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LIST OF ATTACHMENTS

Attachment AA/SM-1:	Curriculum Vitae - Dr. August H. Ankum
Attachment AA/SM-2:	Curriculum Vitae - Sidney L. Morrison
Attachment AA/SM-3:	Recommended Rates
Attachment AA/SM-4:	Revised studies (Confidential)
Attachment AA/SM-5:	ATT's Response to Conv-ATT-1

1 **I. INTRODUCTION**

2 **A. QUALIFICATIONS OF PANEL MEMBERS**

3 **Q. PLEASE STATE THE NAMES OF THE PANEL MEMBERS**
4 **SUPPORTING THIS TESTIMONY.**

5 A. The panel members supporting this testimony are Dr. August H. Ankum and Mr.
6 Sidney L. Morrison.

7

8 **1. *Qualifications of August H. Ankum***

9 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**
10 **ADDRESS.**

11 A. My name is Dr. August H. Ankum. I am a Senior Vice President at QSI
12 Consulting, Inc., a consulting firm specializing in economics and
13 telecommunications issues. My business address is 1261 North Paulina, Suite #8,
14 Chicago, IL 60622.

15

16 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
17 **WORK EXPERIENCE.**

18 A. I received a Ph.D. in Economics from the University of Texas at Austin in 1992,
19 an M.A. in Economics from the University of Texas at Austin in 1987, and a B.A.
20 in Economics from Quincy College, Illinois, in 1982.

21

**Responsive Panel Testimony of August H. Ankum and Sidney Morrison
on Behalf of Conversent Communications of New York, LLC Case No. 02-C-1425**

1 My professional background covers work experiences in private industry and at
2 state regulatory agencies. As a consultant, I have worked with large companies,
3 such as AT&T, AT&T Wireless and MCI WorldCom (“MCIW”), as well as with
4 smaller carriers, including a variety of competitive local exchange carriers
5 (“CLECs”) and wireless carriers. I have worked on many of the arbitration
6 proceedings between new entrants and incumbent local exchange carriers
7 (“ILECs”). Specifically, I have been involved in arbitrations between new
8 entrants and NYNEX, Bell Atlantic, U S WEST, BellSouth, Ameritech, VZ, GTE
9 and Puerto Rico Telephone. Prior to practicing as a telecommunications
10 consultant, I worked for MCI Telecommunications Corporation (“MCI”) as a
11 senior economist. At MCI, I provided expert witness testimony and conducted
12 economic analyses for internal purposes. Before I joined MCI in early 1995, I
13 worked for Teleport Communications Group, Inc. (“TCG”), as a Manager in the
14 Regulatory and External Affairs Division. In this capacity, I testified on behalf of
15 TCG in proceedings concerning local exchange competition issues, such as
16 Ameritech’s Customer First proceeding in Illinois. From 1986 until early 1994, I
17 was employed as an economist by the Public Utility Commission of Texas
18 (“PUCT”) where I worked on a variety of electric power and telecommunications
19 issues. During my last year at the PUCT, I held the position of chief economist.
20 Prior to joining the PUCT, I taught undergraduate courses in economics as an
21 Assistant Instructor at the University of Texas from 1984 to 1986.

22

1 Of particular importance to the current proceeding is my extensive background in
2 and experience with VZ's cost models. A list of proceedings in which I have filed
3 testimony is attached hereto as Attachment AA/SM-1.

4

5 **2. *Qualifications of Sidney L. Morrison***

6 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**
7 **ADDRESS.**

8 A. My name is Sidney L Morrison. My business address is 415 Planters Ridge
9 Drive, Sunset Beach, North Carolina 28468.

10

11 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.**

12 A. I have over 30 years of experience in the telecommunications industry. I began
13 my telecommunications career in 1966 in Charlotte, North Carolina as a cable
14 helper for Southern Bell Telephone and Telegraph. Southern Bell was an
15 incumbent local exchange carrier managing numerous exchanges throughout
16 North Carolina. My duties involved splicing underground, buried and aerial
17 cable. I also worked as a switching technician and special services technician.

18

19 Beginning in August of 1970, I transferred to Mountain Bell in Denver, Colorado
20 as a central office technician. In 1972, I was promoted to supervise main
21 distributing frame operations. My duties included supervising the installation of
22 POTS, Special Services, Central Office area cuts, main distribution frame

1 replacements and many other projects. In 1980 and 1981, I performed time and
2 motion studies for service provisioning on approximately 75 of Mountain Bell's
3 MDF operations. These time and motion studies included components for jumper
4 running and administrative activities on each of these frames. From 1983 until
5 1986, I was the switching control center and main distributing frame subject
6 matter expert for U S WEST. In this position, I was responsible for staff level
7 support for service provisioning and maintenance including the development of
8 enhancements for operational support systems (OSS) supporting these activities.
9 From 1986 until 1993, I was responsible for the U S WEST AMA ("Automatic
10 Message Accounting") teleprocessing organization for the fourteen state
11 U S WEST region.

12
13 In 1993, I retired from U S WEST and began contract engineering work and
14 consulting. In 1995 I took an assignment in Kuala Lumpur, Malaysia as a
15 contractor/consultant with a team of specialists to build a CLEC network
16 consisting of a Global System for Mobil (GSM) communications services, fixed
17 network services, cable television services and data services integrated into a
18 common transport backbone.

19
20 I had a number of responsibilities in Malaysia, the most important of which was
21 organizing and implementing a field operations group (FOG) that was responsible
22 for the installation and maintenance of all fixed network and cable television

1 services. My responsibilities included the planning, organizing, staffing and
2 implementation of the FOG, including an installation and maintenance group,
3 assignment center, dispatch center, test center and a repair center. I also had the
4 responsibility of developing business processes and OSS system requirements for
5 provisioning and maintenance supporting the FOG.

6
7 After launching the FOG, I managed the day-to-day operations of the department,
8 ultimately refining the organization into an ISO 9002¹ qualified organization. In
9 January 1997, the Binariang Maxis FOG became the first certified ISO 9002
10 service organization in Southeast Asia.

11
12 I returned from Malaysia in June of 1997 and worked for approximately two years
13 as a contract outside plant/central office equipment (OSP/COE) engineer, and
14 trained new engineers for U S WEST collocation efforts.

15
16 In May 1999, I accepted a contract in Switzerland building a new CLEC under the
17 market name of diAx telecommunications. My responsibilities involved project
18 management to establish OSS supporting all wireless, wireline, and data services
19 offered by diAx. I also provided consulting services developing business
20 processes supporting the establishment of the diAx Internet Provider Operations
21 Center (IPOC) and diAx data services offerings. I established system

¹ International Organization Standards, ISO 9002 is the standard set of requirements for an organization whose business processes range from, production, installation and servicing.

1 requirements based on IPOC business processes for fault management systems,
2 provisioning systems, capacity inventory systems, customer service inventory
3 systems and workflow engines controlling overall maintenance and provisioning
4 processes.

5
6 In December 2000, I returned from Switzerland and began working for QSI
7 Consulting Inc. as a Senior Consultant. I provide telecommunications companies
8 with engineering advice and counsel for direct network planning, management
9 and cost-of-service support. My specific areas of expertise include network
10 engineering, facility planning, project management, business system applications,
11 incremental cost research and issues related to the provision of unbundled
12 network elements.

13
14 In short, I have more than 30 years of experience with exactly the work activities
15 that are at issue in the current proceeding. Likewise, I have managed hundreds of
16 individuals doing this same work and labored to create processes and support
17 systems aimed at doing it better, faster and more cost effectively. Indeed, as
18 described above, I have created operational support systems and business
19 processes from scratch and worked continuously with those organizations until
20 they were certified under ISO Standards. Finally, I have conducted numerous
21 time and motion studies within U S WEST, now Qwest, which is an organization
22 highly similar to Verizon for many of the same activities at issue here.

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A more comprehensive description of my work experience and educational background is included as Attachment AA/SM-2.

Q. CAN YOU BRIEFLY SUMMARIZE QSI'S EXPERIENCE IN OTHER MATTERS THAT YOU BELIEVE IS RELEVANT TO SUPPORTING YOUR REVIEW OF VERIZON'S PROPOSED NONRECURRING COST STUDIES FOR PURPOSES OF EVALUATING THE REASONABLENESS OF THEIR UNDERLYING INPUTS AND ASSUMPTIONS FOR ESTABLISHING HOT CUT RATES?

A. Yes. The criticisms and recommendations included in this testimony are based upon the experience of QSI consultants in many aspects of the business that particularly enhance our ability to critically examine Verizon's non-recurring cost studies for hot cuts. By way of example, the following can be briefly noted:

- (a) Reviewing cost studies and familiarity with this Commission's previous Orders and the FCC's TELRIC methodology and directives in relevant FCC Orders;
- (b) Building provisioning systems and organizations responsible for performing these same functions;
- (c) Analyzing efficient processes and methods by which to improve performance with respect to these same activities.; and
- (d) Actually performing and supervising the various functions included in VZ's WPTS Cost Study.

1 **B. PURPOSE AND SUMMARY OF FINDINGS AND**
2 **RECOMMENDATIONS**

3 ***1. Statement of Purpose***

4 **Q. PLEASE STATE THE PURPOSE OF THIS TESTIMONY.**

5 A. The purpose of this testimony is to respond to Verizon New York’s (VZ’s)
6 October 24, 2003 testimony, specifically VZ’s Wholesale Provisioning Tracking
7 System (“WPTS”) cost studies for hot cuts, and to respond to the testimony of
8 other companies, such as ATT and MCI, in this proceeding. Based upon our
9 review of Verizon’s WPTS cost study, we will also propose revisions, and offer
10 revised calculations to conform VZ’s WPTS cost study and charges for hot cuts
11 that will more appropriately be TELRIC based.²

12
13 Of the three scenarios presented in VZ’s review of hot cut processes (basic, large
14 and batch hot cuts), we will focus predominantly on the rates proposed for the
15 basic hot cut, utilizing VZ’s Wholesale Provisioning and Tracking System
16 (“WPTS”). Unlike other carriers that have grown a significant base of UNE-P
17 customers, Conversent’s day-to-day business needs are not geared for migrating
18 an embedded base of UNE-P customers to UNE-L arrangements. Conversent
19 requires a process that will enable it, on a daily basis, to continually migrate
20 smaller numbers of customers that are located across a geographically dispersed

² Filed with this testimony are the necessary revisions to VZ’s WPTS hot cut cost studies (see Attachment AA/SM-4) that incorporate the recommendations we make in this testimony. These corrected cost studies use VZ’s cost model and are submitted to provide the Commission with a proper basis for adopting TELRIC based rates for non-recurring service ordering and service provisioning rate elements for hot cuts. Recalculated TELRIC based non-recurring hot cut charges are found in Attachment AA/SM-3.

1 area (multiple central offices). Accordingly, Conversent requires VZ to provide
2 basic hot cuts at terms and conditions that are operationally efficient and
3 economically viable. Consistent with the ruling of the ALJ in this case to
4 separately examine the non-recurring costs and charges for basic hot cuts using
5 VZ's WPTS process, we will focus our testimony on a critical examination of
6 VZ's proposed rates and charges for basic WPTS hot cuts.

7
8 While this testimony is presented on behalf of Conversent, we urge the
9 Commission to recognize the importance of basic hot charges for the further
10 development of local facilities-based competition. For local facilities-based
11 competition to flourish, an efficient and economically viable hot cut service needs
12 to be available, not just to Conversent, but to other carriers – including ATT and
13 MCI – that want to migrate, on a daily basis, customers that are geographically
14 dispersed over the state.

15
16 **Q. PLEASE STATE THE RESPONSIBILITY OF THE WITNESSES.**

17 A. In general, Dr. Ankum supports the economic aspects of the testimony and Mr.
18 Morrison supports the technical/engineering aspects. Given that most of the
19 testimony involves both economic, technical and engineering arguments, it is not
20 possible to assign responsibility to an individual witness on a section by section
21 basis (hence the choice to file panel testimony.)

22

1 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

2 A. VZ’s Hot Cut WPTS Cost Study consists of four components (and proposed
3 charges). These are: (1) Service Ordering, (2) WPTSProvisioning, (3) CO
4 Wiring, and (4) the additional studies and charges for Full-Mechanized
5 Coordination Expedite and IDLC Surcharge. The organization of our testimony
6 generally follows this structure.

7
8 First, we discuss methodological issues that impact all of the aforementioned
9 components of VZ’s Hot Cut WPTS Cost Study; that is, we discuss the TELRIC
10 criteria for reviewing VZ’s cost study, including the importance of assuming an
11 efficient OSS and the proper treatment of connect and disconnect charges. We
12 then will discuss VZ’s use of SME based estimates and the proper assumptions
13 concerning fall out rates. Next, we discuss specific problems with (1) VZ’s
14 Service Ordering study, (2) WPTS provisioning study; and (3) CO Wiring study.

15
16 Last, we discuss some issues raised in the testimony of ATT and MCI and offer
17 our views on whether our findings are consistent with the testimony and
18 conclusions reached by these companies.

19

20 **2. Summary of Findings and Recommendations**

21 **Q. PLEASE SUMMARIZE THE PROBLEMS YOU HAVE FOUND IN VZ’S**
22 **WPTS HOT-CUT STUDY.**

**Responsive Panel Testimony of August H. Ankum and Sidney Morrison
on Behalf of Conversent Communications of New York, LLC Case No. 02-C-1425**

1 A. Having reviewed VZ’s testimony and cost studies supporting the rates for the
2 WPTS basic, large and batch hot-cuts, we have found a number of problems. In
3 general, VZ’s studies and proposed rates do not comply with the basic TELRIC
4 principles as developed in the FCC’s *Local Competition Order*,³ the FCC’s
5 specific rejection of VZ’s non-recurring cost model in the *Virginia Arbitration*
6 *Order*,⁴ the requirements for the batch hot cut process as discussed in the FCC’s
7 *Triennial Review Order*⁵, and the mandates of this Commission as found in the
8 Commission’s January 28, 2002 Order on Unbundled Network Element Rates.⁶
9 The general errors we have found are the following:

10

³ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, *First Report and Order*, 11 FCC Rcd 15499 (1996), *aff’d in part and vacated in part sub nom. Comp. Tel. Assoc. v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), *aff’d in part and remanded*, *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366 (1999); *on remand Iowa Utils. Bd. v. FCC*, 219 F.3d 744 (8th Cir. 2000) (*Iowa Utilities II*), *reversed in part sub nom. Verizon Communications, Inc. v. FCC*, 535 U.S. 467 (2002) (*Verizon v. FCC*), (hereinafter, “*Local Competition Order*”).

⁴ Memorandum Opinion and Order, CC Docket Nos. 00-218, 00251, *In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration, In the Matter of Petition of AT&T Communications of Virginia Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia Corporation Commission Regarding Interconnection Disputes With Verizon Virginia Inc.*, released August 29, 2003, (hereinafter, “*Virginia Arbitration Order*.”)

⁵ *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers* (CC Docket No. 01-338); *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996* (CC Docket No. 96-989); *Deployment of Wireline Services Offering Advanced Telecommunications Capability* (CC Docket No. 98-147), FCC No. 03-36, (rel. Aug. 21, 2003) (hereinafter, “*Triennial Review Order*”).

⁶ Consolidated Cases 98-C-1357, 00-C-1945, *Order on Unbundled Network Element Rates* (Jan. 28, 2002) (hereinafter, “*NYPSC UNE Rate Order*”).

1 **Red-Face Test:**

2 VZ's hot cut charges do not pass the red-face test. RBOC switch vendor contracts
3 typically contain provisions for migrating working loops with dial tone from
4 analog switches to digital switches. These migrations are in fact coordinated hot
5 cuts.⁷ The switch vendor prices for such hot cuts are typically significantly below
6 the VZ hot cut charges. Since the switch vendor prices are a measure for what a
7 competitive market price would be, they can be used to perform a red-face test for
8 VZ's proposals. Based on our knowledge of vendor contracts, we believe that
9 VZ's proposals do not pass the red-face test. In fact, VZ's proposed hot cut
10 charge of \$218.85⁸ for a IDLC based loop is more expensive than a digital line
11 port on a DS0 basis on a Lucent or Nortel switch, which includes the hot cut *and*
12 the switch investments itself! This is equivalent to proposing to charge more for
13 just rotating tires than it costs to have four brand new tires installed -- it would
14 make even a car mechanic blush.

15
16
17 **Reciprocity (*There should be some...*):**

18
19 VZ is proposing to charge CLECs for various costs associated with losing the
20 customer. But Verizon does not appear to recognize the right of CLECs to charge
21 VZ for these types of costs when in turn they lose a customer to VZ. For
22 example, all carriers need to remove the customer's telephone number from their
23 switches when they lose a customer. *Why is it that only VZ wants to charge for*
24 *this?*

- 25
26 -- Costs associated with a customer that chooses to discontinue its service
27 with VZ are, under TELRIC, not the responsibility of the CLEC.
28
29 -- We propose that either no carrier gets to charge for these types of costs, or
30 all are permitted to do so. To afford favorable treatment to VZ would be
31 inappropriate and skew the playing field.
32
33 -- In general, we recommend that the Commission reject VZ's proposal to
34 recover in its charges to CLECs the costs of discontinuing service to
35 customers that have chosen to leave VZ.
36

⁷ Under this hot cut process, the services of tens of millions of customers nationwide have been migrated by RBOCs from analog switches onto digital switches with the assistance of the switch vendors (predominantly with the aid of Lucent and Nortel.)

⁸ This figure is calculated as the sum of the basic 2 wire hot cut charge and the IDLC surcharge (\$22.08 + \$48.14 + \$17.46 + \$131.18 = \$218.85)

1 -- All carriers need to communicate about the migration of customers from
2 one carrier to another carrier. VZ calls this a service order; other carriers
3 absorb these costs themselves. We show that under an efficient OSS, the
4 costs of service ordering should be minimal. However, if the Commission
5 rejects our arguments and approves charges for service ordering in excess
6 of \$1.00, then the Commission should permit *reciprocity* and allow all
7 CLECs to charge for these types of communications – to each other and to
8 VZ.

9
10 **Methodology:**

11
12 -- VZ fails to recognize in its studies that the TELRIC network construct
13 adopted by this Commission in Docket No. 98-C-1357 assumed the
14 existence of 100% fiber based loops.⁹ Instead, VZ assumes that *** Begin
15 Confidential _____ *** End Confidential of the loops involved in cutovers
16 are in fact ordinary copper based loops.¹⁰

17
18 -- VZ continues to re-litigate the question of whether, in a forward-looking
19 construct, IDLC based loops can be unbundled, in spite of repeated
20 Commission and FCC findings that they can, when examining the
21 forward-looking network for TELRIC based rates. Specifically, VZ fails
22 to account for the Digital Loop Electronic Service Activation (“DLESA”)
23 technology associated with IDLC based loops, which largely automates
24 the hot cut process.¹¹

25
26 **IDLC Surcharge:**

27
28 -- VZ ignores the Commission’s previous findings that IDLC based loops
29 can be unbundled. Correcting for this, it should be recognized that IDLC
30 technology does not require that VZ migrate the IDLC based circuit onto a
31 copper circuit. In view of this, there should be no surcharge for IDLC
32 based loops.

33
34 -- The IDLC surcharge should be eliminated in any event because the
35 CLECs have no say over VZ’s loop assignment process. That is, since VZ

⁹ NYPSC *UNE Rate Order*, at pp 93-95.

¹⁰ Verison’s New York Non-Recurring Cost Model, Exhibit-III-A-P, (hereinafter, “VZ’s Hot Cut model”). See Tab: factors.

¹¹ The issue of NGDLC versus UDLC and copper loops was extensively debated in the NYPSC *UNE Rate Order*. See section loop costs and specifically, pages 93 through 95. Our revisions are based on this Commission’s previous findings on the issue and we do not seek to provide evidence to either re-litigate the issue nor to change the Commission’s findings in this regard.

1 is in charge of assigning facilities (copper, UDLC, or IDLC) for a DS0
2 circuit, the CLECs are not the cost causers. Following TELRIC principles
3 (the cost causation principle), CLECs should not be charged an IDLC
4 surcharge.
5

6 **Fall Out Rates:**

7
8 -- VZ's proposed fall out rates are too high and reflective of errors in its own
9 legacy systems. This is inconsistent with TELRIC, which requires that
10 service ordering systems and service provisioning systems are designed
11 and integrated to prevent virtually any fall out for standardized orders and
12 procedures, such as the hot cut process for DS0 circuits.¹²
13

14 -- In general, as ruled by the Commission in its 2002 *UNE Rate Order*, (and
15 as reinforced by the FCC in the *Virginia Arbitration Order*) fall out rates
16 should be no higher than 2%. Since the hot-cut process concerns not
17 complex orders but plain vanilla loops and is so run-of-the-mill, there is
18 simply no reason to adopt a rate of fall-out that exceeds 2%.¹³
19

20 -- Some fall out is associated with customer disconnects for VZ service and
21 not the CLEC's. As such, it is inappropriate to have the CLEC pay for the
22 costly manual intervention.
23

24 **LSRs:**

25
26 -- VZ's systems fail to allow CLECs to submit error-free Local Service
27 Requests ("LSRs") that other commercial systems, such as orbitz.com, are
28 capable of achieving. This is a shortcoming of VZ's systems for which
29 CLECs should not be penalized in the form of higher NRCs.¹⁴ In fact,
30 CLECs are already incurring additional costs by having to submit orders

¹² That NRC studies should assume low fall out of no greater than **2 percent** was confirmed by the FCC's Wireline Competition Bureau in its *Virginia Arbitration Order*. See paragraph 592. The 2 percent assumption for the ATT model is found in paragraph 592.

¹³ In addition to the FCC's findings of a **2 percent fallout rate** in the *Virginia Arbitration Order*, the New York Commission also endorsed the 2 percent fallout, in the *UNE Rate Order*, page 143: "As AT&T points out, the Judge had ample record basis for his **2% fallout rate**, and Verizon's general exception here is denied." (Emphasis added.)

¹⁴ This conclusion is confirmed by the FCC in its *Virginia Arbitration Order*, paragraph 592. The FCC found: "We also find that it is reasonable to assume, as AT&T/WorldCom do, that competitive LEC orders that have errors are returned electronically to the competitive LEC and resubmitted and that **manual intervention by Verizon at the ordering stage should be unnecessary**. We do *not agree* with Verizon that competitive LECs *should pay NRCs* that reflect manual handling of all orders for six or more lines."

1 in an inefficient manner that causes them to incur higher labor costs to
2 perform manual processes than they otherwise would if VZ deployed
3 systems that were more efficient.
4

5 **Verification and Validation Activities:**

6
7 -- VZ's NRC studies for service provisioning are loaded up with expensive
8 activities for verification and validation of service orders. While it may be
9 true that VZ's systems accept service orders that are inconsistent with its
10 own legacy systems, these inconsistencies are due to VZ's own systems.

11
12 -- CLECs should not be penalized for these errors in the form of higher
13 NRCs.¹⁵
14

15 **Cross-Connect Times:**

16
17 -- Cross-connect times ignore the capabilities of automatic loop provisioning
18 of automatic distributing frames ("ADFs") for copper loops and DLESA
19 for IDLC based loops.

20
21 -- VZ's cross-connect times are unsupported by a systematic analysis. They
22 are also significantly overestimated.
23

24 **Disconnect Charges:**

25
26 -- VZ inappropriately combines the costs of connects and disconnects in its
27 Hot Cut rates. However, as the FCC and other Commissions has found,
28 the costs of disconnects should be assessed when this activity occurs and
29 not upfront, which only serves to unnecessarily raise barriers to entry.¹⁶
30

31 With respect to the specific activity times for the principle organizations included
32 in VZ's studies our recommended changes are as follows:

¹⁵ *Virginia Arbitration Order*, paragraph 592. The FCC found: "We also **disagree** with Verizon that costs associated with **database errors** are appropriately recovered from competitive LECs through NRCs. Database maintenance is a recurring cost that should be recovered in recurring charges through ACFs, and not through a NRC." This position had previously been adopted by some state Commissions, such as the Illinois Commerce Commission. See, ICC Docket No. 98-0396, Commission Analysis and Conclusions, pages 39 - 42.

¹⁶ *Virginia Arbitration Order* in paragraph 596. The FCC finds: "We agree with AT&T/WorldCom that disconnect costs, if any, should be recovered **at the time of disconnection.**" (Emphasis added.)

1 **NMC**

2 **(National Market Center – processes Local Service requests)**

3 We have made no adjustments to the NMC task times. Rather, we simply
4 recommend that the Commission order a fall-out rate for the NMC tasks of no
5 more than 2%. This recommendation in itself corrects this portion of the studies.
6

7 **APC**

8 **(Assignment Provisioning Center – Ensures facilities for IDLC to**
9 **Copper/UDLC roll-over)**

10 In view of the Commission’s previous findings on ILDC, we recommend that the
11 APC activities be removed from the hot cut studies as unnecessary activities.
12

13 **RCMAC**

14 **(Recent Change Memory Administration Center – Removes translations**
15 **from VZ switch)**

16 These types of disconnect costs are VZ’s *own* responsibility and there is
17 absolutely no justification for including these costs in the hot cut study. Likewise,
18 when a customer leaves the CLEC – say, due to a VZ winback program – the
19 CLEC would not and should not be allowed to charge VZ for “removing the
20 translations from the [CLEC’s] switch.”
21

22 **RCCC**

23 **(Regional CLEC Coordination Center – “project manages” hot cut process)**

24 The Commission should adjust the cost studies to reflect a forward-looking OSS
25 (including the WPTS) in which the flow of information between VZ and the
26 CLECs is fully automated. This means that the manual activities are set at a 2
27 *percent fall out rate*, consistent with the 2 percent fall out on the NMC (service
28 order related) activities.
29

30 **CO Frame**

31 **(Frame activities – pre-wire, hot cut, etc.)**

32 There are a number of reasons for why these activity times are inflated or
33 otherwise need to be adjusted. They are the following:
34

- 35 -- VZ ignores the automatic loop provisioning capabilities of ADF and
36 IDLC, even though these technologies and capabilities are used in its own
37 network.
38
- 39 -- With advanced frame technologies, pre-wire line and hot cut times can be
40 reduced significantly.
41
- 42 -- With an efficient OSS, times to analyze and complete work orders can be
43 significantly reduced.
44

1 -- Pre-Test activities should be removed. With IDLC based loops the loop
2 migration is performed electronically. The manual test activities,
3 therefore, do not occur. Further, the loops that are to be cut over are
4 “live” circuits that are either working satisfactorily or if the customer
5 filled a maintenance/repair ticket, it would be VZ’s own responsibility to
6 test and repair the circuit. Also, the costs should be – and are – recovered
7 through recurring charges for the UNE loop as part of the maintenance
8 factors.

9
10 -- The cost of the “Pull Disconnect Wire DD+1” activity should be removed.
11 This is a cost associated with the customer’s decision to discontinue
12 service with VZ. It is not the cost responsibility of the CLEC.

13
14 -- VZ includes Begin Confidential *** _____ *** End Confidential of travel
15 costs in each basic hot cut charge.¹⁷ This is inappropriate. All central
16 offices have technicians, except for some remote central offices. The
17 remote central offices, however, are actually deployed with ADF’s and,
18 under TELRIC, should be assumed to have automatic distributing frames
19 that obviate the need for manual cross-connects. The travel times should
20 be removed.

21
22
23 **Q. PLEASE SUMMARIZE YOUR RATE RECOMMENDATIONS.**

24 A. In view of the above deficiencies in VZ’s studies, we recommend that the
25 Commission reject VZ’s proposed non-recurring charges for hot cuts using the
26 WPTS.

27
28 We recommend that the Commission adopt rates that are no higher than the costs
29 calculated in our revised studies that conservatively correct for VZ’s most
30 obvious errors. Importantly, we have *not* assumed the use of electronic loop
31 provisioning systems that are currently available and that under a strict

¹⁷ See VZ hot cut WPTS cost study, Exhibit III-A-P, Tab 1. (This figure is calculated as Begin Confidential *** _____ *** End Confidential times the per minute labor rate and marked-up for shared and common costs. The disconnect time travel is discounted to the present value, accounting for the time value of money.)

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1 application of TELRIC should have been assumed in the studies. As such, our
 2 revised studies calculate conservative results. We have assumed, however, that
 3 VZ's unmanned central offices are deployed with the ADF technologies. This is
 4 consistent with VZ's actual deployment and use of this technology for those
 5 offices.¹⁸ The impact of this assumption is, among others, that travel times can be
 6 removed from the studies. Reflecting separate charges for connect activities and
 7 disconnect activities, we recommend that the Commission adopt basic hot cut
 8 rates that are no higher than the following:

UNE/Service Description	Service Order (Per Order) (Line 7)	C.O. Wiring (Per Line) (Line 8)	Provi-sioning (Per Line) (Line 9)	Total Charge
B	C	D	E	C+D+E
CONNECT				
Full-Mechanized Coordination HotCut ("Basic")				
2-W Initial	\$0.39	\$6.09	\$0.24	\$6.71
2-W Additional	-	\$6.09	\$0.24	\$6.32
4-W Initial	\$0.54	\$11.52	\$0.25	\$12.31
4-W Additional ("Basic")	-	\$11.52	\$0.25	\$11.78
Full-Mechanized Coordination Expedite				
				\$1.35
IDLC Surcharge				
				\$0.00

¹⁸ See Response to MCI-VZ-122.

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UNE/Service Description	Service Order (Per Order) (Line 7)	C.O. Wiring (Per Line) (Line 8)	Provisioning (Per Line) (Line 9)	Surcharge
B	C	D	E	F
DISCONNECT				
Full-Mechanized Coordination				
HotCut ("Basic")				
2-W Initial	\$0.11	\$0.50	\$0.00	\$0.60
2-W Additional	-	\$0.50	\$0.00	\$0.50
4-W Initial	\$0.11	\$0.50	\$0.00	\$0.60
4-W Additional ("Basic")	-	\$0.50	\$0.00	\$0.50
Full-Mechanized Coordination Expedite				\$1.35
IDLC Surcharge				\$0.00

1

2 **Q. WHAT ARE THE RATES THAT VZ IS PROPOSING?**

3 **A.** VZ is proposing the following rates:

Verizon Proposal UNE/Service Description	Service Order (Per Order) (Line 7)	C.O. Wiring (Per Line) (Line 8)	Provisioning (Per Line) (Line 9)	Total Charge
B	C	D	E	F
CONNECT & DISCONNECT				
Full-Mechanized Coordination				
HotCut ("Basic")				
2-W Initial	\$22.08	\$48.14	\$17.46	\$87.67
2-W Additional	-	\$29.40	\$17.53	\$46.93
4-W Initial	\$29.55	\$84.15	\$18.27	\$131.97
4-W Additional ("Basic")	-	\$50.87	\$18.35	\$69.22
Full-Mechanized Coordination Expedite				\$51.41
IDLC Surcharge				\$131.18

4

5 **Q. PLEASE SUMMARIZE WHY THESE RATES ARE LOWER THAN VZ'S**
6 **PROPOSED RATES FOR HOT CUTS USING WPTS?**

7

1 A. As will be discussed in detail, the differential stems in large part from the use of
2 different study assumptions and methodologies. We have already mentioned
3 VZ's failure to account for forward-looking technologies, fall out rates and other
4 cost study requirements mandated for NRCs by the FCC and this Commission, as
5 well as other Commissions. Further, we believe that VZ has misclassified a large
6 number of costs as non-recurring costs. Specifically, VZ has misclassified all
7 costs associated with the manual intervention that is needed when orders fall-out
8 as a result of errors in VZ's legacy databases. Under a strict reading of TELRIC,
9 no such errors would exist, so there wouldn't be any costs. However, if those
10 costs are to be recovered, they should be recovered through *recurring* charges and
11 not through non-recurring charges. The FCC has recently elaborated on when
12 costs should be recovered through non-recurring charges and specified the
13 following criterion:

14 Costs of non-recurring activities that benefit *only* the competitive
15 LEC, or are not reflected in Verizon's ACF calculation (*e.g.*, certain
16 types of loop conditioning), should be recovered through NRCs.
17 (Emphasis added.)¹⁹
18

19 Given that cleansing VZ's databases benefits VZ and all CLECs collectively,
20 these costs should be recovered through recurring charges. Further, the other
21 associated costs of manual intervention are not the responsibility of the individual

¹⁹ FCC's *Virginia Arbitration Order*, paragraph 156. This concept is repeated in paragraph 584, for example, where the FCC finds: "For this reason, we conclude that the better approach is to recover these costs through ACFs and not through NRCs unless the *activity provides no benefit to any future user* of the same facility or if the cost of the activity is not reflected in the ACF calculations." (Emphasis added.)

1 CLEC that places the service order either. Thus, once VZ's methodological errors
2 have been recognized, a large number of costs can be reclassified or eliminated all
3 together.

4
5 However, as noted, we have *not calculated revised* rates on the assumption of
6 100% deployment of electronic loop provisioning associated with IDLC in the
7 system. As such, our revised rates are exceptionally conservative.

8

9 **Q. WHAT ARE THE RATES FOR BASIC HOT CUTS PROPOSED BY**
10 **AT&T AND MCI IN THIS PROCEEDING?**

11 A. In its direct testimony, ATT did not expressly offer a discrete rate for basic,
12 WPTS hot cuts. However, WPTS is a component of the batch hot cut process
13 offered by ATT. In response to Conversent's request (CONV-ATT-1) ATT has
14 calculated the cost of a WPTS hot cut at \$11.32.²⁰ ATT notes that this rate is
15 conservative.²¹

16 Unlike the \$5.01 established by the FCC for an individual hot cut in
17 the AT&T/Verizon Virginia arbitration decision where the most
18 efficient technology and ILEC operations were assumed, the \$11.32 in
19 this proceeding results from assumptions based on making the *existing*
20 Verizon New York processes as efficient as possible. Therefore,
21 substantial inefficiencies are embedded in the cost.
22

²⁰ See ATT's response to Conv-ATT-1, attached as **Attachment AA/SM-5**.

²¹ *Id.*

1 MCI proposes a bifurcated rate structure of a fixed charge of \$34.33 and an
2 additional \$5.86 per additional loop. The table below shows the average hot cut
3 rate under varying size jobs.

Set-Up	\$ 34.33
Incremental	\$ 5.86
Number of Loops	Average Price Per Loops
4	\$ 14.44
8	\$ 10.15
12	\$ 8.72
16	\$ 8.01
20	\$ 7.58
24	\$ 7.29
28	\$ 7.09

5

6 These rates are in line with the rates proposed in our testimony.

7

8 **Q. IS IT CRITICALLY IMPORTANT FOR THE COMMISSION TO**
9 **APPROVE HOT CUT RATES THAT ARE OPERATIONALLY**
10 **EFFICIENT AND ECONOMICALLY VIABLE?**

11 A. Yes. As the FCC recognized in the *Triennial Review Order*, there is a potentially
12 dangerous relationship between hot cut rates, churn rates and the ILEC's winback
13 programs. The higher the churn rates, the more difficult it is for the CLEC to
14 fully recoup its customer acquisition costs, which includes the non-recurring
15 charges, such as the hot cut charges. As the FCC notes:²²

²² See *Triennial Review Order* at paragraphs 470 and 471.

1 The evidence in the record demonstrates that customer churn
2 exacerbates the operational and economic barriers to serving mass
3 market customers. For example, competitive LECs incur non-
4 recurring costs upon establishing an end user's service, but generally
5 recover those costs over time, spreading them out over monthly
6 customer bills; high churn rates thus often deprive competitive carriers
7 the opportunity fully to recover those outlays.

