a necessary
16 and integral part of the process – and one that is currently untested at mass-market
17 volumes.

18 **Q. PLEASE EXPLAIN.**

19 A. When a customer migrates to UNE-L, a transaction must be sent to NPAC to
20 identify the “destination” switch for calls to this number. The ILEC initiates this
21 transaction by creating a “10 digit trigger” in the donor (losing) switch at the time the
22 UNE-L order is created. The trigger will cause incoming calls to “dip” into the NPAC
23 database to determine the switch that now houses the number. The CLEC initiates the

1 second step of this process when it receives notification from the ILEC that the cut has
2 been completed. The CLEC then sends a transaction to NPAC to claim the number.
3 Until the CLEC claims the number in the NPAC database, the customer will be unable to
4 receive any incoming telephone calls.²⁵ If the NPAC transaction is not completed
5 successfully, (for example, the NPAC system is down, the request is formatted
6 incorrectly, or the ILEC has not notified the CLEC that the cut is complete) the customer
7 will not be able to receive calls, since they will be directed to the incorrect home switch.²⁶
8 It is essential that the NPAC process be coordinated and successful. If it is not,
9 consumers could experience service problems that simply do not exist today with UNE-P,
10 and these problems may occur on a switch-by-switch basis, causing some calls to
11 complete to the UNE-L customer but not others. The current experience of customers
12 ~~trying to port their number between wireless carriers provides a good example of the~~
13 problems that are occurring in the local number portability process. The number
14 portability problems are causing many customers to carry two telephones, one from their
15 new provider and one from their old provider, to ensure that they will continue to receive
16 calls. While this is merely inconvenient to wireless customers (and perhaps more
17 expensive than necessary – subscribing to two different wireless carriers at the same
18 time) customers can still receive calls directed to their number. With wireline local
19 number portability, customers would likely be livid if the process does not work properly
20 as the customers would have no work-around to receive calls until the number is properly
21 ported over to the carrier providing dial tone via a UNE-Loop to the residence.

²⁵ Recently in New York, Verizon has indicated that it will now retain control over both of the NPAC orders in a UNE-L migration.
²⁶ The customer's voice mail will also be impacted.

1 When the customer changes carriers again, the losing carrier must “unlock” the
2 existing record to allow the winning carrier to “replace” it with its destination code. Both
3 churn and the addition of wireless local number portability (the ability for customers to
4 migrate their numbers between wireless carriers and from wireline to wireless carriers)
5 will raise the number of transactions processed by the NPAC tremendously. It is unclear
6 whether or not NPAC will be able to handle the volumes of transactions that would occur
7 in a dynamic UNE-L market. If they cannot handle the volumes, changes to the NPAC
8 process will undoubtedly prove necessary.

9 **Q. DOES MCI HAVE ANY SUGGESTED RESOLUTION TO THIS ISSUE?**

10 A. MCI recommends that the Commission immediately open a collaborative
11 discussion between the ILEC, CLECs, and the current NPAC administrator, Neustar, to
12 ~~determine NPAC’s actual capabilities and to develop metrics for the completion of~~
13 number portability tasks. Volume testing or scalability analysis will also be required to
14 determine whether NPAC can actually handle the volumes of numbers that will be ported
15 in a single day. Since a failure of the NPAC system will have a direct negative impact on
16 customers, it is critical that the movement to UNE-L for mass markets customers not take
17 place until all parties are clear that the system can support the increased volumes.²⁷

18 **Q. ARE THERE ISSUES WITH DIRECTORY LISTING AND DIRECTORY**
19 **ASSISTANCE?**

20
21 A. Yes. In a UNE-L world, CLECs must send directory listing information to the
22 ILEC to include in both the printed and on-line directories of each company. This step
23 occurs as part of the UNE-L migration order.

²⁷ Neustar has told both ILEC and CLEC representatives that it can handle “any volumes,” but these are marketing rather than technical analyses.

1 **Q. ARE CHANGES TO DL/DA NECESSARY WITH UNE-P?**

2 A. No. No changes are necessary in a migration to UNE-P.

3 **Q. HOW DOES THE DIRECTORY LISTING PROCESS WORK WITH UNE-**
4 **L?**

5
6 A. The CLEC completes the directory listing form and sends it with its order to the
7 ILEC for processing. While an "as is" (i.e., no change) directory listing can be ordered
8 from the ILEC as part of the "first" retail to UNE-L migration (or UNE-P to UNE-L
9 conversion), this process must be repeated with full information for each subsequent
10 change. This increases the likelihood of errors or deletions in the directory as it is
11 "opened" to remove listings and "closed" to put the same listings back in. This was an
12 issue raised in the state 271 proceedings by UNE-L carriers who had evidence of
13 directory listings being left out of the phone books, inserted into the incorrect locations in
14 the phone books or containing incorrect customer information. Again, the sheer volume
15 of directory changes to be processed if UNE-L were to become a viable mass-market
16 service delivery method could have significant impacts on the directory publishing and
17 operator services databases.

18 **Q. DOES MCI HAVE A PROPOSED RESOLUTION TO THIS ISSUE?**

19 A. MCI recommends that "migrate as is" functionality for directory listings be
20 available to CLEC-to-CLEC migrations as well as in ILEC-to-CLEC migrations to limit
21 the number of times that this information must be added and deleted.

22 **Q. ARE THERE ISSUES WITH LIDB AND CNAM?**

23
24 A. Yes. The Line Information Database ("LIDB") and Caller Name ("CNAM")
25 databases provide information on caller identity and blocking options. UNE-P customers
26 today use the LIDB and CNAM databases provided by the ILEC. Unless a customer of

1 the CLEC chooses new blocking options, no changes are required to the data when a
2 customer migrates. Today, when a customer migrates a telephone number to a new
3 carrier, the losing company deletes the telephone number's LIDB/CNAM information
4 from its LIDB/CNAM database and the acquiring carrier loads the telephone number's
5 LIDB/CNAM information internally.²⁸

6 LIDB and CNAM are essential databases. Customer information for migrating
7 customers whose LIDB and CNAM is not loaded or incorrect will not be available for
8 caller name display on caller ID, potentially leading to call blocking by the called party
9 and improper rejection of 3rd party billed calls.

10 With UNE-L, both LIDB and CNAM data must be reloaded because the losing
11 LEC will delete the information from their LIDB and CNAM processes. The
12 ~~LIDB/CNAM data entry step is performed while the order is in order entry. CLECs must~~
13 either create CNAM data from published sources (which results in a substandard database
14 because not all necessary data is available publicly) or dip the ILEC systems to receive
15 the data at a per dip TELRIC rate. Under the Triennial Review Order, the database dips
16 referred to above will no longer be at cost based pricing. CLECs should be allowed to
17 obtain a download of the ILECs' databases (at TELRIC rates) when using UNE-L in
18 order to ensure that there is consistency of information and that callers are provided with
19 the fully functional features that they require.

20 Both vendors and the ILEC need to examine the increase in data loads that they
21 will have to handle to determine whether existing processes are sufficient. In addition,
22 current processes for error checking and reject handling must be followed or new

²⁸ MCI, as the acquiring carrier loads the data internally and at its LIDB/CNAM vendor, VeriSign.

1 processes developed – issues that were never addressed with UNE-P because the ILEC
2 systems were used.

3 **Q. DOES MCI BELIEVE THAT ALL OF THESE CUSTOMER-IMPACTING**
4 **ISSUES WOULD HAVE A SIGNIFICANT EFFECT ON CUSTOMERS IN**
5 **A UNE-L WORLD?**

6
7 A. Yes. All of these customer record/information changes must take place as
8 efficiently and seamlessly as possible in a UNE-L environment. It is critical that these
9 various orders and transfers of information be coordinated to the greatest extent possible
10 throughout the various systems and processes of each provider, and between providers.
11 A lack of coordination could result in errors in the customer records, the loss of customer
12 data and loss of dial tone.

13 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

14 ~~A. In conducting this proceeding, the Commission must carefully examine the~~
15 details related to a company's provisioning of UNE-L service to mass market customers
16 before determining that a company is a trigger company. The Commission must address
17 the operational issues raised in this testimony to determine whether the alleged triggering
18 companies have overcome these issues related to connecting the ILEC's loops to the
19 CLEC's switching facilities to determine if they are actively serving the mass market
20 economically and efficiently. The Commission must also determine whether a CLEC
21 currently providing service via unbundled loops will be able to continue providing such
22 service if all competitive carriers are forced to use unbundled loops without first
23 resolving the issues raised in this testimony.

24 It is critical to the success of the dynamic, competitive local exchange market that
25 all of the industry players participate in the resolution of these customer-impacting

1 operational issues. The goal of this proceeding must be to ensure that the correct
2 processes and systems are in place to allow consumers to move quickly and seamlessly
3 among carriers in a dynamic competitive market that includes UNE-L as a service
4 delivery method. Only then will we achieve the goal of making sure that consumers have
5 real viable service and provider choices available to them.

6 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

7 **A. Yes, it does.**

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)**

Docket No. I-00030099

ATTACHMENT MC-1

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

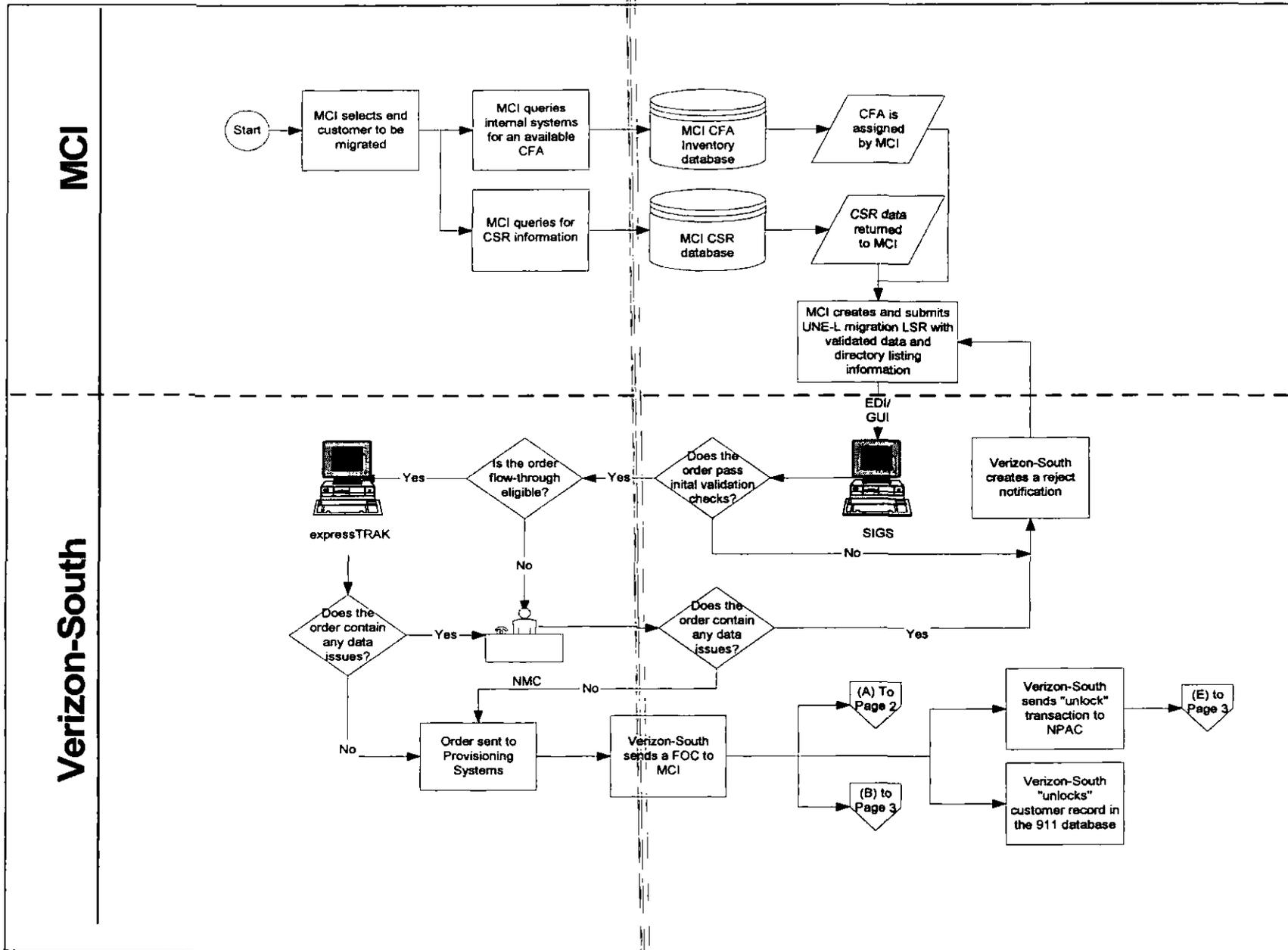
MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

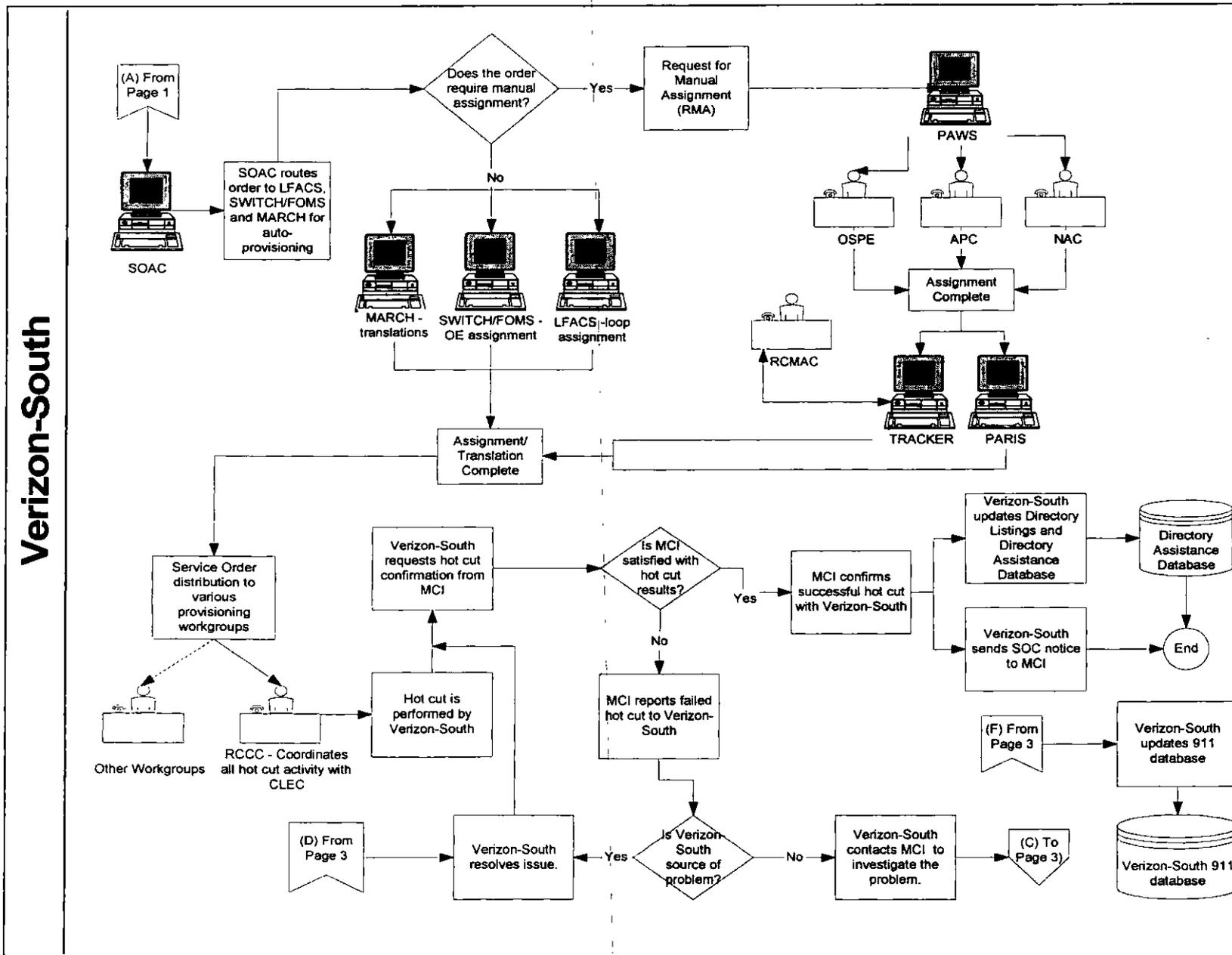
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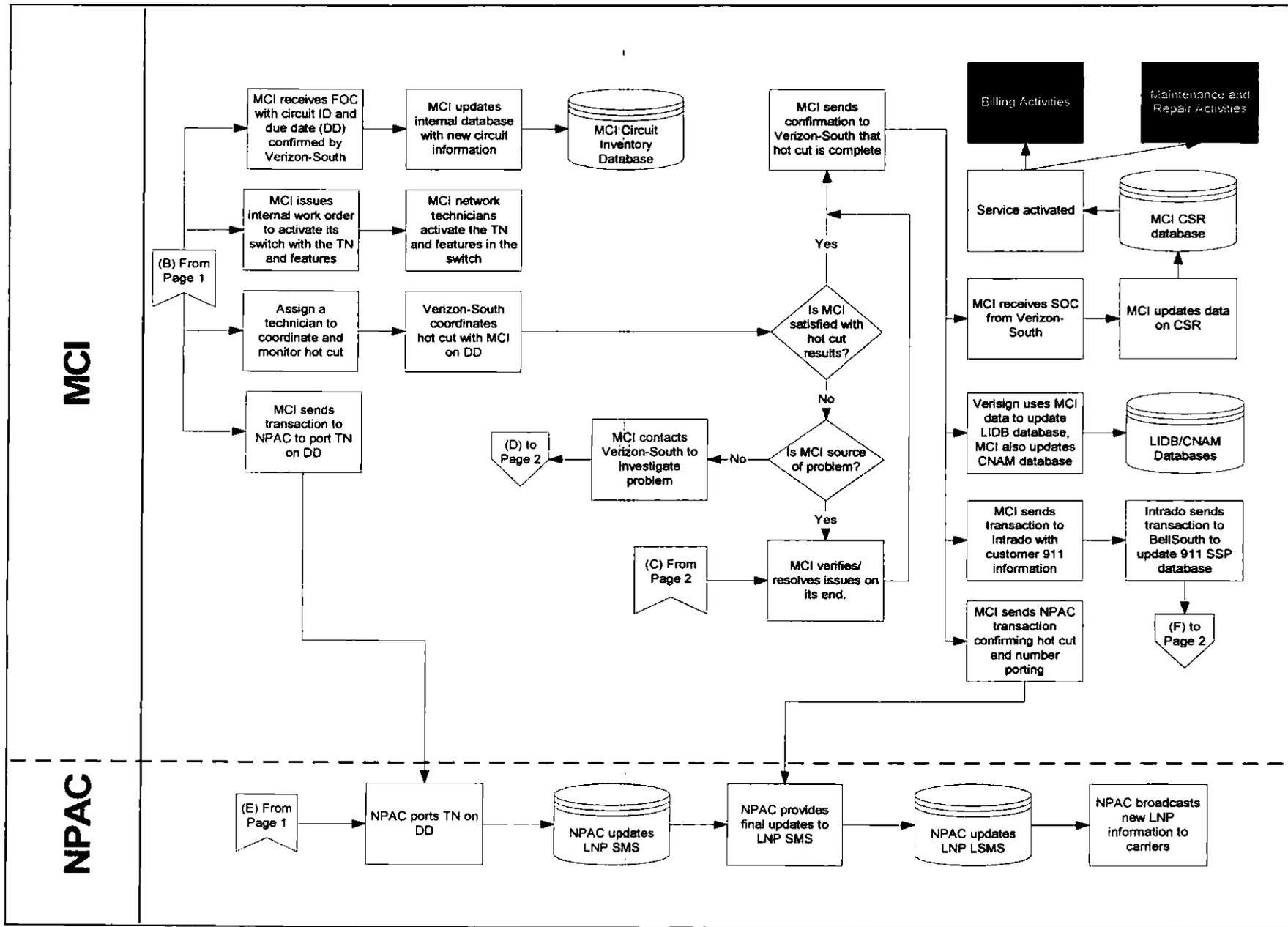
MCI UNE-P to MCI UNE-L Conversion (Individual Customer)



MCI UNE-P to MCI UNE-L Conversion (Individual Customer)



MCI UNE-P to MCI UNE-L Conversion (Individual Customer)



Assumptions:

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Challenges:

(The following challenges are based on the UNE-L Operational Analysis: Activity Two reports.)