8
9 To put these dynamics in perspective, consider an example: if customer
10 acquisition costs are \$120 and churn rates are 12 months, the monthly cost
11 recovery burden to break-even on customer acquisition costs is approximately
12 \$10.²³ If the churn rate is 6 months, however, than the monthly cost recovery
13 burden shoots up to \$20 per month. It is clear from this example that in the face
14 of high churn rates, the non-recurring charges are possibly more important
15 considerations than the recurring charges and they may pose an insurmountable
16 barrier to entry.²⁴

17
18 The mix is revealed as even more lethal for CLECs when one considers the
19 ability of ILEC's to engage in winback programs. Since winback programs are
20 specifically targeted at the CLEC customers that have just left the ILEC, the
21 winback programs in effect serve to *increase* the CLEC's churn rates. Indeed, it's
22 through the combination of the non-recurring charges – if they are high -- and the
23 winback programs that the ILEC will be able to render customers uneconomical
24 for CLECs. Given that the winback programs are generally unregulated, they can

²³ Ignoring the time value of money, $\$120 / 12 = \10 per month. Though these numbers are hypothetical, they are not unrealistic.

²⁴ *Triennial Review Order*, paragraph 475.

1 be used as a “punitive” measure to signal to CLECs how much competition the
2 ILEC will tolerate in a serving area.²⁵

3
4 The only protection against this potentially lethal dynamic that places an
5 inordinate amount of market control in the hands of VZ is to set non-recurring
6 charges at minimal levels. That is not to say that VZ should not recover its costs;
7 rather, it is a matter of rigorously applying TELRIC principles and correctly
8 classifying costs as either non-recurring or recurring costs. We have already
9 discussed that if VZ’s costs are correctly classified, then many of the costs now
10 included by VZ in the hot cut charges are more appropriately recovered through
11 recurring charges.

12

13 **Q. HAS THE FCC RECOGNIZED THAT HOT CUT RATES ARE**
14 **POTENTIALLY THE ACHILLES HEEL OF LOCAL COMPETITION?**

15 A. Yes. It seems nearly impossible to overstate the importance of getting the hot cut
16 process and rates “right.” As the FCC notes:

17 Accordingly, we conclude that the operational and economic barriers
18 arising from the hot cut process create an *insurmountable*
19 disadvantage to carriers seeking to serve the mass market,
20 demonstrating that competitive carriers are impaired without local
21 circuit switching as a UNE. Although we find that current conditions
22 at the national level demonstrate that competitive LECs are impaired
23 without unbundled switching for mass market customers based on the
24 costs and delays associated with hot cuts, we take affirmative steps to
25 reduce this impairment and promote an environment suitable for

²⁵ At this stage it would be unwise for any ILEC to entirely eliminate competitors while regulators are still vigilant.

1 increased facilities-based competition. As described below, we find
2 that the present impairment can be mitigated by an improved loop
3 provisioning process.²⁶
4

5 While the context in the *Triennial Review Order* is an analysis of whether CLECs
6 that currently use UNE-P are impaired without local circuit switching, the
7 observation is no less relevant to UNE-L carriers such as Conversent. Indeed, if
8 companies such as ATT and MCI, which have an existing long distance customer
9 base and thus possibly lower customer acquisition costs, are considered to be
10 impaired, then surely a company such a Conversent is impaired as well.
11

12 **Q. DO YOU BELIEVE THAT VZ’S PROPOSED HOT CUT CHARGES ARE**
13 **REASONABLE IN VIEW OF THE FCC’S EXPRESSED CONCERNS**
14 **ABOUT NON-RECURRING CHARGES, CHURN RATES AND**
15 **WINBACK PROGRAMS?**

16 A. No. I believe that if the Commission were to approve VZ’s proposed rates, it will
17 have placed the fox in charge of the hen house.
18

19 **Q. ARE THERE IMPROVEMENTS THAT CAN BE IMPLEMENTED THAT**
20 **WOULD MAKE VZ’S WPTS MORE COST EFFICIENT?**

21 A. From an operational perspective, Conversent has no immediate problems with the
22 manner in which VZ is provisioning Conversent’s hot cuts. However, we will
23 discuss a large number of improvements that can be made to the WPTS that

²⁶ *Triennial Review Order*, paragraph 475.

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1 would make the WPTS more cost efficient and that should be considered in a

2 TELRIC-based rate.

3

1 **II. OVERVIEW OF VZ’S NRC STUDIES**

2 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF VZ’S WPTS HOT CUT**
3 **COST STUDIES USED TO SUPPORT NON-RECURRING CHARES.**

4 A. VZ’s cost study consists of principally two categories of costs -- service ordering
5 costs and service provisioning costs. While the costs are ultimately aggregated in
6 the same Excel spreadsheet, it is useful to keep this general distinction in mind as
7 they pertain to two distinct sets of activities and aspects of VZ’s OSS and hot-cut
8 process.

9
10 Irrespective of whether one deals with a service ordering study or a service
11 provisioning study, however, the format/layout of VZ’s WPTS hot cut studies are
12 the same. Basically, both the service ordering and the service provisioning costs
13 in the study conceptually follow the pattern shown below:

14

		<i>Task</i>			
	<i>Task Time</i>	<i>Occurrence</i>			
<i>Tasks</i>	<i>Required</i>	<i>Percent / Fall</i>	<i>Labor Rate</i>	<i>= Cost</i>	
<i>Performed</i>	<i>(Minutes)</i>	<i>Out</i>		<i>(b)x(c)x(d)</i>	
(a)	(b)	(c)	(d)		

15
16 Following the layout/logic of the cost studies, we will focus on the following
17 issues in the testimony that follows:

1 **Tasks:**

2 We will review the specified tasks, and consider and discuss whether the tasks are
3 necessary. In many instances, we will recommend that certain task be eliminated
4 entirely. For example, VZ studies include a large number of activities associated
5 with reviewing the accuracy of service orders and reconciling differences between
6 databases. We will recommend that such activities be eliminated from VZ's
7 studies, since they are unnecessary in a forward-looking, most-efficient, least-cost
8 environment that presumes efficient OSS.
9

10 **Task times:**

11 We will review the specific task times and discuss whether the task times are
12 appropriate. In many instances we will recommend reductions in VZ's task times.
13 For example, we believe that many of the travel times are excessive and
14 consequently propose shorter travel times.
15

16 **Labor rates:**

17 We will not critique the labor rates proposed by VZ in the current study and
18 assume that the labor rates used in the studies are the most recently approved rates
19 by the Commission.
20

21 **Task Occurrence/Fall Out rates:**

22 We will extensively discuss the issue of task occurrence and fall-out rates. We
23 will show that the fall-out rates are a major source of inefficiencies in the studies
24 and cause costs to be greatly inflated.
25

26 In addition to the above cost components, the studies are based on certain
27 methodological/TELRIC assumptions regarding technology mix, etc. We will
28 review these other methodological and computational issues and recommend
29 adjustments where they are needed.
30

31
32
33
34

1 **III. METHODOLOGY – CRITERIA FOR REVIEW**

2 **A. TELRIC PRINCIPLES**

3 **Q. WHAT ARE THE PRINCIPLES THAT SHOULD GUIDE THIS**
4 **COMMISSION IN EVALUATING VZ’S TESTIMONY AND PROPOSED**
5 **HOT-CUT PROCESS AND COST STUDIES?**

6 A. VZ’s testimony, proposed hot-cut process and cost studies should be reviewed in
7 light of the Commission’s directives in the NYPSC *UNE Rate Order* and in the
8 rulings of Judge Linsider earlier in this proceeding. Further, the Commission
9 should carefully consider the FCC’s *Triennial Review Order* and the FCC’s
10 TELRIC methodology as identified in the FCC’s *Local Competition Order*.

11
12 **Q. PLEASE DISCUSS THE PERTINENT PRINCIPLES THAT ARE**
13 **DERIVED FROM THESE ORDERS OF THE NEW YORK COMMISSION**
14 **AND THE FCC.**

15 A. In general, the pertinent TELRIC principles can be summarized as follows:

16 Principle # 1: *The firm should be assumed to operate in the long run.*

17 Principle # 2: *The relevant increment of output should be total company*
18 *demand for the unbundled network element in question.*

19 Principle # 3: *Technology choices should reflect least-cost, most efficient*
20 *technologies.*

21 Principle # 4: *Costs should be forward-looking.*

22 Principle # 5: *Cost identification should follow cost causation.*

23

1 While these principles do not appear verbatim in the FCC’s *Local Competition*
2 *Order*, they accurately summarize the FCC’s TELRIC methodology.

3 In addition to these TELRIC principles, the FCC also noted the following:

- 4 1. An incumbent LEC must prove to the state commission that the rates for
5 *each element it offers do not exceed the forward-looking economic cost*
6 *per unit of providing the element.*²⁷
- 7 2. The ILEC has the burden of proof since “incumbent LECs have greater
8 access to the cost information necessary to calculate the incremental cost
9 of the unbundled elements of the network.²⁸” In view of the “asymmetric
10 access to cost data,” the FCC notes that “incumbent LECs must *prove* to
11 the state commission the nature and magnitude of any forward-looking
12 cost that it seeks to recover in the prices of interconnection and unbundled
13 network elements.²⁹”
- 14 3. Cost models should be transparent, open and verifiable by Commissions
15 and intervenors.³⁰

16 In our review of the cost studies, we will continuously refer back to these basic
17 but essential cost study principles and requirements.

18

19 **Q IS IT IMPORTANT TO ADHERE RIGOROUSLY TO TELRIC**
20 **PRINCIPLES IN ESTABLISHING APPROPRIATE CHARGES FOR**
21 **HOT-CUTS?**

22 A. Yes. As will be discussed in considerable detail, many of the problems in VZ’s
23 hot-cut studies stem from inefficient systems and errors in VZ’s own legacy

²⁷ FCC’s *Local Competition Order*, § 51.505 (e).

²⁸ *Id.*, paragraph 680.

²⁹ *Id.*, paragraph 680.

³⁰ The FCC recently directed that in upcoming cases to be arbitrated by the FCC, involving Verizon and three CLECs, computerized cost models “must be submitted in a form that allows the Arbitrator and the parties to alter inputs and determine the effect on cost estimates.” Procedures Established for Arbitration of Interconnection Agreements Between Verizon, AT&T, Cox, and WorldCom, DA 01-270 (February 1, 2001), Paras. A.2.1.i; A.3.1.c.

1 systems. Often, these inefficiencies and errors in VZ's legacy systems cause
2 considerable cost increases in VZ's cost studies: they are the reason for endless
3 manual intervention for purposes of the verification of work orders and
4 corrections to VZ's systems and databases. While undoubtedly VZ will incur
5 some of those costs, it is important to note that many of those costs are not
6 *efficiently* incurred, but are the result of embedded inefficiencies. Where this is
7 the case, the Commission should rigorously disallow recovery of such costs for
8 three related reasons:

- 9 (a) Costs related to embedded inefficiencies and inefficient processes are
10 inconsistent with TELRIC's least-cost, most-efficient, forward-looking
11 principles.
- 12
13 (b) To compensate VZ for embedded inefficiencies and inefficient processes
14 provides for an undesirable incentive structure that may fundamentally
15 impair the competitive process. In effect, it would reward VZ for
16 handicapping its would-be competitors.
- 17
18 (c) The costs of cleaning-up of VZ's legacy databases are not non-recurring
19 costs. To the extent that all CLECs and VZ itself benefit from the cleaning
20 up of VZ's databases, the costs of doing so are recurring costs. To recover
21 these costs from CLECs on a per service order basis is inconsistent with
22 cost-causation and provides inefficient cross-subsidies. In effect, the
23 CLECs will be cross-subsidizing VZ as they are paying VZ to clean up its
24 databases to its own benefits.
- 25

26 Rigorous application of the TELRIC principles is fair and serves to promote
27 competition.

28

29 **Q. EVEN IF VZ HAD MODELED ITS ACTUAL OPERATIONS**
30 **ACCURATELY, WOULD THIS BE SUFFICIENT UNDER TELRIC?**

1 A. No. Under TELRIC it is not sufficient to simply model VZ's actual operations.
2 First, the NRC studies should be consistent with the recurring cost studies for
3 loops and other facilities. Any forward-looking adjustments should be applied to
4 the NRC models as well. Further, it is important that the Commission order VZ
5 to assume for purposes of its cost studies that the company has efficient, forward
6 looking designed OSS and operations. To do otherwise would be to reward the
7 company for its embedded inefficiencies. It also would not be TELRIC as
8 defined by the FCC.

9

10 **Q. THE FCC NOTED THAT COST MODELS SHOULD BE TRANSPARENT,**
11 **OPEN AND VERIFIABLE. WHY IS THIS SO IMPORTANT?**

12 A. First, it allows the cost analyst to better understand how the model calculates costs
13 and all the assumptions that are implied in the model. By analogy, it is one thing
14 to read a description of an internal combustion engine; it is another to open the
15 hood of a car and to work on the engine. While VZ's switching models are
16 generally open to inspection, there are still a large number of instances where data
17 and calculations underlying VZ's NRC studies are unsupported, and *remain*
18 *unsupported* even after CLECs have asked for clarification and supporting data
19 and documentation in data requests.

20

21 Particularly disturbing is VZ's reliance on SMEs for its estimates of labor time
22 estimates. This process of obtaining labor time estimates from SMEs remains

1 obscure and subject to obvious errors, stemming from bias and other incentives
2 for VZ-employed personnel to artificially inflate their time estimates. These
3 problems will be discussed in more detail below.

4

5 **B. CRITERION FOR WHEN COSTS SHOULD BE RECOVERED**
6 **THROUGH NRCS**

7 **Q. IS THE DISTINCTION BETWEEN RECURRING COSTS AND NON-**
8 **RECURRING COSTS ONE THE MOST IMPORTANT ISSUES TO BE**
9 **DECIDED BY THE COMMISSION IN THIS PROCEEDING?**

10 A. Yes. The distinction between recurring costs and non-recurring is perhaps the
11 most important issue with respect to determining appropriate non-recurring
12 charges.

13

14 The Commission should note that a large portion of the ILEC's costs – if not the
15 majority – are incurred on a non-recurring basis. This is true for most of the
16 investments associated with outside plant facilities, interoffice transport facilities,
17 switch facilities, and for all buildings, and grounds, and much of the power
18 equipment in the central offices. Almost all of these facilities represent large, one
19 time investment costs incurred on a non-recurring basis (though clearly all of
20 them have recurring costs, such as maintenance, taxes, etc., associated with them).
21 However, just because the costs associated with these facilities are incurred on a
22 non-recurring basis in no way means from an economic perspective that these
23 costs should be recovered through non-recurring charges. In fact, most of these

1 costs are routinely identified in cost studies by VZ and others as recurring costs,
2 and correctly so. Typically, however, there is little discussion in recurring cost
3 studies about why such one-time investments are expressed as recurring costs. In
4 this proceeding, given that VZ has misclassified many of its costs as non-
5 recurring costs while they should be classified as recurring costs, it is worthwhile
6 to make explicitly discuss the criterion that should guide the Commission in
7 determining what costs should be recovered through non-recurring charges and
8 what costs should be recovered through recurring charges.

9

10 **Q. PLEASE DISCUSS WHAT CRITERION SHOULD GUIDE THE**
11 **COMMISSION IN DETERMINING WHEN A COST SHOULD BE**
12 **RECOVERED THROUGH RECURRING CHARGES AND WHEN IT**
13 **SHOULD BE RECOVERED THROUGH NON-RECURRING CHARGES.**

14 A. In general, the criterion for classifying costs should be the following. If activities
15 benefit only the CLEC placing the request for service, then the costs of these
16 activities – to the extent that they are efficiently incurred – should be recovered
17 from the CLEC through non-recurring charges. However, if other entities, such
18 as other CLECs and the ILEC itself, benefit either immediately or over time, then
19 the costs of these activities should be recovered through recurring charges.

20

1 An excellent discussion on this issue is found in the *Virginia Arbitration Order*, in
2 which the FCC notes:³¹

3 The costs at issue are labor costs associated with the activities
4 necessary to provide UNEs to a competitive LEC. In many cases,
5 these activities will produce benefits for any carrier using the facility in
6 the future, and not just the initial competitive LEC for which the work
7 is performed (*e.g.*, cross-connects made to complete a connection are
8 likely to remain in place even if the end-user customer no longer takes
9 service from the competitive LEC).

10
11 The FCC then correctly goes on to note:

12 Costs of non-recurring activities that benefit *only* the competitive
13 LEC, or are not reflected in Verizon's ACF calculation (*e.g.*, certain
14 types of loop conditioning), should be recovered through NRCs.
15 (Emphasis added.)
16

17 Again, many of the problems with VZ's hot-cut studies can be reduced to the fact
18 that often VZ mischaracterizes costs as non-recurring costs even though those
19 activities and costs would benefit subsequent customers and should be recovered
20 through recurring costs.

21
22 A good example of the co-mingling of recurring and non-recurring costs concerns
23 the cleaning up of the legacy databases. As noted (and discussed in more detail
24 below), VZ's high fall-out rates -- and the associated costs -- are mostly caused by
25 errors in VZ's legacy databases. The clean up of these databases, however, will
26 benefit not only the CLEC placing the service order that falls out because of the
27 errors in the databases, but all subsequent CLECs that place orders as well as VZ

³¹ *Virginia Arbitration Order* at paragraphs 156 and 584.

1 itself. For this reason (see previous discussion), all of the costs with cleaning up
2 the databases are recurring costs and not non-recurring costs.

3
4 The co-mingling of recurring and non-recurring costs is often also found in VZ's
5 provisioning cost studies. As the FCC notes, most of the costs of provisioning
6 consist of the labor costs associated with activities (traveling, establishing cross-
7 connects, and testing) at either the central office or outside plant location. To the
8 extent that establishing cross-connects results in the permanent activation of
9 facilities, the CLEC that orders the facility to be activated as well as other CLECs
10 and the ILEC itself will benefit from this activity. Thus -- using the criterion
11 discussed previously -- the costs of this activity are more properly characterized
12 as recurring costs.

13
14 Further, given that VZ's SMEs typically provide time estimates for testing and
15 problem resolution activities for *end to end facilities*, the cost studies for non-
16 recurring costs tend to inappropriately co-mingle recurring costs and non-
17 recurring costs. Any testing and repairs on facilities (distribution links, feeder
18 facilities, CO facilities, etc.) benefit not just the CLEC that orders facilities but
19 also subsequent CLECs and the ILEC itself. As such, the costs of these activities
20 are recurring costs and *not* non-recurring costs. Clearer directives on this issue
21 would resolve many of the cost disputes in this proceeding.

22

1 Last, as the FCC has noted on many occasions, the practice of recouping costs
2 through non-recurring charges tends to create barriers-to-entry and precludes
3 competition where it might have been viable. By contrast, recognizing that many
4 of the costs recovered through the ILECs' proposed non-recurring charges may in
5 fact be more appropriately recouped through recurring charges has the added
6 benefit that it lowers such potential barriers-to-entry.

7

8 **Q. ARE THERE ADDITIONAL REASONS FOR ENSURING THAT COSTS**
9 **ARE APPROPRIATELY IDENTIFIED AS RECURRING COSTS AND**
10 **NOT INAPPROPRIATELY AS NON-RECURRING COSTS?**

11 A. Yes. In addition to the aforementioned reasons, costs associated with cleaning up
12 data bases, etc., -- if they are to be recovered at all under TELRIC -- are more
13 appropriately identified as recurring costs. To be sure, to permit recovery of such
14 costs as part of the non-recurring charges for hot-cuts would lead to a number of
15 undesirable effects:

- 16 1. It would provide VZ with no incentive to further automate or mechanize
17 its systems as it would be compensated for its costs whether or not those
18 costs are efficiently incurred.
- 19 2. It would cause over-recovery since many of these costs are also recovered
20 through recurring charges.
- 21 3. It would cause complicated corrections to the recurring cost studies to sort
22 out which costs are recovered through the non-recurring cost studies. If
23 costs are not appropriately eliminated from the recurring cost studies, then
24 over-recovery occurs. Further, to the extent that certain maintenance
25 related expenses may be incorporated into the non-recurring charges, retail
26 rates may have to be adjusted as well since presumably retail rates are set
27
28

1 at levels that at least in part reflect the cost of maintaining the public
2 switched network.

3
4 4. It would cause unintended cross-subsidies as the non-recurring charges,
5 paid by one single CLEC as a result of ordering one or more UNEs,
6 would recover costs for activities from which other carriers, including the
7 ILEC itself, will continue to benefit. To avoid these types of inappropriate
8 cross-subsidies, complicated refund mechanisms would have to be put in
9 place.

10
11 5. This method would cause non-recurring charges to be significantly higher
12 than they should be and preclude competition where competition would
13 otherwise be possible.

14
15 6. It would reduce barriers to entry

16
17 In short, an approach that recovers all costs associated with service activation --
18 irrespective of whether those costs are associated with activities that benefit only
19 the CLEC placing the service order -- would result in a large number of
20 undesirable consequences.

21
22 **C. RELATIONSHIP BETWEEN RECURRING COST STUDIES FOR**
23 **UNE LOOPS AND NON-RECURRING COST STUDIES FOR HOT-**
24 **CUTS**

25 **Q. IN GENERAL, SHOULD THERE BE CONSISTENCY BETWEEN THE**
26 **RECURRING COST STUDIES AND NON-RECURRING COST**
27 **STUDIES?**

28 A. Yes. Recurring costs and non-recurring costs should be closely tracked, in the
29 sense that costs should be classified either as recurring costs or as non-recurring
30 costs, but never as both. For this reason, among others, it is important that both
31 types of cost studies are rooted in the same network constructs. For example, if

1 the recurring loop cost studies assume the use of a certain loop technology, such
2 as fiber based feeder using IDLC, then the non-recurring cost studies should be
3 based on that same technology.

4

5 **Q. ARE VZ'S WPTS HOT CUT COST STUDIES CONSISTENT WITH THE**
6 **LOOP COST STUDIES THAT THE COMMISSION APPROVED FOR**
7 **VZ?**

8 A. No. In the NYPSC *UNE Rate Order*, the Commission reconfirmed a previous
9 finding that, for cost study purposes, 100 percent of VZ's loops are assumed to be
10 fiber based.³² VZ's current hot cut WPTS studies deviate from this loop
11 constructs and assume that *** Begin Confidential ____ End Confidential ***
12 percent of the hot cuts involve copper loops. This is not appropriate.

13

14 **Q. HOW DOES THIS INCONSISTENCY AFFECT THE WPTS HOT CUT**
15 **COST STUDIES?**

16 A. It affects the WPTS hot cut studies in a number of ways. First, it makes it
17 impossible to keep track of which costs are already recovered in the recurring cost
18 studies to avoid double recovery. That is, because the recurring and non-recurring
19 cost studies are based on totally different loop constructs, there is simply no way
20 to cross-check to see where costs are being recovered.

21

³² NYPSC *UNE Rate Order* at pages 93-95. and 140.

1 Second, because the non-recurring cost studies ignore the assumption that 100
2 percent of the loops are fiber based, VZ fails to account for certain advanced
3 technologies that largely automate the hot cut process. (These technologies will
4 be discussed in a separate section below.)

5
6 **Q. WHAT DO YOU RECOMMEND?**

7 A. We recommend that the Commission adopt our revisions to VZ's WPTS hot cut
8 studies that are consistent with the Commission's previously approved loop
9 construct for VZ. Specifically, the Commission should order VZ to assume that
10 100 percent of the loops are fiber based for purposes of setting NRCs for hot cuts.

11

12 **D. TELRIC REQUIRES EFFICIENT TECHNOLOGIES IN SERVICE**
13 **ORDERING AND SERVICE PROVISIONING**

14 **Q. SHOULD NRC COST STUDIES REFLECT FORWARD-LOOKING,**
15 **MOST-EFFICIENT, LEAST-COST TECHNOLOGIES RATHER THAN**
16 **VZ's ACTUAL OPERATIONS?**

17 A. Yes. The NRC studies are subject to the same requirements as the recurring cost
18 studies: they should be TELRIC studies. As such, it is important that the NRC
19 studies reflect forward-looking, most-efficient, least-cost technologies and not
20 VZ's actual operations. In what follows, we will provide in general terms a
21 description of forward-looking, least-cost technologies and the role such
22 technologies should play in service ordering and service provisioning.

23

1 **E. SYSTEMS INTEGRATION STREAMLINES SERVICE DELIVERY**

2 **Q. HOW DOES OSS, INTEGRATED WITH WORKFLOW ENGINE DRIVEN**
3 **TECHNOLOGY, STREAMLINE THE DELIVERY OF SERVICES TO**
4 **ILECS' WHOLESALE CUSTOMERS?**

5 A. One network database, or the integration of multiple network databases to appear
6 as a singular database, makes information management easy and efficient,
7 resulting in enhanced data integrity, increased flow-through, and reduced data
8 management costs.

9
10 When technicians do intervene in the business process, a singular graphical user
11 interface (“GUI”) optimizes technician efficiency by replacing multiple GUIs or
12 text driven interfaces for each individual OSS. This approach eliminates the time
13 technicians spend accessing multiple systems.

14
15 A singular technician logon improves OSS security and system administration,
16 and enhances technician efficiency by allowing a technician to logon to OSS once
17 and eliminating multiple applications and repetitive system logons.

18
19 Changes in business processes to support new service offerings can be
20 implemented as an algorithm in the WFE and adjustments, if necessary, to system
21 interfaces impacted by the new service offerings. Additional new systems can be
22 added to the integrated technology by the implementation of an interface between

1 the new system and the WFE and the addition of algorithms to manage the new
2 integration.

3
4 In our review of VZ's studies, we will evaluate the validity of VZ's cost estimates
5 against the standards described in the above discussion. Further, in the last
6 section of this testimony, we will address some of the issues raised in the
7 testimony of ATT. ATT has argued that certain improvements in VZ's OSS are
8 possible that would not only improve the process from an operational perspective
9 but that would also make the hot cut process more cost efficient.

10

11 **IV. METHODOLOGY – CONNECT AND DISCONNECT**
12 **CHARGES SHOULD SEPARATED**

13 **Q. DO VZ'S STUDIES COMBINE THE COSTS OF CONNECT AND**
14 **DISCONNECT ACTIVITIES?**

15 A. Yes. VZ's cost studies and proposed charges combine the costs of connect and
16 disconnect activities.

17

18 **Q. SHOULD CONNECT AND DISCONNECT CHARGES BE SEPARATED?**

19 A. Yes. First, they obviously apply at different points in time. VZ's NRC studies
20 assume a two-year location life that ignores that some customers may remain with
21 a company for years, if not decades. It is inappropriate to charge for
22 disconnection of service when service is activated. Our revised NRC cost studies

1 and rates calculated and propose separate charges for connects and disconnects
2 using the proper TELRIC based assumptions.

3

4 **Q. HAS THE FCC RECOGNIZED THAT THE COSTS OF CONNECT AND**
5 **DISCONNECT ACTIVITIES SHOULD BE SEPARATED?**

6 A. Yes. In its *Virginia Arbitration Order*, the FCC found the following: “We agree
7 with AT&T/WorldCom that disconnect costs, if any, should be recovered *at the*
8 *time of disconnection.*”³³ (Emphasis added.) The FCC then ordered VZ to
9 separate the costs of activities for connecting a loop from those of disconnecting a
10 loop and to develop separate charges.

11

12

13

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19

20

³³ *Virginia Arbitration Order* at paragraphs 596-598.

1 **V. METHODOLOGY -- VZ SMES' PROCESS IS BIASED AND**
2 **UNRELIABLE**

3 **A. OVERVIEW**

4 **Q. IS VZ UNDER AN OBLIGATION TO DEMONSTRATE THAT ITS**
5 **NEWLY-PROPOSED NRCs DO NOT EXCEED FORWARD-LOOKING**
6 **ECONOMIC COSTS?**

7 A. Yes. The FCC has found that ILECs such as VZ have to prove that no unbundled
8 network element is priced above its forward-looking, economic cost.
9 Specifically, in its *Local Competition Order*, the FCC adopted the following
10 rule.³⁴

11 **§ 51.505 Forward-looking economic cost.**

12
13 (e) *Cost study requirements.* An incumbent LEC must prove to
14 the state commission that the rates for *each element it offers*
15 *do not exceed the forward-looking economic cost* per unit of
16 providing the element, using a cost study that complies with
17 the methodology set forth in this section and § 51.511 of this
18 part. (Emphasis added.)
19

20 As will be discussed presently, VZ's heavy reliance on SMEs fundamentally
21 undermines the company's efforts in this regard.
22

23 **Q. ARE VZ'S NON-RECURRING COST STUDIES CRITICALLY**
24 **DEPENDENT ON SUBJECT MATTER EXPERT ("SME") ESTIMATES?**

25 A. Yes. Virtually *all of the costs* in VZ's NRC studies consist of labor-related costs.
26 Those labor-related costs are calculated based on a simple equation that generally

³⁴ *Local Competition Order*, First Report and Order CC Docket No. 96-98, released August 8, 1996.

1 multiplies hourly labor rates times the estimated labor times. As previously
2 discussed, the process can be illustrated as follows:

$$\begin{array}{rcccl}
 & & \textit{Task} & & \\
 & & \textit{Occurrence} & & \\
 \textit{Tasks} & \textit{Task Time} & \textit{Percent / Fall} & \textit{Labor Rate} & = \textit{Cost} \\
 \textit{Performed} & \textit{Required} & \textit{Out} & & \\
 \textit{(Minutes)} & & & & \\
 \text{(a)} & \text{(b)} & \text{(c)} & \text{(d)} & \text{(b)x(c)x(d)}
 \end{array}$$

3
4 Thus, as the above equation shows, VZ determines its NRCs almost exclusively
5 by using SME-provided labor time estimates. As such, these SME-provided labor
6 time estimates are the determining factor in VZ's NRC studies.

7
8 **Q. PLEASE SUMMARIZE THE REASONS WHY VZ'S RELIANCE ON THE**
9 **SME PROVIDED LABOR TIME ESTIMATES IS PROBLEMATIC AND**
10 **INVALIDATES VZ'S HOT CUT WPTS COST STUDIES?**

11 A. VZ's method for relying on SME-provided labor time estimates is problematic for
12 a number of reasons:

- 13 -- SME estimates are subjective and most likely biased against the CLECs.
- 14
- 15 -- SME estimates are generally unsupported, obscure and *not provided* by
- 16 testifying witnesses.
- 17
- 18 -- SME estimates fail to account for forward-looking, least-cost, most-
- 19 efficient processes, but are instead based on the SMEs' experiences with
- 20 embedded and inefficient processes.
- 21
- 22 -- SME estimates fail to account for variations across the state, which casts
- 23 additional doubts on their validity.
- 24

25 In what follows, each of these problems will discussed in more detail.

1 B. **THE METHOD OF RELYING ON SME ESTIMATES IS**
2 **INHERENTLY FLAWED AND LIKELY BIASED AGAINST**
3 **CLECS**

4 **Q. WHY IS THE SME-BASED PROCESS INHERENTLY FLAWED?**

5 A. The SME-based process is inherently flawed because it is always extremely
6 sensitive to the manner and the context in which the questions are asked. A slight
7 change in the way VZ asks its SMEs for input can radically change the answers
8 given. In the current instance, the most obvious bias that will slip into the time
9 estimates stems from the fact that it concerns services to be offered to VZ's
10 competitors -- *who may be perceived by the SMEs as a direct threat to their own*
11 *job security*. Clearly, these types of estimates should be validated by time and
12 motion studies³⁵ to make them objective, rather than subjective (as they are now).

13
14 **Q. WHAT INCENTIVES DO VZ'S SMEs HAVE TO PROVIDE LABOR**
15 **TIME ESTIMATES THAT REFLECT LEAST-COST, MOST-EFFICIENT,**
16 **FORWARD-LOOKING OPERATIONS?**

17 A. The SMEs have few, if any, incentives to provide accurate estimates. Indeed,
18 given that the labor time estimates are supposed to be TELRIC -- *i.e.*, forward-
19 looking, most-efficient, least-cost -- the SMEs are asked to provided labor time
20 estimates that are lower than the labor times which they themselves (or their

³⁵ By time and motion studies we refer to a management technique covering the investigation of methods of performing work (method study) and the time taken to do it (work measurement) with a view to its rationalization and the possible introduction of incentive payment systems. The time and motion studies can be used to validate the SME estimates.

1 crews) are likely to achieve. In effect, the SMEs are being asked to reveal their
2 own inefficiencies. We suspect that few human beings would be inclined to do
3 this unless they are operating in an extremely secure job environment. As VZ has
4 publicized widely in its anti-UNE-P advocacy, competitors' slight inroads into
5 VZ's monopoly grip on the local service marketplace mean that job security at
6 VZ is no longer what it used to be. Further, to the extent that the labor time
7 estimates feed directly into the NRC studies, low labor time estimates would
8 make the prospects of competitive entry and related job losses more likely. In
9 short, virtually all incentives are for the SMEs to overestimate labor time
10 estimates.

11
12 Again, it is always important to recall that legislators and regulators have forced
13 VZ to make UNEs available to its would-be competitors. This observation is
14 important in order to put the question concerning the reliability of labor time
15 estimates in a proper perspective and alerts us to the possibility that those
16 estimates are likely biased.

17
18 **Q. HAVE SOME COMMISSIONS FOUND THAT SUBJECT MATTER**
19 **EXPERTS HAVE AN INCENTIVE TO PROVIDE BIASED ESTIMATES**
20 **FOR TELRIC STUDIES BECAUSE SUCH STUDIES CONCERN RATES**
21 **ASSESSED AGAINST COMPETITORS?**

1 A. Yes. In Massachusetts, in Docket DTE 96-73, Phase 4-L, October 15, 1999, the
2 Department made the following observations regarding work time estimates,
3 which are relevant here as well:

4 *d. Work Time Estimates*

5 [...] This concern is amplified because Bell Atlantic time estimators
6 were biased because they were told that the estimates were going to be
7 used to establish charges that would be assessed against CLECs. [...] *There is also a strong likelihood of bias when employees are instructed to provide estimates that they are told will be used to derive charges for their employer's competitors.* Bell Atlantic has
8 failed to demonstrate that it acted to reduce the probability of such
9 bias. [...] Accordingly, we are left with no choice but to modify the
10 numbers presented by Bell Atlantic to offset, to the extent possible, the
11 biases in its approach. (Emphasis added.)
12
13
14
15

16 Much of the concerns expressed by the Massachusetts Department of Energy with
17 respect to Verizon's non-recurring cost studies apply equally to VZ's SME-based
18 studies in this case in this case. The inherent bias in VZ's use of SMEs was
19 further criticized by the FCC in the *Virginia Arbitration Order*.³⁶
20

21 **Q. HAS VZ VALIDATED ITS SMES' ESTIMATES WITH TIME AND**
22 **MOTION STUDIES?**

23 A. No. To our knowledge, VZ has not performed any time and motion studies to
24 validate the time estimates provided by its SMEs.
25

³⁶ See *Virginia Arbitration Order* at paragraphs 572-580 (See, e.g., paragraph 580 where the FCC noted: "Every state commission has recognized various significant upward biases (in over-estimating work-time estimates))

1 **C. SME ESTIMATES FAIL TO ACCOUNT FOR EFFICIENT**
2 **PROCESSES BUT ARE BASED ON THE SMES' EXPERIENCES**
3 **WITH EMBEDDED AND INEFFICIENT PROCESSES.**

4 **Q. HAS VZ PROVIDED SME ESTIMATES THAT ALLOW THE**
5 **COMMISSION TO MAKE AN INFORMED DECISION IN THIS CASE**
6 **REGARDING HOT CUT COSTS?**

7 A. No. In order for the Commission to accept the nonrecurring rates generated by
8 VZ's NRC studies, the methodology used in generating the rates must be valid.
9 Because the studies largely depend upon estimates obtained from VZ SMEs, it is
10 critical that these SME-provided data inputs can be relied upon to produce costs
11 that are representative of *forward-looking* hot cut costs in New York. They are
12 not.

13
14 **Q. HAVE OTHER JURISDICTIONS RECOGNIZED THIS WEAKNESS IN**
15 **THE CALCULATION OF NONRECURRING COSTS?**

16 A. Yes. The Massachusetts Department of Energy and Telecommunications
17 recognized in D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-L,
18 that there were serious flaws in Verizon-MA's NRC methodology, and that in
19 order to reduce the strong likelihood of bias when, among other things, employees
20 are instructed to provide estimates that will be used to derive charges for
21 competitors, the Department ordered VZ-MA to rely on *minimum*, rather than
22 *average*, work time estimates in deriving its NRCs.

23

1 Also, the Washington Utilities and Transportation Commission, *In the Matter of*
2 *the Continued Costing and Pricing of Unbundled Network Elements, Transport,*
3 *Termination and Resale*, Brief of Commission Staff, Docket No. UT-0030013,
4 Part B, May 29, 2001, made the following observation:

5 The cost studies that Qwest filed in this case are based on
6 Qwest's actual experience or company practice (TR 1821; Ex. T-
7 1001, page 5; *See also* Ex. 101, pages 7-8), although they purport
8 to yield forward-looking replacement costs. The time estimates
9 for various activities are based on the estimates of subject-matter
10 experts (SMEs). However, as brought out in the cross-
11 examination of Ms. Million by Ms. Steele (*See* TR 1834-1836),
12 the information provided to the SME's to produce those
13 estimates, and the detail of the activities performed, are not in the
14 record. The Commission requested that, in briefs, the parties
15 address the issue of how it can validate the reasonableness of the
16 opinions of the SMEs (Commission Issue No. 1). It is Staff's
17 view that, without time and motion studies or the opportunity to
18 observe the activities that are performed, it is difficult, if not
19 impossible, to obtain such validation.
20

21 These findings are directly relevant and applicable to VZ's cost studies as well,
22 because as in these other flawed VZ studies VZ NY's WPTS cost study, and the
23 use of VZ SMEs, is not independently verified by time and motion studies or
24 other verifiable means that can correct for inherent skewing of the results.

25

26 **Q. WHAT OTHER ISSUES DO YOU HAVE WITH SME TASK TIME**
27 **ESTIMATES?**

28 A. VZ's testimony and discovery responses leave unclear to what extent the
29 estimates are based on an average that would account for the following:

- 1 -- Problems encountered during the work activities to process the service
- 2 order.
- 3
- 4 -- Systems down time.
- 5
- 6 -- Time spent resolving internal order flow procedures.
- 7
- 8 -- Supplements to the initial order.
- 9
- 10 -- Maintenance or repair time.
- 11

12 Given that it does not appear that VZ has made adjustments for the above

13 considerations, all of which negatively impact work time estimates, the reported

14 times for many of the work tasks are inconsistent and inflated. (VZ’s so called

15 forward-looking adjustments are discussed in a separate section.)

16

17 **Q. WHY DO YOU SAY THAT OMISSION OF THE ABOVE**

18 **CONSIDERATIONS WOULD LEAD TO INFLATED WORK TIMES?**

19 A. We say this because many of the work task descriptions include time for

20 processes that assume that problems, errors or inconsistencies exist in the

21 provisioning process. The descriptions of work items include descriptive terms

22 such as “analyze,” “verify,” “create order manually,” “resolve order problems,”

23 “handle,” and “if order includes IDLC”, as well as other similar terms.³⁷ By using

24 these terms, the SME implies that the time spent is attributable to the VZ

25 technician searching for problems or irregularities in the service provisioning

26 order. In this case, the technician is searching for problems that should not exist

³⁷ For example, see, VZ hot cut WPTS cost study, Exhibit III-A-P, Tabs 1, 2, 3, and 4.

1 in an efficient environment. The point is that it is inappropriate to charge the
2 CLEC customer for searching for problems that, even if they do exist, *should not*
3 *exist in a TELRIC environment*. VZ’s NRC studies should not include any time
4 for correcting such errors, nor should they include time for searching for such
5 errors. Any errors discovered during provisioning are errors caused by VZ’s
6 business processes, and not by the CLEC service request. Under TELRIC, cost
7 identification should follow the cost causation process, which VZ’s study
8 practices violate. This issue is discussed in more detail in a separate section
9 below.

10

11 **D. TIME AND MOTION STUDIES**

12 **Q. IS IT YOUR TESTIMONY THAT THE USE OF SMES FOR PURPOSES**
13 **OF OBTAINING TASK TIME AND PROBABILITY OF OCCURRENCE**
14 **ESTIMATES IS INHERENTLY UNRELIABLE, INACCURATE AND**
15 **UNVERIFIABLE?**

16 A. Yes. As discussed, we think that due to the flaws in the process of obtaining the
17 SME labor time estimates, the potential – and indeed, *probability* -- exists for
18 estimates to be produced that have very little basis in reality. For this reason
19 alone, the FCC’s observation that “[e]very state commission has recognized

1 various significant upward biases [in work time estimates by VZ SMEs]³⁸
2 applies with equal vigor in VZ's WPTS cost study submitted in this proceeding.

3
4 Without knowing much more about how the SME estimates were obtained and
5 calculated, it is difficult for the Commission to take the VZ's survey results
6 seriously, or to give the resulting NRCs much credence.

7
8 **Q. HAVE YOU OBSERVED SIMILAR DEFICIENCIES WITH RESPECT TO**
9 **VZ'S PROBABILITY OF OCCURRENCE ESTIMATES?**

10 A. Yes. The probability-of-occurrence factors relied upon by VZ in its NRC studies
11 are flawed in the same manner as its task time estimates. Since these probability
12 factors reflect the extent to which the tasks at issue even need to be performed
13 (and the extent to which VZ needs to recover those costs), questions regarding the
14 validity of these probability factors have a significant impact on the resulting
15 NRCs.

16
17 **Q. WHAT COULD VZ DO TO PROVIDE THE COMMISSION WITH SOME**
18 **ASSURANCE THAT ITS SME ESTIMATES ARE VALID?**

19 A. VZ could provide validation for its estimates by performing time and motion
20 studies for the tasks at issue. This exercise could give the Commission comfort

³⁸ *Virginia Arbitration Order* at paragraph 580.

1 that the time estimates were not overstated or biased. However, VZ has not done
2 this.

3
4 Alternatively, VZ could engage an independent third party to audit and verify the
5 results obtained from its models. VZ has not done this either. In fact, VZ
6 provides little or no support to establish that its survey results are at all reliable or
7 unbiased. Further, even VZ's process for gathering the limited information that it
8 has provided is unclear.

9

10 **E. RECOMMENDATIONS**

11 **Q. WHAT ARE YOUR RECOMMENDATIONS?**

12 A. Our recommendations are specific to each activity identified in the studies. As
13 such, they will be specified in the pertinent sections below that discuss the
14 required modifications to VZ's studies.

15

16

17

18

19

20

1 **VI. METHODOLOGY – FALL OUT RATES ARE TOO HIGH FOR**
2 **AN EFFICIENT OSS**

3 **A. OVERVIEW**

4 **Q. PLEASE DISCUSS THE ROLE THAT FLOW-THROUGH AND FALL-**
5 **OUT RATES PLAY IN VZ’S COST STUDIES.**

6 A. Having examined VZ’s hot cut WPTS cost studies, we believe that a major source
7 for costs in the hot cut studies stems from the lack of well-developed OSS that
8 would (a) permit CLECs to place error-free service orders, (b) integrate service
9 ordering with service provisioning, and (c) draw on clean, accurate and up-to-date
10 databases that inventory VZ’s network facilities for facility availability, locations,
11 *etc.* While the WPTS is supposed to provide enhancements, it does not
12 apparently reduce the significant degree of fall out reflected in the studies.

13
14 In fact, one finds *low* flow-through and *high* fall-out rates throughout VZ’s
15 service ordering and service provisioning studies. This is very problematic and,
16 in addition to the many other problems, causes the hot cut WPTS studies to be
17 unfit for setting TELRIC-based rates.

18
19 As a result of the high fall-out rates there is an excessive amount of very costly
20 manual intervention that would not be needed in an efficient OSS environment.

21 In fact, the very purpose of an efficient OSS (and presumably the improvements
22 brought about by WPTS) is to reduce or eliminate the need for manual

1 intervention. Manual intervention is very expensive -- not just for the ILEC, but
2 also for the CLEC -- and causes many other possibilities for potential errors to
3 slip into the chain of service ordering and service provisioning. For example, due
4 to the high fall-out rates in service ordering -- which are often caused by errors in
5 VZ's legacy systems -- downstream service provisioning activities involve
6 continuous checking and order validations by technicians. As such, high fall-out
7 rates and low levels of trust in the system have a ripple effect throughout the
8 chain of service ordering and service provisioning activities, causing excessive
9 order validation and database reconciliation and clean-up activities. None of this
10 is consistent with the TELRIC standard that govern VZ's cost studies. We also
11 believe that none of this is consistent with good business practices.

12

13 **Q. DO YOU BELIEVE THAT THE COMMISSION SHOULD APPROVE**
14 **VZ'S PROPOSED FALL-OUT RATES?**

15 A. No, for the following reasons:

- 16 -- VZ's fall-out rates are too high to be consistent with TELRIC principles.
- 17
- 18 -- VZ fails to use most-efficient, forward-looking OSS.
- 19
- 20 -- This Commission, the FCC and other states have approved an upper limit
- 21 of 2% fall-out.
- 22
- 23 -- Approving VZ's high fall-out rates would provide the wrong incentives.
- 24

25

26 It is important to note that the high fall-out rates impact all aspects of the cost
27 studies. In what follows, we will discuss each of these factors in more detail.

1

2

3 **Q. WHAT IS YOUR RECOMMENDATION?**

4 A. For the reasons discussed below, we recommend that the Commission, as it has
5 previously ruled and as supported by the FCC's *Virginia Arbitration Order*, find
6 that fall-out rates *no higher than 2%* should be used in VZ's hot cut WPTS cost
7 studies.

8

9 **B. VZ'S FALL-OUT RATES**

10 **Q. PLEASE PROVIDE SOME OF VZ'S FALL-OUT RATES FOUND IN THE**
11 **SERVICE ORDERING AND SERVICE PROVISIONING PARTS OF VZ'S**
12 **HOT CUT WPTS COST STUDIES.**

13 A. The fall-out rates are found in both VZ's service ordering and service
14 provisioning studies. The table below provides examples of VZ's proposed fall-
15 out rates in the service ordering (NMC) part of the hot cut WPTS studies.³⁹ Begin
16 Confidential ***

³⁹ This table is taken from VZ Hot Cut study, Exhibit III-A-P, Tab 1.

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ACTIVITY DESCRIPTION	Connect Typical Occur'nce
B	D
NMC	

1
2
3
4
5
6
7
8
9
10

*** End Confidential

The fall out rates for the WPTS/provisioning component of the process is similarly high. For example, the RCCC activities are based on the assumption that Begin Confidential *** __ percent *** End Confidential of the time there is a need to “resolve order problems and reschedule.”⁴⁰

These fall-out rates are significantly higher than those previously approved by the Commission, the FCC and other state commissions.

⁴⁰ See VZ Hot Cut study, Tab 1, RCCC.

1 C. VZ'S FALL-OUT RATES ARE INCONSISTENT WITH EFFICIENT
2 OSS

3 Q. WHAT WOULD CAUSE AN OSS TO RECEIVE AN INVALID OR
4 INCOMPATIBLE MESSAGE?

5 A. Database synchronization errors, network element/element manager failures and
6 system communication failures are three types of OSS/network element system
7 errors or failures that cause work activity fall-out.

8
9 Database synchronization errors. Inaccurate or non-matching data are the basis
10 for database synchronization errors. Such errors are caused by two or more OSS
11 systems failing to match data, such as customer names or addresses, or the status
12 of system resources such as equipment and facility, switch ports, *etc.* Database
13 synchronization errors are common and caused by the technician-based manual
14 input methods used to propagate information from system to system when
15 automatic interfaces are not available. Technicians manually input repetitive data
16 into multiple systems. This process exposes the data to a number of potential
17 error types that are time-consuming to identify and correct, both within systems
18 and between systems. The errors consist of typographical errors, transposition,
19 and misinterpretation of data from manual documents. Resolution of these errors
20 is slow and labor-intensive.

21
22 Network element/element manager system (EMS) failures occur when network
23 elements such as local switches, digital access and cross connect system (DACS)

1 or other network elements fail to complete a task requested by the OSS or EMS
2 network. The most common reason for this type of failure is very similar to the
3 database synchronization errors failure -- that is, incorrect information or status in
4 either the network element or the OSS/EMS responsible for initiating
5 provisioning activity. These errors are commonly caused by a combination of
6 data input processes, including processes whereby technicians manually input
7 data from manual records at the same time that an OSS is inputting data through
8 automated processes. These errors are very much similar in nature and resolution
9 as the previously mentioned *database synchronization errors*.

10

11 *System communication failures* are typically software failures at the application
12 layers or interface layers responsible for the establishment of a communications
13 path and managing interface protocols, resulting in a failure of the network to
14 transmit data among OSS, EMS and network elements. The basic cause of these
15 types of errors is two-fold: software and hardware maintenance. When these
16 failures occur without protected systems, the business process typically breaks
17 down to a totally manual process that perpetuates even *more database*
18 *synchronization errors* and *network element failures*.

19

20 **Q. HOW CAN VZ IDENTIFY AND DEVELOP IMPROVEMENTS TO OSS?**

21 A. Effective ILEC users of forward-looking OSS technology utilize, as part of their
22 business process, a root cause analysis (RCA) procedure to scrutinize the causes
23 of OSS fallout. The resulting root cause analysis data are used to develop

1 improvements to business processes and develop software features and
2 enhancements to improve flow-through effectiveness.

3

4 Another excellent example of the RCA process and its ability to improve flow-
5 through is evident from the transcript of the Operations Support Systems Forum
6 that was held by the FCC Common Carrier Bureau on May 28 and 29, 1997.

7 During the second day of the forum, Elizabeth Ham from Southwestern Bell
8 described how her company improved the flow-through capability of their EASE
9 (Easy Access Sales Environment) OSS to a **99 percent flow-through rate**.

10 Commenting on how Southwestern Bell achieved this high flow-through rate, Ms.
11 Ham stated: “Our consumer EASE product permits a 99 percent flow through of
12 all service orders that are entered by our residential or consumer retail operations.
13 We would expect the same flow through from a trained CLEC service rep.”

14

15 Forward-looking, most-efficient OSS perform at low fall-out levels. The above
16 Southwestern Bell example demonstrates the level of flow through that can be
17 accomplished by currently-available telecommunications systems technology and
18 business processes. The example that Ms. Ham offers is for an ordering system.
19 However, this demonstrates the feasibility of high percentage flow-through
20 systems generally.

21

1 **D. RECOMMENDATION: STUDIES SHOULD BE BASED ON NO**
2 **MORE THAN 2% FALL OUT**

3 **Q. WHY DO YOU BELIEVE THAT A MAXIMUM OF 2% FALL-OUT**
4 **FACTOR SHOULD BE APPLIED TO VZ'S NRC COST STUDIES?**

5 A We propose that an administrative fall-out factor be incorporated into each
6 network element NRC calculation to recognize that in an efficient environment
7 only minimal fallout will occur. This factor should be applied once to the entire
8 end-to-end provisioning process in recognition of the basic principle that
9 processes should be viewed in this manner and to avoid the compounding cost
10 effect associated with recognizing fall-out at each process step. We propose
11 utilizing a rate of *2 percent* to reflect forward-looking quality/cost efficiencies,
12 which, in our opinion, are reasonable to expect from a progressive company
13 focused on forward-looking process improvements.

14
15 VZ obviously considers the present amount of manual intervention reflected in its
16 studies to be forward-looking. As discussed above, however, this is obviously
17 not a forward-looking assumption and is inconsistent with the directives of the NY
18 PSC and the FCC that VZ should assume a 2% fall-out rate when calculating non-
19 recurring costs for TELRIC based prices.

20

1 **E. THE NY PSC, AND OTHER STATES, HAVE APPROVED 2%**
2 **FALL-OUT AS AN UPPER LIMIT**

3 **Q. HAS THE NY PSC ORDERED VZ TO USE A 2% FALL-OUT RATE FOR**
4 **COST STUDY PURPOSES?**

5 A. Yes. In the UNE Rate Order, this Commission ordered VZ to use a 2 percent fall
6 out rate.⁴¹

7

8 **Q. HAVE OTHER STATE REGULATORY BODIES REVIEWED AND**
9 **EVALUATED THE PRINCIPLES AND FALL-OUT FACTOR**
10 **APPROACH YOU SUGGEST?**

11 A. Yes. These principles and the 2% fallout factor were presented, evaluated and
12 accepted in four other jurisdictions, two of which are in the former Ameritech
13 region:

14 -- Illinois, ICC Docket No. 98-0396, October 16, 2001.

15 -- Massachusetts, D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-
16 Phase 4-L consolidated arbitration, ruling dated October 1999.

17

18 -- Connecticut, Docket 97-04-10, decision dated May 1998 and Docket 98-
19 09-01, decision dated November 1999.

20

21 -- Michigan, Case U-11280, order issued November 1999.

22

23 -- FCC's *Virginia Arbitration Order*.

24

⁴¹ NY PSC UNE Rate Order at pg. 143.

1 **F. SOME OF THE FALL OUT IS FOR VZ DISCONNECTS AND NOT**
2 **THE CLEC'S**

3 **Q. IS THE CLEC REQUIRED BY VZ TO SEND IN – AS PART OF THE LSR**
4 **– A DISCONNECT ORDER FOR VZ'S CUSTOMER?**

5 A. Yes. The process of submitting a LSR under the basic hot is described by VZ as
6 consisting of four pieces of information:⁴²

- 7 1. A disconnect (“D”) order, for example to discontinue the existing
- 8 retail service where the customer was originally a Verizon retail
- 9 2. A change (“C”) order to establish the UNE-L for the CLEC.
- 10 3. A trigger order which sends a message to NPAC 48 hours before
- 11 the due date indicating that the end user’s telephone number will
- 12 be ported to the CLEC.
- 13 4. A record order detailing listing information, including E911 data.
- 14

15 As is clear from this language, the CLEC is required to submit a disconnect order
16 for a VZ customer.

17
18 This requirement is probably the result of the practical consideration that it is the
19 CLEC that knows the customer is changing providers while VZ does not.

20 However, this does not mean that the CLEC should bear the burden of the costs
21 associated with this notification. Most importantly, to the extent that it is VZ
22 databases that cause fall out for this data entry, it would be most ironic and
23 inappropriate if the CLEC were charged for the associated manual intervention –
24 as the CLEC is under VZ’s proposal.

25
⁴² *VZ's Panel Testimony*, page 23.

1 **Q. IS THE CLEC CHARGED BY VZ FOR DISCONNECT ACTIVITIES**
2 **WHEN ITS CUSTOMER DISCONTINUES SERVICE?**

3 A. Yes. In effect, for each customer, the CLEC is charged for two sets of disconnect
4 activities by VZ. First, the CLEC is charged when the customer discontinues
5 VZ's service⁴³; and second, the CLEC is charged again when the customer
6 discontinues the CLEC's service. Clearly, this is not appropriate (though it does
7 underscore the benefits of incumbency.)

8
9 **Q. BUT, ISN'T IT TRUE THAT THE DISCONNECT NOTICE TO VZ**
10 **INCLUDED IN THE LSR CONCERNS ONLY THE NOTIFICATION**
11 **COSTS AND NOT THE COSTS OF THE PHYSICAL DISCONNECTS?**

12 A. In a sense, yes: but, this does not make it more appropriate. Furthermore, with
13 respect to the physical connects and disconnects that occur when VZ loses a
14 customer to a CLEC, it is not clear how VZ differentiates between its own
15 disconnect activities and the connect activities performed for the CLEC. For
16 example, when a customer is served on a copper loop and the customer leaves
17 VZ, VZ would have to disconnect that customer by disconnecting the cross-
18 connect at the MDF. This involves some of the same activities, however, that are
19 also involved in the connect activities performed for the CLEC. The technician
20 has to go over to the MDF, find the cross-connect presence on the MDF, etc. it is

⁴³ The costs here involve only the costs associated with the LSR submission. There are no costs for the physical disconnect.

1 not clear how VZ is accounting for these shared costs. This issue is discussed
2 more detail below in a separate section on cross-connect and disconnects.

3

4 **Q. WHAT DO YOU RECOMMEND?**

5 A. The problem we have identified here resolves itself if the Commission orders VZ
6 to use an upper limit of a 2 percent fall-out rate for its LSR process. In that event,
7 the CLEC will not incur costs associated with fall out and manual intervention in
8 the notification of VZ that VZ has lost a customer. In short, we recommend that
9 the NYPSC adopts the same position on these issues as the FCC's Wireline
10 Competition Bureau did in its *Virginia Arbitration Order* and as this Commission
11 previously ordered in the *UNE Rate Order*. Our recommendation is, therefore, to
12 order VZ to use a fall out of no more than 2 percent.

13

14 **G. INCENTIVES: ADOPTING VZ'S PROPOSED FALL-OUT RATES**
15 **WOULD REWARD VZ FOR INEFFICIENCIES AND WILL**
16 **PERMANENTLY IMPAIR COMPETITION**

17 **Q. HAS THE FCC RECOGNIZED THE PERVERSE INCENTIVE**
18 **STRUCTURE OF APPROVING HIGH NRCS BASED ON THE**
19 **ASSUMPTION OF HIGH FALL OUT RATES FOR THE ILEC?**

20 A. Yes. Its worth quoting the FCC in full on this issue:

21 We find that the *two percent fallout rate* used in the
22 AT&T/WorldCom model is consistent with TELRIC requirements.
23 We note that several state commissions have adopted this position. We
24 also find that it is reasonable to assume, as AT&T/WorldCom do, that
25 competitive LEC orders that have errors are returned electronically to
26 the competitive LEC and resubmitted and that *manual intervention* by

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1 Verizon at the ordering stage should be unnecessary. We do not agree
2 with Verizon that competitive LECs should pay NRCs that reflect
3 manual handling of all orders for six or more lines. As noted by
4 AT&T/WorldCom, this policy appears to be a “workaround” designed
5 to deal with the possibility that Verizon’s OSS cannot reliably
6 determine the available facilities for a given location. We also disagree
7 with Verizon that costs associated with database errors are
8 appropriately recovered from competitive LECs through NRCs.
9 Database maintenance is a recurring cost that should be recovered in
10 recurring charges through ACFs, and not through a NRC. Allowing
11 Verizon to impose NRCs on competitive LECs to correct database
12 errors provides *no incentive* to Verizon to avoid such errors.⁴⁴
13 (Emphasis added.)
14

15 We recommend that the NYPSC adopts the same position on these issues as the
16 FCC’s Wireline Competition Bureau did in its *Virginia Arbitration Order*.

⁴⁴ *Virginia Arbitration Order*, paragraph 592.

1 **VII. SERVICE ORDERING (NMC) -- VZ'S LSR PROCESS DOES**
2 **NOT ALLOW CLECS ERROR-FREE LSR SUBMISSIONS**

3 **A. THE FCC FINDS THAT ERROR FREE LSRS SHOULD BE THE**
4 **STANDARD**

5 **Q. IS VIRTUALLY 100 PERCENT OF THE COST VZ IDENTIFIED FOR**
6 **SERVICE ORDERING CAUSED BY FALL OUT?**

7 A. Yes. As shown in VZ's cost study,⁴⁵ virtually *100 percent* of the costs of service
8 ordering are caused by fall out. That is, if the service orders would flow through
9 the service ordering interfaces without fall out, then the service ordering costs
10 would be zero or near zero.

11
12 **Q. DID VZ DESIGN AN EFFICIENT LSR ORDERING AND**
13 **PROVISIONING PROCESS THAT PERMITS CLECS TO SUBMIT**
14 **ERROR-FREE REQUESTS?**

15 A. No. As is clear from VZ's cost studies, a significant number of service orders are
16 being accepted by VZ's service ordering systems *even though the service orders*
17 *contain errors or inconsistencies* that cause the orders to fall-out and require
18 manual intervention.

19
20 **Q. SHOULD VZ DESIGN ITS SERVICE ORDERING SYSTEMS SO THAT**
21 **CLECS CAN SUBMIT ERROR-FREE SERVICE REQUESTS?**

⁴⁵ See for example, VZ Hot Cut study, Exhibit III-A-P, Tab 1, NMC, lines 1 through 8.

1 A. Yes. There is no reason that VZ cannot implement a service ordering system that
2 would permit CLECs to submit error-free service requests. This is a different
3 issue from flow-through for service provisioning activities. This issue concerns
4 the upfront activities of receiving service orders.

5
6 The Commission should consider that at this point, there are thousands of
7 commercial applications of electronic service and product ordering systems used
8 on the Internet that often deal with situations that are more complex than the
9 situation VZ faces. Therefore, this suggestion is by no means as if to require VZ
10 to force a technological breakthrough in electronic service and product ordering
11 systems.

12
13 **Q. DOES FALL-OUT DUE TO IMPROPERLY-DESIGNED SERVICE**
14 **ORDERING SYSTEMS CAUSE THE NEED FOR MANUAL**
15 **INTERVENTION AND AN INCREASE IN THE NON-RECURRING**
16 **CHARGES?**

17 A. Yes. As previously demonstrated, the fall-out rates for service ordering are
18 significant and cause costly manual intervention that greatly drives up the NRCs.

19
20 **Q. DID THE FCC FIND THAT ERROR FREE SUBMISSIONS SHOULD BE**
21 **THE STANDARD?**

1 A. Yes. It is worth quoting the FCC on this issue.⁴⁶

2 We also find that it is reasonable to assume, as AT&T/WorldCom do,
3 that competitive LEC orders that have errors are returned
4 electronically to the competitive LEC and resubmitted and that manual
5 intervention by Verizon at the ordering stage should be unnecessary.
6 (Emphasis added.)
7

8 **Q. WHAT DO YOU RECOMMEND?**

9 A. We recommend that the Commission set rates based on the assumption that the
10 C:LECs are able to place error free LSRs. In our revised studies, we have
11 modified the studies accordingly.
12

13 **B. ILLUSTRATION OF AN EFFICIENT SERVICE ORDERING**
14 **SYSTEM: ORBITZ.COM**

15 **Q. PLEASE DISCUSS HOW ORBITZ.COM REPRESENTS AN EFFICIENT**
16 **SERVICE ORDERING SYSTEM WITH MINIMAL FALL-OUT AND**
17 **WHICH ALLOWS USERS ERROR-FREE ORDER SUBMISSIONS.**

18 A. For an example of an efficient OSS, the Commission should consider orbitz.com
19 that allow one to purchase airline tickets online. We present this example to
20 demonstrate that efficient systems allowing customers to submit service orders
21 that are error free and with minimal or no fallout not only exist, but are currently
22 in commercial use.
23

⁴⁶ *Virginia Arbitration Order*, paragraph 592.

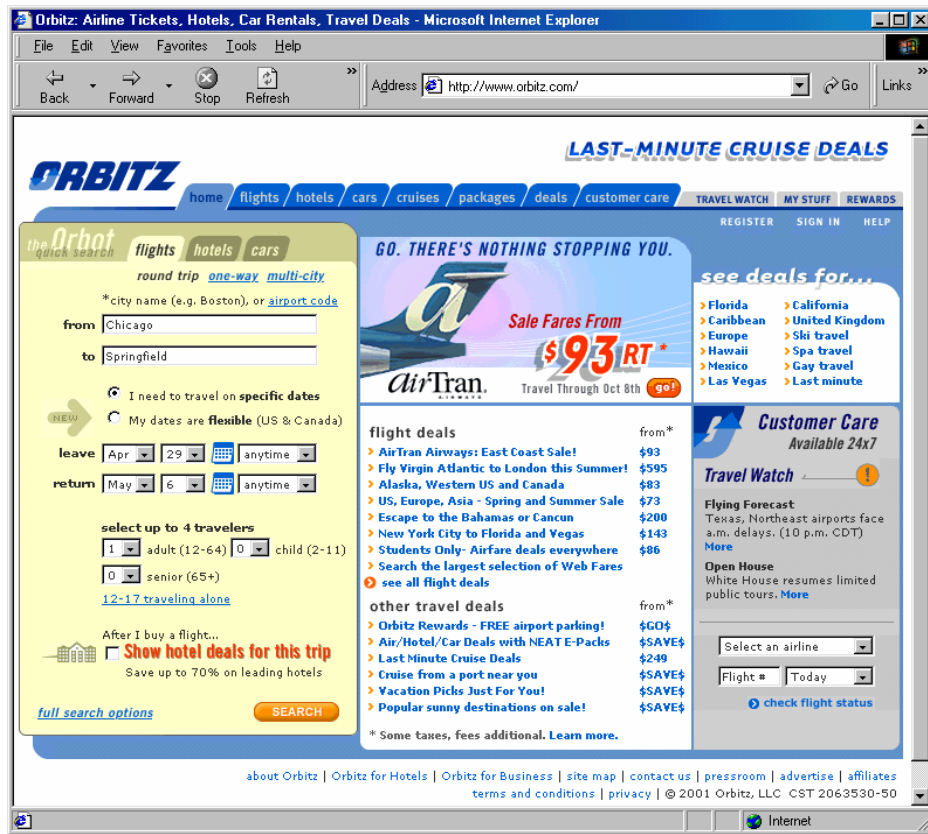
1 A number of observations are in order. First, the system deals with services and
2 products that are significantly more complex than those at issue in the current
3 proceeding. Second, although we have not done a formal analysis of the fall-out
4 rates for orbitz.com, our firm regularly uses the orbitz.com website to make our
5 frequent travel arrangements and we have never had difficulties with placing the
6 order or receiving confirmation thereof. We suspect, therefore, that the fallout
7 rates must be minimal.

8

9 **Q. IF INAPPROPRIATE ENTRIES ARE MADE ON ORBITZ.COM, DOES**
10 **THE PROGRAM BOUNCE BACK THE ENTRY WITH A DISCUSSION**
11 **OF WHAT ERROR WAS MADE AND WITH SUGGESTIONS ON HOW**
12 **TO CORRECT THE ERRORS?**

13 A. Yes. Presented below is a screen view of the website with the initial data entries
14 used to institute the service ordering process.

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1

2

3 **Q. YOU NOTED THAT ORBITZ.COM DEALS WITH A SITUATION THAT**
4 **IS SIGNIFICANTLY MORE COMPLEX THAN THE ONE WITH WHICH**
5 **VZ IS DEALING. WHY DO YOU THINK THAT IS THE CASE?**

6 **A.** This is based on the simple recognition that orbitz.com must consider a vastly
7 greater number of possible service order configurations than VZ. To see this, the
8 Commission should consider the following:

9

10 Orbitz.com allows one to order one way flights, return-flights, multi-stop flights
11 from any place in the United States to most other places in the world departing at
12 various times in the day on any day of the year and returning basically any time

1 thereafter on multiple airlines ordered with multiple credit cards. The number of
2 possible permutations of these variables runs in the billions,⁴⁷ dwarfing anything
3 that VZ might face. Further, orbitz.com must tap into the databases of many
4 different and independent companies, such as the various airlines and the credit
5 card companies. If the Commission still has any doubt that VZ's service ordering
6 situation is simple compared to the immense complexities faced by orbitz.com, it
7 should note that orbitz.com also allows for hotel, car rental and cruise
8 reservations, involving the databases of yet more companies and organizations.

9

10 The fact that VZ -- more than six years after passage of the Telecommunications
11 Act of 1996 -- still is not able to accept error-free service order requests is truly
12 amazing. In any event, the Commission should not reward VZ for its inability --
13 whether planned or not -- to create a state-of-the-art service ordering system.

14

15 **C. NMC ADJUSTMENTS – SPECIFIC ADJUSTMENTS TO COST**
16 **STUDIES**

17 **Q. THE SERVICE ORDERING ACTIVITIES INVOLVE THE NMC TASKS.**

18 **ACCORDING TO VZ, WHAT DOES THE NMC DO?**

⁴⁷ This statement is easily verified by calculating the possible combinations for all the variables. The numbers very quickly explode and, in fact, grow much larger than billions. By contrast, VZ deals with a relatively finite universe of combinations and, in any event, has to deal mostly with databases that are managed internally to the company (though, apparently, this seems to be more a problem than an advantage).

1 **A.** On page 12 of its panel testimony, VZ describes the NMC as follows: “The
2 National Market Center (“NMC”), which is responsible for processing Local
3 Service Requests (“LSRs”) that are submitted by the CLECs.”
4

5 **Q.** **IN VIEW OF THE ABOVE DISCUSSIONS, WHAT SPECIFIC CHANGES**
6 **TO THE NMC ARE YOU RECOMMENDING?**

7 **A.** The NMC activities identified by VZ in its studies are the following:⁴⁸ Begin
8 Confidential ***

9
10 *** End Confidential. None of these activities consist of the actual physical tasks
11 of cutting over circuits. Rather, all of these tasks are related to the transmission of
12 information. As we have discussed in detail, all of these task should be
13 automated and to the extent they are already automated (and they for the most part
14 are) fall-out for these tasks should be no more than 2 percent.

15
16 We have made no adjustments to the task times associated with the submissions
17 of LSRs. Rather, we simply recommend that the Commission order a fall-out rate

⁴⁸ These activities are taken from VZ’s Hot Cut study, Exhibit III-A-P, NMC activities.

1 for the NMC tasks of no more than 2%. This recommendation in itself corrects
2 this portion of the studies.

3 **VIII. WPTS/PROVISIONING (RCCC, APC, RCMAC)**

4 **A. INTRODUCTION**

5 **Q. WHICH ARE THE THREE VZ ORGANIZATIONS THAT VZ CLAIMS**
6 **ARE INVOLVED IN THE PROVISIONING OF HOT CUTS?**

7 A. According to VZ, there are three organizations involved in the provisioning of hot
8 cut: RCCC, APC and RCMAC. Their tasks as described by VZ are as follows:⁴⁹

9 **RCCC:** The Regional CLEC Coordination Center (“RCCC”): this
10 organization “project manages” the hot cut process and ensures proper
11 coordination between Verizon and the CLEC.”

12
13 **APC:** The Assignment Provisioning Center (the “APC”): this organization
14 “ensures that a suitable alternative facility (copper or UDLC) is available if
15 necessary.”

16
17 **RCMAC:** The Recent Change Memory Administration Center (“RCMAC”):
18 this organization “is responsible for removing the translations from Verizon’s
19 switch once a Verizon-to-CLEC migration is complete (thus terminating the
20 provision of Verizon dial tone to the customer).”

21
22 In this section, we will discuss the various adjustments that need to be made to the
23 RCCC activities. We will first discuss, however, why the APC and RCMAC
24 activities and costs have no place in a TELRIC study and why we have removed
25 these costs altogether.

26

⁴⁹ See *VZ’s Panel Testimony*, pages 12 and 13.

1 **B. APC ACTIVITIES HAVE NO ROLE IN A TELRIC STUDY**

2 **Q. ARE THE APC ACTIVITIES RELATED TO THE RE-ASSIGNMENT OF**
3 **A CIRCUIT FROM AN IDLC BASED FACILITY TO A COPPER OR**
4 **UDLC BASED FACILITY?**

5 A. Yes. These activities are included in VZ hot cut study because VZ maintains that
6 it cannot provision unbundled loops on an IDLC based facility.