- 1) Challenges associated with manual handling throughout ordering and provisioning processes.
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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)**

Docket No. I-00030099

ATTACHMENT MC-2

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

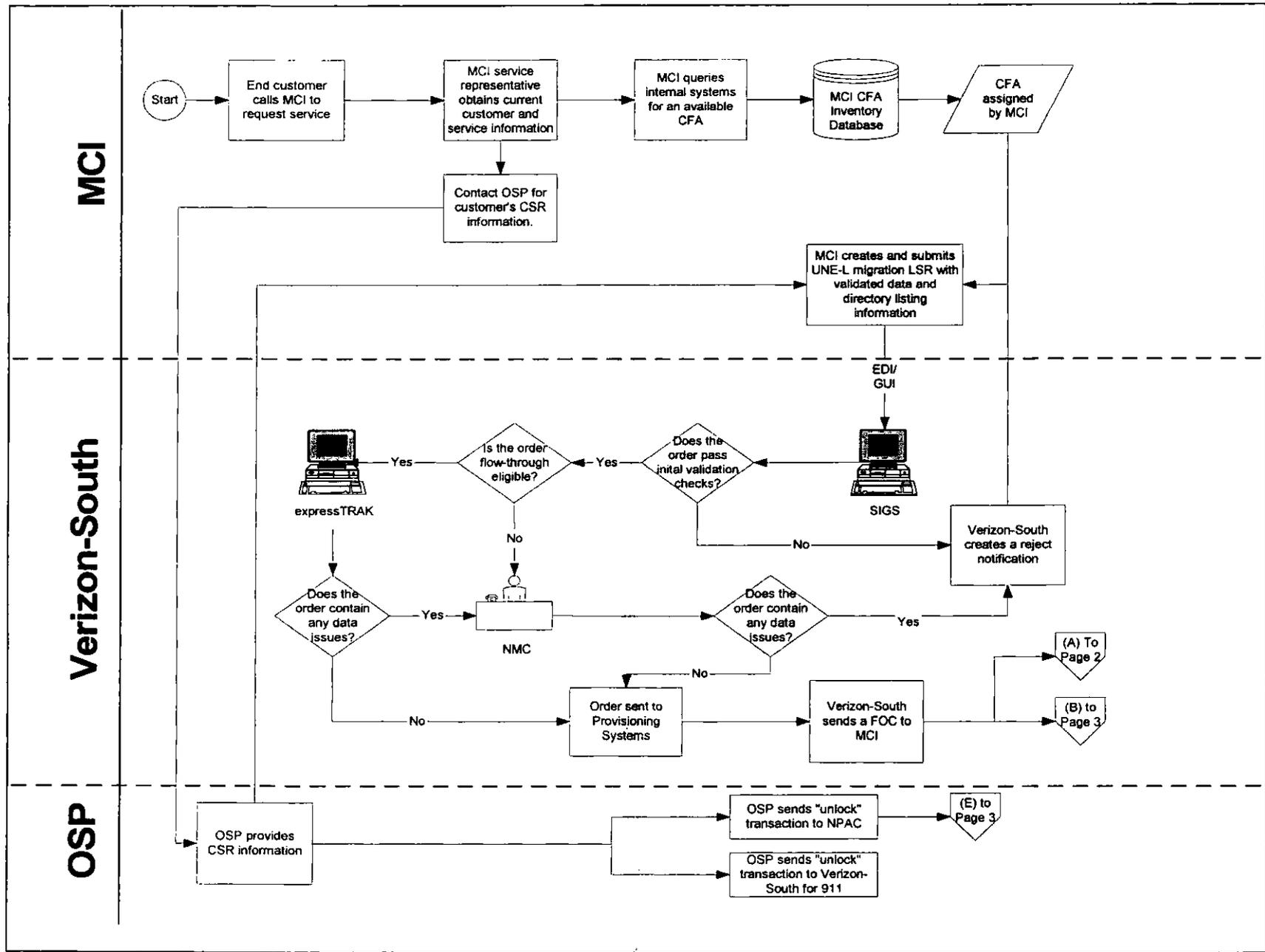
MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

2004 JAN 28 PM 3:06

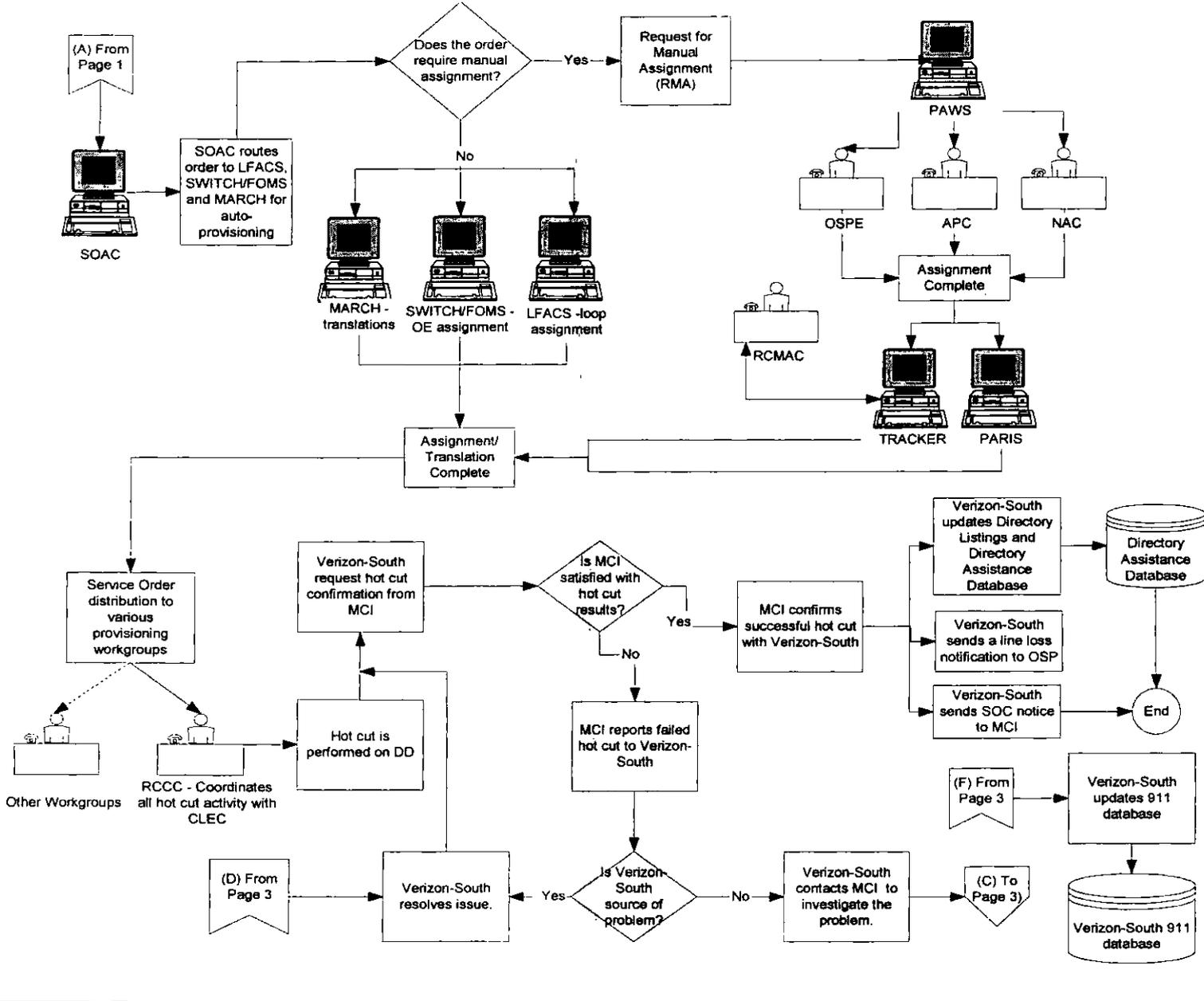
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CLEC UNE-P to MCI UNE-L Migration

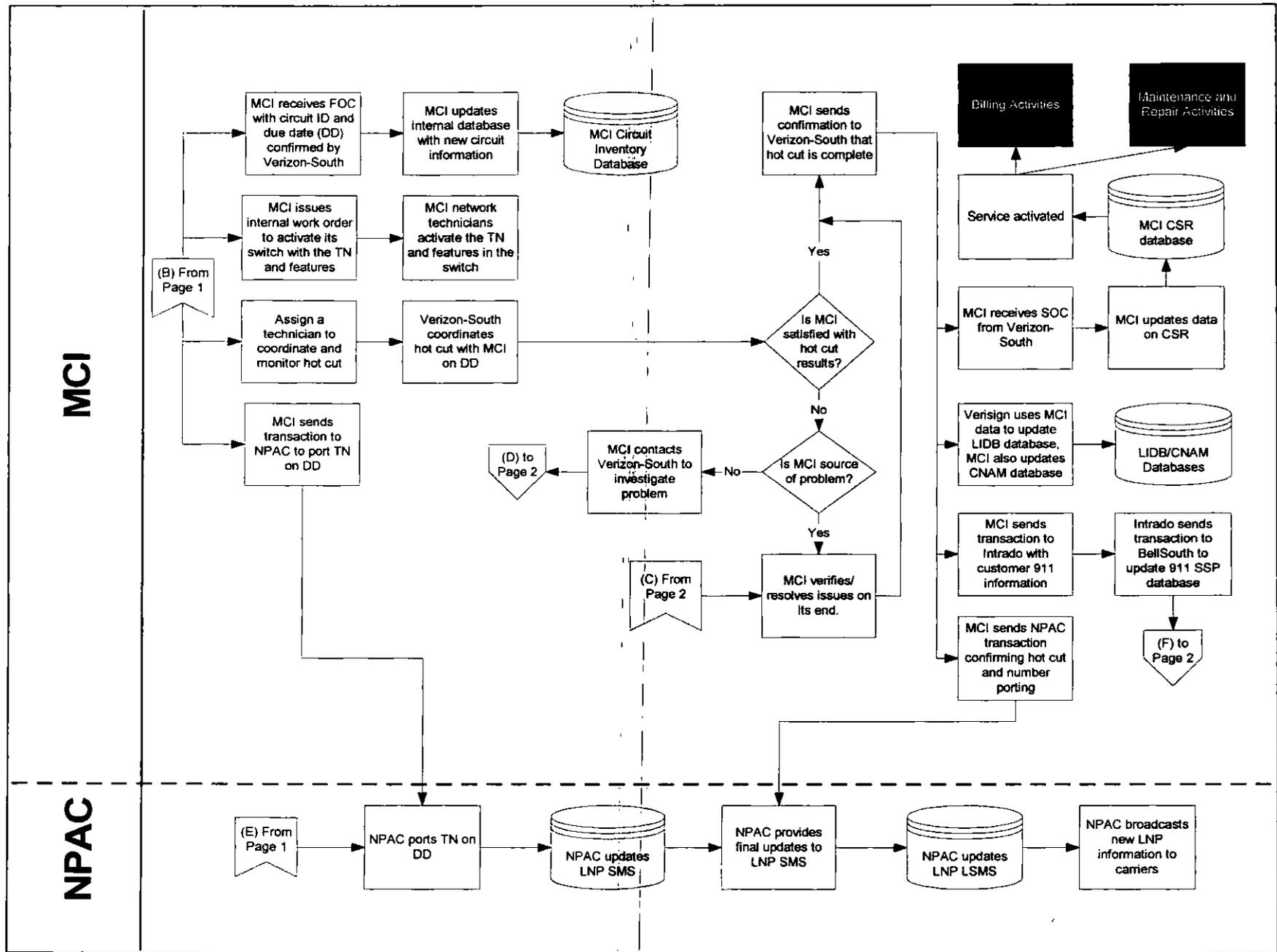


CLEC UNE-P to MCI UNE-L Migration

Verizon-South



CLEC UNE-P to MCI UNE-L Migration



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Unbundle Network Elements)**