7

8 **Q. HAVE YOU ALREADY DISCUSSED THAT VZ’S POSITION IS**
9 **INCONSISTENT WITH THE COMMISSION’S PREVIOUS FINDINGS**
10 **ON THIS ISSUE?**

11 A. Yes. As discussed in detail, the Commission has previously found for cost study
12 purposes that unbundled loops can be provisioned over IDLC.⁵⁰

13

14 **Q. DOES THIS MEAN THAT THE APC ACTIVITIES SHOULD BE**
15 **REMOVED FROM THE STUDY?**

16 A. Yes. If the Commission reconfirms its previous decision on this issue, then there
17 is simply no role for the APC activities.

18

19 **Q. WHAT DO YOU RECOMMEND WITH RESPECT TO THE APC**
20 **ACTIVITIES?**

⁵⁰ *NYPSC UNE Rate Order*, pages 93 –95.

1 A. In view of the Commission’s previous findings on ILDC, we recommend that the
2 APC activities be removed from the hot cut studies as unnecessary activities.

3

4 C. **RCMAC ACTIVITIES HAVE NO ROLE IN A TELRIC STUDY**

5 Q. **IS IT APPROPRIATE FOR VZ TO CHARGE A CLEC FOR “REMOVING
6 THE TRANSLATION FROM VERIZON’S SWITCH” WHEN VZ LOSES
7 A CUSTOMER TO THE CLEC?**

8 A. No. This types of disconnect costs are VZ’s own responsibility. There is
9 absolutely no justification for including these costs in the hot cut study. In fact, it
10 is just as inappropriate as it would be to include the costs of other administrative
11 functions VZ may have to perform to remove the former customer from its
12 systems, such as its billing systems.

13

14 Q. **ARE YOU SAYING THAT EACH CARRIER IS RESPONSIBLE FOR
15 THE COSTS OF WHATEVER IT IS THEY NEED TO DO TO REMOVE A
16 CUSTOMER FROM THEIR SYSTEMS WHEN A CUSTOMER OPTS TO
17 LEAVE THEM FOR ANOTHER PROVIDER?**

18 A. Yes. When a customer leaves the CLEC – say, due to a VZ winback program –
19 the CLEC would not and should not be allowed to charge VZ for “removing the
20 translations from the [CLEC’s] switch.”

21

22 Q. **WHAT DO YOU RECOMMEND?**

1 A. I recommend that the Commission order VZ to remove all the RCMAC activities
2 from the hot cut studies since these costs are the responsibility of VZ and not
3 those of the CLEC.

4

5 However, if the Commission rejects this recommendation, then I recommend that
6 the CLECs should also be allowed to charge VZ for this very same activity when
7 a customer is lost to VZ. To not permit CLECs to charge VZ in this situation
8 would create an imbalance for which there is simply no justification.

9

10 **D. RCCC ACTIVITIES**

11 ***1. WPTS's Operational Short Comings***

12 **Q. FROM AN OPERATIONAL PERSPECTIVE, DOES CONVERSENT**
13 **HAVE PROBLEMS WITH THE CURRENT PROCESS USED BY VZ TO**
14 **PROVISION HOT CUTS?**

15 A. No. From an operational perspective, Conversent's has no immediate problems
16 with the manner in which VZ is provisioning Conversent's hot cuts. However,
17 clearly, the process can and should be automated to a greater degree, particularly
18 in view of VZ's WPTS process that now lies at the heart of the process and should
19 allow for a more complete integration of VZ's and the CLECs' operations.

20

21 **Q. SHOULD THE COST STUDIES BE BASED ON VZ'S**
22 **ACTUAL/EXISTING WPTS PROCESS OR ON A FORWARD-LOOKING**

1 **PROCESS THAT MORE FULLY ACCOUNTS FOR SYSTEM**
2 **INTEGRATION, LOWER FALL OUT AND REDUCED MANUAL**
3 **INTERVENTION?**

4 A. Consistent with the FCC’s TELRIC methodology, the FCC’s *Virginia Arbitration*
5 *Order* and this Commission’s previous findings, the appropriate standard is
6 TELRIC. This means that VZ’s existing OSS (including WPTS) should not be
7 considered as the final standard in cost studies. In fact, VZ itself recognizes this:
8 in its cost studies, VZ is making certain adjustments to reflect that its current OSS
9 (WPTS) is not consistent with TELRIC.⁵¹

10

11 **Q. ARE THERE IMPROVEMENTS TO THE WPTS THAT SHOULD BE**
12 **REFLECTED IN THE COST STUDIES TO MAKE THE PROCESS MORE**
13 **COST EFFICIENT?**

14 A. Yes. There are a large number of improvements that can be made to the WPTS
15 that would make the WPTS the tool it is promising to be and the hot cut process
16 less manually intensive, more cost efficient and consistent with TELRIC. The
17 interrelated improvements are the following:

- 18 1) We have already discussed the need to improve the LSR process. Toward
19 this objective, the WPTS should permit CLEC real-time access to the
20 information contained in VZ’s LFACS database. Further, WPTS should be
21 part of the front end of the LSR entry process, allowing the cut over to be
22 automatically populated in WPTS, thus eliminating Verizon’s and/or the
23 CLECs’ expensive and error prone *manual* processes to populate and prepare
24 WPTS for its provisioning roll.

⁵¹ See VZ Hot Cut study, Exhibit III-A-P. The adjustments are generally made in column E of the spreadsheets

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- 2) The RCCC tasks are activities that should be incorporated into the WPTS. This would make the WPTS an automated communications system that obviates the need for manual intervention. In so doing, the WPTS could drop off exception reports to responsible organizations internal to VZ as well as to the CLECs. At this point, the WPTS is little more than a manual monitoring report that serves as a referral point that aggregates information reported through WPTS.
- 3) WPTS should automatically notify Verizon down stream provisioning work centers and systems regarding Hot Cuts.
- 4) The Verizon systems and NMC should determine the availability of Verizon Hot Cut resources for the project.
- 5) The NMC should be able to consult Verizon's work force administration ("WFA") OSS for resource availability (usually technicians) information.
- 6) Verizon's OSSs should contain current information on the status of other work activities and Verizon resources to expedite the NMC in determining if resources are available.
- 7) The Verizon OSS or NMC can schedule and confirm with the CLEC via WPTS the bulk hot cut project date requested by the CLEC. When resources do not permit the original CLEC requested date, the next available date should be made available.
- 8) The Verizon OSS or NMC should input the due date, along with the project identification into WPTS, which will communicate the project information to the CLEC electronically.
- 9) Electronic transfer of information to provide the CLEC with real time electronic updates of the status for all Hot Cut project items, eliminating costly full time monitoring by CLEC technicians.
- 10) All groups that are part of the hot cut process need to have access to WPTS and its tracking information to appropriately manage the Hot Cut process.
- 11) After final checks, the WPTS should permit CLECs to communicate its readiness for cutover by inputting this information into WPTS, notifying Verizon of CLEC readiness to cut the service over.

1 12) Verizon starts cutover activities with the lines associated with the hot cut
2 notifying the CLEC on a near real time basis of the frame attendant's
3 progress in migrating services.
4

5 13) In the case of mechanized frame cutover activities the mechanized devices
6 provide automatic notification of Hot Cut progress through interfaces to
7 Verizon OSS, including WPTS as the final communications method to the
8 CLEC.
9

10 As discussed throughout this testimony, the cost studies have been revised to
11 reflect a number of these improvements so as to make the cost studies
12 appropriately forward-looking.
13

14 **2. *RCCC Activities – Recommended Changes***

15 **Q. PLEASE DISCUSS THE RCCC ACTIVITIES THAT ARE INCLUDED IN**
16 **VZ'S HOT CUT STUDY.**

17 **A. The activities at issue here are the following:⁵² *** Begin Confidential**
18

⁵² These activities are taken from VZ's Hot Cut study, Exhibit III-A-P, RCCC activities.

1

2 **Q. DOES THIS MEAN THAT VZ IS SIMPLY NOT PLANNING ANY**
3 **FURTHER ENHANCEMENTS ON ITS WPTS?**

4 A. Presumably VZ is planning enhancements on its WPTS. However, none of those
5 planned enhancements are reflected in the studies.

6

7 **Q. DOES THE ABSENCE OF FORWARD-LOOKING ADJUSTMENTS**
8 **UNDERScore – AS THE FCC HAS NOTED – THAT VZ WILL HAVE**
9 **LITTLE INCENTIVE TO IMPROVE THE WPTS IF ITS IS ALLOWED**
10 **TO RECOVER THE COSTS OF OPERATIONAL INEFFICIENCIES?**

11 A. Yes. As the FCC noted in the *Virginia Arbitration Order*, if VZ is allowed to
12 recover the costs of operational inefficiencies then the company has little or no
13 incentive to plan and implement improvements. In fact, the contrary is true.
14 Given that the hot cut charges constitute a barrier to entry, VZ has ample
15 incentive to let the status quo of its OSS be the final benchmark, to the detriment
16 of its local competitors and the competitive process.

17

18 **Q. WHAT ADJUSTMENTS DO YOU RECOMMEND?**

19 A. We recommend a rigorous adherence to the TELRIC principles, espoused by the
20 FCC in the *Local Competition Order* and in the *Virginia Arbitration Order*. That
21 is, we recommend that the Commission adjust the cost studies to reflect a
22 forward-looking OSS (including the WPTS) in which the flow of information

1 between VZ and the CLECs is fully automated. This means that the manual
2 activities associated with WPTS are eliminated from the cost studies. Consistent
3 with this recommendation, we have eliminated the task times for the manual
4 activities in the cost studies.

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18 **IX. CO WIRING**

19 **A. OVERVIEW**

20 **Q. PLEASE IDENTIFY THE TASKS THAT VZ INCLUDES AS PART OF**
21 **THE CO WIRING COMPONENT OF THE HOT CUT STUDIES.**

1 A. The (Central Office “CO”) wiring activities are captured by the CO Frame group.
2 All the activities concern the actual process of performing the cut over (as
3 opposed to the previously discussed organizations that involved information
4 flows.) The activities listed in the VZ study are the following: *** Begin
5 Confidential

CO FRAME	Minutes

6

7 *** End Confidential.

8 **Q. DO YOU AGREE WITH THE ACTIVITY TIMES THAT VZ HAS**
9 **IDENTIFIED?**

10 A. No. There are a number of reasons for why these activity times are inflated or
11 otherwise need to be adjusted. They are the following:

- 12 -- VZ ignores the automatic loop provisioning capabilities of ADF and
13 IDLC.
- 14
- 15 -- With advanced frame technologies, pre-wire line and hot cut times can be
16 reduced significantly.
- 17
- 18 -- With an efficient OSS, times to analyze and complete work orders can be
19 significantly reduced.
- 20
- 21 -- Pre-Test activities should be removed. With IDLC based loops the loop
22 migration is performed electronically. The manual test activities,
23 therefore, do not occur. Further, the loops that are to be cut over are
24 “live” circuits that are either working satisfactorily or if the customer
25 filled a maintenance/repair ticket, it would be VZ’s own responsibility to

1 test and repair the circuit. Also, the costs should be – and are – recovered
2 through recurring charges for the UNE loop as part of the maintenance
3 factors.
4

5 In what follows, we will discuss each of these issues in more detail.

6 **B. VZ IGNORES AUTOMATIC LOOP PROVISIONING**
7 **CAPABILITIES OF ADF AND IDLC TECHNOLOGIES**

8 **Q. HAS VZ RECOGNIZED IN ITS STUDIES ANY FORWARD-LOOKING**
9 **AUTOMATIC LOOP PROVISIONING CAPABILITIES?**

10 **A.** No. VZ’s hot cut studies rely entirely on the capabilities of its embedded
11 network. This approach ignores that there are automatic loop provisioning
12 capabilities associated with (1) copper loops and (2) fiber based loops.
13

14 **Q. WHAT PERCENTAGE OF COPPER BASED LOOPS DID VZ ASSUME**
15 **IN ITS STUDIES?**

16 **A.** For purposes of the current studies, VZ assumes that Begin Confidential *** ____
17 *** End Confidential percent of the loops that are involved in the hot-cut process
18 are fiber based loops, the rest are assumed to be copper loops.⁵³
19

20 **Q. DOES THE *** Begin Confidential ____ *** End Confidential PERCENT**
21 **IDLC ASSUMPTION USED BY VZ CORRESPOND TO EITHER THE**
22 **ACTUAL PERCENTAGE IN VZ’S NETWORK OR THE PERCENTAGE**
23 **USED BY VZ IN ITS RECURRING LOOP COST STUDIES?**

⁵³ This is indicated in Verizon’s hot cut study, Exhibit III-A-P, Tab: Factors.

1 A. The percentage corresponds neither to VZ's actual network nor to the loop
2 construct used by VZ in its recurring loop cost studies.

3

4 **Q. IS THIS CONSISTENT WITH THE LOOP CONSTRUCT ADOPTED BY**
5 **THE COMMISSION IN THE NYPSC *UNE RATE ORDER*?**

6 A. No. As previously discussed, the Commission adopted a loop construct, for cost
7 purposes, based on 100 percent fiber based loops.⁵⁴

8

9 **Q. HAVE YOU ALREADY DISCUSSED THAT PROPER TELRIC STUDIES**
10 **REQUIRE A CONSISTENCY BETWEEN THE LOOP NETWORK**
11 **CONSTRUCT ASSUMED FOR RECURRING STUDIES AND FOR NON-**
12 **RECURRING STUDIES?**

13 A. Yes. In a previous section, we have already discussed the importance of
14 maintaining a consistency between the assumptions underlying the recurring and
15 the non-recurring cost studies and the potential problems associated with using
16 varying and different assumptions. We will not repeat those arguments here and
17 presume that the Commission will reconfirm its previous findings on this issue.⁵⁵

18

⁵⁴ NY PSC *Une Rate Order* at pp 93-95.

⁵⁵ The decision to base VZ's recurring cost studies on a 100 percent fiber loops construct was controversial from a cost perspective. Many parties argued that this assumption increased the recurring loop costs. The Commission found against that notion and approved a 100 percent fiber loop construct on the assumption that it was an over all least-cost, forward-looking construct. Presumably, if the Commission had been notified by VZ that the company would apply IDLC surcharges and otherwise increase the costs of non-recurring charges associated with IDLC, the Commission might have come to a different conclusion.

1 Q. HOW DOES VZ'S FAILURE TO ACCOUNT FOR AUTOMATIC LOOP
2 PROVISIONING CAPABILITIES IMPACT THE CONNECT AND THE
3 DISCONNECT ACTIVITIES IN THE HOT CUT PROCESS?

4 A. VZ's failure to recognize the forward-looking automatic loop provisioning
5 capabilities increases the hot cut costs and rates. These issue is discussed in more
6 detail below.

7

8 1. *VZ Has failed to Account for the Efficiencies of Automatic*
9 *Distributing Frames and Standard One-Sided Frames*

10 Q. WHAT ROLE DO CROSS-CONNECT ACTIVITIES PLAY IN THE HOT-
11 CUT PROCESS?

12 A. Cross connections provide points of flexibility in central offices. These points are
13 commonly referred to as main distributing frames⁵⁶ (MDF) and intermediate
14 distributing frames⁵⁷ (IDF) and various other terms that are more descriptive of
15 the function than these generic frame nomenclatures. The cross connect device
16 provides a means of making changes to wiring, seeing what connections are made
17 between network elements such as central office electronics, field electronics,
18 active components, passive components, facilities and other devices required to
19 accomplish service delivery.

⁵⁶ A Main Distributing Frame is a mechanical device used to interconnect telecommunications facilities (cable and pair or equivalent) to central office equipment. In the manual context the method of connection is a cross-connect or jumper, usually consisting of metallic wire.

⁵⁷ Intermediate Distributing Frame is similar to the MDF in character; the name intermediate implies the IDF is electrically located between the MDF and other central office equipment. In many cases the other equipment is competitive local exchange carrier collocations.

1

2 **Q. HOW DOES THE MAIN DISTRIBUTION FRAME IMPACT THE**
3 **RESULTS OF COST STUDIES DESIGNED TO CAPTURE COST?**

4 A. Except for IDLC based loops, the cross connections that are central to the hot-cut
5 process are labor-related operations because cross connects are physical wires, or
6 jumpers, that are manually placed. This requires the physical presence of a
7 technician to place the jumper on a distribution frame.

8

9 **Q. ARE THERE NEW TECHNOLOGIES THAT PERFORM WHAT TODAY**
10 **IS MANUAL CENTRAL OFFICE AND FIELD CROSS-CONNECTS**
11 **TASK?**

12 A. Yes. New technologies making automated distributing frames (ADF) practical
13 have emerged and are being deployed that dramatically reduce the cost and size of
14 electromechanical cross-connects, supporting thousands of any-to-any
15 connections in a single 23-inch wide shelf.⁵⁸ While offering true metallic
16 switching capabilities in an extremely high-density platform, these new devices
17 finally make large copper switches economically feasible and available for actual
18 deployment.

19

⁵⁸ Examples of manufacturers of ADF technology are Turnstone Systems, Inc. (<http://www.turnstone.com>), Oki Electric Industry Co. Ltd. (http://www.oki.com/jp/NSC/ENGLISH/PROD/S_MDF/smart-e.html), NHC Communications (www.nhc.com)

1 ADF cross-connect systems are typically equipped with intelligent routing
2 software and a scalable switching architecture enables it to grow linearly with
3 subscriber demands. Using standard interface technology, ADF control
4 processors and software are designed to integrate into telecom OSS for flow-
5 through support of provisioning and maintenance.

6
7 ADF technology can scale from a remote terminal (RT) application to the largest
8 central office (CO) maintaining any-to-any connectivity regardless of the
9 application, at a relatively constant price per connection point.

10

11 **Q. WHAT DOES THIS INTRODUCTION OF NEW TECHNOLOGY TO THE**
12 **TELECOM INDUSTRY MEAN IN THE CONTEXT OF VZ HOT-CUT**
13 **STUDIES?**

14 A. Under TELRIC, NRC studies should account in the technology mix for these
15 newer technologies and these newer technologies should be made a part of the
16 definition of forward-looking, TELRIC-efficient technologies and part of VZ cost
17 studies submitted in this case. The impact would be to significantly lower the
18 cross connect and disconnect times.

19

20 **Q. HAS VZ ASSUMED THE PRESENCE OF THESE NEWER**
21 **TECHNOLOGIES IN ITS NRC STUDIES?**

1 A. Not really. It appears that VZ SMEs have based their estimates on their
2 experience with VZ's actual network without forward-looking adjustments for
3 these newer types of technologies.

4

5 **Q. HAS VZ ACKNOWLEDGED THAT THESE TECHNOLOGIES EXIST**
6 **AND ARE IN FACT BEING DEPLOYED IN VZ'S NETWORK?**

7 A. Yes. On page 14 of its panel testimony, VZ states the following:

8 **Q. Some CLECs have suggested that the wiring process in the**
9 **central office could be completely automated by systems that use**
10 **robotic technology to make and break connections at the frame.**
11 **Please comment on this claim.**

12 A. Devices do exist that automatically make copper-to-copper
13 physical connections between any of a set of input positions and any
14 of a set of output positions. For the most part, Verizon utilizes these
15 devices in small, unstaffed central offices that serve an average of a
16 few thousand lines (and in which, incidentally, there is minimal if any
17 collocation). (Examples are central offices in such towns as Angelica,
18 Avoca, Canisteo, Hinsdale, and Lafargeville.) By enabling Verizon to
19 make cross-connections automatically and remotely, such devices
20 reduce the need for frame technicians to travel to those offices.

21

22 Of course, VZ then goes on to note that the deployment of these facilities is not
23 possible on a wider scale. As we have shown above, this part of VZ claim is not
24 true.

25

26 As will be discussed below, we believe that the Commission should order VZ to
27 base its hot cut rates on a 100 percent fiber based loop construct. This means that
28 the MDF based cross-connects are not needed and the entire debate over whether
29 or not ADFs are the forward-looking technology will be by-passed. However, if

1 the Commission adopts VZ’s assumption that approximately 50 percent of the hot
2 cuts are for copper based loops then we recommend that the Commission order
3 VZ to base the costs for those hot cuts on the assumption that ADFs are used.

4

5 **2. The Commission Already Found that IDLC Based Loops Can Be**
6 **Unbundled**

7 **Q. HAS VZ RECOGNIZED THE FORWARD-LOOKING LOOP**
8 **PROVISIONING CAPABILITIES ASSOCIATED WITH IDLC SYSTEMS?**

9 A. No. In fact, VZ reinitiates the entire debate about whether or IDLC based loops
10 can be unbundled. VZ argues that they cannot. On page 9 of *VZ’s Panel*

11 *Testimony*, it states:

12 **Q. What is the relevance of IDLC technology to hot cuts?**

13 A. Although IDLC is a well-accepted and efficient means to deliver
14 voice traffic over a digital loop carrier system to a digital switch, there
15 is no technically feasible, practicable means of obtaining access to
16 individual voice-grade loops at the central office when such loops are
17 provisioned over an IDLC system.

18

19 VZ then goes on to note that it needs to make special provisions before an IDLC
20 based loop is cut over

21 Accordingly, before a customer served by an IDLC- equipped loop
22 can be cut over to a switch-based CLEC, the customer must be shifted
23 from an IDLC-equipped loop to an all-copper loop or to a loop served
24 via Universal Digital Loop Carrier (“UDLC”) technology (which,
25 unlike IDLC, can be unbundled in the central office).

26

27 **Q. DOES VZ EVEN PROPOSE AN IDLC SURCHARGE BASED ON THE**
28 **ASSUMPTION THAT IDLC BASED LOOPS CANNOT BE UNBUNDLED?**

1 A. Yes. VZ proposes a surcharge of no less than \$131.18 for all loops served on a
2 IDLC system.⁵⁹

3

4 **Q. IS VZ POSITION INCONSISTENT WITH THIS COMMISSION'S**
5 **PREVIOUS FINDINGS ON THIS ISSUE?**

6 A. Yes. The Commission has grappled with this debate a number of times and
7 found that VZ's position is incorrect. Specifically, with the context of the cost
8 study review, the Commission found that IDLC based loops can in fact be
9 unbundled, though the Commission did make an adjustment to the percentage of
10 unbundled loops that are assumed to be IDLC based.⁶⁰

11

12 **Q. SHOULD THE COMMISSION REOPEN THE DEBATE ABOUT THIS**
13 **ISSUE?**

14 A. No. VZ had its opportunity to litigate this issue and the Commission found
15 against VZ. We believe that it is simply unreasonable to endlessly expand
16 resources on litigating this issue. Enough is enough.

17

18 However, to assist the Commission's understanding of how this issue plays in the
19 cost studies, it is important to review of this technology plays in the ILEC's
20 network.

21

⁵⁹ VZ Hot Cut study, Exhibit III-A-P, Tab: Cost Sum, line 10.

⁶⁰ *NYPSC UNE Rate Order* at pp 93-95.

1 3. ***DLESA Technology Associated with Fiber Based Loop Does Not***
2 ***Require Manual Loops Provisioning Activities Identified by VZ***

3 **Q. PLEASE BRIEFLY DESCRIBE AN IDLC CONFIGURATION.**

4 A. Integrated Digital Loop Carrier (IDLC) extends the central office electronically
5 by connecting the central office with fiber optic transmission to a remote terminal
6 (RT) in the field. The RT emulates the central office and thus extends the central
7 office to the remote terminal. The fiber transmission route replicates the feeder
8 portion of the local loop while the RT electronically emulates the central office.
9 Thus, this configuration extends the central office to the RT for connection to the
10 copper distribution network.

11
12 **Q. WHY IS THE TECHNOLOGY CALLED “INTEGRATED”?**

13 A. Because the fiber transmission equipment and fiber optic cable represent the
14 feeder portion of the loop and is connected electronically to the switch by way of
15 a central office terminal device for optical to electrical conversion, the feeder
16 route and its associated distribution network are directly connected to or
17 *integrated* into the switch and by pass convention main distribution frame (MDF)
18 technology. Hence the use of the term “integrated”, or in this case integrated
19 digital loop carrier; that is, it is integrated because the entire optical/electronic
20 connection is based on digital time division multiplexing.

21
22 **Q. ARE THERE DIFFERENT WAYS THAT IDLC BASED LOOPS CAN BE**
23 **MIGRATED?**

1 A. Yes. There are two methods by which IDLC services can be migrated without the
2 expensive manual intervention identified in VZ’s studies. Telcordia Notes on the
3 Networks identifies these two alternative methods of migration along with other
4 methods that require manual intervention for circuit migration; both methods are
5 focused around GR303 compliant IDLCs.

6

7 The first method involves the use of “a separate GR-303 Interface Group for the
8 CLEC customers. The RDT must support the MIG (Multiple Interface Group)
9 capability defined in the GR-303 specification. This configuration allows a
10 CLEC switch to connect to the ILEC’s RDT at the GR-303 interface level.”⁶¹

11

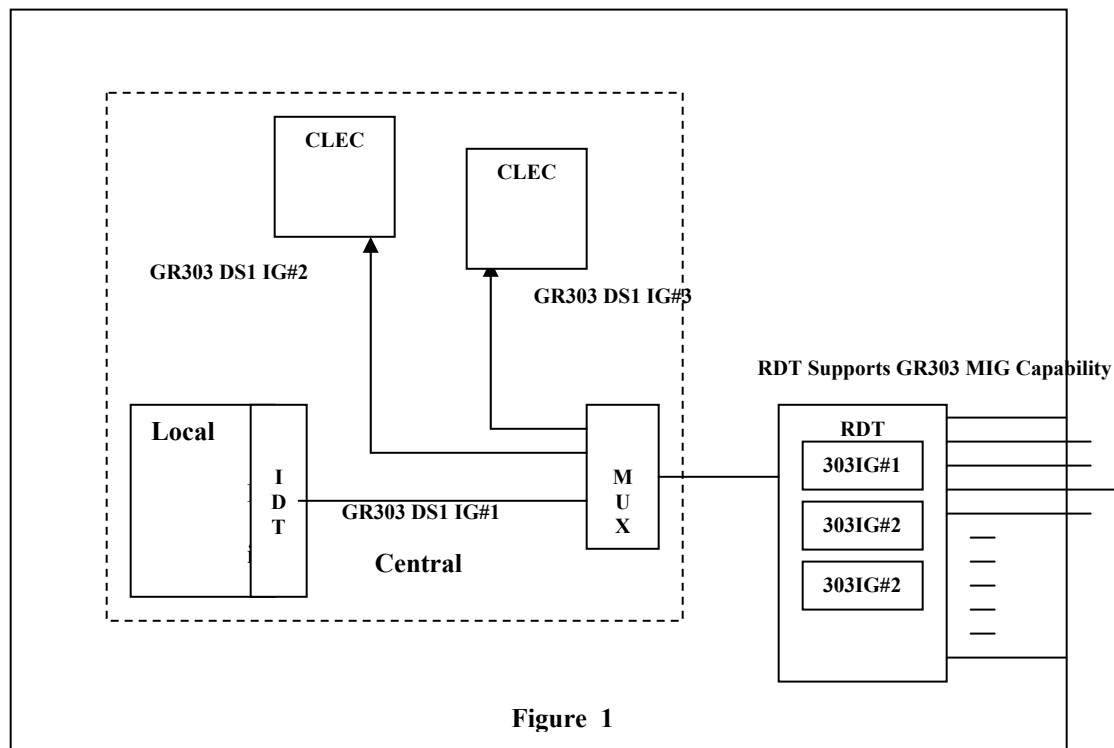
12 A GR-303 compliant switch and RDT switch configuration enables automatic
13 provisioning of facilities integrated into the switch by providing a method of
14 electronic rerouting of services over the multiple interface groups that are now
15 terminated to various CLECs collocation sites within the ILEC central office. (See
16 Figure 1 below.)

17

18 The second Telcordia recommended method requires the use of “a GR-303
19 Interface Group and the side door port of the switch to transport CLEC traffic out

⁶¹ *Telcordia Notes on the Networks*, Distribution, Issue 4, October 2000, Pages 12-54, 4.

1 of the ILEC switch.⁶² This method is possibly not economically efficient, and
2 we will not consider this method in our revised studies.



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13
IDLC Unbundling Using Separate GR303 Interface Groups

14
15 When fully implemented the first of the two Telcordia recommended GR303
16 compliant options eliminate the manual intervention currently necessary to
17 migrate customers away from the ILEC switch and to a CLEC collocation site and
18 consequently to the CLEC switch. The limiting factor is the willingness of the
19 ILEC to invest in fully GR303 compliant network elements. However, because
20 GR303 is an industry standard and is heavily sought after by all ILECs and
21 competitors, it is in production by all major telecommunications vendors and is

⁶² *Telcordia Notes on the Networks*, Distribution, Issue 4, October 2000, Pages 12-54, 5.

1 readily available to the ILEC at competitive prices and because of its nature has
2 benefits for both wholesale and retail services.

3

4 **Q. DOES THE IDLC TECHNOLOGY ALLOW LOOPS TO BE**
5 **TRANSFERRED ELECTRONICALLY WITHOUT THE COST MANUAL**
6 **INTERVENTION?**

7 A. Yes. Since circuits are assigned electronically on the IDLC system, circuits can
8 be shifted over to the CLECs facilities without the need to manually establish
9 cross-connects. In fact, there simply are no cross-connects to be established or
10 disconnected. As such, the assumption, for cost study purposes, that loops are
11 IDLC based eliminates most of the costs associated with the manual process in
12 VZ hot cut study.

13

14 **Q. WHAT ARE YOUR RECOMMENDATIONS?**

15 A. Consistent with TELRIC, we recommend that the Commission order VZ to reflect
16 in its hot cut studies the full capabilities IDLC based loops. In the alternative, if
17 the Commission rejects this recommendation, then the Commission should order
18 VZ to reflect the capabilities of the ADF that also allow for electronic loop
19 provisioning. (This issue was discussed previously.)

20

1 C. **PRE-WIRE LINE & HOT CUT/CROSS-CONNECT TIMES**
2 **SHOULD BE REDUCED**

3 **Q. WHAT ROLE DO PRE-WIRING & CROSS-CONNECTS PLAY IN VZ'S**
4 **NRC STUDIES?**

5 A. As previously discussed, the cross-connect times are at the heart of VZ's hot-cut
6 study. In fact, it is the costs associated with establishing cross-connects that drive
7 much of the costs of the hot-cut process. Further, because it concerns hot cuts, the
8 connections are pre-wired to minimize the time that the circuits are down.

9
10 We have just discussed why with the use of the DLESA capabilities of the IDLC
11 technology, the loop can be transferred automatically without the need for the
12 manual pre-wire and cross-connect activities. Given that the Commission has
13 previously found that 100 percent of the loops should be fiber based for cost study
14 purposes, it logically follows that under TELRIC it should be assumed that for
15 100 percent of those loops electronic loop transfers are possible. This means that
16 the studies under a strict TELRIC application should have no activity times for
17 the manual pre-wire and hot cut/cross-connect activities.

18
19 1. *Even If the Commission Rejects the 100 % IDLC Assumption,*
20 *Further Adjustments for ADF, One Sided Frames and Excessive*
21 *Estimates Are Needed*

22 **Q. IF THE COMMISSION REJECTS THE 100 PERCENT IDLC**
23 **ASSUMPTION, SHOULD THE COMMISSION APPROVE VZ'S LABOR**

1 **TIME ESTIMATES FOR PRE-WIRE AND HOT CUT/CROSS-CONNECT**
2 **ACTIVITIES?**

3 A. No. Even if the Commission rejects the notion that under TELRIC the studies
4 should assume 100 percent deployment of IDLC and the DLESA technology, then
5 there are still adjustments that need to be made to these cross connect times. The
6 reasons are the following:

- 7 -- As discussed, even for copper based loops (and UDLC based loops), the
8 ADF technology would considerably reduce the pre-wire and hot
9 cut/cross-connect times reported by VZ in its studies. Further, forward-
10 looking MDFs, such as one-sided cosmic frames, allow for shorter and
11 more efficient cross-connect times. These forward-looking, most-efficient
12 technologies do not appear to be fully incorporated/reflected in VZ's
13 cross-connect time estimates.
- 14 -- VZ failed to provide validation of its cross-connect time estimates, in its
15 testimony, cost studies and data request responses. Thus, these estimates
16 are unsupported and simply cannot be relied upon.
- 17 -- VZ's time estimates do not comport with our experience and appear
18 unreasonably high.
- 19 -- VZ's estimates do not comport with our experience and appear
20 unreasonably high.
- 21 -- VZ's estimates do not comport with our experience and appear
22 unreasonably high.
- 23 -- VZ's estimates do not comport with a reasonable benchmark – the hot cuts
24 that VZ performs when an analog switch is replaced and lines are cutover
25 to a new digital switch.

26 **Q. WHAT ARE YOUR RECOMMENDATIONS WITH RESPECT TO THE**
27 **PRE-WIRE AND HOT CUT/CROSS-CONNECT TIME ESTIMATES TO**
28 **BE USED IN THE HOT CUT STUDIES?**

29 A. We recommend that the Commission reject VZ's pre-wire and hot cut/cross-
30 connect times and adopt the revised cross-connect times presented in the table
31 below:

1 *** Begin Confidential

CO FRAME	VZ	Conversent

2

3 *** End Confidential

4 These estimates are based on our extensive experience with these activities. As
5 discussed during the professional qualifications sections, QSI consultants have
6 examined studies in other jurisdictions, performed these very activities
7 themselves, and supervised these activities, as well as performed time and motion
8 studies. VZ’s estimates are just not reasonable for experienced technicians and
9 adjustment need to be made. The above estimates provide our best estimates. We
10 have used these time estimates in other jurisdiction in contested hearing.

11

12 **Q. YOU SAY THAT QSI CONSULTANTS HAVE EXPERIENCE**
13 **PERFORMING AND SUPERVISING THESE ACTIVITIES IN A**
14 **BUSINESS ENVIRONMENT. IS IT NOT TRUE THAT THE NEED FOR**
15 **HOT CUTS IS FAIRLY NEW AND ASSOCIATED WITH THE**
16 **EMERGENCE OF CLECS AND LOCAL COMPETITION SINCE 1996?**

17 A. No. All ILECs have experience with hot cuts. In fact, ILECs have performed hot
18 cuts for decades for their own customers as part of switch engineering and central
19 office management. Specifically, when ILECs replaced the old analog switches
20 with new digital switches, the companies would cutover tens of thousands of lines
21 on a basis that is essentially the same as hot cuts.

1

2

2. *Switch Vendor Contracts Contain Provisions for Conversion Services (Hot Cuts) for Analog to Digital Switch Migrations*

3

4

Q. DO VZ'S SWITCH CONTRACTS CONTAIN PROVISIONS AND PRICES FOR HOT CUTS?

5

6

A. All switch vendor contracts for replacement facilities – digital switches that replace analog switches – contain provisions for hot cuts in the form of ‘conversion services.’ These involve vendor assistance for the “Y splice” and other types of service that the vendor provides to the ILEC to allow a “smooth” migration (*i.e.*, hot cut) of its customers from the old analog switch to the new digital switch.

7

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13

Q. SHOULD THE VENDOR CONTRACT PROVISIONS – PRICES -- SERVE AS AN UPPER LIMIT FOR THE HOT CUT COSTS IN VZ'S HOT CUT STUDIES?

14

15

16

A. Yes. The Commission should not allow VZ to turn this absolutely essential service for the further development of local competition into yet another profit center.⁶³ The prices that switch vendors charge VZ for activities that are approximately comparable (though in a sense more complex) are a reasonable upper limit or proxy for what VZ's costs and prices would be if the market for these services were competitive.

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⁶³ A normal return on invested capital, as reflected in TELRIC studies, is appropriate. However, it is clear that VZ is viewing the hot cut process as yet another “happy opportunity” to make supernormal profits.

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D. WITH EFFICIENT OSS TIMES FOR ANALYZING AND CLOSING/COMPLETING WORK ORDERS SHOULD BE MINIMAL OR ELIMINATED

Q. DOES VZ INCLUDE EXCESSIVE TIMES FOR ANALYZING AND CLOSING OUT WORK ORDERS?

A. Yes. For the basic hot cut, VZ includes almost 5 minutes for analyzing and closing out a hot cut order.

Q. ARE THESE ESTIMATES EXCESSIVE AND BASED ON VZ'S ACTUAL/EMBEDDED OPERATIONS THAT REFLECT A LARGE DEGREE OF FALL-OUT?

A. Yes. The estimates provided by VZ's SMEs are based on their experience with VZ's actual OSS. As such, these estimates reflect the fact that VZ's OSS is simply not state of the art and causes excessive fall-out due to errors in the legacy databases. We have already discussed why OSS fall-out due to errors in databases are inappropriate. At issue here is the fact that VZ's SMEs as part of the CO Wiring activities are experiencing what we call the "ripple effects" of the OSS's deficiencies. As a corollary to the Fall Out reductions discussed elsewhere in this testimony, the time for analyzing hot cuts and closing out work orders should be reduced correspondingly.

1 .Q. WHAT ACTIVITY TIMES DO YOU RECOMMEND FOR THESE
2 ACTIVITIES?

3 A. We recommend that these activities be eliminated all together. However, to be
4 conservative we have used the minimal time estimates in our revised studies of 20
5 seconds for each activity.

6
7 E. VZ'S PROPOSED PER-TEST ACTIVITIES SHOULD BE
8 REMOVED FROM THE STUDIES

9 Q. WHAT ROLE DO TESTING ACTIVITIES PLAY IN VZ'S NRC
10 STUDIES?

11 A. Testing activities are found in VZ service provisioning studies. Generally, the
12 studies assume that VZ performs pre-testing of the facilities.

13

14 Q. DO YOU AGREE WITH THE TESTING ACTIVITY TIMES?

15 A. No. These pre-testing activities should be removed for the following reasons:

16 -- With IDLC based loops the loop migration is performed electronically.
17 The manual test activities, therefore, do not occur.

18

19 -- The loops that are to be cut over are "live" circuits and not circuits that are
20 to be newly activated. As such, the circuits are either working
21 satisfactorily or if the customer filled a maintenance/repair ticket, it would
22 be VZ's own responsibility to test and repair the circuit.

23

24 -- The maintenance and repair of the UNE loops is the responsibility of VZ.
25 As such, the costs should be – and are – recovered through recurring
26 charges for the UNE loop as part of the annual charge factors ("ACFs").

27

1 Q. ARE THE TESTING ACTIVITIES ALREADY RECOVERED THROUGH
2 THE RECURRING CHARGES FOR UNE LOOPS AS PART OF THE
3 MAINTENANCE FACTORS?

4 A. Yes. The recurring UNE loop charges include significant costs for loop
5 maintenance and repair costs as part of the annual charge factors (“ACFs”).
6

7 Q. GIVEN THAT MAINTENANCE OF THE UNE LOOP IS THE
8 RESPONSIBILITY OF VZ, SHOULD THE COSTS ASSOCIATED WITH
9 TESTING AND REPAIR BE RECOVERED THROUGH RECURRING
10 CHARGES RATHER THAN THROUGH NON-RECURRING CHARGES?

11 A. Yes. Given that maintenance of the UNE loop is the responsibility of VZ, it is
12 inappropriate to charge CLECs for this activity of a non-recurring basis. Rather,
13 these costs should be – and are – recovered on a recurring basis.
14

15 F. TRAVEL TIMES SHOULD BE ELIMINATED

16 Q. DOES VZ INAPPROPRIATELY INCLUDE TRAVEL TIMES IN ITS HOT
17 CUT CHARGES?

18 A. Yes. VZ includes ***CONFIDENTIAL ____ END CONFIDENTIAL*** of
19 travel costs in each basic hot cut charge.⁶⁴ This is inappropriate. All central
20 offices have technicians, except for some remote central offices. The remote

⁶⁴ See VZ hot cut WPTS cost study, Exhibit III-A-P, Tab 1. ***CONFIDENTIAL (_____

_____) END CONFIDENTIAL***

1 central office, however, are being deployed and under TELRIC should be
2 assumed to have automatic distributing frames that obviate the need for manual
3 cross-connects. Further, the travel times should be removed.

4

5 **G. PULL DISCONNECTED WIRE ON DD+1 ACTIVITY HAS NO**
6 **ROLE IN A TELRIC STUDY**

7 **Q. HAS VZ INCLUDED CO WIRING COSTS FOR DISCONNECTING THE**
8 **CUSTOMER (LOST TO THE CLEC) FROM ITS OWN FACILITIES?**

9 A. Yes. VZ includes in the CO Wiring element the costs of disconnecting the
10 customer that it has lost to the CLEC. This is inappropriate.

11

12 **Q. PLEASE EXPLAIN WHY IT IS INAPPROPRIATE TO INCLUDE THESE**
13 **COSTS?**

14 A. We have already discussed that VZ inappropriately includes the costs of
15 removing the telephone number from its switch in the RCMAC costs in the
16 Provisioning element of its rates and cost study. We discussed that this is
17 inappropriate because these cost internal to VZ that are not caused by the CLEC
18 but rather by the customer that has opted to disconnect its service from VZ. We
19 have also discussed that the CLECs in turn have to incur the same costs when
20 they lose a customer to VZ (or to any other CLEC) and do not – and should not --
21 charge for this. In short, we have shown that including these types of costs that
22 are associated with the disconnecting a customer are essentially VZ's own
23 responsibility under TELRIC. The same rational applies with respect to the cost

1 of the “Pull Disconnected Wire on the DD+1” activity. This is a cost incurred as
2 a result of the customer’s decision to discontinue its service from VZ, and as such
3 they should be borne by VZ itself.
4

5 **Q. ARE YOU SAYING THAT THESE COSTS ARE NOT CAUSED BY THE**
6 **CLEC?**

7 A. Yes. Certain costs come about as a result of the customer’s decision to
8 discontinue his/her service with VZ. As a result of that decision VZ needs to
9 perform certain actions and incur certain costs. It is important to keep these types
10 of cost separate from the costs that are caused by the CLEC. The RCMAC costs
11 and the “Pull Disconnected Wire on the DD+1” activity costs are examples of
12 such costs that should not be recovered from the CLEC.
13

14 **Q. WHAT DO YOU RECOMMEND?**

15 A. We recommend that the Commission reject VZ’s proposal to recover in its
16 charges to CLECs the costs of disconnecting its own customers. Specifically,
17 with respect to the costs of the “Pull Disconnected Wire on the DD+1” activity,
18 these costs should be removed from the studies and the charges for hot cuts.
19

20 **H. RECOMMENDATION FOR CO FRAME ACTIVITIES**

21 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS FOR THE CO**
22 **FRAME ACTIVITIES.**

1 A. In summary, our recommendations as discussed in this testimony are as follows:

2 *** Begin Confidential

CO FRAME	VZ	Conversent

3
4 *** End Confidential. The following time estimates have been implemented in
5 our revised studies.

6 **X. IDLC SURCHARGE – THE IDLC SURCHARGE SHOULD BE**
7 **REMOVED**

8 **Q. DOES VZ PROPOSE AN IDLC SURCHARGE OF \$131.18 FOR THOSE**
9 **INSTANCES IN WHICH A CIRCUIT IS IDLC BASED?**

10 A. Yes. When a circuit is carried on IDLC, VZ proposes to first migrate that circuit
11 to a copper based facility before the hot cut can occur. The IDLC surcharge is
12 presented as cost recovery for that circuit migration.

13
14 The IDLC surcharge is inappropriate for two reasons: (1) it is inconsistent with
15 the Commission’s previous findings that IDLC based loops can be unbundled, and
16 (2) CLECs have no say on facility assignments and thus are not the cost causers.
17 Each of these reasons is discussed in more detail below.

18

1 **Q. IN A STRAIGHTFORWARD SENSE, WHO IS THE COST CAUSER**
2 **THOSE INSTANCES FOR WHICH VZ CLAIMS THAT IT MUST MOVE**
3 **A CIRCUIT FROM A IDLC BASED LOOP ONTO A COPPER BASED**
4 **LOOP?**

5 A. VZ is the cost causer because it is VZ that has made the initial facilities
6 assignment. To be sure, since the CLECs don't have control over the facilities
7 assignment process, they cannot possibly be considered the cost causer.

8

9 **Q. BUT DOESN'T VZ HAVE LIMITED CONTROL BECAUSE FACILITIES**
10 **ARE DEDICATED TO SPECIFIC CUSTOMER LOCATIONS?**

11 A. No. VZ has a significant degree of flexibility over facilities assignment. The
12 degree of flexibility "enjoyed" by VZ is explained in *VZ's Panel Testimony* in the
13 section that discusses the reverse hot cut process. As VZ explains on page 9:

14 Verizon is not always able to obtain from the CLEC that is losing the
15 customer the circuit identification information necessary for a
16 successful cutover. (See "End User Migration Guidelines: CLEC to
17 CLEC: Phase II" (June 2002), at § V, page 13 (appended to Case 00-
18 C-0018, "Order Adopting Phase II Guidelines" (issued and effective
19 June 14, 2002)).) In such cases, Verizon has no choice but to provision
20 the customer's service on *a separate line*. For purposes of this
21 testimony, we will refer to a cutover that occurs as part of a winback as
22 a "reverse" hot cut.

23

24 Thus, as this testimony indicates, VZ has the ability to select facilities, while
25 CLECs do not.

26

1 **Q. GIVEN THAT CLECS ARE NOT THE COST CAUSERS WHEN VZ**
2 **MAINTAINS THAT IT NEEDS TO TRANSFER A CIRCUIT FROM AN**
3 **IDLC BASED LOOPS TO A COPPER BASED LOOPS, IS IT**
4 **CONSISTENT WITH TELRIC TO ASSESS CHARGES ON CLECS?**

5 A. No. We have already discussed why with the aid of more advanced technologies
6 it is in fact easier to transfer IDLC based loops to the CLECs. However, even if
7 the Commission rejects this technology based argument and accepts that VZ's
8 embedded network does not currently have those advanced capabilities, then it
9 would still not be appropriate for VZ to assess the proposed additive for hot-cuts
10 for circuits on IDLC based loops. Again, the CLECs have no choice in the
11 assignment process of loop facilities and as such cannot possibly be the cost
12 causers. Given that under TELRIC, costs and prices should be set to reflect cost
13 causation, the fact that CLECs are not the cost causers means that they should not
14 be assessed the proposed IDLC additive.

15

16 **Q. WHAT DO YOU RECOMMEND?**

17 A. In our revised cost studies and proposed rates, we have set the IDLC additive at
18 zero. Again, this is the appropriate rate for two reasons: (1) advanced
19 technologies allow electronic loop transfer for IDLC based loops, and (2) CLECs
20 are not the cost causers and therefore should not be held financially accountable
21 for the cost recovery.

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9 **XI. REVIEW OF ATT'S AND MCI'S TESTIMONY AND**
10 **PROPOSED STUDIES AND HOT-CUT CHARGES**

11 **Q. HAVE YOU REVIEWED THE TESTIMONIES AND STUDIES FILED BY**
12 **ATT AND MCI IN THIS PROCEEDING?**

13 A. Yes. We have reviewed the testimonies and studies filed by ATT and MCI. In
14 general, we believe that their positions and studies are consistent with the
15 modifications to VZ's studies we are proposing in this testimony. We also
16 believe that the cost study results calculated in those studies is generally
17 consistent with the results of the VZ model after we correct VZ's studies for the
18 errors discussed in this testimony.

19

20 **Q. CAN THE ATT COST MODEL BE MODIFIED TO CALCULATE THE**
21 **COST OF AN INDIVIDUAL HOT-CUT?**

1 A. Yes, the ATT model can be used to calculate the costs of an individual hot-cut. In
2 response to a data request from Conversent, ATT confirmed this and stated the
3 following:

4 The majority of tasks and the costs produced by the model can
5 be used to produce the cost for individual hot-cuts. However,
6 there are specific tasks that are unique to projects (*i.e.*, bulk
7 migrations) that would not be required when Verizon performs
8 an individual hot-cut. In addition, the process flow (Attachment
9 B to the Panel testimony) that supports the model tasks must be
10 modified to reflect the appropriate task descriptions for an
11 individual hot-cut. These modifications would then be
12 incorporated into the non-recurring model to produce the
13 underlying model calculation of the rate.
14

15 ATT then proceeded to discuss in detail the various modifications that are
16 required to their model and concluded:⁶⁵

17 Unlike the \$5.01 established by the FCC for an individual hot
18 cut in the AT&T/Verizon Virginia arbitration decision where the
19 most efficient technology and ILEC operations were assumed,
20 the \$11.32 in this proceeding results from assumptions based on
21 making the *existing* Verizon New York processes as efficient as
22 possible. Therefore, substantial inefficiencies are embedded in
23 the cost.
24

25 Thus, when modified, the ATT model identifies a cost of \$11.32 for an individual
26 hot-cut.
27

28 **Q. PLEASE DISCUSS MCI'S RATE PROPOSALS?**

⁶⁵ Conv ATT-1 is attached hereto as Exhibit 5.

1 A. MCI proposes a bifurcated rate structure of a fixed charge of \$34.33 and an
2 additional \$5.86 per additional loop. The table below shows the average hot cut
3 rate under varying size jobs.

Set-Up	\$ 34.33
Incremental	\$ 5.86
Number of Loops	Average Price Per Loops
4	\$ 14.44
8	\$ 10.15
12	\$ 8.72
16	\$ 8.01
20	\$ 7.58
24	\$ 7.29
28	\$ 7.09

5

6 These rates are in line with the rates proposed in our testimony.

7

8 **Q. ARE THE ATT AND MCI PROPOSALS CONSISTENT WITH THE**
9 **RATES THAT YOU ARE PROPOSING?**

10 A. Yes. The rates proposed by ATT (as implied by its cost studies) and MCI are
11 roughly comparable to those proposed by us based on our revised studies. As
12 such, the various reviews by the parties appear to corroborate the observation that
13 VZ's proposals are unreasonable and not in compliance with TELRIC principles.

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9 **XII. CONCLUSION AND RATE RECOMMENDATIONS**

10 **Q. WHAT IS YOUR RECOMMENDATION?**

11 A. We recommend that the Commission reject VZ's rate proposals. Further, we
12 recommend that the Commission adopt rates for hot cuts based on our revised
13 studies.

14

15 Specifically, we recommend that the Commission adopt rates that are no higher
16 than the costs calculated in our revised studies that conservatively correct for
17 VZ's most obvious errors. Importantly, we have *not* assumed the use of
18 electronic loop provisioning systems that are currently available and that under a
19 strict application of TELRIC should have been assumed in the studies. As such,
20 our revised studies calculate conservative results. We have assumed, however,
21 that VZ's unmanned central offices are deployed with the ADF technologies.
22 This is consistent with VZ's actual deployment and use of this technology for

**Responsive Panel Testimony of August H. Ankum and Sidney Morrison
on Behalf of Conversent Communications of New York, LLC Case No. 02-C-1425**

1 those offices.⁶⁶ The impact of this assumption is, among others, that travel times
 2 can be removed from the studies. Reflecting separate charges for connect
 3 activities and disconnect activities, we recommend that the Commission adopt
 4 basic hot cut rates that are no higher than the following:
 5

UNE/Service Description	Service Order (Per Order) (Line 7)	C.O. Wiring (Per Line) (Line 8)	Provi-sioning (Per Line) (Line 9)	Total Charge
B	C	D	E	C+D+E
CONNECT				
Full-Mechanized Coordination HotCut ("Basic")				
2-W Initial	\$0.39	\$6.09	\$0.24	\$6.71
2-W Additional	-	\$6.09	\$0.24	\$6.32
4-W Initial	\$0.54	\$11.52	\$0.25	\$12.31
4-W Additional ("Basic")	-	\$11.52	\$0.25	\$11.78
<hr/>				
Full-Mechanized Coordination Expedite				\$1.35
IDLC Surcharge				\$0.00

6

7

⁶⁶ See Response to MCI-VZ-122s.

**Responsive Panel Testimony of August H. Ankum and Sidney Morrison
on Behalf of Conversent Communications of New York, LLC Case No. 02-C-1425**

UNE/Service Description	Service Order (Per Order) (Line 7)	C.O. Wiring (Per Line) (Line 8)	Provi-sioning (Per Line) (Line 9)	Sur-charge
B	C	D	E	F
DISCONNECT				
Full-Mechanized Coordination				
HotCut ("Basic")				
2-W Initial	\$0.11	\$0.50	\$0.00	\$0.60
2-W Additional	-	\$0.50	\$0.00	\$0.50
4-W Initial	\$0.11	\$0.50	\$0.00	\$0.60
4-W Additional ("Basic")	-	\$0.50	\$0.00	\$0.50
<hr/>				
Full-Mechanized Coordination Expedite				\$1.35
IDLC Surcharge				\$0.00

1

2 **Q. DOES THIS CONCLUDE YOUR RESPONSE TESTIMONY?**

3 A. Yes, it does.

4

5

Curriculum Vitae
August H. Ankum, Ph.D.
Senior Vice-President
QUANTITATIVE SOLUTIONS, INC
Economics and Telecommunications Consulting
1261 North Paulina, Suite 8
Chicago, IL 60622

Phone: 773.645.0653

Fax: 773.645.0705

I am an economist and consultant, specializing in public utility regulation. In this capacity, I have provided consulting services in the major telecommunications markets of the United States, such as New York, Texas, Illinois, Michigan, Tennessee, Georgia, and in a variety of smaller states. My consulting activities focus mostly on telecommunications regulation. Specifically, I work with large corporate clients, such as MCIWorldCom, AT&T, AT&T Wireless, and a variety of smaller competitive local exchange carriers and PCS providers. I have represented these clients before state and federal regulatory agencies in various proceedings concerning the introduction of competition in telecommunications markets. Recently, these proceedings focus largely on the implementation of the pro-competition provisions of Telecommunications Act of 1996.

Professional experience:

My professional background includes work experiences in private industry and state government. I have worked for MCI Telecommunications Corporation (AMCI@) as a senior economist. At MCI, I provided expert witness testimony and conducted economic analyses for internal purposes. Prior to joining MCI in early 1995, I worked for Teleport Communications Group, Inc. (ATCG@), as a Manager in the Regulatory and External Affairs Division. In this capacity, I testified on behalf of TCG in proceedings concerning local exchange competition issues. From 1986 until early 1994, I was employed as an economist by the Public Utility Commission of Texas (APUCT@) where I worked on a variety of electric power and telecommunications issues. During my last year at the PUCT I held the position of chief economist. Prior to joining the PUCT, I taught undergraduate courses in economics as an Assistant Instructor at the University of Texas from 1984 to 1986.

Education:

I received a Ph.D. in Economics from the University of Texas at Austin in 1992, an M.A. in Economics from the University of Texas at Austin in 1987, and a B.A. in Economics from Quincy College, Illinois, in 1982.

PROCEEDINGS IN WHICH DR. ANKUM HAS FILED EXPERT WITNESS TESTIMONY:

New York

Commission Investigation into Resale, Universal Service and Link and Port Pricing, New York Public Service Commission, Case Nos. 95-C-0657, 94-C-0095, and 91-C-1174, July 4, 1996. On behalf of MCI Telecommunications Corporation.

In the Matter of Proceeding on Motion of the Commission To Reexamine Reciprocal Compensation, New York Public Service Commission, Case 99-C-0529. Direct Testimony, July 1999. On Behalf Of Cablevision LightPath, Inc.

Proceeding on the Motion of the Commission To Examine New York Telephone Company's Rates for Unbundled Network Elements, New York Public Service Commission, Case 98-C-1357. Direct Testimony, October 1999. On behalf of Corecomm New York, Inc.

Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements, New York Public Service Commission Case 98-C-1357, Direct Testimony, June 2000, on behalf of MCIWorldCom.

California

Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050. Consolidated dockets. Reply testimony, February 2003. On behalf of ATT and MCI.

Connecticut

DPUC Investigation of Intrastate Carrier Access Charges, Docket No. 02-05-17. Rebuttal testimony, June 2003. On behalf of AT&T and MCI.

Florida

Investigation into Pricing of Unbundled Network Elements, Docket No. 990649B-TP. January, 2002. Filed on behalf of AT&T Communications of the Southern States, Inc. MCImetro Access Transmission Services, LLC & MCI WorldCom Communications, Inc. Florida Digital Network, Inc. (collectively called the "ALEC Coalition").

New Jersey

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Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Bell Atlantic – New Jersey Board of Public Utilities, May 2000. On behalf of Focal Communications Corporation of New Jersey.

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Delaware

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Texas

Petition of The General Counsel for an Evidentiary Proceeding to Determine Market Dominance, PUC of Texas, Docket No. 7790, Direct Testimony, June 1988. On behalf of the Public Utility Commission of Texas.

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Application of Southwestern Bell Telephone Company to Amend its Existing Customer Specific Pricing Plan Tariff: As it Relates to Local Exchange Access through Integrated Voice/Data Multiplexers, PUC of Texas, Docket No. 8478, Direct Testimony, August 1989. On behalf of the Public Utility Commission of Texas.

Application of Southwestern Bell Telephone Company to Provide Custom Service to Specific Customers, PUC of Texas, Docket No. 8672, Direct Testimony, September 1989. On behalf of the Public Utility Commission of Texas.

Inquiry of the General Counsel into the Reasonableness of the Rates and Services of Southwestern Bell Telephone Company, PUC of Texas, Docket No. 8585, Direct Testimony, November 1989. On behalf of the Public Utility Commission of Texas.

Southwestern Bell Telephone Company Application to Declare the Service Market for CO LAN Service to be Subject to Significant Competition, PUC of Texas, Docket No. 9301, Direct Testimony, June 1990. On behalf of the Public Utility Commission of Texas.

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Proceeding to examine reciprocal compensation pursuant to section 252 of the Federal Telecommunications of 1996, Public Utility Commission of Texas, Docket No. 21982. May 2000. On behalf of Taylor Communications.

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Iowa

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Illinois

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AT&T's Petition for an Investigation and Order Establishing Conditions Necessary to Permit Effective Exchange Competition to the Extent Feasible in Areas Served by Illinois Bell Telephone Company, Illinois Commerce Commission, Docket No. 94-0146. September 30, 1994. On behalf of Teleport Communications Group, Inc.

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In the Matter of MCI Telecommunications Corporation Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish and Interconnection Agreement with Central Telephone Company of Illinois (ASprint@), Illinois Commerce Commission, Docket No. 96-AB-007, January, 1997. On behalf of MCI Telecommunications Corporation.

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Massachusetts

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New Mexico

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Minnesota

In Re Commission Investigation Of Qwest's Pricing Of Certain Unbundled Network Elements, PUC Docket No. P-442, 421, 3012 /M-01-1916. Rebuttal testimony, April, 2002. on behalf of Otter Tail Telecom, Val-Ed Joint Venture D/B/A 702 Communications, McCleoudUSA, Eschelon Telecommunications, USLink.

Michigan

In the Matter of the Application of City Signal, Inc. for an Order Establishing and Approving Interconnection Arrangements with Michigan Bell Telephone Company, Michigan Public Service Commission, Case No. U-10647, October 12, 1994. On behalf of Teleport Communications Group, Inc.

In the Matter, on the Commission=s Own Motion, to Establish Permanent Interconnection Arrangements Between Basic Local Exchange Providers, Michigan Public Service Commission,

Case No. U-10860, July 24, 1995. On behalf of MCI Telecommunications Corporation.

In the Matter, on the Commission=s Own Motion, to consider the total service long run incremental costs and to determine the prices for unbundled network elements, interconnection services, resold services, and basic local exchange services for Ameritech Michigan, Michigan Public Service Commission, Case No. U-11280, March 31, 1997. On behalf of MCI Telecommunications Corporation.

In the matter of the application under Section 310(2) and 204, and the complaint under Section 205(2) and 203, of MCI Telecommunications Corporation against AMERITECH requesting a reduction in intrastate switched access charges, Case No. U-11366. April, 1997. On behalf of MCI Telecommunications Corporation.

Ohio

In the Matter of MCI Telecommunications Corporation Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish and Interconnection Agreement with Ameritech Ohio, The Public Utilities Commission of Ohio, Case No. 96-888-TP-ARB, October, 1996. On behalf of MCI Telecommunications Corporation.

In the matter of the review of Ameritech Ohio=s economic costs for interconnection, unbundled network elements, and reciprocal compensation for transport and termination of local telecommunications traffic, The Public Utilities Commission of Ohio, Case No. 96-922-TP-UNC, Jan 17, 1997. On behalf of MCI Telecommunications Corporation.

In the Matter of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic. Case No. 96-922-TP-UNC and In the Matter of the Application of Ameritech Ohio for Approval of Carrier to Carrier Tariff. Case No. 00-1368-TP-ATA. Ohio Public Utilities Commission. Direct Testimony, October 2000. On behalf of MCIWorldCom and ATT of the Central Region.

Indiana

In the matter of the Petition of MCI Telecommunications Corporation for the Commission to Modify its Existing Certificate of Public Convenience and Necessity and to Authorize the Petitioner to Provide certain Centrex-like Intra-Exchange Services in the Indianapolis LATA Pursuant to I.C. 8-1-2-88, and to Decline the Exercise in Part of its Jurisdiction over Petitioner=s Provision of such Service, Pursuant to I.C. 8-1-2.6., Indiana Regulatory Commission, Cause No. 39948, March 20, 1995. On behalf of MCI Telecommunications Corporation.

In the matter of the Petition of Indiana Bell Telephone company, Inc. For Authorization to Apply a Customer Specific Offering Tariff to Provide the Business Exchange Services Portion of Centrex and PBX Trunking Services and for the Commission to Decline to Exercise in Part Jurisdiction over the Petitioner=s Provision of such Services, Pursuant to I.C. 8-1-2.6, Indiana regulatory Commission, Cause No. 40178, October 1995. On behalf of MCI Telecommunications Corporation.

MCI Telecommunications Corporation Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish and Interconnection Agreement with Indiana Bell Telephone Company d/b/a Ameritech Indiana, Indiana Public Utility Regulatory Commission, Cause No. 40603-INT-01, October 1996. On behalf of MCI Telecommunications Corporation.

In the matter of the Commission Investigation and Generic Proceeding on Ameritech Indiana=s Rates for Interconnection Service, Unbundled Elements and Transport and Termination under the Telecommunications Act of 1996 and Related Indiana Statutes, Indiana Public Utility Regulatory Commission, Cause No. 40611. April 18, 1997. On behalf of MCI Telecommunications Corporation.

In the Matter of the Commission Investigation and Generic Proceeding on GTE=s Rates for Interconnection, Service, Unbundled Elements, and Transport under the FTA 96 and related Indiana Statutes, Indiana Public Utility Regulatory Commission, Cause No. 40618. October 10, 1997. On behalf of MCI Telecommunication Corporation.

In the matter of the Commission Investigation and Generic proceeding on the Ameritech Indiana's rates for Interconnection, Unbundled Elements, and Transport and Termination Under the Telecommunications Act of 1996 and Related Indiana Statutes, Indiana Utility Regulatory Commission, Cause No. 40611-S1. October 2001. On behalf of WorldCom, Inc., AT&T Communications of Indiana, G.P.

Rhode Island

Comprehensive Review of Intrastate Telecommunications Competition, State of Rhode Island and Providence Plantations Public Utilities Commission, Docket No. 2252, November, 1995. On behalf of MCI Telecommunications Corporation.

Utah

In the Matter of the Determination of the Costs Investigation of the Unbundled Loop of Qwest Corporation, Inc., Docket No. 01-049-85. Rebuttal testimony, August 16, 2002. On behalf of AT&T and WorldCom.

Vermont

Investigation into NET's tariff filing re: Open Network Architecture, including the Unbundling of NET's Network, Expanded Interconnection, and Intelligent Networks, Vermont Public Service Board, Docket No. 5713, June 8, 1995. On behalf of MCI Telecommunications Corporation.

Wisconsin

Investigation of the Appropriate Standards to Promote Effective Competition in the Local Exchange Telecommunications Market in Wisconsin, Public Service Commission of Wisconsin, Cause No. 05-TI-138, November, 1995. On behalf of MCI Telecommunications Corporation.

Matters relating to the satisfaction of conditions for offering interLATA services (Wisconsin Bell, Inc. d/b/a Ameritech Wisconsin) Wisconsin Public Service Commission, 670-TI-120, March 25, 1997. On behalf of MCI Telecommunications Corporation.

In the Matter of MCI Telecommunications Corporation Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Wisconsin Bell, Inc. d/b/a Ameritech Wisconsin, Wisconsin Public Service Commission, Docket Nos. 6720-MA-104 and 3258-MA-101. On behalf of MCI Telecommunications Corporation.

Investigation Into The Establishment of Cost-Related Zones For Unbundled Network Elements, Docket No. 05-TI-349. Rebuttal Testimony, September 2000. On behalf of AT&T Communications of Wisconsin, McLEODUSA Telecommunications Services, Inc., TDS MetroCom, Inc., and Time Warner Telecom.

Investigation into Ameritech Wisconsin's Unbundled Network Elements, PSC of Wisconsin, Docket No. 6720-TI-161, Direct and Rebuttal testimony, 2001. On Behalf Of AT&T Communications of Wisconsin, Inc., WorldCom, Inc., Rhythms Links, Inc., KMC Telecom, Inc., and McLeodUSA ("CLEC Coalition")

Pennsylvania

In Re: Formal Investigation to Examine Updated Universal Service Principles and Policies for telecommunications Services in the Commonwealth Interlocutory order, Initiation of Oral Hearing Phase, Pennsylvania Public Utility Commission, Docket No. I-00940035, February 28, 1996. On behalf of MCI Telecommunications Corporation.

Structural Separation of Verizon, Pennsylvania Public Utility Commission - Docket No. M-0001352. Direct Testimony, October, 2000. On behalf of MCI WorldCom.

Georgia

AT&T Petition for the Commission to Establish Resale Rules, Rates and terms and Conditions and the Initial Unbundling of Services, Georgia Public Service Commission, Docket No. 6352-U, March 22, 1996. On behalf of MCI Telecommunications Corporation.

Tennessee

Avoidable Costs of Providing Bundled Services for Resale by Local Exchange Telephone Companies, Tennessee Public Service Commission, Docket No. 96-00067, May 31, 1996. On behalf of MCI Telecommunications Corporation.

Commonwealth of Puerto Rico

Petition for Arbitration Pursuant to 47 U.S.C. & (b) and the Puerto Rico Telecommunications Act of 1996, regarding Interconnection Rates Terms and Conditions with Puerto Rico Telephone Company, Puerto Rico Telecommunications Regulatory Board, Docket No. 97-0034-AR, April 15, 1997. On behalf of Cellular Communications of Puerto Rico, Inc.

Contact Information

QSI Consulting, Inc.
415 Planters Ridge Drive
Sunset Beach, North Carolina 28468

phone: 910-575-4616
cellular: 910-575-4659
fax: 910-471-4616

e-mail: smorrison@qsiconsulting.com

Current Position

Senior Consultant, QSI Consulting, Inc.

December 2000 to Present

Professional Experience

DiAx Telecommunications Zurich, Switzerland

Project Coordinator, Operations Support Systems
Senior Consultant

OSP Consultants Denver, Colorado

Central Office Equipment Engineer
Nextlevel 3 VDSL Broadband

Competitive Strategies Group Inc Chicago Illinois

Technical Consultant
Microwave facilities analysis

CDI Telecommunications Denver, Colorado

Collocation Engineer
Telecommunications Engineer Training
Central Office Engineer
Outside Plant Engineer

Binariang Sdn. Bhd. Kuala Lumpur, Malaysia

Senior Manager, Network Operations
Fixed Network Facilities Service Center
GSM Facilities Consultant

Power Engineers Denver, Colorado

Outside Plant Engineering Consultant

**Tele-Matic Corporation
Englewood, Colorado**

Director Data Services

**US WEST
Denver, Colorado**

Manager

**Southern Bell
Charlotte, North Carolina**

Cable Splicer
Central Office Technician
Special Services Technician

**United States Air Force
Lowery Air Force Base, Denver, Colorado**

Nuclear Weapons/Reentry Vehicle Technician

Computing Skill Set

Hardware Experience: Mini-Computers, Personal Computers, Expansion Devices, Client Server, Workstations, HP Scanners, Novell & Lantastic Networks

Software Application Experience: CAD Applications COEFM, CIMAGE, CPD, TIRKS, COSMOS, LFAC, DOS, OS/2 2.0/Warp 3.0, UNIX, REXX programming language, Paradox, Dbase III, MS Word/Excel/Project, Visio, Wordperfect 6.0 DOS and Windows 3.X, Windows 95, 98 2000 & NT, Harvard Graphics, Pagis, XTALK, ProCom, Application script files

Areas of Expertise

DiAx Telecommunications; Zurich, Switzerland

May 1999 to December 2000

Project Coordinator/Manager

- Responsible for the development of customer requirements for the Lucent fault management systems; Network Fault Manager (NFM), Actiview and Trouble Manager as an integrated system for diAx
- Managed the project to completion within the allocated budget and time frames
- Developed and implemented business processes to support provisioning and maintenance of IP-VPN data services
- Planned and implemented the diAx Internet Provider Operations Center
- Trained internet engineers on the processes and detail engineering required for telecommunications central office based infrastructure

OSP Consultants Inc.; Phoenix, AZ /Sterling, VA.