Docket No. I-00030099

ATTACHMENT MC-3

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

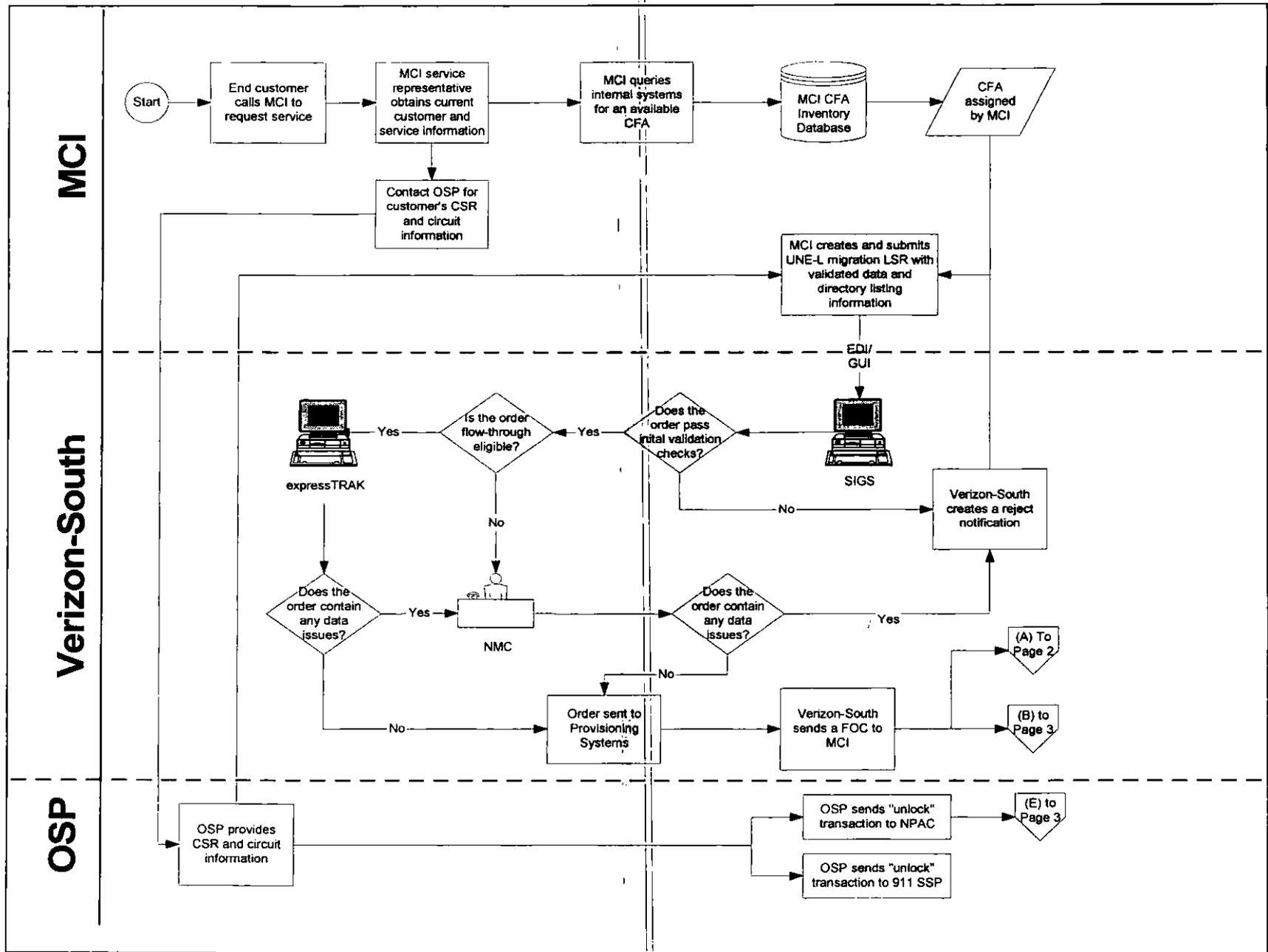
MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

2004 JAN 28 PM 3:06

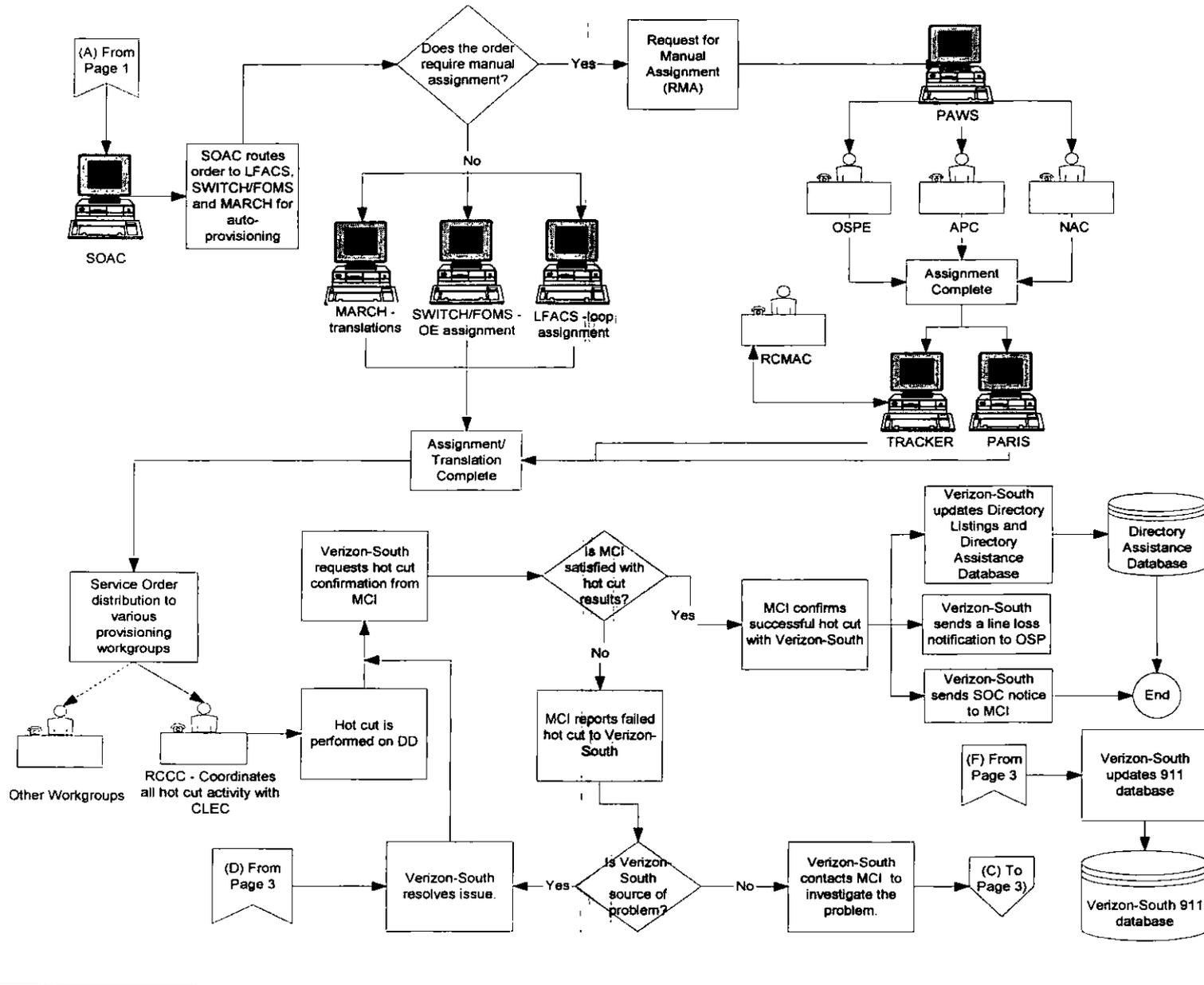
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CLEC UNE-L to MCI UNE-L Migration (Verizon-South)

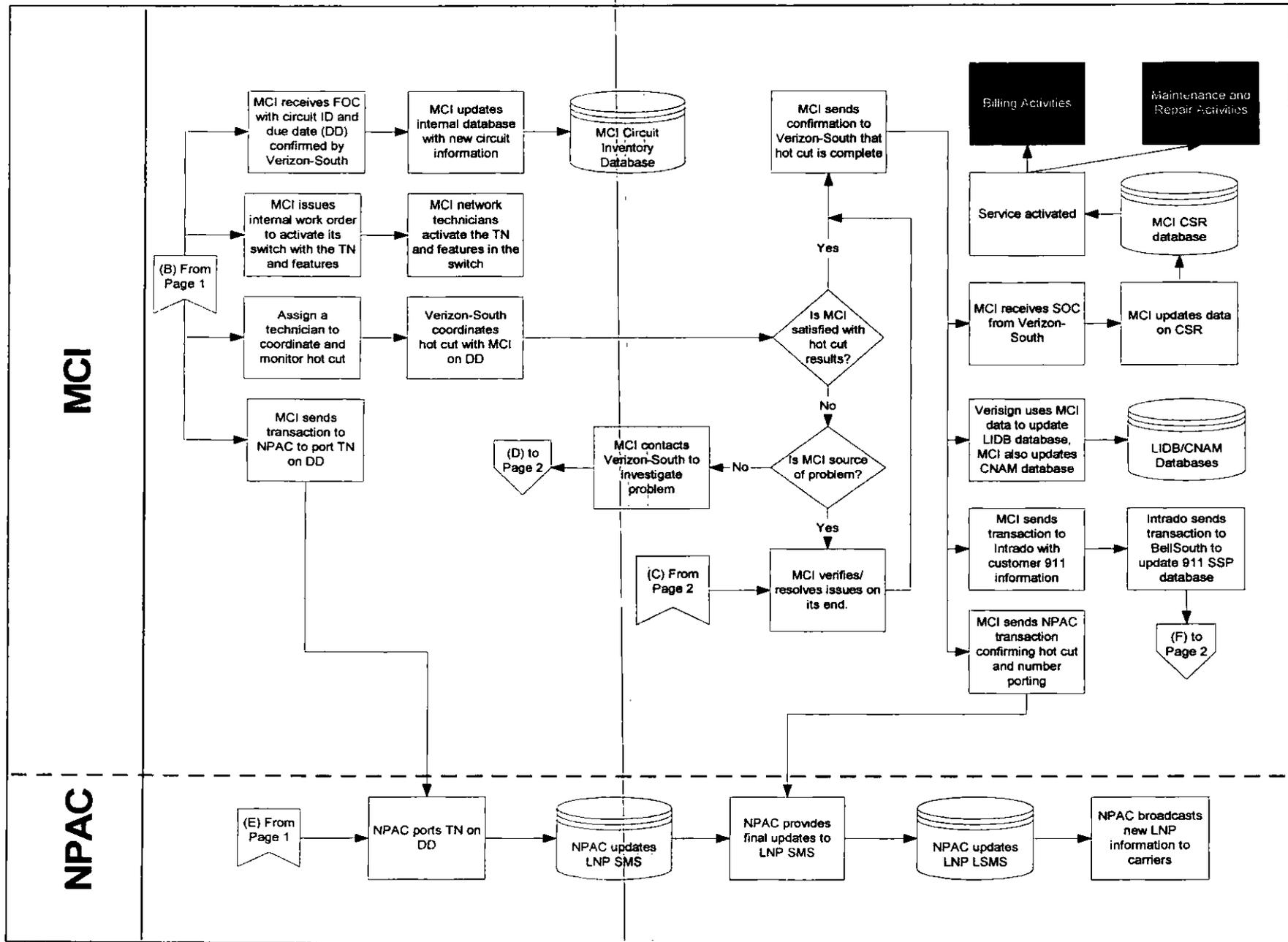


CLEC UNE-L to MCI UNE-L Migration (Verizon-South)

Verizon-South



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Unbundle Network Elements)**

ATTACHMENT MC-4

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

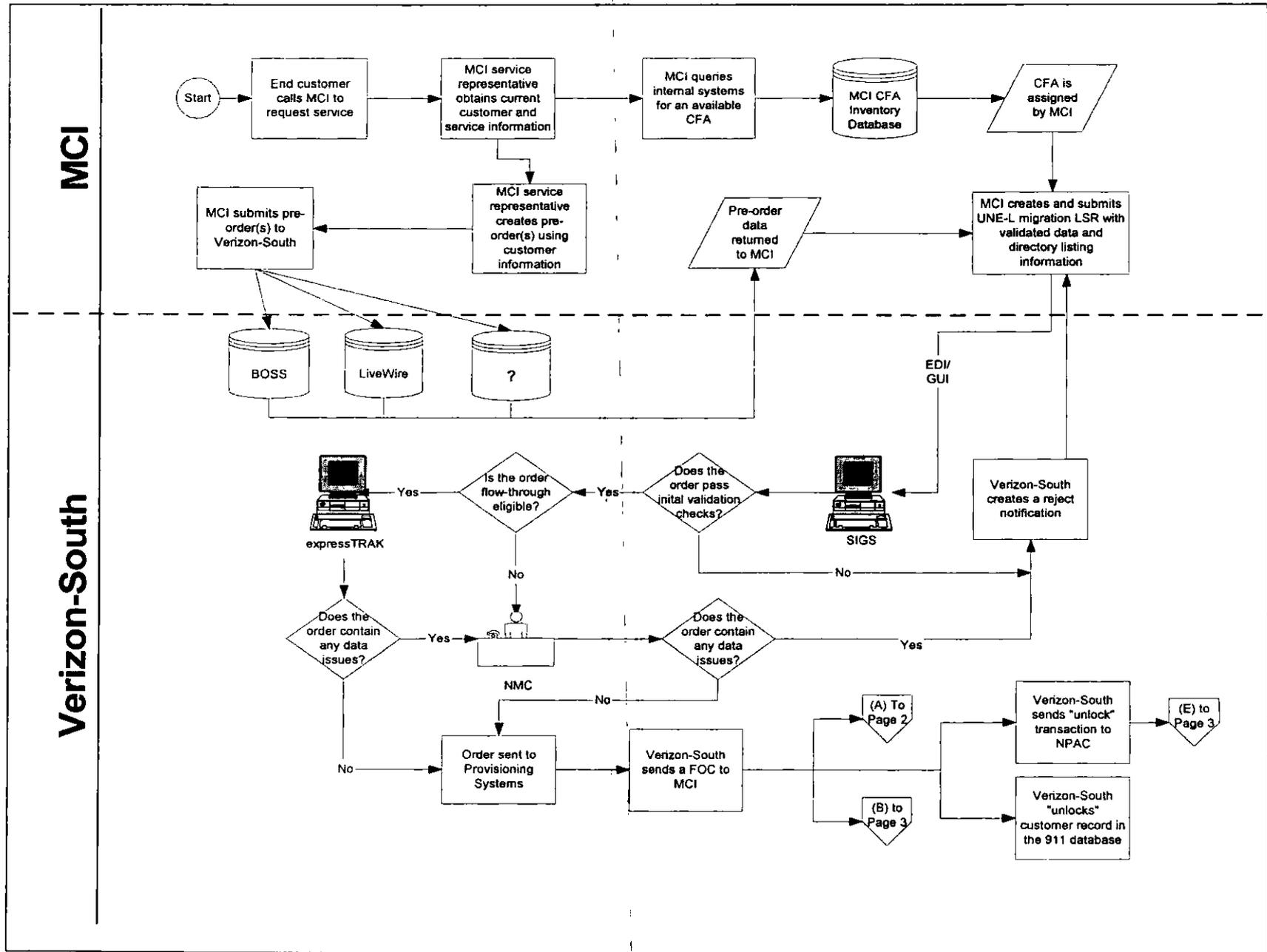
MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

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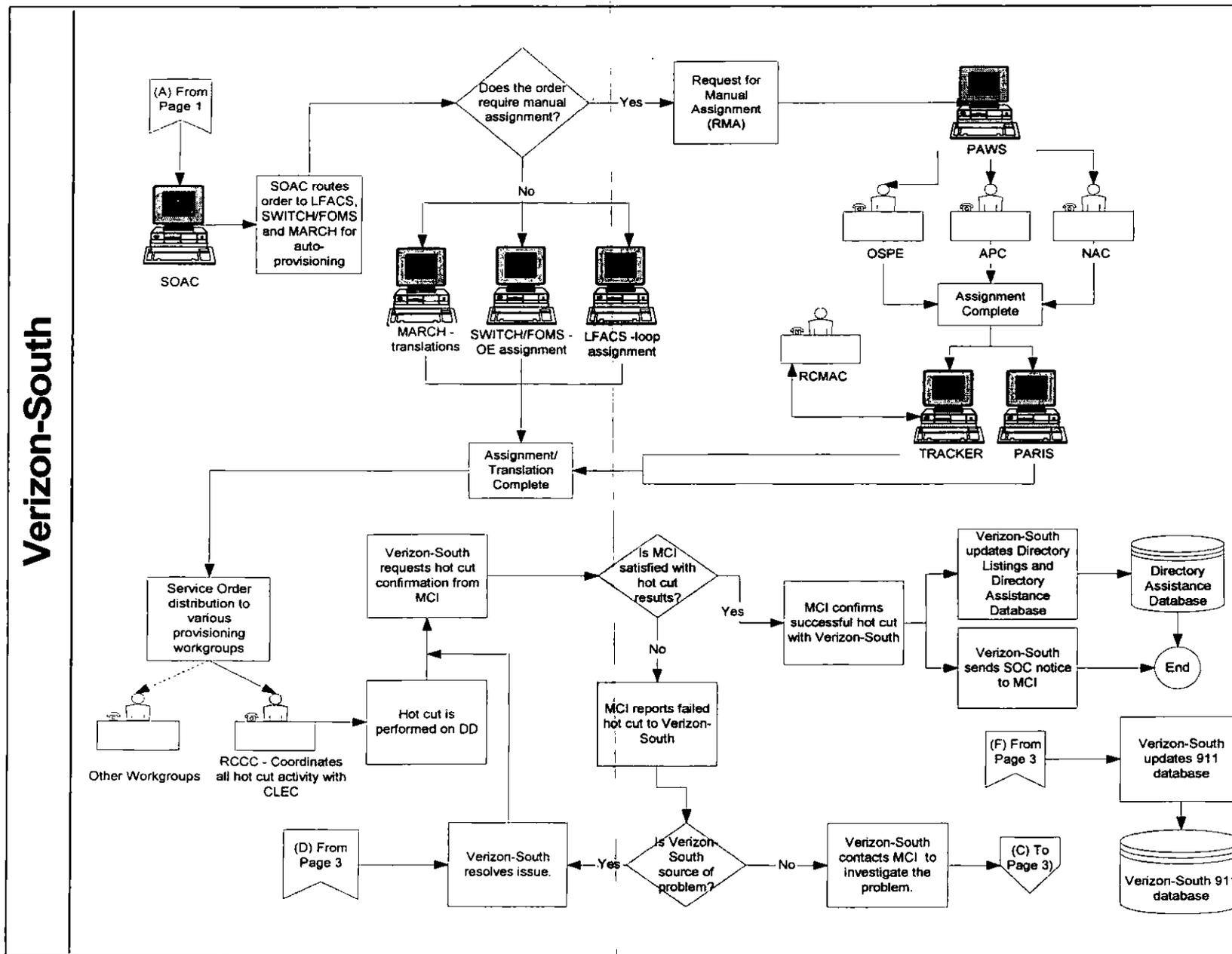
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Verizon-South Retail DSL-Capable Loop to MCI DSL-Capable Loop Migration