October 1998 to May 1999

Consultant; CO transmission engineer

- Provide CO engineering for Very High Bit Rate Digital Subscriber Line Carrier (VDSL) utilizing Nextlevel 3 Broadband Data Terminal equipment, including, floor plan equipment placement, cable racking, power, and integration into outside plant (OSP) facilities and distribution networks
- Project manager CO VDSL installation, procurement and Central Office Equipment Facilities Management (COEFM) engineering process, MOP development, CO installation Design Work Package
- Provide source information on quality control for CO installers
- Provide input information for TIRKS Equipment & Facilities records
- Maintain project progress reports for customer

Competitive Strategies Group; Chicago, IL / Denver, CO

October 1998 to May 1999

Consultant: Competitive Local Exchange Carrier (CLEC) Operations & Engineering

- Technical analysis of network facilities & switching (microwave, fiber & Nortel switches)
- Network operations analysis and procedures recommendations for CLEC operators

CDI; Englewood, CO

October 1997 to September 1998

Consultant: Outside Plant Engineering

- OSP design engineer; facility placement, copper/fiber/field Electronics
- OSP Facility distribution makeup engineering
- Maintain mechanized records systems for CO and OSP
- Common Systems Planning and Engineering (CSPEC): Power/Frames/Cable Rack/Floor Space/CLEC Collocation Planner
- Training course development and presentation for new hire CO/OSP engineers
- Courses developed and presented, Basic Conventional Communications, CO Switching, OSP Design, Numbering & Routing, for fixed networks and wireless

Binariang Sdn. Bhd., Subang Hi-Tech, Shah Alam, Malaysia

December 1995 to June 1997

Senior Manager: Network Operations, Fixed Network Facilities Service Center (FSC) & GSM Facilities Consultant

- Project Managed the planning and implementation of the fixed network provisioning organization including installation and maintenance, assignment and repair organization for telephony, CATV and data
- Project managed the implementation of GTE World Win OSS for provisioning & maintenance of fixed network & CATV
- Developed fixed network operations acceptance criteria for Copper Cables, Hybrid Fiber Coaxial (HFC) Facilities, Subscriber Line Carrier (SLC), Remote Switching Systems (RSS) and Community Antenna Television (CATV) nodes
- Developed operations requirements for switched and leased line services
- Planned, wrote and implemented Southeast Asia's first telecommunications ISO 9002 process for fixed network operations
- Project managed the implementation of an operations field support group for Hybrid Fiber Coaxial (HFC) network

Binariang Sdn. Bhd., Subang Hi-Tech, Shah Alam, Malaysia

May 1995 to December 1995

Consultant: Network Operations GSM facilities Consultant

- Project managed the development and implementation of contractor specifications for Global System for Mobile Communications (GSM) and Base Transceiver Site (BTS) construction (cabin, cabinet, tower, pad, cable racking, antenna attachment hardware, grounding, lightning protection, UPS power and electrical)
- Trained contractors and local managers on specifications and quality requirements for site acceptance
- Developed acceptance check list and performed acceptance on the first sixty GSM/BTS sites

Power Engineers

March 1995 to May 1995

Consultant: Outside Plant Engineering

- Facility design and placement
- Customer service request analyst

Tele-Matic Corporation

February 1993 to November 1994

Director: Data Service

- Planned and directed the activities of the data center department including 2 managers and 10 data center technicians
- Coordinated Automatic Message Accounting (AMA) billing activities with Tele-Matic partners i.e. AT&T, U S WEST, Bell Atlantic, South Western Bell, and other RBOCs for inmate type telephone services
- Negotiated AMA data structures, quality and timely delivery for billing systems
- Developed automation concepts for data services software systems
- Planned and directed the implementation of advanced architecture (intelligent networks, servers & workstations)

U S WEST

August 1988 to January 1993

Manager: Teleprocessing

- Managed AMA Teleprocessing activities for the U S WEST fourteen state region
- Planned the consolidation of operating centers from seven to four
- Project managed the development and implementation of the U S WEST Oasis network operations support system

for AMA

- Directed and managed the activities of PC support personnel
- Provided technical support for the corporate legal department

U S WEST

February 1985 to July 1988

Manager: Switching Control Center Corporate Support

- Project managed the selection and implementation of switching maintenance and provisioning operational support system
- Provided technical support for Network Switching Control Centers and Essential Power Systems
- Managed the development of switch operations support systems for center operations
- Directed the activities of 12 staff subordinates responsible for switch vendor specific electronic switching support

U S WEST

June 1978 to January 1985

Manager: Network Switching

- Managed U S WEST central office operations responsible for data, special services and local service provisioning
- Project manager for the Denver Curtis Park Area Cut, approximately 30K lines and 12K special services cut from two central office areas
- Planned and implemented new Main Distributing Frame technology in the Denver Main Wire Center
- Operations consultant for U S WEST land use study and business case for southeast Denver metropolitan area
- 16 direct report supervisors and 115 technicians

U S WEST

December 1972 to May 1978

Manager: Network Operations

- Supervised central office mainframe operations responsible for local and special services provisioning
- Project manager for the Denver Capital Hill Area Cut, approximately 18K lines & 8K Special Services cut

Mountain Bell/Southern Bell

November 1966 to November 1972

Technician: Switching Services

- Special Services Data Technician, Central Office Technician, Cable Splicer and Cable Helper

United States Air Force

September 1961 to April 1965

- Nuclear Weapons Technician (Reentry Vehicles) Honorable Discharge

Testimony Profile and Experience

Before the State of New Jersey Board of Public Utilities

Docket No. T00060356

In the Matter of the Review of Unbundled Network Elements Rates Terms and Conditions of Verizon – New Jersey
On behalf of WorldCom, Inc.

Before the Wisconsin Public Service Commission

Docket No. 6720-T1-161

Investigation Into Ameritech Wisconsin's Unbundled Network Elements

On behalf of AT&T communications of Wisconsin, TCG Milwaukee, MCI WorldCom, Inc., McLeodUSA Telecommunications Services, Inc., Rhythms Links, Inc., TDS Metrocom, Time Warner telecom, KMC Telecom, Inc.

Before the Public Service Commission of Wyoming

Docket No. 700000-TA-00-599 (Record No. 5924)

In The Matter of the Application of Qwest Corporation Regarding Relief Under Section 271 of the Federal Telecommunications Act of 1996, Wyoming's Participation in a Multi-State Section 271 Process, and Approval of Qwest's Statement of Generally Available Terms and Conditions

On behalf of Covad Communications Company, Rhythms Links, Inc., New Edge Networks, Inc.

Before The Arizona Corporation Commission

DocketNo.T-000000A-00-0194, Phase II --A

In The Matter Of The Investigation Into Qwest Corporation's Compliance With Certain Wholesale Pricing Requirements for Unbundled Network Elements And Resale Discounts

On behalf of WorldCom, Inc.

Before The Public Utilities Commission of The State Of Colorado

Docket no. 99A-577T

In The Matter Of U S WEST Communications, Inc.'s Statement Of Generally Available Terms And Conditions

On behalf of Covad Communications Company, Rhythms Links, Inc., New Edge Networks, Inc.

Before The Commonwealth Of Massachusetts Department Of Telecommunications And Energy

Docket No. D.T.E. 01-20

In the Matter Of Investigation by the Department on its own Motion Into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided Cost Discount for Verizon New England Inc., d/b/a Verizon Massachusetts' Resale Services

On behalf of Allegiance Telecom of Massachusetts, Inc., Covad Communications, Company, El Paso Networks, LLC, and Network Plus, Inc. (collectively called the "CLEC Coalition")

Before The Washington Utilities And Transportation Commission

Docket No. UT-003013

In The Matter of: The Continued Costing and Pricing of Unbundled Network Elements, Transport, Termination and Resale

On behalf of WorldCom, Inc.

Before The Florida Public Service Commission

Docket No. 990649B-TP

In The Matter of: Investigation Into Pricing Unbundled Network Elements

On behalf of the ALEC Coalition

Before The Indiana Utility Regulatory Commission

Docket No. 40611-S1

In The Matter of: The Commission Investigation and Generic Proceeding on Ameritech Indiana's Rates for Interconnection Service. Unbundled Elements, and Transport and Termination under the telecommunications Act of 1996 and Related Indiana Statutes

On behalf of AT&T Communications of Indiana, GP and TCG Indianapolis, WorldCom, Inc., McLeodUSA Telecommunications Services, Inc.

Before the New Mexico Public Regulation Commission

Utility Case No. 3495, Phase B

In The Matter of the consideration of costing and pricing rules for OSS collocation, shared transport, nonrecurring charges, spot frames combination of network elements and switching.

On behalf of The Public Regulation Commission Staff

Before the State Of North Dakota Public Service Commission

Case No. PU-2342-01-296

In the matter of: Qwest Corporation Interconnection/Wholesale Price Investigation.

On behalf of US Link, Inc., 702 Communications, McLeodUSA Telecommunications, and IdeaOne Telecom Group

Before The Public Utilities Commission Of The State Of South Dakota

Docket No. TC01-098

In The Matter Of Determining Prices For Unbundled Network Elements (Unes) In Qwest Corporation's Statement Of Generally Available Terms (Sgat).

On Behalf Of The Staff Of The Public Utilities Commission Of South Dakota

Before The Illinois Commerce Commission

Docket No. 02-0864

In The Matter of: Illinois Bell Telephone Company, Filing To Increase Unbundled Loop And Nonrecurring Rates (Tariffs Filed December 24, 2002),

On Behalf Of WorldCom, Inc., McLeodUSA Telecommunications Services, Inc., Covad Communications Company, TDS Metrocom, LLC, Allegiance Telecom of Illinois, Inc., RCN Telecom Services of Illinois, LLC., Globalcom, Inc., Z-Tel Communications, Inc., XO Illinois, Inc., Forte Communications, Inc., CIMCO Communications, Inc.

Before The Indiana Utility Regulatory Commission

Cause No. 42393

In The Matter Of The Commission Investigation And Generic Proceeding Of Rates And Unbundled Network Elements And Collocation For Indiana Bell Telephone Company, Incorporated D/B/A Sbc Indiana Pursuant To The Telecommunications Act Of 1996 And Related Indiana Statutes

On behalf of CIMCO Communications, Inc.

Cavalier Telephone Mid-Atlantic, LLC
D. No. M-00031754 – Development of an Efficient Loop Migration Process
Testimony of Larry Sims

1 **Q. Please state your name, business title, and qualifications.**

2 **A.** My name is Larry Sims and my business address is 2134 West Laburnum
3 Avenue, Richmond, Virginia 23227. I am Vice President for Engineering and
4 Operations for Cavalier Telephone, LLC. My formal job responsibilities are to
5 supervise all engineering and operations functions for Cavalier. My day-to-day
6 job responsibilities include not just normal engineering and operations functions,
7 but also management of numerous daily escalations of operational issues with
8 Verizon, meeting with customers whose telephone service has been disconnected
9 or otherwise disrupted, and trying to reestablish telephone service or resolve
10 problems caused by Verizon. I worked for 30 years in various staff and
11 operational positions at Bell Atlantic, previously known as Chesapeake &
12 Potomac Telephone Company and now known as Verizon.

13 **Q. Would you please describe the hot cut process that Cavalier wishes to**
14 **introduce?**

15 **A.** Cavalier wishes to introduce a hot cut process that is currently in use
16 between Cavalier and Verizon. Cavalier and Verizon have been using this
17 process for over two years. The process works well, but several improvements
18 could be made to further streamline and economize the work activities.

Cavalier Telephone Mid-Atlantic, LLC
D. No. M-00031754 – Development of an Efficient Loop Migration Process
Testimony of Larry Sims

1 **Q.** Would you briefly describe the hot cut process used today by Cavalier
2 **and Verizon?**

3 **A.** Cavalier and Verizon use a “batch” hot cut process. An overview of that
4 process is shown in Exhibit 1. Under current operating procedures, a local
5 service request (LSR) is submitted to Verizon requesting the normal interval, *i.e.*
6 5 days, for loops. Verizon responds back with a Firm Order Confirmation (FOC).
7 The FOC provides the scheduled cutover date and scheduled time for the cut.
8 Cavalier then “posts” the cutover date, confirms that the necessary Cavalier
9 switch and network arrangements are in place, and verifies that the order is
10 recorded in Verizon’s Wholesale Provisioning Tracking System (WPTS). WPTS
11 is the system that Verizon and Cavalier use to monitor and track hot cut
12 installations.

13 The apparently unique feature of this process is that all of Cavalier’s
14 orders are installed in a “batch”. In Pennsylvania, for example, all hot cut orders,
15 except for special orders, are scheduled for a specific cutover date and are
16 batched together *for all offices across the state*, with the actual cutover
17 prearranged at a set time, e.g., 1:30 p.m. At the prearranged time, the loop is
18 rewired in the central office to terminate on Cavalier’s network. At that set time,
19 Cavalier ports the telephone number to its switch, and performs testing that the

Cavalier Telephone Mid-Atlantic, LLC
D. No. M-00031754 – Development of an Efficient Loop Migration Process
Testimony of Larry Sims

1 loop is up and working. This “batch” process is performed daily for all
2 Pennsylvania offices at the pre-arranged time, without any regard to the quantity
3 of cuts. The same is true for Cavalier’s other markets where, at each respective
4 pre-arranged time, all hot cuts are performed in batch for all the offices across
5 that state (*e.g.* Delaware) or large regional market (*e.g.* Northern Virginia).

6 **Q. What aspects of this process facilitate the installation of hot cuts?**

7 **A.** As noted above, Verizon performs hot cuts for Cavalier in “batch”. That
8 is, all orders for any given office are worked at a specific time of the day using
9 WPTS as the control tool. Because the cutover is based on a prearranged time in
10 a batch, Cavalier does not have to guess the time of the installation and
11 continually peer into the WPTS system to verify when the loop is actually
12 delivered. Cavalier, Verizon, and more important the customers benefit from
13 this process, as orders are more routinely installed.

14 **Q. What aspects of this process impede the installation of hot cuts?**

15 **A.** Hot cut installations are impeded when a loop is served via Integrated
16 Digital Loop Carrier (IDLC). Succinctly, IDLC serves as a pair gain device,
17 where no single copper facility provides the pre-conversion Verizon dial tone.
18 IDLC is used extensively in certain central offices, particularly those that serve
19 relatively new neighborhoods. Under current Verizon operating procedures,

Cavalier Telephone Mid-Atlantic, LLC
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Testimony of Larry Sims

1 IDLC serves as an obstacle to seamless and efficient customer transitions from
2 Verizon to Cavalier. When an IDLC situation is encountered, Verizon adopts
3 one of the below two approaches:

- 4 1. Reassign the loop from the IDLC to a physical copper pair.
- 5 2. Re-terminate the loop to Universal Digital Carrier (UDLC) facilities.

6 With a customer order that has to be converted to any of these two approaches,
7 the loop installation does not occur on the scheduled time. The installation has
8 to be reworked, at the discretion of Verizon. Cavalier has no say in this
9 determination. Cavalier and the customer are left dangling, until Verizon makes
10 the accommodation to alternative arrangements. And if either of these
11 approaches do not work, then Verizon *cancel*s the order due to “no facilities”.
12 Canceling the order is not a desired result. But time and time again we are faced
13 with that situation. So, in conclusion, IDLC slows up the hot cut process, and is
14 an impediment. Under the current hot cut process, the “no facilities” response
15 provides Verizon with an unverifiable escape from making the service transition
16 to Cavalier. That condition is undesirable.

17 **Q. Did the FCC address the IDLC situation in its Triennial Review Order?**

18 **A.** Yes, it did. It is important to note that the FCC’s Triennial Review Order,
19 released August 21, 2003, states that a technically feasible method must be

Cavalier Telephone Mid-Atlantic, LLC
D. No. M-00031754 – Development of an Efficient Loop Migration Process
Testimony of Larry Sims

1 presented to avoid the no-facilities problem that I described previously. In that
2 order, the FCC held that

3 *....Integrated DLC systems, may require incumbent LECs to implement*
4 *policies, practices, and procedures different from those used to provide*
5 *access to loops served by Universal DLC systemsWe recognize that in*
6 *most cases this will be either through a spare copper facility or through the*
7 *availability of Universal DLC systems. Nonetheless even if neither of*
8 *these options is available, incumbent LECs must present requesting*
9 *carriers a technically feasible method of unbundled access. (FCC Order at*
10 *Paragraph 297)*

11 **Q. Has Verizon presented a technically feasible method of unbundling**
12 **IDLC to Cavalier?**

13 **A.** No, it has not. Not only is its current position entrenched, but when IDLC
14 situations are encountered, Verizon wants Cavalier to accept higher non-
15 recurring charges for the installation. On October 2, 2003, Cavalier received a
16 letter from Verizon stating that it is going to terminate certain unbundled
17 network elements (UNEs) and that, to provision other UNEs, additional charges
18 would be required. Verizon asked that Cavalier sign an interconnection
19 amendment that contained additional provisions and charges for processing hot

Cavalier Telephone Mid-Atlantic, LLC
D. No. M-00031754 – Development of an Efficient Loop Migration Process
Testimony of Larry Sims

1 cuts. A copy of that letter, proposed interconnection amendment, and pricing
2 schedule is attached as Exhibit 3. Note in the pricing attachment, Verizon wants
3 to charge Cavalier an additional \$140.52 for an IDLC conversion to copper or
4 UDLC.

5 **Q. Has Cavalier adopted a new interconnection amendment as suggested**
6 **by Verizon?**

7 A. No it has not. Verizon's own position with respect to implementation of
8 the TRO is contradictory. Verizon would discontinue certain UNEs without the
9 need for an interconnection amendment, but when it comes to installation of
10 UNEs, Verizon imposes unilateral terms and conditions. Verizon should not be
11 allowed to have it both ways.

12 **Q. To your knowledge are there any other CLECs using the batch process**
13 **that Verizon employs with Cavalier?**

14 A. There may be, but I personally am not aware of any. Verizon and
15 Cavalier have developed a batch cut process that is working, even though the
16 daily volume of orders in a given market, such as Pennsylvania, might fluctuate
17 from as little as 25 orders per day up to 100 orders per day.

18 **Q. How would you advocate that this process be modified?**

Cavalier Telephone Mid-Atlantic, LLC
D. No. M-00031754 – Development of an Efficient Loop Migration Process
Testimony of Larry Sims

1 **A.** First, this proceeding should not move our current hot cut process
2 backwards. Today, Cavalier installs hot cuts in batch, and that process should be
3 the starting point for gaining efficiencies. Any new process that would provide a
4 constraint on the batch, by setting minimum volume levels and pushed-out due
5 dates would be unacceptable. But I do not believe that the current process is the
6 end-all. Improvements to that process can certainly be made. For starters, I
7 would advocate that the recommendations submitted by Conversent
8 Communications in New York in Case 02-1425, in the Panel Responsive
9 Testimony of August Ankum and Sidney Morrison, filed on December 26, 2003,
10 be adopted. I have attached a copy of their testimony in Exhibit 2. In brief, those
11 recommendations eliminate redundancies and add further electronic controls to
12 minimize the handholding that the current process requires.

13 **Q.** **Does this conclude your testimony?**

14 **A.** Yes.

**RATES
CONVERSENT & VZ PROPOSALS**

UNE/Service Description B	Service Order (Per Order) (Line 7) C	C.O. Wiring (Per Line) (Line 8) D	Provi- sioning (Per Line) (Line 9) E	Surcharge G	Total Charge
CONNECT					
Full-Mechanized Coordination HotCut ("Basic")					
2-W Initial	\$0.39	\$6.09	\$0.24	-	\$6.71
2-W Additional	-	\$6.09	\$0.24	-	\$6.32
4-W Initial	\$0.54	\$11.52	\$0.25	-	\$12.31
4-W Additional ("Basic")	-	\$11.52	\$0.25	-	\$11.78
Full-Mechanized Coordination Expedite (4)				\$1.35	\$1.35
IDLC Surcharge (5)				\$0.00	\$0.00

UNE/Service Description B	Service Order (Per Order) (Line 7) C	C.O. Wiring (Per Line) (Line 8) D	Provi- sioning (Per Line) (Line 9) E	Sur- charge G	Total Charge
DISCONNECT					
Full-Mechanized Coordination HotCut ("Basic")					
2-W Initial	\$0.11	\$0.50	\$0.00	-	\$0.60
2-W Additional	-	\$0.50	\$0.00	-	\$0.50
4-W Initial	\$0.11	\$0.50	\$0.00	-	\$0.60
4-W Additional ("Basic")	-	\$0.50	\$0.00	-	\$0.50
Full-Mechanized Coordination Expedite				\$1.35	\$1.35
IDLC Surcharge				\$0.00	\$0.00

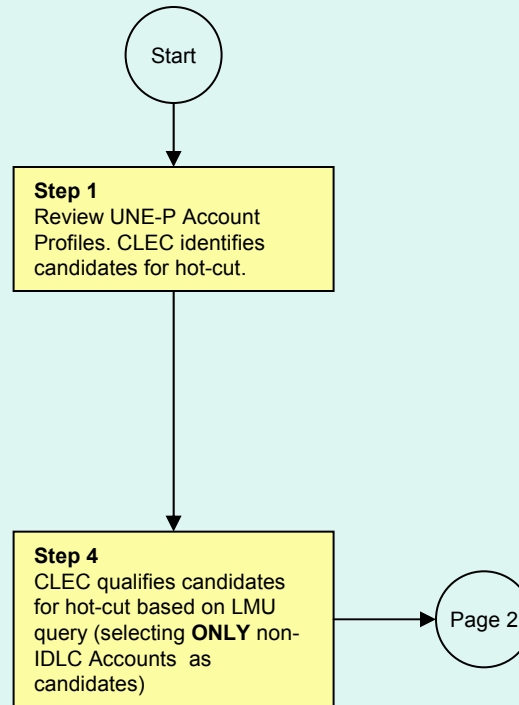
Verizon Proposal UNE/Service Description B	Service Order (Per Order) (Line 7) C	C.O. Wiring (Per Line) (Line 8) D	Provi- sioning (Per Line) (Line 9) E	Sur- charge G	Total Charge
CONNECT & DISCONNECT					
Full-Mechanized Coordination HotCut ("Basic")					
2-W Initial	\$22.08	\$48.14	\$17.46	-	\$87.67
2-W Additional	-	\$29.40	\$17.53	-	\$46.93
4-W Initial	\$29.55	\$84.15	\$18.27	-	\$131.97
4-W Additional ("Basic")	-	\$50.87	\$18.35	-	\$69.22
Full-Mechanized Coordination Expedite				\$51.41	\$51.41
IDLC Surcharge				\$131.18	\$131.18

ATTACHMENT A

UNE-P to UNE-L Hot-Cut Process

Modifications to this attachment have been performed solely to respond to CONV-ATT –1 discovery request.

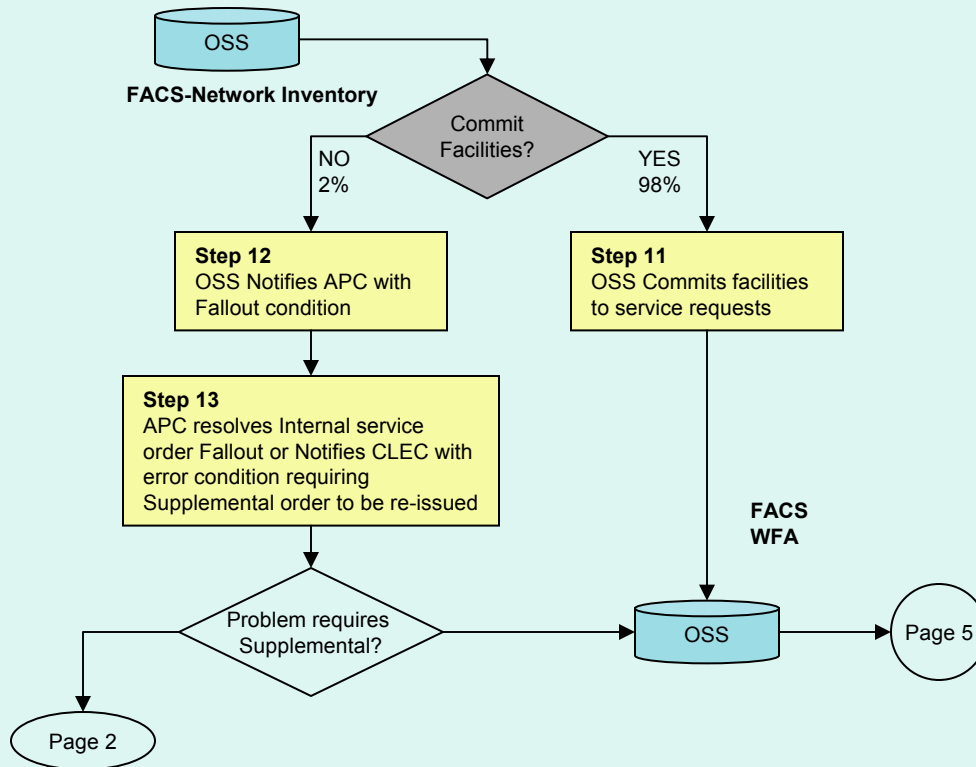
Pre-Order Activity (Individual Hotcut Request)



LMU Data base reflects up-to-date Facility data contained in LFACS

Modifications to this attachment have been performed solely to respond to CONV-ATT -1 discovery request.

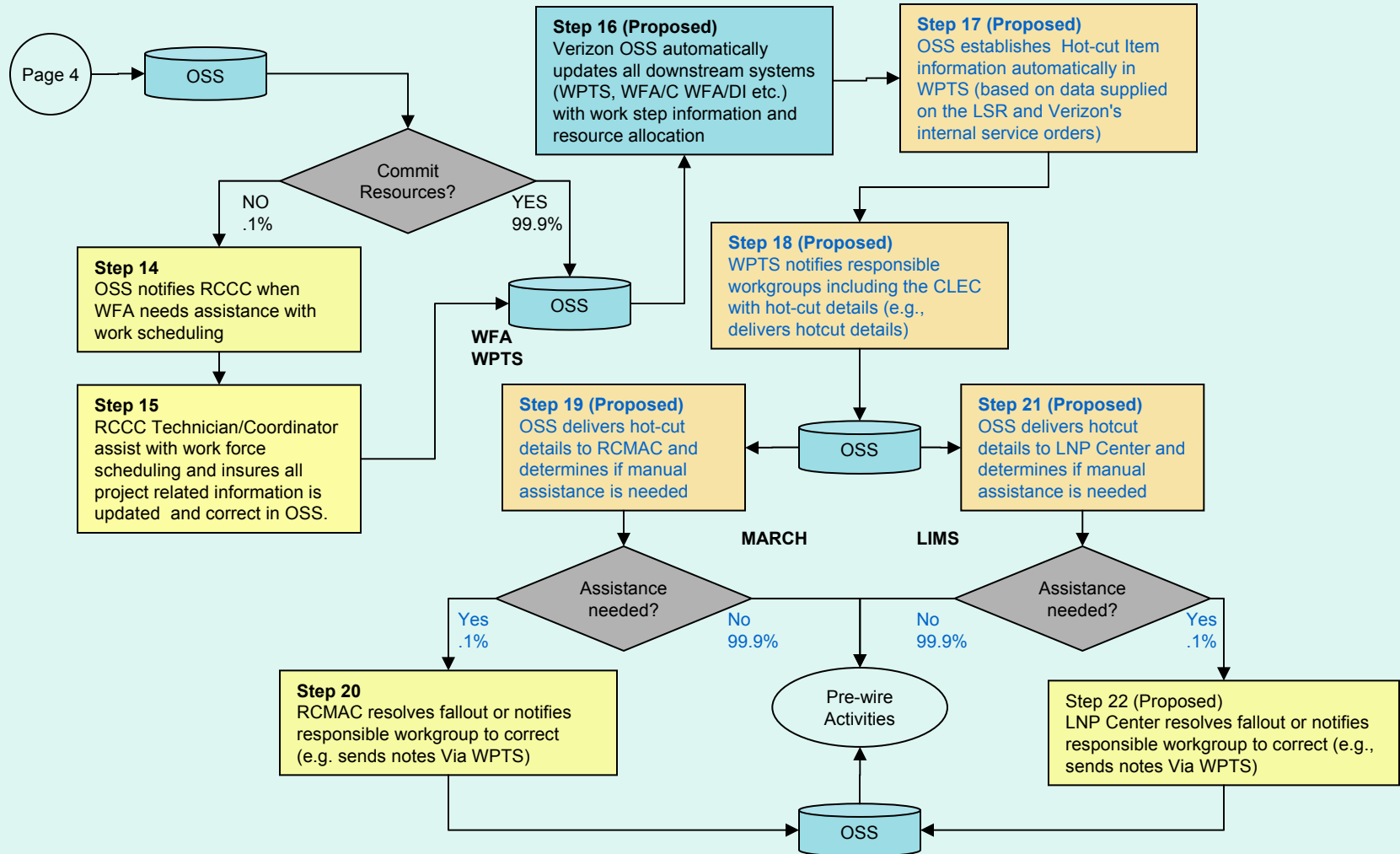
Work Assignment (Commit Facilities)



Notify CLEC to Issue Sup

Modifications to this attachment have been performed solely to respond to CONV-ATT –1 discovery request.

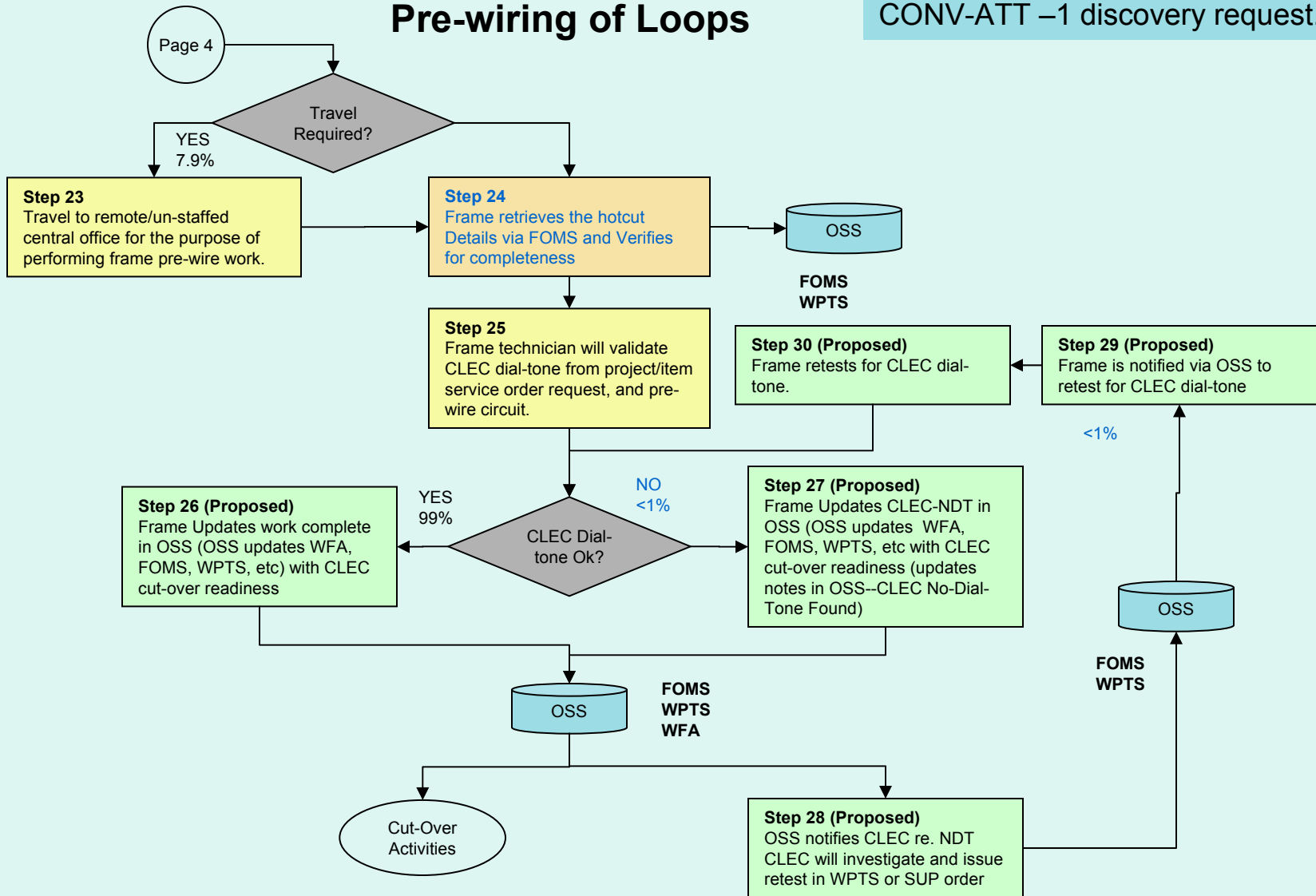
Work Assignment (Commit Resources)



UNE-P to UNE-L Bulk Hot-Cut Process

Modifications to this attachment have been performed solely to respond to CONV-ATT -1 discovery request.

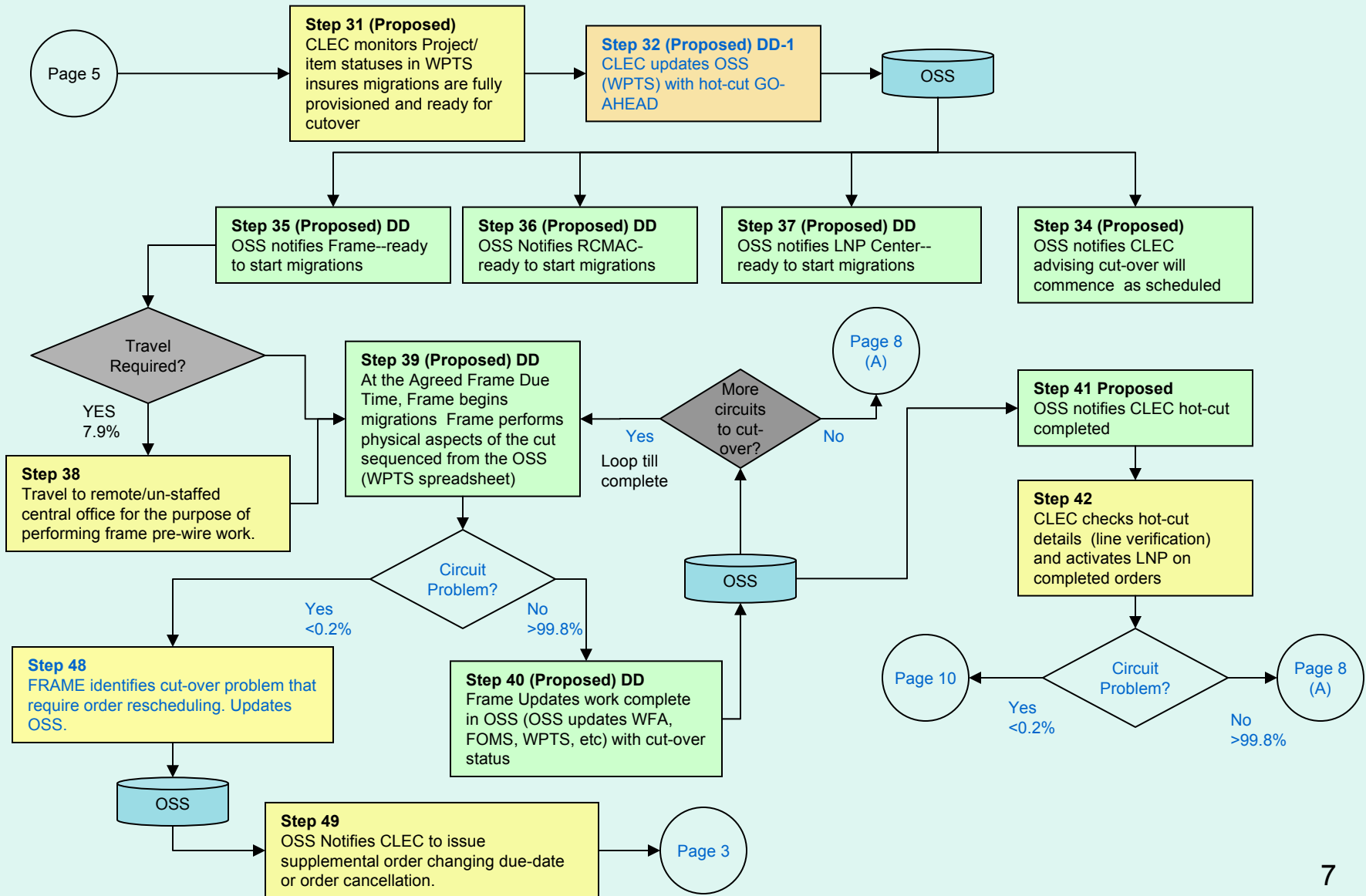
Pre-wiring of Loops



UNE-P to UNE-L Hot-Cut Process

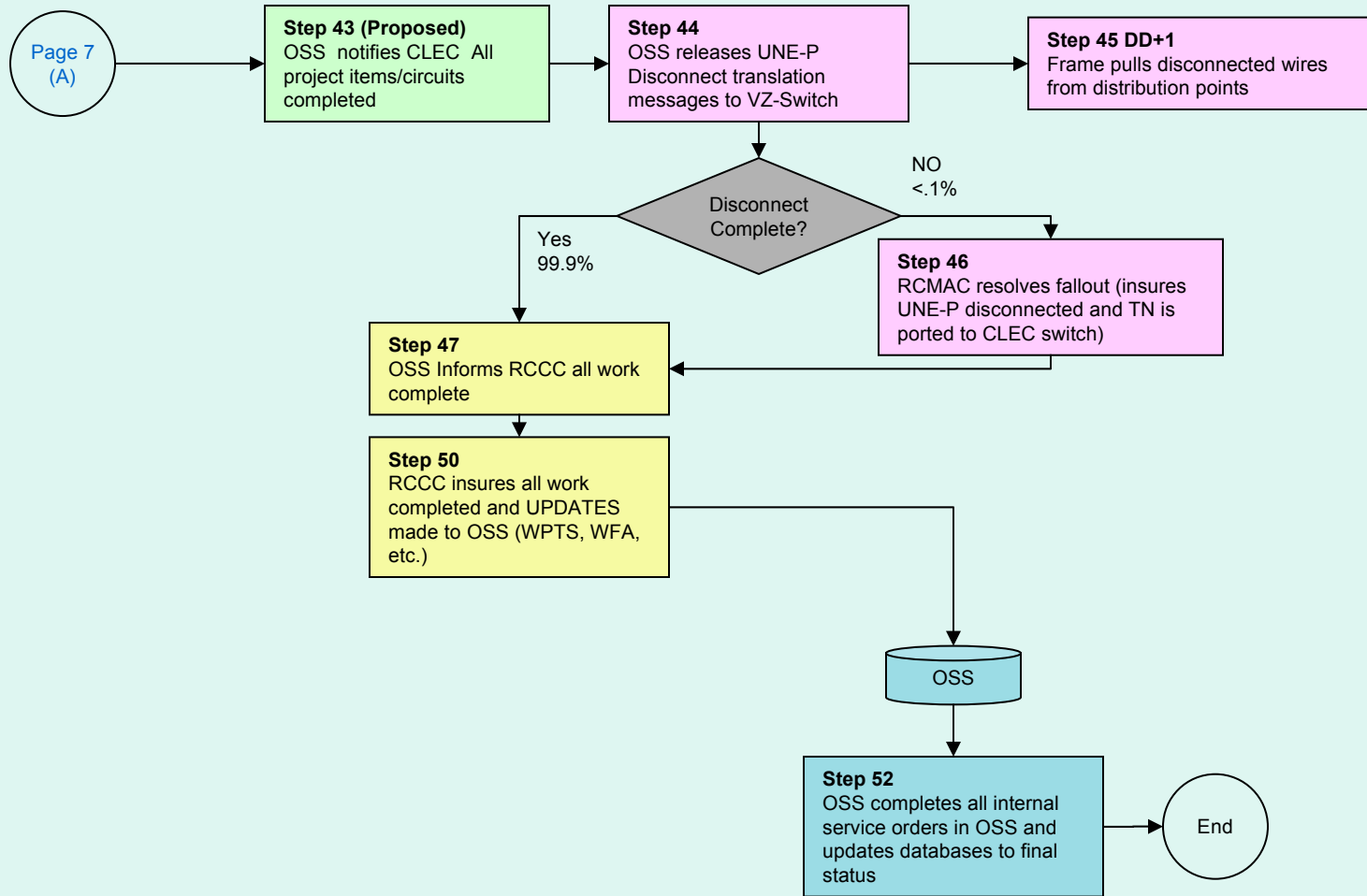
Due Date Cutover Activities

Modifications to this attachment have been performed solely to respond to CONV-ATT -1 discovery request.