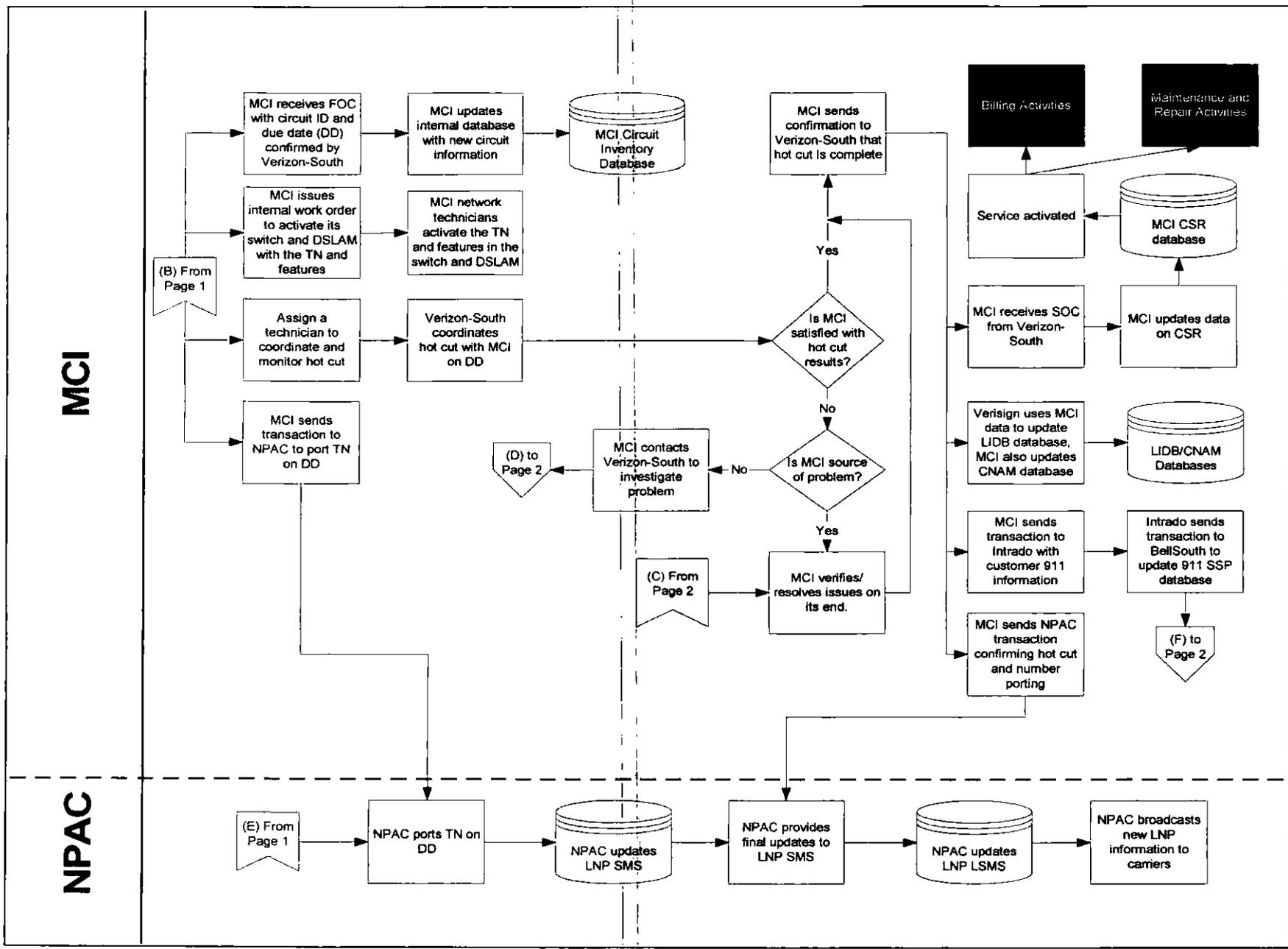


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Verizon-South



Verizon-South Retail DSL-Capable Loop to MCI DSL-Capable Loop Migration



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ATTACHMENT MC-5

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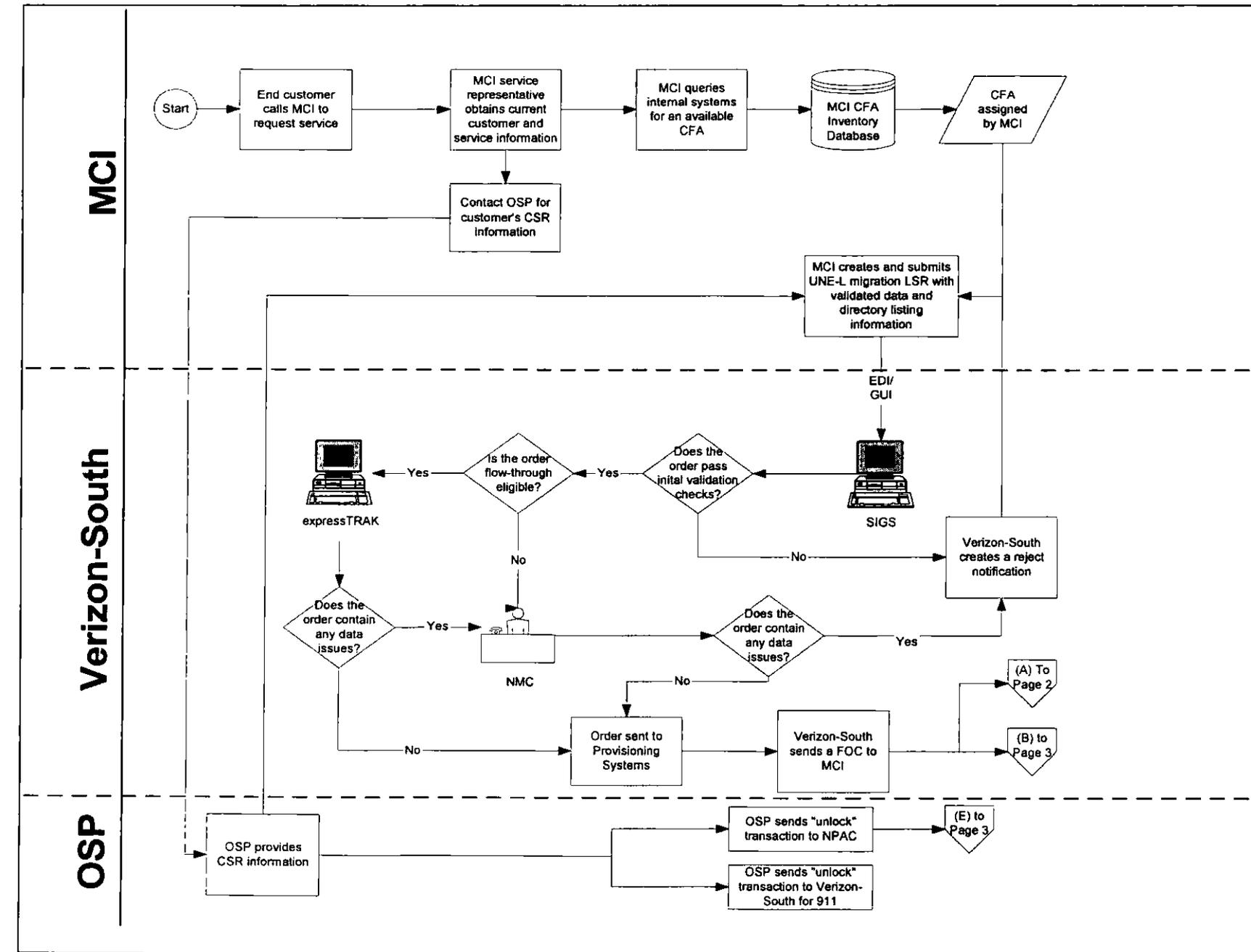
MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

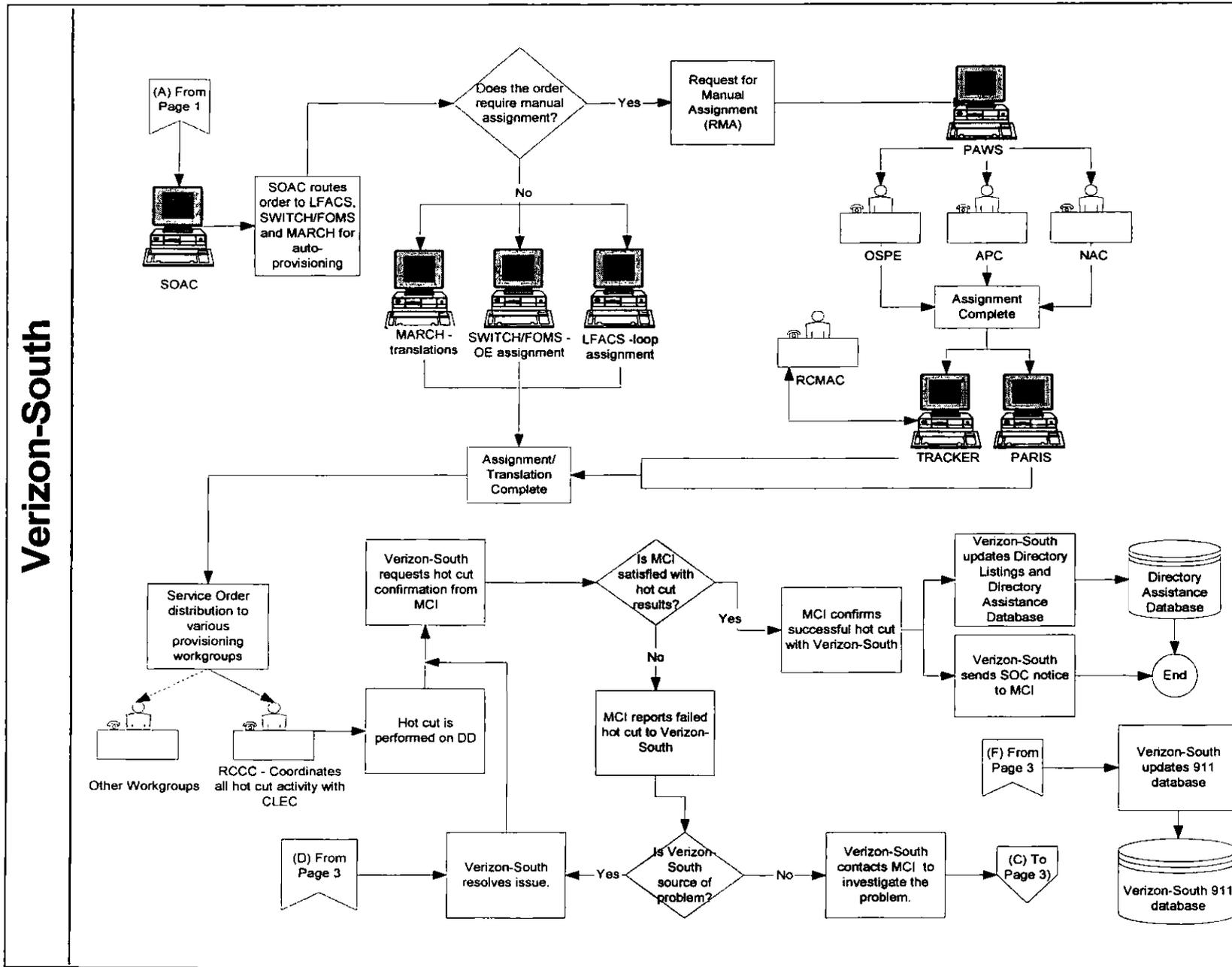
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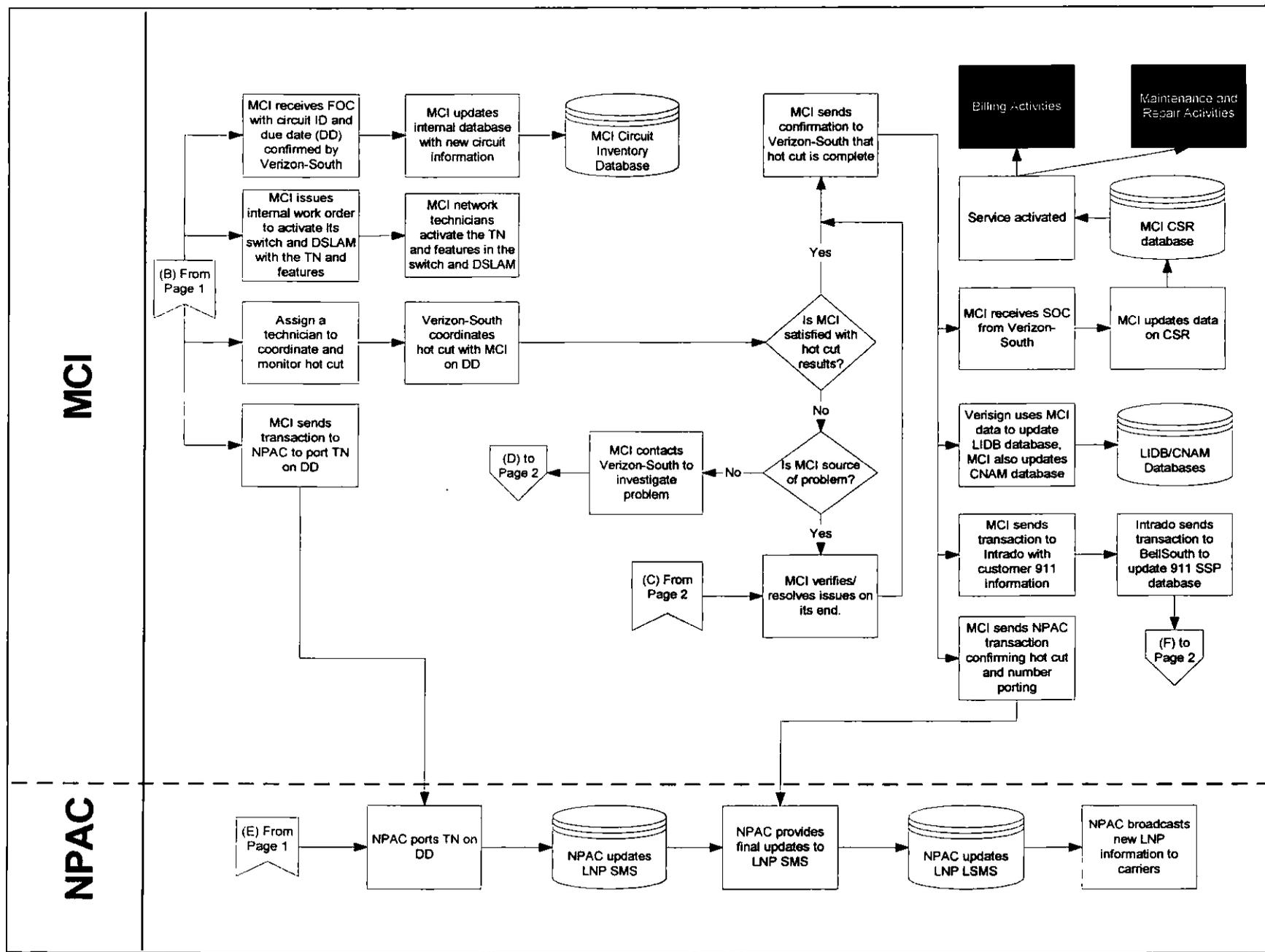
Line-Splitting UNE-P CLEC to MCI UNE-L (Voice and Data) Migration



Line-Splitting UNE-P CLEC to MCI UNE-L (Voice and Data) Migration



Line-Splitting UNE-P CLEC to MCI UNE-L (Voice and Data) Migration



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- 12) Challenges associated with number unlocking procedures for 911 and LNP.

Glossary:

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CFA: Connecting Facility Assignment
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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Investigation into the Obligations of)
Incumbent Local Exchange Carriers to) Docket No. I-00030099
Unbundle Network Elements)**

ATTACHMENT MC-6

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

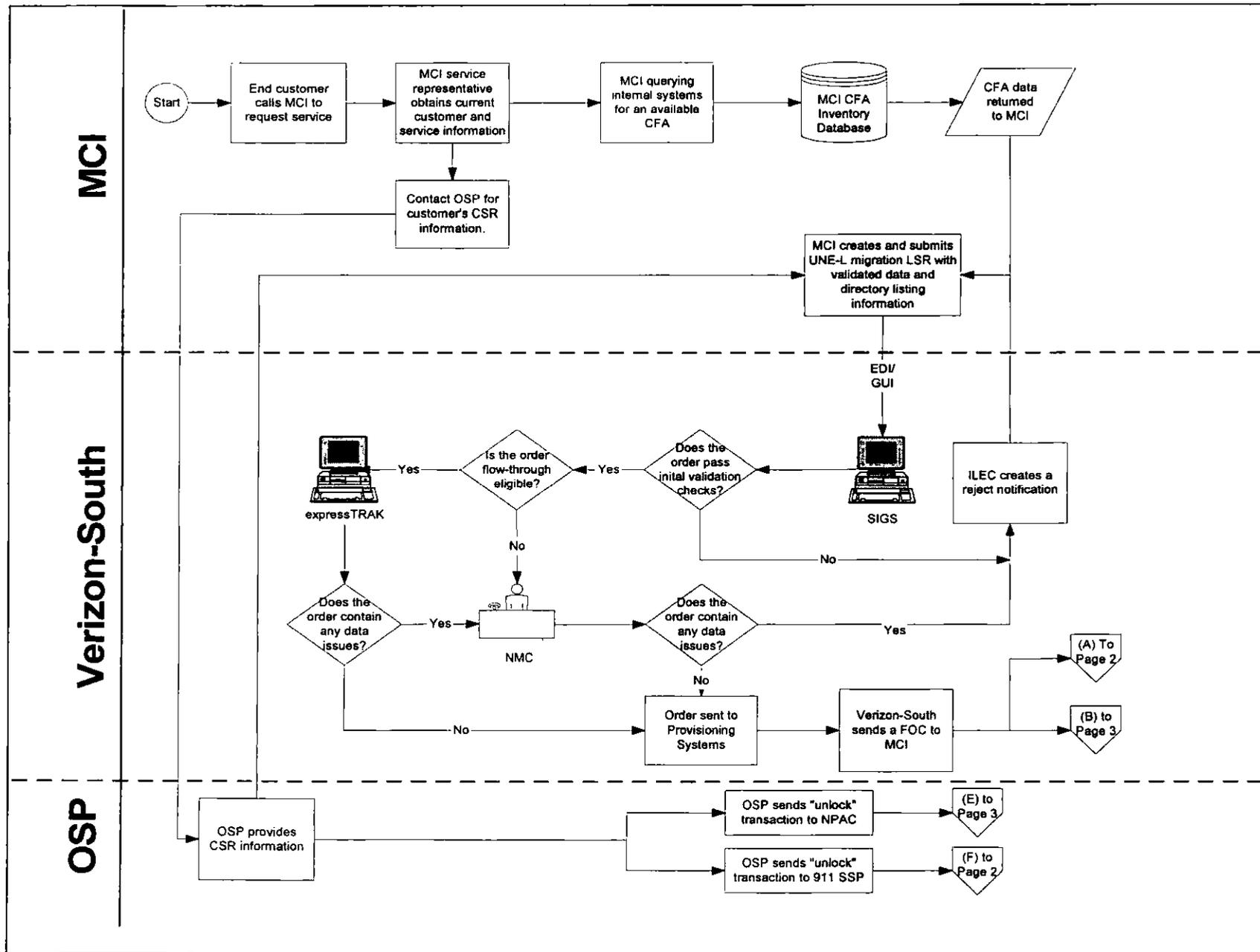
MCI WORLDCOM NETWORK SERVICES, INC.

SECRETARY'S BUREAU

2004 JAN 28 PM 3:07

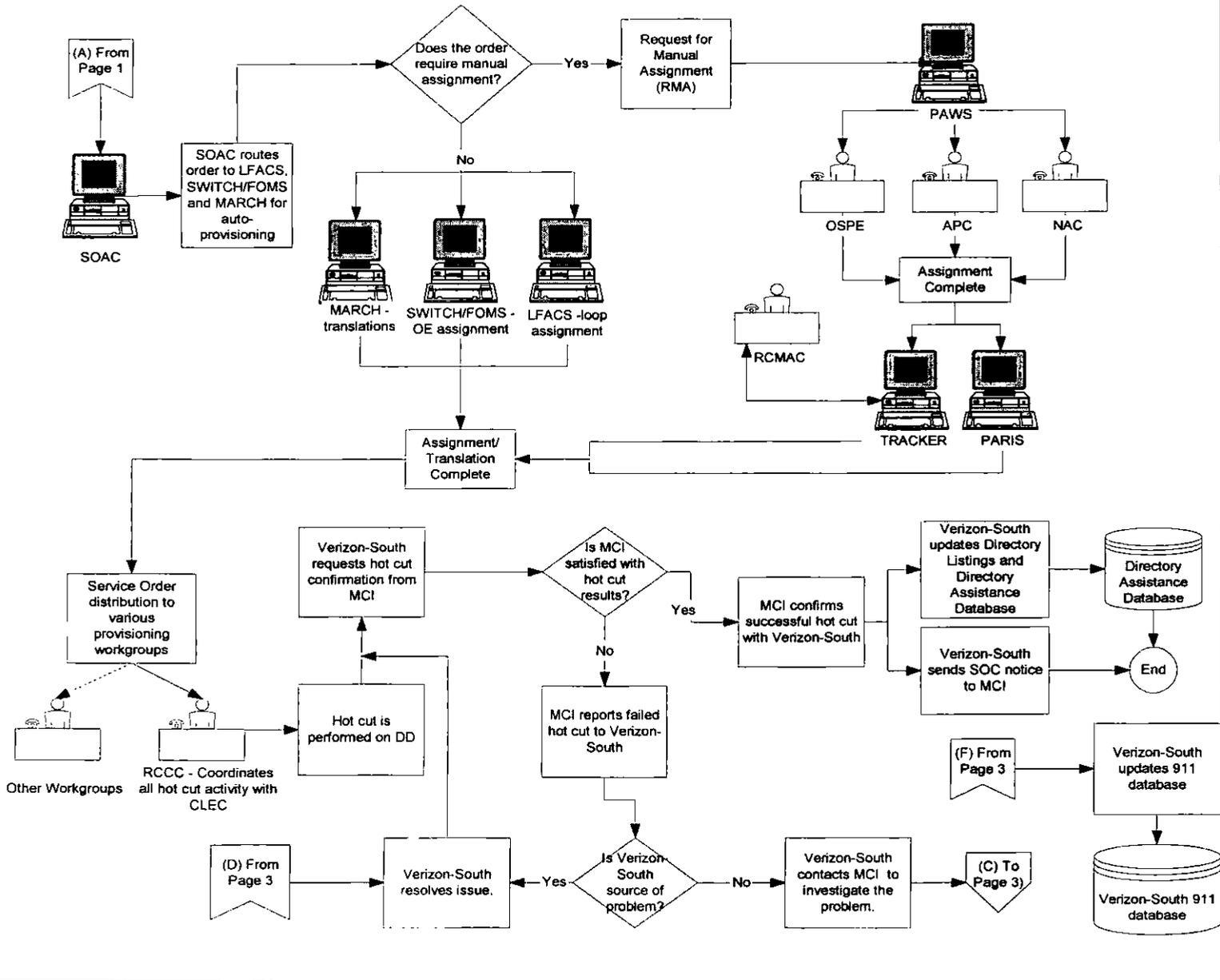
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CLEC DSL-Capable Loop to MCI DSL-Capable Loop