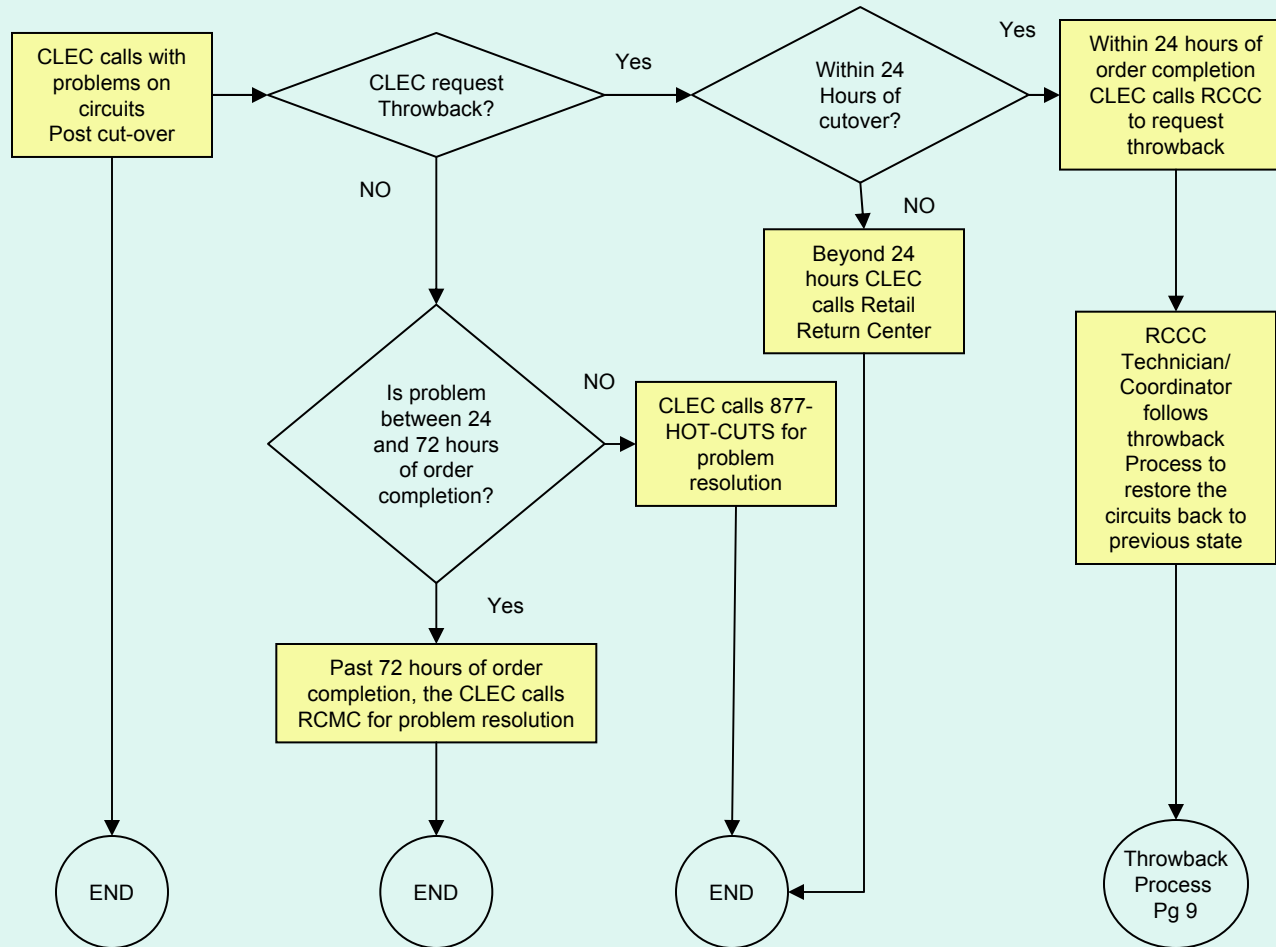


Modifications to this attachment have been performed solely to respond to CONV-ATT –1 discovery request.

Post Cutover Activities

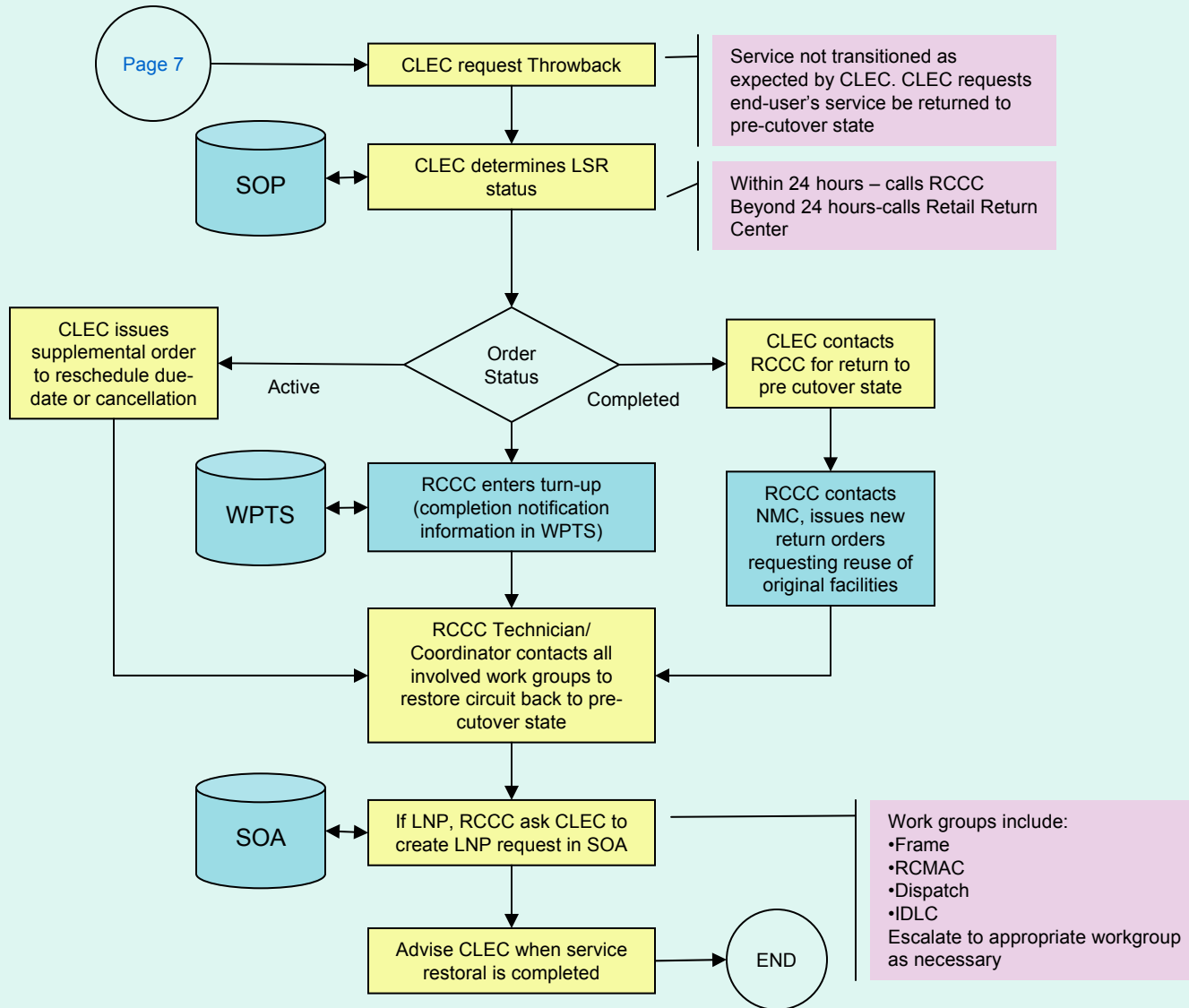


Problem Resolution upon completion of the Hot Cut



UNE-P to UNE-L Hot-Cut Process

Throwbacks





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FCC Triennial Review Order



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- [Verizon West](#)

October 2, 2003

Subject: FCC Triennial Review Order

Verizon has posted on its website today a proposed amendment to e interconnection agreements that incorporates the provisions of the F and Order and Order on Remand and Further Notice of Proposed Ru Docket Nos. 01-338, 96-98 and 98-147 (released on August 21, 2003 draft contract amendment can be accessed through the electronic lin of this notice. This document can also be accessed through the Veriz Web Site under "Industry Letters" at Verizon Wholesale.

Carriers seeking to amend their interconnection agreements should r amendment and contact Verizon to proceed with completion of the cc process. You can either send an email to [contract management](#) or cc Ragsdale, Manager Interconnection Services. Ms. Ragsdale's addre Hidden Ridge, Irving, TX 75038 and her telephone number is 972-71

Please contact Ms. Ragsdale if you have questions regarding this top

[Attachment: Model Interconnection Amendment.](#)

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[Click here to download a free copy if you don't already have it.](#)

AMENDMENT NO. ____

to the

INTERCONNECTION AGREEMENT

between

[VERIZON LEGAL ENTITY]

and

[CLEC FULL NAME]

This Amendment No. [NUMBER] (the "Amendment") is made by and between Verizon [LEGAL ENTITY] ("Verizon"), a [STATE OF INCORPORATION] corporation with offices at [VERIZON STATE ADDRESS], and [FULL CLEC NAME], a [CORPORATION/PARTNERSHIP] with offices at [CLEC ADDRESS] ("**CLEC Acronym TXT**"), and shall be deemed effective [FOR CALIFORNIA] upon Commission approval pursuant to Section 252 of the Act (the "Amendment Effective Date").] [FOR ALL OTHER STATES: on _____ (the "Amendment Effective Date").] Verizon and **CLEC Acronym TXT** are hereinafter referred to collectively as the "Parties" and individually as a "Party". This Amendment covers services in Verizon's service territory in the [State or Commonwealth] of [STATE/COMMONWEALTH NAME OF AGREEMENT] (the "State"/"Commonwealth").

WITNESSETH:

NOTE: **DELETE** THE FOLLOWING WHEREAS SECTION ONLY IF CLEC'S AGREEMENT HAS USED AN ADOPTION LETTER:

[WHEREAS, Verizon and **CLEC Acronym TXT** are Parties to an Interconnection Agreement under Sections 251 and 252 of the Telecommunications Act of 1996 dated [INSERT DATE] (the "Agreement"); and]

NOTE: **INSERT** THE FOLLOWING WHEREAS SECTION ONLY IF CLEC'S AGREEMENT USED AN ADOPTION LETTER:

[WHEREAS, pursuant to an adoption letter dated [INSERT DATE OF ACTUAL ADOPTION LETTER] (the "Adoption Letter"), **CLEC Acronym TXT** adopted in the [State or Commonwealth] of [STATE/COMMONWEALTH NAME], the interconnection agreement between [NAME OF UNDERLYING CLEC AGREEMENT] and VERIZON (such Adoption Letter and underlying adopted interconnection agreement referred to herein collectively as the "Agreement"); and]

WHEREAS, the Federal Communications Commission (the "FCC") released an order on August 21, 2003 in CC Docket Nos. 01-338, 96-98, and 98-147 (the "Triennial Review Order" or "TRO"), which became effective as of October 2, 2003; and

WHEREAS, pursuant to Section 252(a)(1) of the Act, the Parties wish to amend the Agreement in order to give contractual effect to provisions of the TRO as set forth herein; and

NOW, THEREFORE, in consideration of the promises and mutual agreements set forth herein, the Parties agree to amend the Agreement as follows:

1. The Parties agree that the Agreement should be amended by the addition of the rates, terms and conditions set forth in the TRO Attachment and the Pricing Exhibit to the TRO Attachment attached hereto. The TRO Attachment and the Pricing Exhibit to the TRO Attachment shall apply notwithstanding any other provision of the Agreement or a Verizon tariff or a Verizon Statement of Generally Available Terms and Conditions ("SGAT").
2. Conflict between this Amendment and the Agreement. This Amendment shall be deemed to revise the terms and provisions of the Agreement to the extent necessary to give effect to the terms and provisions of this Amendment. In the event of a conflict between the terms and provisions of this Amendment and the terms and provisions of the Agreement this Amendment shall govern, *provided, however*, that the fact that a term or provision appears in this Amendment but not in the Agreement, or in the Agreement but not in this Amendment, shall not be interpreted as, or deemed grounds for finding, a conflict for purposes of this Section 2.
3. Counterparts. This Amendment may be executed in one or more counterparts, each of which when so executed and delivered shall be an original and all of which together shall constitute one and the same instrument.
4. Captions. The Parties acknowledge that the captions in this Amendment have been inserted solely for convenience of reference and in no way define or limit the scope or substance of any term or provision of this Amendment.
5. Scope of Amendment. This Amendment shall amend, modify and revise the Agreement only to the extent set forth expressly in Section 1 of this Amendment. As used herein, the Agreement, as revised and supplemented by this Amendment, shall be referred to as the "Amended Agreement." Nothing in this Amendment shall be deemed to amend or extend the term of the Agreement, or to affect the right of a Party to exercise any right of termination it may have under the Agreement.
6. Stay or Reversal of the TRO. Notwithstanding any contrary provision in the Agreement, this Amendment, or any Verizon tariff or SGAT, nothing contained in the Agreement, this Amendment, or any Verizon tariff or SGAT shall limit Verizon's right to appeal, seek reconsideration of or otherwise seek to have stayed, modified, reversed or invalidated any order, rule, regulation, decision, ordinance or statute issued by the [***State Commission TXT***], the FCC, any court or any other governmental authority related to, concerning or that may affect Verizon's obligations under the Agreement, this Amendment, any Verizon tariff or SGAT, or Applicable Law. The Parties acknowledge that certain provisions of the TRO are presently on appeal to the United States Court of Appeals for the District of Columbia Circuit (the "D.C. Circuit"), and that a Writ of Mandamus relating to the TRO is presently pending before the D.C. Circuit. Notwithstanding any other change of law provision in the Agreement, this Amendment, or any Verizon tariff or SGAT, should the D.C. Circuit or the United States Supreme Court issue a stay of any or all of the TRO's provisions, any terms and conditions of this Amendment that relate to the stayed provisions shall be suspended, and shall have no force and effect, from the effective date of such stay until the stay is lifted. Should the D.C. Circuit or the United States Supreme Court reverse any or all of the TRO's provisions, then any terms and conditions of this Amendment that relate to the reversed provisions shall be voidable at the election of either Party.
7. Joint Work Product. This Amendment is a joint work product, and any ambiguities in this Amendment shall not be construed by operation of law against either Party.

SIGNATURE PAGE

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

*****CLEC Full Name TXT*****

VERIZON*IF Verizon Company Full Name 2 TXT
| = *******

By: _____

By: _____

Printed: _____

Printed: _____

Title: _____

Title: _____

FOR CALIFORNIA, FLORIDA AND PENNSYLVANIA ONLY

Date: _____

Date: _____

TRO Attachment

1. General Conditions

- 1.1 Notwithstanding any other provision of the Agreement, this Amendment, or any Verizon tariff or SGAT: (a) Verizon shall be obligated to provide access to unbundled Network Elements ("UNEs"), combinations of unbundled Network Elements ("Combinations"), or UNEs commingled with wholesale services ("Commingling"), to ***CLEC Acronym TXT*** under the terms of this Amended Agreement only to the extent required by both 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, and, (b) Verizon may decline to provide access to UNEs, Combinations, or Commingling to ***CLEC Acronym TXT*** to the extent that provision of access to such UNEs, Combinations, or Commingling is not required by both 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51.
- 1.2 ***CLEC Acronym TXT*** may use a UNE, a Combination, or Commingling only for those purposes for which Verizon is required by 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51 to provide such UNE, Combination, or Commingling to ***CLEC Acronym TXT***.
- 1.3 Notwithstanding any other provision of the Agreement, this Amendment, or any Verizon tariff or SGAT, to the extent Verizon is required by a change in Applicable Law to provide to ***CLEC Acronym TXT*** pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51 a UNE, a Combination, or Commingling that is not offered under the Amended Agreement to ***CLEC Acronym TXT*** as of the Amendment Effective Date, the rates, terms, conditions for such UNE, Combination, or Commingling shall be as provided in an applicable Verizon tariff, or, in the absence of an applicable Verizon tariff, as mutually agreed in writing by the Parties.
- 1.4 Verizon reserves the right to argue in any proceeding before the [***State Commission TXT***], the FCC or another governmental body of competent jurisdiction that an item identified in the Agreement or this Amendment as a Network Element (a) is not a Network Element under 47 U.S.C. § 251(c)(3), (b) is not a Network Element Verizon is required by 47 U.S.C. § 251(c)(3) to provide to ***CLEC Acronym TXT***, or (c) is an item that Verizon is not required to offer to ***CLEC Acronym TXT*** at the rates set forth in the Amended Agreement.

2. TRO Glossary

Notwithstanding any other provision in the Agreement or any Verizon tariff or SGAT, the following terms, as used in the Amended Agreement, shall have the meanings set forth below:

2.1 Call-Related Databases.

Databases, other than operations support systems that are used in signaling networks for billing and collection, or the transmission, routing, or other provision of a telecommunications service. Call-related databases include, but are not limited to, the calling name database, 911 database, E911 database, line information database, toll free calling database, advanced intelligent network databases, and downstream number portability databases.

2.2 Dark Fiber Transport.

An unactivated optical transmission facility within a LATA, without attached multiplexing, aggregation or other electronics, between Verizon switches (as identified in the LERG) or wire centers, that is provided on an unbundled basis pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Dark fiber facilities between (i) a Verizon wire center or switch and (ii) a switch or wire center of ***CLEC Acronym TXT*** or a third party are not Dark Fiber Transport.

2.3 Dedicated Transport.

A DS1 or DS3 transmission facility between Verizon switches (as identified in the LERG) or wire centers, within a LATA, that is dedicated to a particular end user or carrier and that is provided on an unbundled basis pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Transmission facilities or services provided between (i) a Verizon wire center or switch and (ii) a switch or wire center of ***CLEC Acronym TXT*** or a third party are not Dedicated Transport.

2.4 DS1 Dedicated Transport.

Dedicated Transport having a total digital signal speed of 1.544 Mbps.

2.5 DS3 Dedicated Transport.

Dedicated Transport having a total digital signal speed of 44.736 Mbps.

2.6 DS1 Loop.

A digital transmission channel suitable for the transport of 1.544 Mbps digital signals that is provided on an unbundled basis pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. This loop type is more fully described in Verizon TR 72575, as revised from time to time. A DS-1 Loop requires the electronics necessary to provide the DS-1 transmission rate.

2.7 DS3 Loop.

A digital transmission channel suitable for the transport of isochronous bipolar serial data at a rate of 44.736 Mbps (the equivalent of 28 DS-1 channels) that is provided on an unbundled basis pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. This Loop

type is more fully described in Verizon TR 72575, as revised from time to time. A DS-3 Loop requires the electronics necessary to provide the DS-3 transmission rate.

2.8 Enterprise Switching.

Local Switching or Tandem Switching that, if provided to ***CLEC Acronym TXT*** would be used for the purpose of serving ***CLEC Acronym TXT***'s customers using DS1 or above capacity Loops.

2.9 Feeder.

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

2.10 FTTH Loop.

A Loop consisting entirely of fiber optic cable, whether dark or lit, between the main distribution frame (or its equivalent) in an end user's serving wire center and the demarcation point at the end user's customer premises.

2.11 House and Riser Cable.

A distribution facility in Verizon's network, other than in a FTTH Loop, between the minimum point of entry ("MPOE") at a multiunit premises where an end user customer is located and the Demarcation Point for such facility, that is owned and controlled by Verizon.

2.12 Hybrid Loop.

A local Loop composed of both fiber optic cable and copper wire or cable.

2.13 Line Sharing.

The process by which ***CLEC Acronym TXT*** provides xDSL service over the same copper Loop that Verizon uses to provide voice service by utilizing the frequency range on the copper loop above the range that carries analog circuit-switched voice transmissions (the High Frequency Portion of the Loop, or "HFPL"). The HFPL includes the features, functions, and capabilities of the copper Loop that are used to establish a complete transmission path between Verizon's distribution frame (or its equivalent) in its Wire Center and the demarcation point at the end user's customer premises, and includes the high frequency portion of any inside wire (including any House and Riser Cable) owned and controlled by Verizon.

2.14 Local Switching.

The line-side, and trunk-side facilities associated with the line-side port, on a circuit switch in Verizon's network (as identified in the LERG), plus the features, functions, and capabilities of that switch, unbundled from loops and transmission facilities, including: (a) the line-side Port (including the capability to connect a Loop termination and a switch line card, telephone number assignment, dial tone, one primary directory listing, pre-subscription, and access to 911); (b) line and line group features (including all vertical features and line blocking options the switch and its associated deployed switch software are capable of providing that are provided to Verizon's local exchange service Customers served by that switch); (c) usage (including the connection of lines to lines,

lines to trunks, trunks to lines, and trunks to trunks); and (d) trunk features (including the connection between the trunk termination and a trunk card).

2.15 Mass Market Switching.

Local Switching or Tandem Switching that Verizon offers on an unbundled basis pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, and that is provided to ***CLEC Acronym TXT*** to serve ***CLEC Acronym TXT***'s end user customers over DS0 Loops.

2.16 Nonconforming Facility.

Any facility that Verizon was providing to ***CLEC Acronym TXT*** on an unbundled basis pursuant to the Agreement or a Verizon tariff or SGAT prior to October 2, 2003, but which Verizon is no longer obligated to provide on an unbundled basis under 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, by operation of either the TRO or a subsequent nonimpairment finding issued by the [***State Commission TXT***] or the FCC. By way of example and not by way of limitation, Nonconforming Facilities may include any of the following: (a) any unbundled dedicated transport or dark fiber facility that is no longer encompassed within the amended terms applicable to DS1 Dedicated Transport, DS3 Dedicated Transport, or Dark Fiber Transport; (b) DS1 Dedicated Transport, DS3 Dedicated Transport, or Dark Fiber Transport on a Route or Routes as to which the [***State Commission TXT***] or the FCC, on or after October 2, 2003, finds telecommunications carriers to be nonimpaired without access to such facilities; (c) Enterprise Switching; (d) Mass Market Switching in any market in which the [***State Commission TXT***] or the FCC, on or after October 2, 2003, finds telecommunications carriers to be nonimpaired without access to such facilities; (e) Local Switching subject to the FCC's four-line carve out rule, as described in Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No 96-98, 15 FCC Rcd 3822-31 (1999) (the "Four-Line Carve Out Rule"); (f) OCn Loops and OCn Dedicated Transport; (g) the Feeder portion of a Loop; (h) Line Sharing; (i) an EEL that does not meet the service eligibility criteria established in the TRO; (j) any Call-Related Database, other than the 911 and E911 databases, that is not provisioned in connection with ***CLEC Acronym TXT***'s use of Verizon Mass Market Switching; (k) Signaling that is not provisioned in connection with ***CLEC Acronym TXT***'s use of Verizon's Mass Market Switching; (l) FTTH Loops (lit or unlit) in a new build environment; (m) FTTH Loops (lit or unlit) in an overbuild environment, subject to the limited exceptions set forth herein; or (n) any facility or class of facilities as to which the [***State Commission TXT***] or the FCC, on or after October 2, 2003, makes a general finding of nonimpairment.

2.17 Packet Switching.

The routing or forwarding of packets, frames, cells, or other data units based on address or other routing information contained in the packets, frames, cells or other data units, or the functions that are performed by the digital subscriber line access multiplexers, including but not limited to the ability to terminate an end-user customer's copper Loop (which includes both a low-band voice channel and a high-band data channel, or solely a data channel); the ability to forward the voice channels, if present, to a circuit switch or multiple circuit switches; the ability to extract data units from the data channels on the Loops; and the ability to combine data units from multiple Loops onto one or more trunks connecting to a packet switch or packet switches.

2.18 Qualifying Service.

A telecommunications service that competes with a telecommunications service that has been traditionally the exclusive or primary domain of the incumbent LECs, including, but not limited to, local exchange service, such as plain old telephone services, and access services, such as digital subscriber line services and high-capacity circuits.

2.19 Route.

A transmission path between one of Verizon's wire centers or switches and another of Verizon's wire centers or switches within a LATA. A route between two points (e.g., wire center or switch "A" and wire center or switch "Z") may pass through one or more Verizon intermediate wire centers or switches (e.g., Verizon wire center or switch "X"). Transmission paths between identical end points (e.g., Verizon wire center or switch "A" and Verizon wire center or switch "Z") are the same "route", irrespective of whether they pass through the same intermediate Verizon wire centers or switches, if any.

2.20 Signaling.

Signaling includes, but is not limited to, signaling links and signaling transfer points.

2.21 Sub-Loop for Multiunit Premises Access.

Any portion of a Loop, other than a FTTH Loop, that is technically feasible to access at a terminal in Verizon's outside plant at or near a multiunit premises. It is not technically feasible to access a portion of a Loop at a terminal in Verizon's outside plant at or near a multiunit premises if a technician must access the facility by removing a splice case to reach the wiring within the cable.

2.22 Sub-Loop Distribution Facility.

The copper portion of a Loop in Verizon's network that is between the minimum point of entry ("MPOE") at an end user customer premises and Verizon's feeder/distribution interface.

2.23 Tandem Switching.

The trunk-connect facilities on a Verizon circuit switch that functions as a tandem switch, plus the functions that are centralized in that switch, including the basic switching function of connecting trunks to trunks, unbundled from and not contiguous with loops and transmission facilities. Tandem Switching creates a temporary transmission path between interoffice trunks that are interconnected at a Verizon tandem switch for the purpose of routing a call. A tandem switch does not provide basic functions such as dial tone service.

3. **UNE TRO Provisions**

3.1 Loops.

3.1.1 Hi-Cap Loops. Notwithstanding any other provision of the Agreement or a Verizon tariff or SGAT, as of October 2, 2003:

3.1.1.1 DS1 Loops. Upon ***CLEC Acronym TXT***'s written request, Verizon shall provide ***CLEC Acronym TXT*** with nondiscriminatory access to a DS1 Loop on an unbundled basis under the Amended Agreement in accordance with, but only to

the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51.

3.1.1.2 DS3 Loops. Upon ***CLEC Acronym TXT***'s written request, Verizon shall provide ***CLEC Acronym TXT*** with nondiscriminatory access to a DS3 Loop on an unbundled basis under the Amended Agreement in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51.

3.1.1.2.1 Cap on DS3 Loops. ***CLEC Acronym TXT*** may obtain on an unbundled basis a maximum of two (2) DS-3 Loops (or two (2) DS-3 equivalents) at any single end user location. Any Loop previously made available to ***CLEC Acronym TXT*** at said end user location above the two (2) Loop cap shall be considered a Nonconforming Facility.

3.1.1.3 Nonimpairment. Without limiting any other rights Verizon may have under the Amended Agreement or under Applicable Law, subject to the provisions of Section 3.8 below, Verizon shall be under no obligation to provide or continue providing ***CLEC Acronym TXT*** with nondiscriminatory access to DS-1 Loops or DS3 Loops under the Amended Agreement at a specific end user location if the [***State Commission TXT***] or the FCC finds that ***CLEC Acronym TXT*** or CLECs generally are not impaired without access to such DS1 Loops or DS3 Loops at such end user location (or class of locations). Any DS1 Loops or DS3 Loops previously made available to ***CLEC Acronym TXT*** at the subject end user location shall be considered Nonconforming Facilities immediately on the effective date of the nonimpairment finding and thereafter.

3.1.2 FTTH Loops.

3.1.2.1 New Builds. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, ***CLEC Acronym TXT*** shall not be entitled to obtain access to a FTTH Loop (or any segment thereof) on an unbundled basis where Verizon has deployed such a Loop to an end user's customer premises that previously was not served by any Verizon Loop.

3.1.2.2 Overbuilds. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, ***CLEC Acronym TXT*** shall not be entitled to obtain access to a FTTH Loop (or any segment thereof) on an unbundled basis where Verizon has deployed the subject Loop parallel to, or in replacement of, an existing copper Loop; provided, *however*, that if such a Loop replaces a copper Loop that Verizon has retired, and there are no other available copper Loops or Hybrid Loops, then in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, Verizon shall provide ***CLEC Acronym TXT*** with nondiscriminatory access on an unbundled basis to a transmission path from Verizon's serving wire center to the demarcation point at the end user's customer premises capable of voice grade service.

3.1.3 Hybrid Loops Generally.

- 3.1.3.1 Packet Switching. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, ***CLEC Acronym TXT*** shall not be entitled to obtain access to the Packet Switching Capability of any Hybrid Loop on an unbundled basis.
- 3.1.3.2 Broadband Services. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, as of October 2, 2003, when ***CLEC Acronym TXT*** seeks access to a Hybrid Loop for the provision of "broadband services," as such term is defined by the FCC, then in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, Verizon shall provide ***CLEC Acronym TXT*** with access under the Amended Agreement to the time division multiplexing features, functions, and capabilities of that Hybrid Loop, including DS1 or DS3 capacity (but only where impairment has been found to exist), on an unbundled basis, to establish a complete transmission path between the main distribution frame (or equivalent) in the end user's serving wire center and the end user's customer premises. This access shall include access to all features, functions, and capabilities of the Hybrid Loop that are not used to transmit packetized information.
- 3.1.3.3 Narrowband Services. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, as of October 2, 2003, when ***CLEC Acronym TXT*** seeks access to a Hybrid Loop for the provision to its customer of "narrowband services," as such term is defined by the FCC, then in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, Verizon shall either (a) provide access under the Amended Agreement to a spare home-run copper Loop serving that customer on an unbundled basis, or in Verizon's sole discretion, (b) provide access under the Amended Agreement, on an unbundled basis, to a voice-grade transmission path between the main distribution frame (or equivalent) in the end user's serving wire center and the end user's customer premises, using time division multiplexing technology.
- 3.1.3.4 Feeder. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, as of October 2, 2003, ***CLEC Acronym TXT*** shall not be entitled to obtain access to the Feeder portion of a Loop on an unbundled, standalone basis.

3.1.4 IDLC Hybrid Loops.

Notwithstanding any other provision of the Agreement, Section 3.1.3 above, or any Verizon tariff or SGAT, if ***CLEC Acronym TXT*** requests, in order to provide narrowband services, unbundling of a 2 wire analog or 4 wire analog Loop currently provisioned via Integrated Digital Loop Carrier (over a Hybrid Loop), Verizon shall, as and to the extent required by 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, provide ***CLEC Acronym TXT*** unbundled access to a Loop capable of voice-grade service to the end user customer served by the Hybrid Loop.

- 3.1.4.1 Verizon will endeavor to provide ***CLEC Acronym TXT*** with an existing copper Loop or a Loop served by existing Universal Digital Loop Carrier ("UDLC"). Standard recurring and non-recurring Loop charges will apply. In addition, a non-recurring charge will apply whenever a line and station transfer is performed.
- 3.1.4.2 If neither a copper Loop nor a Loop served by UDLC is available, Verizon shall, upon request of ***CLEC Acronym TXT***, construct the necessary copper Loop or UDLC facilities. In addition to the rates and charges payable in connection with any unbundled Loop so provisioned by Verizon, ***CLEC Acronym TXT*** shall be responsible for the following charges: (a) an engineering query charge for preparation of a price quote; (b) upon ***CLEC Acronym TXT***'s submission of a firm construction order, an engineering work order nonrecurring charge; and (c) construction charges, as set forth in the price quote. If the order is cancelled by ***CLEC Acronym TXT*** after construction work has started, ***CLEC Acronym TXT*** shall be responsible for cancellation charges and a pro-rated charge for construction work performed prior to the cancellation.
- 3.1.4.3 Verizon's performance in connection with providing unbundled Loops pursuant to this Section 3.1 shall not be subject to standard provisioning intervals or to performance measures and remedies, if any, contained in the Amended Agreement or elsewhere.