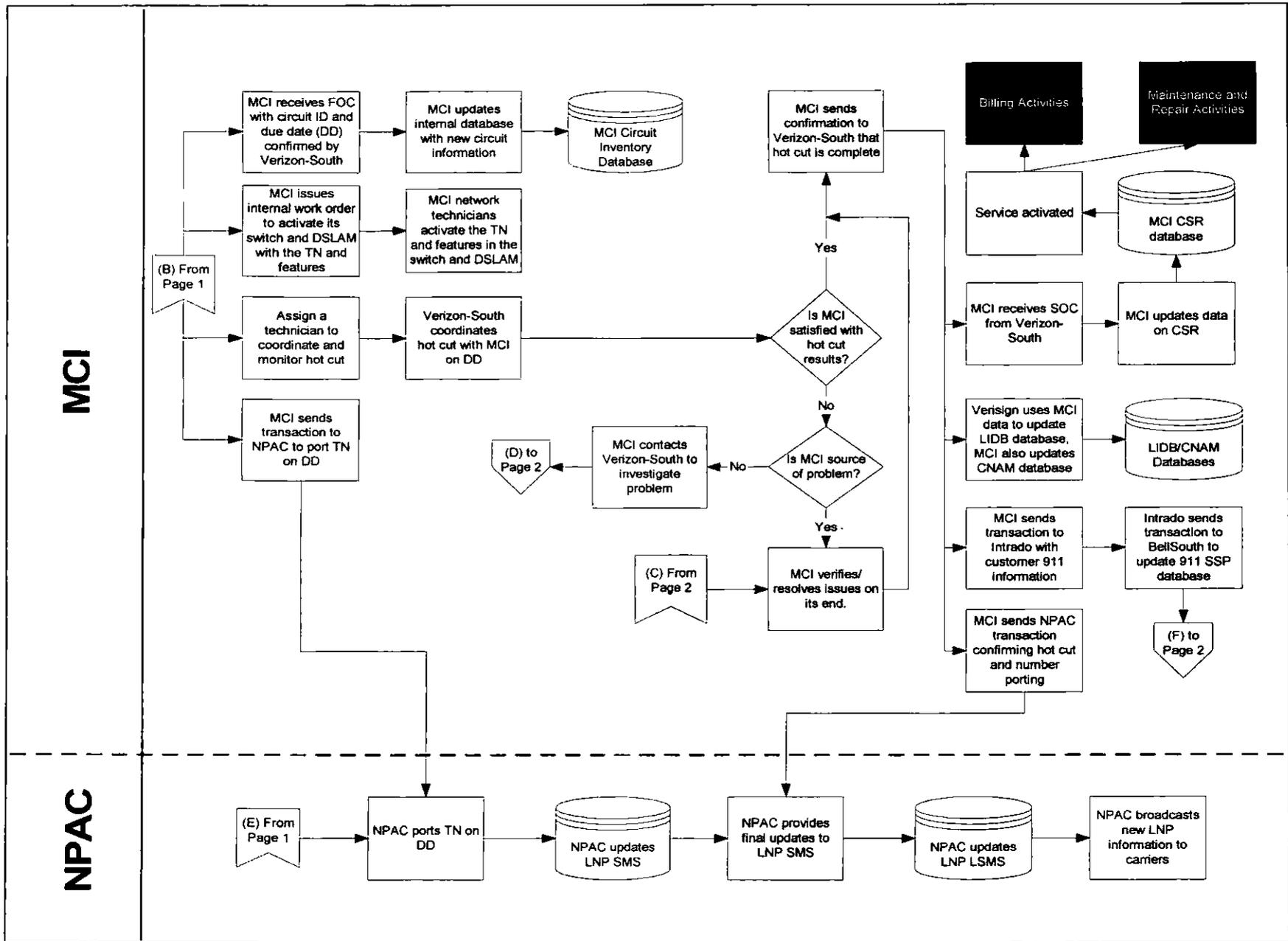


CLEC DSL-Capable Loop to MCI DSL-Capable Loop

Verizon-South



CLEC DSL-Capable Loop to MCI DSL-Capable Loop



Assumptions:

- 1) All customers call into MCI service center to order service.
- 2) All customers port their numbers.
- 3) MCI switches provide all MCI UNE-L customer features.
- 4) Customers are not moving to new locations.
- 5) Verizon-South is the 911 SSP. Verizon-South maintains the 911 database and the tandem router from the Verizon-South Central Office to the PSAP. MCI takes appropriate action to account for regional or local 911 requirements.
- 6) MCI will maintain its own LIDB and CNAM databases.
- 7) Scenarios are represented as "ideal" (not necessarily zero-defect): Each party has sufficient resources; each party sufficiently manages its responsibilities; no "one-off" circumstances are involved.
- 8) When translations are performed, Verizon-South sets the AIN trigger.
- 9) As part of MCI's agreement with Verizon-South, line loss reports will only be generated for loss of lines to other carriers. If MCI is converting customers from one UNE type to another, line loss reports will not be generated.
- 10) Provisioning flows are based in part on information obtained from the KPMG Consulting Verizon-Virginia OSS Report.
- 11) Only processes and systems that directly impact MCI or Verizon-South are outlined.
- 12) For migrations involving DSL, voice and data are pre-wired together in MCI's collocation (DSLAM and Splitter), and inventoried and assigned as one assembly with one CFA.

Challenges:

(The following challenges are based on the UNE-L Operational Analysis: Activity Two reports.)

- 1) Challenges associated with manual handling throughout ordering and provisioning processes.
- 2) Challenges associated with high steady-state provisioning volumes and the impact on systems and processes.
- 3) Challenges associated with facility availability.
- 4) Challenges associated with facility re-use.
- 5) Challenges associated with expanded MCI Provisioning Group responsibilities for UNE-L service.
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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Investigation into the Obligations of)
Incumbent Local Exchange Carriers to)
Unbundle Network Elements)**

Docket No. I-00030099

ATTACHMENT MC-7

DIRECT TESTIMONY

OF

MINDY CHAPMAN

ON BEHALF OF

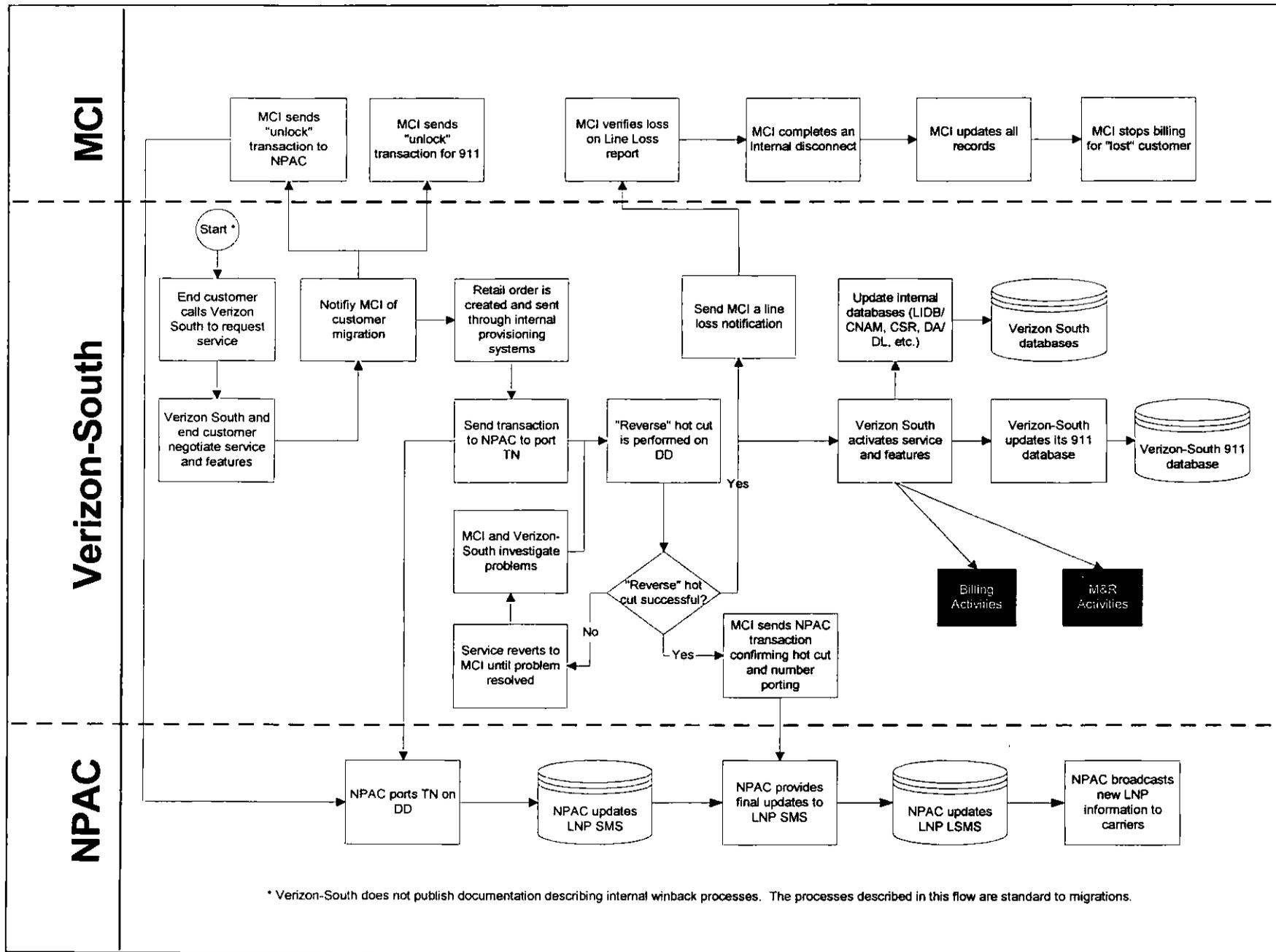
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Winback - MCI UNE-L to Verizon-South Retail Migration



* Verizon-South does not publish documentation describing internal winback processes. The processes described in this flow are standard to migrations.

Assumptions:

- 1) All customers call into MCI service center to order service.
- 2) All customers port their numbers.
- 3) MCI switches provide all MCI UNE-L customer features.
- 4) Customers are not moving to new locations.
- 5) Verizon-South is the 911 SSP. Verizon-South maintains the 911 database and the tandem router from the Verizon-South Central Office to the PSAP. MCI takes appropriate action to account for regional or local 911 requirements.
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CAVALIER X-EX 3

1-00030099

Hbg TK

1/27/04

**RESPONSES OF AT&T COMMUNICATIONS OF PENNSYLVANIA, LLC
TO PRELIMINARY DISCOVERY REQUESTS
PaPUC Docket No. I-00030099**

Transport

6. Identify and describe any arrangements into which you have entered with another entity for such other entity's use of transport facilities in Pennsylvania that you own or control, on a lease or other basis.

Response:

None.

DOCUMENT

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JAN 30 2004

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CAVALIER X-EX2

1-0003099 146g TX 1/27/04

**RESPONSES OF AT&T COMMUNICATIONS OF PENNSYLVANIA, LLC
TO VERIZON'S THIRD SET OF INTERROGATORIES
PaPUC Docket No. I-00030099**

VZ II-31 Provide all documents that discuss or describe whether you are willing to provide dark fiber dedicated transport in Pennsylvania to other carriers.

Response:

AT&T previously objected to this interrogatory.
Subject to AT&T's general and specific objections, see AT&T's response to PaPUC, Preliminary Discovery Requests, Transport Question 6, and the Direct Testimony of Robert Kirchberger and E. Christopher Nurse, at 118-120.

DOCKETED
JAN 30 2004

DOCUMENT

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**RESPONSES OF AT&T COMMUNICATIONS OF PENNSYLVANIA, LLC
 TO PRELIMINARY DISCOVERY REQUESTS
 PaPUC Docket No. I-00030099**

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- 6. Identify and describe any arrangements into which you have entered with another entity for such other entity's use of transport facilities in Pennsylvania that you own or control, on a lease or other basis.

Response:

None.

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JAN 30 2004

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