3.2 Line Sharing.

Notwithstanding any other provision in the Agreement or any Verizon tariff or SGAT, as of October 2, 2003:

3.2.1 Line Sharing.

- 3.2.1.1 New Line Sharing. Verizon shall be under no obligation to provision new Line Sharing arrangements under the Agreement or this Amendment; *provided, however*, that as and to the extent required by 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, and subject to Section 3.8.3 below, Verizon offers new Line Sharing arrangements on a transitional basis pursuant to rates, terms, and conditions offered by Verizon in a separate agreement that is subject to FCC-prescribed pricing rules.
- 3.2.1.2 Grandfathered Line Sharing. Any existing Line Sharing arrangement over a copper Loop or Sub-Loop in place with an end user customer of ***CLEC Acronym TXT*** will be grandfathered at existing rates, provided ***CLEC Acronym TXT*** began providing xDSL service to that end user customer using Line Sharing over that Loop or Sub-Loop prior to October 2, 2003, and only so long as ***CLEC Acronym TXT*** has not ceased providing xDSL service to that end user customer at the same location over that Loop or Sub-Loop.

3.3 Sub-Loop.

3.3.1 Sub-Loop for Access to Multiunit Premises. As of October 2, 2003, all provisions in the Agreement governing ***CLEC Acronym TXT*** access to Inside Wire, House and Riser or House and Riser Cable are hereby deleted and replaced with this Section 3.3.1, which shall supersede any other provision in the Agreement or in any Verizon tariff or SGAT in effect prior to October 2, 2003. Upon request by ***CLEC Acronym TXT***, Verizon shall provide to ***CLEC Acronym TXT*** access to the Sub-Loop for Multiunit Premises Access in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51.

3.3.1.1 Inside Wire Sub-Loop. In accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, upon request by ***CLEC Acronym TXT***, Verizon shall provide to ***CLEC Acronym TXT*** access to a House and Riser Cable pursuant to this Section 3.3.1.1 at the rates and charges provided in the Agreement. Verizon shall not reserve a House and Riser Cable for ***CLEC Acronym TXT***. ***CLEC Acronym TXT*** may access a House and Riser Cable only between the MPOE for such cable and the demarcation point at a technically feasible access point. It is not technically feasible to access inside wire sub-loop if a technician must access the facility by removing a splice case to reach the wiring within the cable.

3.3.1.1.1 ***CLEC Acronym TXT*** must satisfy the following conditions before ordering access to a House and Riser Cable from Verizon:

3.3.1.1.1.1 ***CLEC Acronym TXT*** shall locate its facilities within cross connect distance of the point of interconnection on such cable. Facilities are within cross connect distance of a point of interconnection if they are located in the same room (not including a hallway) or within twelve (12) feet of such point of interconnection.

3.3.1.1.1.2 If suitable space is available, ***CLEC Acronym TXT*** shall install its facilities no closer than fourteen (14) inches of the point of interconnection for such cable, unless otherwise agreed by the Parties.

3.3.1.1.1.3 ***CLEC Acronym TXT***'s facilities cannot be attached, otherwise affixed or adjacent to Verizon's facilities or equipment, cannot pass through or otherwise penetrate Verizon's facilities or equipment and cannot be installed so that ***CLEC Acronym TXT***'s facilities or equipment are located in a space where Verizon plans to locate its facilities or equipment.

3.3.1.1.1.4 ***CLEC Acronym TXT*** shall identify its facilities as those of ***CLEC Acronym TXT***.

- 3.3.1.1.2 To provide ***CLEC Acronym TXT*** with access to a House and Riser Cable, Verizon shall not be obligated to (a) move any Verizon equipment, (b) secure any right of way for ***CLEC Acronym TXT***, (c) secure space for ***CLEC Acronym TXT*** in any building, (d) secure access to any portion of a building for ***CLEC Acronym TXT*** or (e) reserve space in any building for ***CLEC Acronym TXT***.
- 3.3.1.1.3 Verizon shall perform cutover of a Customer to ***CLEC Acronym TXT*** service by means of a House and Riser Cable subject to a negotiated interval. Verizon shall install a jumper cable to connect the appropriate Verizon House and Riser Cable pair to ***CLEC Acronym TXT***'s facilities, and Verizon shall determine how to perform such installation. ***CLEC Acronym TXT*** shall coordinate with Verizon to ensure that House and Riser Cable facilities are converted to ***CLEC Acronym TXT*** in accordance with ***CLEC Acronym TXT***'s order for such services.
- 3.3.1.1.4 If proper ***CLEC Acronym TXT*** facilities are not available at the time of installation, Verizon shall bill ***CLEC Acronym TXT***, and ***CLEC Acronym TXT*** shall pay to Verizon, the Not Ready Charge set forth in the Agreement and the Parties shall establish a new cutover date.
- 3.3.1.1.5 Verizon shall perform all installation work on Verizon equipment in connection with ***CLEC Acronym TXT***'s use of Verizon's House and Riser Cable. All ***CLEC Acronym TXT*** equipment connected to a House and Riser Cable shall comply with applicable industry standards.
- 3.3.1.1.6 Verizon shall repair and maintain a House and Riser Cable at the request of ***CLEC Acronym TXT***. ***CLEC Acronym TXT*** shall be solely responsible for investigating and determining the source of all troubles and for providing Verizon with appropriate dispatch information based on its test results. Verizon shall repair a trouble only when the cause of the trouble is a Verizon House and Riser Cable. If (a) ***CLEC Acronym TXT*** reports to Verizon a Customer trouble, (b) ***CLEC Acronym TXT*** requests a dispatch, (c) Verizon dispatches a technician, and (d) such trouble was not caused by a Verizon House and Riser Cable in whole or in part, then ***CLEC Acronym TXT*** shall pay Verizon the charge set forth in the Agreement for time associated with said dispatch. In addition, this charge also applies when the Customer contact as designated by ***CLEC Acronym TXT*** is not available at the appointed time. If as the result of ***CLEC Acronym TXT*** instructions, Verizon is erroneously requested to dispatch to a site on Verizon company premises ("dispatch in"), a charge set forth in

the Agreement will be assessed per occurrence to ***CLEC Acronym TXT*** by Verizon. If as the result of ***CLEC Acronym TXT*** instructions, Verizon is erroneously requested to dispatch to a site outside of Verizon company premises ("dispatch out"), a charge set forth in the Agreement will be assessed per occurrence to ***CLEC Acronym TXT*** by Verizon.

3.3.1.2 Single Point of Interconnection. In accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, upon request by ***CLEC Acronym TXT*** and provided that the conditions set forth in Subsections 3.3.1.2.1 and 3.3.1.2.2 are satisfied, the Parties shall negotiate in good faith an amendment to the Amended Agreement memorializing the terms, conditions and rates under which Verizon will provide a single point of interconnection at a multiunit premises suitable for use by multiple carriers:

3.3.1.2.1 Verizon has distribution facilities to the multiunit premises, and either owns and controls, or leases, the House and Riser Cable at the multiunit premises; and

3.3.1.2.2 ***CLEC Acronym TXT*** certifies that it will place an order for access to an unbundled Sub-Loop network element under 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51 via the newly provided single point of interconnection.

3.3.2 Distribution Sub-Loop Facility. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, upon site-specific request, ***CLEC Acronym TXT*** may obtain access to the Distribution Sub-Loop Facility at a technically feasible access point located near a Verizon remote terminal equipment enclosure at the rates and charges provided for Unbundled Sub-Loop Arrangements (or the Distribution Sub-Loop) in the Agreement. It is not technically feasible to access the sub-loop distribution facility if a technician must access the facility by removing a splice case to reach the wiring within the cable.

3.4 Unbundled Local Circuit Switching.

3.4.1 General Requirements. Verizon shall provide Mass Market Switching to ***CLEC Acronym TXT*** under the Amended Agreement in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Notwithstanding any other provision of the Agreement, this Amendment, or any Verizon tariff or SGAT, as of October 2, 2003, with the exception of the foregoing obligation to provide Mass Market Switching, Verizon shall have no other obligation to provide any other form of Local Switching or Tandem Switching (such as Enterprise Switching) to ***CLEC Acronym TXT***, and any Local Switching or Tandem Switching previously made available to ***CLEC Acronym TXT*** shall be considered a Nonconforming Facility that shall be subject to the transition provisions of Section 3.8 below. For the avoidance of doubt: (a) Enterprise Switching is a Nonconforming Facility as of October 2, 2003; and (b) Local Switching subject to the FCC's Four-Line Carve Out Rule is a Nonconforming Facility by operation of law in effect prior to the Amendment Effective Date.

- 3.4.2 Nonimpairment. Subject to the provisions of Section 3.8 below, Verizon shall be under no obligation to continue to provide ***CLEC Acronym TXT*** with nondiscriminatory access to Mass Market Switching on an unbundled basis under the Amended Agreement upon a finding by the [***State Commission TXT***] or the FCC that requesting telecommunications carriers are not impaired without access to Mass Market Switching in a particular market, or where the [***State Commission TXT***] has found that all impairment would be cured by implementation of a transition plan for unbundled circuit switching in a particular market.
- 3.4.3 Signaling and Call-Related Databases. Verizon shall provide access to Signaling and Call-related Databases under the Amended Agreement in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Specifically, notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, as of October 2, 2003, Verizon shall provide Signaling and Call-Related Databases only in conjunction with the provision of Local Switching or Tandem Switching that Verizon is otherwise obligated to make available to ***CLEC Acronym TXT*** under the Amended Agreement; *provided, however*, that Verizon shall continue to provide nondiscriminatory access to the 911 and E911 Call-Related Databases in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Where Local Switching or Tandem Switching associated with a particular Signaling facility or Call-Related Database is or becomes a Nonconforming Facility, the associated Signaling facility or Call-Related Database associated with that Local Switching or Tandem Switching facility shall also be subject to the same transitional provisions in Section 3.8 (except for the 911 and E911 Call-Related Databases, as noted above).
- 3.5 Unbundled Interoffice Facilities.
- 3.5.1 General Requirements. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, as of October 2, 2003: (a) Verizon shall provide Dedicated Transport and Dark Fiber Transport under the Agreement in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51; and (b) Verizon shall provide Dedicated Transport and Dark Fiber Transport to ***CLEC Acronym TXT*** only if ***CLEC Acronym TXT*** obtains access to the subject facility in order to provide a "Qualifying Service" on a common carrier basis.
- 3.5.2 Dedicated Transport. On or after October 2, 2003, notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, and in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51:
- 3.5.2.1 Upon ***CLEC Acronym TXT***'s written request, Verizon shall provide ***CLEC Acronym TXT*** with nondiscriminatory access to DS1 Dedicated Transport and DS3 Dedicated Transport on an unbundled basis pursuant to the Amended Agreement. For the avoidance of doubt: (a) a transmission facility or service between a Verizon switch or wire center and a switch or wire center of ***CLEC Acronym TXT*** or a third party is not Dedicated Transport; and (b) a transmission facility or service that uses an OCn interface or a SONET interface is not Dedicated Transport. Subject to the provisions of Section 3.8 below, Verizon is under no obligation to provide or continue providing the Nonconforming

Facilities described in clauses (a) and (b) above under the Agreement or the Amended Agreement.

- 3.5.2.2 Cap on Dedicated Transport. ***CLEC Acronym TXT*** may obtain on an unbundled basis a maximum of twelve (12) DS3 Dedicated Transport circuits (or twelve (12) DS3-equivalents, e.g. 336 DS1s) on any single Route on which unbundled transport is otherwise available. Any circuit capacity on that Route above such twelve (12) circuit cap shall be considered a Nonconforming Facility.
- 3.5.2.3 Nonimpairment. Subject to the provisions of Section 3.8 below, Verizon shall be under no obligation to provide or continue providing ***CLEC Acronym TXT*** with nondiscriminatory access to DS1 Dedicated Transport or DS3 Dedicated Transport on an unbundled basis under the Amended Agreement on a particular Route upon a finding by the [***State Commission TXT***] or the FCC that requesting telecommunications carriers are not impaired without access to DS1 Dedicated Transport or DS3 Dedicated Transport, respectively, on the subject Route(s) or on all Routes. Any DS1 Dedicated Transport or DS3 Dedicated Transport previously made available to ***CLEC Acronym TXT*** on the subject Route(s) shall be considered Nonconforming Facilities immediately on the effective date of the nonimpairment finding and thereafter.
- 3.5.3 Dark Fiber Transport. On or after October 2, 2003, notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, and in accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51:
- 3.5.3.1 Upon ***CLEC Acronym TXT***'s written request, Verizon shall provide ***CLEC Acronym TXT*** with nondiscriminatory access to Dark Fiber Transport on an unbundled basis pursuant to the Amended Agreement. For the avoidance of doubt, Dark Fiber Transport does not include a dark fiber facility between (a) a Verizon switch or wire center and (b) a switch or wire center of ***CLEC Acronym TXT*** or any third party, and subject to the provisions of Section 3.8 below, Verizon is under no obligation to provide or continue providing such Nonconforming Facility under the Amended Agreement.
- 3.5.3.2 Nonimpairment. Subject to the provisions of Section 3.8 below, Verizon shall be under no obligation to provide or continue providing ***CLEC Acronym TXT*** with nondiscriminatory access to Dark Fiber Transport on an unbundled basis under the Agreement or the Amended Agreement on a particular Route upon a finding by the [***State Commission TXT***] or the FCC that requesting telecommunications carriers are not impaired without access to unbundled Dark Fiber Transport on the subject Route(s) or on all Routes. Any Dark Fiber Transport previously made available to ***CLEC Acronym TXT*** on the subject Route(s) shall be considered a Nonconforming Facility as of the effective date of the nonimpairment finding.

3.6 Commingling and Combinations.

3.6.1 Commingling. Notwithstanding any other provision of the Agreement or any Verizon tariff or SGAT, but subject to the conditions set forth in the following Section 3.6.2, Verizon will not prohibit the commingling of an unbundled Network Element or a combination of unbundled Network Elements obtained under the Agreement or Amended Agreement pursuant to 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, or under an Verizon UNE tariff ("Qualifying UNEs"), with wholesale services obtained from Verizon under a Verizon access tariff or separate non-251 agreement ("Qualifying Wholesale Services"), but only to the extent and so long as commingling is required by 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51. Moreover, to the extent and so long as required by 47 U.S.C. § 251(c)(3) and 47 U.S.C. Part 51, Verizon shall, upon request of ***CLEC Acronym TXT***, perform the functions necessary to commingle Qualifying UNEs with Qualifying Wholesale Services. Subject to Section 3.8.3 below, the rates, terms and conditions of the applicable access tariff or separate non-251 agreement will apply to the Qualifying Wholesale Services, and the rates, terms and conditions of the Amended Agreement or the Verizon UNE tariff, as applicable, will apply to the Qualifying UNEs; *provided, however*, that a nonrecurring charge will apply for each UNE circuit that is part of a commingled arrangement, as set forth in the Pricing Attachment to this Amendment. This charge is intended to offset Verizon's costs of implementing and managing commingled arrangements. "Ratcheting," as that term is defined by the FCC, shall not be required. Qualifying UNEs that are commingled with Qualifying Wholesale Services are not included in the shared use provisions of the applicable tariff. Verizon's performance in connection with the provisioning of commingled facilities and services shall not be subject to standard provisioning intervals, or to performance measures and remedies, if any, contained in the Amended Agreement or elsewhere.

3.6.2 Service Eligibility Criteria for Certain Combinations and Commingled Facilities and Services. Notwithstanding any other provision of the Agreement, this Amendment, or any Verizon tariff or SGAT to the contrary:

3.6.2.1 Verizon shall not be obligated to provide:

3.6.2.1.1 an unbundled DS1 Loop in combination with unbundled DS1 or DS3 Dedicated Transport, or commingled with DS1 or DS3 access services;

3.6.2.1.2 an unbundled DS3 Loop in combination with unbundled DS3 Dedicated Transport, or commingled with DS3 access services;

3.6.2.1.3 unbundled DS1 Dedicated Transport commingled with DS1 channel termination access service;

3.6.2.1.4 unbundled DS3 Dedicated Transport commingled with DS1 channel termination access service; or

3.6.2.1.5 unbundled DS3 Dedicated Transport commingled with DS3 channel termination service,

unless and until ***CLEC Acronym TXT***: (a) certifies in writing to Verizon for each DS1 circuit or DS1 equivalent circuit that it is in compliance with each of the service eligibility criteria set forth in 47 C.F.R. § 51.318. ***CLEC Acronym TXT*** must remain in

compliance with said service eligibility criteria for so long as ***CLEC Acronym TXT*** continues to receive the aforementioned combined or commingled facilities and/or services from Verizon. The service eligibility criteria shall be applied to each DS1 circuit or DS1 equivalent circuit. If the circuit is, becomes, or is subsequently determined to be, noncompliant, the noncompliant circuit will be treated as a Nonconforming Facility subject to the provisions of Section 3.8 below. The foregoing shall apply whether the circuits in question are being provisioned to establish a new circuit or to convert an existing wholesale service, or any part thereof, to unbundled network elements. For existing circuits, the CLEC must re-certify in writing for each DS1 circuit or DS1 equivalent within 30 days of the Amendment Effective Date. Circuits not re-certified shall be Nonconforming Facilities.

- 3.6.2.2 Each written certification to be provided by ***CLEC Acronym TXT*** pursuant to Section 3.6.2.1 above must contain the following information for each DS1 circuit or DS1 equivalent: (a) the local number assigned to each DS1 circuit or DS1 equivalent; (b) the local numbers assigned to each DS3 circuit (must have 28 local numbers assigned to it); (c) the date each circuit was established in the 911/E911 database; (d) the collocation termination connecting facility assignment for each circuit, showing that the collocation arrangement was established pursuant to 47 U.S.C. § 251(c)(6), and not under a federal collocation tariff; (e) the interconnection trunk circuit identification number that serves each DS1 circuit. There must be one such identification number per every 24 DS1 circuits; and (f) the local switch that serves each DS1 circuit. When submitting an ASR for a circuit, this information must be contained in the Remarks section of the ASR, unless provisions are made to populate other fields on the ASR to capture this information.
- 3.6.2.3 The charges for conversions are as specified in the Pricing Attachment to this Amendment and apply for each circuit converted.
- 3.6.2.4 Until such time as Verizon implements its ASR-driven conversion process in the East, conversion of access circuits to unbundled Network Elements will be performed manually pursuant to Verizon's conversion guidelines. The effective bill date for conversions is the first of the month following Verizon's receipt of an accurate and complete ASR or electronic request for conversion pursuant to Verizon's conversion guidelines.
- 3.6.2.5 All ASR-driven conversion requests will result in a change in circuit identification (circuit ID) from access to UNE or UNE to access. If such change in circuit ID requires that the affected circuit(s) be retagged, then a retag fee per circuit will apply as specified in the pricing attachment.
- 3.6.2.6 All requests for conversions will be handled as a project and will be excluded from all ordering and provisioning metrics.

3.6.2.7 Once per calendar year, Verizon may obtain and pay for an independent auditor to audit ***CLEC Acronym TXT***'s compliance in all material respects with the service eligibility criteria applicable to EELs. Any such audit shall be performed in accordance with the standards established by the American Institute for Certified Public Accountants, and may include, at Verizon's discretion, the examination of a sample selected in accordance with the independent auditor's judgment. To the extent the independent auditor's report concludes that ***CLEC Acronym TXT*** failed to comply with the service eligibility criteria for any DS1 or DS1 equivalent circuit, then ***CLEC Acronym TXT*** must convert all noncompliant circuits to the appropriate service, true up any difference in payments, make the correct payments on a going-forward basis, reimburse Verizon for the entire cost of the audit within thirty (30) days after receiving a statement of such costs from Verizon. Should the independent auditor confirm ***CLEC Acronym TXT***'s compliance with the service eligibility criteria for each DS1 or DS1 equivalent circuit, then ***CLEC Acronym TXT*** shall provide to the independent auditor for its verification a statement of ***CLEC Acronym TXT***'s out-of-pocket costs of complying with any requests of the independent auditor, and Verizon shall then reimburse ***CLEC Acronym TXT*** for its out-of-pocket costs within thirty (30) days of the auditor's verification of the same. ***CLEC Acronym TXT*** shall maintain records adequate to support its compliance with the service eligibility criteria for each DS1 or DS1 equivalent circuit for at least eighteen (18) months after the service arrangement in question is terminated.

3.7 Routine Network Modifications.

3.7.1 General Conditions. In accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, Verizon shall make such routine network modifications, at the rates and charges set forth in the Pricing Attachment to this Amendment, as are necessary to permit access by ***CLEC Acronym TXT*** to the Loop, Dedicated Transport, and Dark Fiber Transport facilities available under the Amended Agreement, including DS1 Loops and DS1 Dedicated Transport, and DS3 Loops and DS3 Dedicated Transport. Where facilities are unavailable, Verizon will not perform trenching, pull cable, construct new Loops or Transport or install new aerial, buried, or underground cable to provision an order of ***CLEC Acronym TXT***. Routine network modifications applicable to Loops or Transport may include, but are not limited to: rearranging or splicing of in-place cable at existing splice points; adding an equipment case; adding a doubler or repeater; installing a repeater shelf; deploying a new multiplexer or reconfiguring an existing multiplexer; accessing manholes; and deploying bucket trucks to reach aerial cable. Routine network modifications applicable to Dark Fiber Transport may include, but are not limited to, splicing of in-place dark fiber at existing splice points; accessing manholes; deploying bucket trucks to reach aerial cable; and routine activities, if any, needed to enable ***CLEC Acronym TXT*** to light a Dark Fiber Transport facility that it has obtained from Verizon under the Amended Agreement. Routine network modifications do not include the installation of new aerial or buried cable for a requesting telecommunications carrier or the placement of new cable.

3.7.2 Performance Plans. Verizon's performance in connection with the provisioning of Loops or Transport (including Dark Fiber Transport) for which routine network modifications are necessary shall not be subject to standard provisioning intervals, or to performance measures and remedies, if any, contained in the Amended Agreement or elsewhere.

3.8 Transitional Provisions for Nonconforming Facilities.

3.8.1 Nonconforming Facilities – Switching. In accordance with, but only to the extent required by, 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51, Verizon and ***CLEC Acronym TXT*** will abide by the following transitional procedures with respect to Mass Market Switching and Enterprise Switching:

3.8.1.1 Mass Market Switching. Upon a finding by the [***State Commission TXT***] that no impairment exists in a particular market with respect to Mass Market Switching, Verizon will continue accepting orders under the Amended Agreement for Mass Market Switching for a transitional period of five (5) months. Thereafter, Verizon shall be under no obligation to accept new orders for Mass Market Switching. Counting from the date of the [***State Commission TXT***]'s order finding no impairment in a particular market or markets, ***CLEC Acronym TXT*** shall submit orders to Verizon to migrate the embedded base of its end user customers in the subject market off of Verizon's Mass Market Switching product to any other switching service or product made available by Verizon, subject to Section 3.8.3 below, under separate agreement, or to ***CLEC Acronym TXT***'s own or a third party's facilities, in accordance with the following schedule: (a) during month 13, ***CLEC Acronym TXT*** must submit orders to migrate one-third of its embedded base of end user customers; (b) during month 20, ***CLEC Acronym TXT*** must submit orders to migrate one-half of the remaining embedded base of end user customers; and (c) during month 27, ***CLEC Acronym TXT*** must submit orders to migrate the remainder of its embedded base of end user customers. For purposes of the foregoing schedule, customers already in a "rolling" transition plan established by the [***State Commission TXT***] shall not be included in the embedded base.

3.8.1.2 Enterprise Switching. Verizon will provide ***CLEC Acronym TXT*** with at least thirty (30) days advance written notice of the date on which Verizon will cease provisioning Enterprise Switching to ***CLEC Acronym TXT***. Verizon agrees to continue provisioning Enterprise Switching to ***CLEC Acronym TXT*** under the terms of the Amended Agreement during a transitional period, which transitional period shall end on the date set forth in the notice. Beginning January 1, 2004, ***CLEC Acronym TXT*** shall have ninety (90) days in which to submit orders to Verizon to migrate its embedded base of end user customers served by Verizon's Enterprise Switching product to any other switching service or product made available by Verizon, subject to Section 3.8.3 below, under separate agreement, or to ***CLEC Acronym TXT***'s own or a third party's facilities.

3.8.2 Other Nonconforming Facilities. With respect to any Nonconforming Facility not addressed in Section 3.8.1 above, Verizon will notify ***CLEC Acronym

TXT*** in writing as to any particular unbundled facility previously made available to ***CLEC Acronym TXT*** that is or becomes a Nonconforming Facility, as defined herein. The Parties acknowledge that such notice was issued prior to the execution of this Amendment with respect to certain Nonconforming Facilities. During a transitional period of thirty (30) days from the date of such notice, Verizon agrees to continue providing the Nonconforming Facilities addressed in the subject notice(s) to ***CLEC Acronym TXT*** under the terms of the Amended Agreement. At the end of that thirty (30) day period, unless ***CLEC Acronym TXT*** has submitted an LSR or ASR, as appropriate, to Verizon requesting disconnection of the Nonconforming Facility, Verizon shall, subject to Section 3.8.3 below, convert the subject Nonconforming Facilities to an analogous access service, if available, or if no analogous access service is available, to such other service arrangement as ***CLEC Acronym TXT*** may have separately secured from Verizon (e.g., a separate agreement at market-based rates or resale); *provided, however*, that where there is no analogous access service, if ***CLEC Acronym TXT*** has not separately secured from Verizon, subject to Section 3.8.3 below, a substitute service within such thirty (30) day period, then Verizon may disconnect the Nonconforming Facilities; and *provided, further*, that with respect to any dark fiber facility that, pursuant to the terms of this Amendment, is (or becomes) a Nonconforming Facility, the transition period shall be ninety (90) days from the date of the aforementioned notice; and *provided further*, that unless ***CLEC Acronym TXT***, subject to Section 3.8.3 below, has separately secured from Verizon a suitable transitional services agreement for such dark fiber facilities within that ninety (90) day period, Verizon may disconnect the Nonconforming Facility in question. Where the Nonconforming Facilities are converted to an analogous access service, Verizon shall, subject to Section 3.8.3 below, provide such access services at the month-to-month rates, and in accordance with the terms and conditions, of Verizon's applicable access tariff, with the effective bill date being the first day following the thirty (30) day notice period. ***CLEC Acronym TXT*** shall pay all applicable termination charges, if any, for any Nonconforming Facilities that ***CLEC Acronym TXT*** requests Verizon to disconnect, or that Verizon disconnects as permitted by terms of this Amendment or otherwise.

- 3.8.3 Limitation With Respect to Substitute Services. Notwithstanding any contrary provision in the Agreement, this Amendment, or any Verizon tariff or SGAT, to the extent a Nonconforming Facility is replaced, in whole or in part, by a service, facility or arrangement that Verizon is not required by 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51 to provide, including without limitation an analogous access service (a "Substitute Service"), any negotiations regarding the rates, terms or conditions of such Substitute Service shall not be deemed to have been conducted pursuant to this Amended Agreement or 47 U.S.C. § 252(a)(1) (or 47 C.F.R. Part 51), and the rates, terms, and conditions of any such Substitute Service shall not be subject to arbitration pursuant to 47 U.S.C. § 252(b). Verizon does not agree to negotiate pursuant to 47 U.S.C. § 252(a)(1) the rates, terms, or conditions of any Substitute Service. Any reference in this Amended Agreement to Verizon's provision of a service that Verizon is not required by 47 U.S.C. § 251(c)(3) and 47 C.F.R. Part 51 to provide is solely for the convenience of the Parties and shall not be construed in a manner contrary to this Section 3.8.3.

Pricing Attachment to the TRO Amendment

1. General

- 1.1 As used in this Attachment:
- 1.1.1 "Services" means and includes any Network Element or other service, facility, equipment or arrangement, provided pursuant to this Amendment; and,
- 1.1.2 "Charges" means the rates, fees, charges and prices for a Service.
- 1.2 Charges for Services provided under the Amended Agreement shall be those set forth in Exhibit A of this Pricing Attachment and in the Amended Agreement (including any cross references therein to applicable tariffs). For rate elements provided in Exhibit A of this Pricing Attachment that do not include a Charge, if any, whether marked as "TBD" or otherwise, Verizon is developing such Charges and has not finished developing such Charges as of the Amendment Effective Date. When Verizon finishes developing such a Charge, Verizon shall notify ***CLEC Acronym TXT*** in writing of such Charge in accordance with, and subject to, the notices provisions of the Amended Agreement and thereafter shall bill ***CLEC Acronym TXT***, and ***CLEC Acronym TXT*** shall pay to Verizon, for Services provided pursuant to this Amendment on the Amendment Effective Date and thereafter in accordance with such Charge. Any Charges set out in a notice provided by Verizon to ***CLEC Acronym TXT*** pursuant to this Section 1.2 shall be deemed to be a part of Exhibit A of this Pricing Attachment immediately after Verizon sends such notice to ***CLEC Acronym TXT*** and thereafter.
- 1.3 In the absence of Charges for a Service established pursuant to Section 1.2 of this Attachment, the Charges for the Service shall be the Charges required, approved, or otherwise allowed to go into effect, by the [***State Commission TXT***] or the FCC (including, but not limited to, in a tariff that has been filed with the [***State Commission TXT***] or the FCC), provided such Charges are not subject to a stay issued by any court of competent jurisdiction.
- 1.4 In the absence of Charges for a Service established pursuant to Sections 1.2 through 1.3 of this Attachment, the Charges for the Service shall be mutually agreed to by the Parties in writing.

Exhibit A

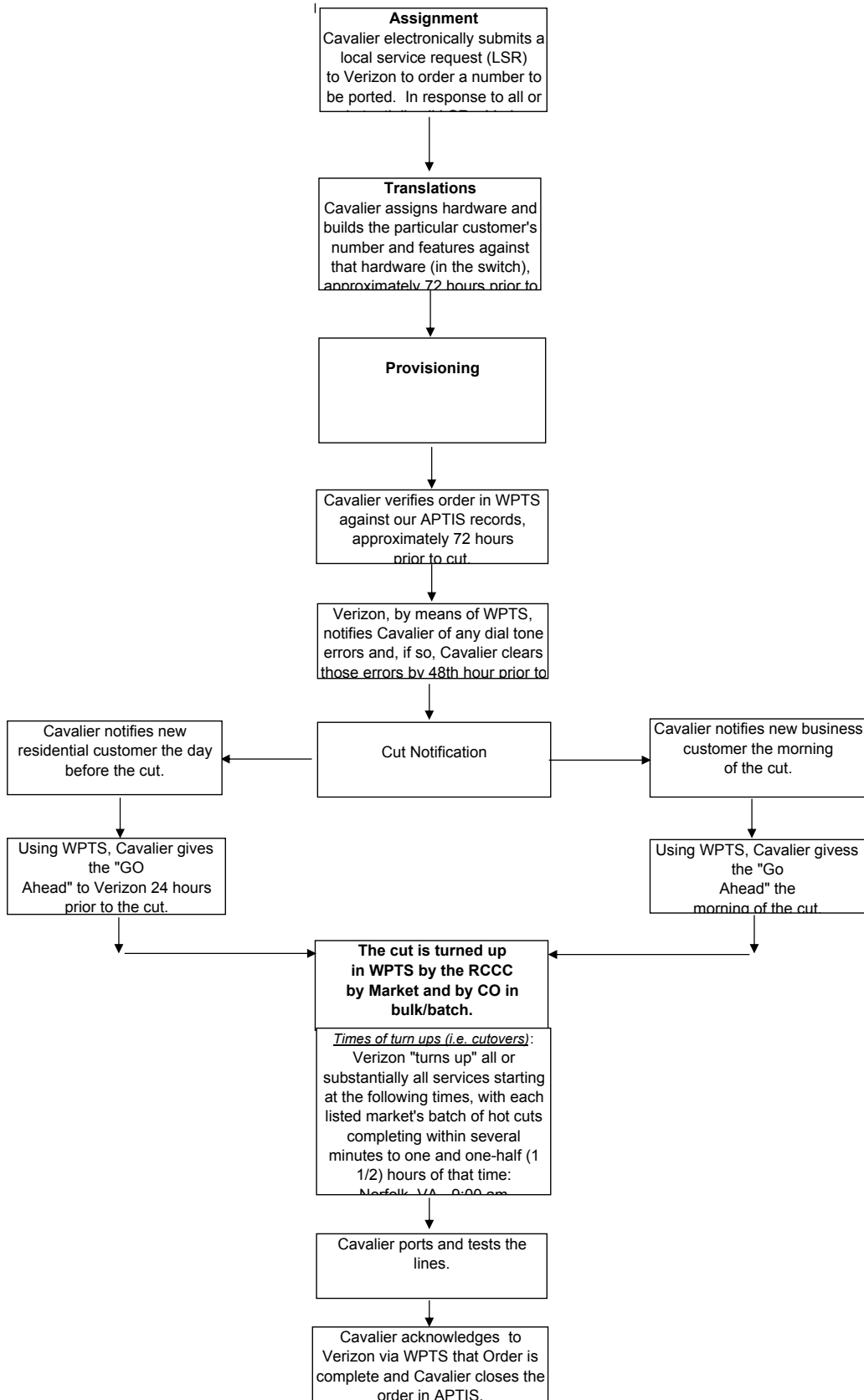
EXHIBIT A[♦]

PENNSYLVANIA	
DESCRIPTION	
DS-0 Network Modifications	Non-Recurring Charges
Engineering Query ¹	\$ 123.24
Engineering Work Order ²	\$ 553.76
Expedite Engineering Query ¹	\$ 242.46
Expedite Engineering Work Order ²	\$ 1,029.03
Removal of load coils (21K FT)	\$ 880.92
Removal of load coils (21K FT) subsequent	\$ 198.20
Expedite removal of load coils (21K FT) initial	\$ 2,023.26
Expedite Removal of Load Coils (21K FT) subsequent	\$ 277.47
Removal of load coils (27K FT)	\$ 1,171.62
Removal of Load Coils (27K FT) subsequent	\$ 263.88
Expedite removal of load coils (27K FT) initial	\$ 2,692.38
Expedite Removal of Load Coils (27K FT) subsequent	\$ 369.43
Removal of single bridged tap	\$ 192.56
Removal of multiple bridged taps	\$ 468.44
Expedite removal of single bridged tap	\$ 469.97
Expedite removal of multiple bridged taps	\$ 1,151.56
Line and Station transfers	\$ 140.52
Copper to a Digital Loop Carrier (DLC) arrangement	\$ 281.04
Installation of repeater	\$ 968.77
Installation of Range extenders	\$ 968.77
Clear defective pair (where feasible)	\$ 225.00
Binder group facility rearrangement	\$ 140.52
Rearrangement IDLC to copper cable	\$ 140.52
Rearrangement IDLC to UDLC	\$ 140.52
Dispatch to place a channel unit in an existing Universal/Cotted DLC system	\$ 64.65
Serving terminal installation (existing facilities)	Time & Materials
Upgrade an existing serving terminal (existing facilities)	Time & Materials
Activate dead copper cable pair	\$ 140.52
Reassignment of an existing non-working cable pair	\$ 75.00
Will perform a copper rearrangement	\$ 140.52
Other Required Modifications	Time & Materials
DS-1 & DS-3 Network Modifications	Non-Recurring Charges
Engineering Query ¹	\$ 123.24
Engineering Work Order ²	\$ 553.76
Expedite Engineering Query ¹	\$ 242.46
Expedite Engineering Work Order ²	\$ 1,029.03
DS-1 / DS-3 Network Modification	\$ 1,000.00
Other Required Modifications	Time & Materials
DS-1 / DS-3 Network Modifications Include the following: Installation of new apparatus case, multiplexer reconfiguration, installation of new multiplexer, removal/installation of required electronics, copper rearrangement (DS-1 only), removal of load coils, installation of double card, cross-connection to existing fiber facility, installation of line card, removal of bridge taps, clear defective pair (where feasible).	
Notes:	
1 Engineering Query Charges apply or Expedite Engineering Query Charges apply in addition to other listed rates.	
2 Engineering Work Order Charges apply or Expedite Engineering Work Order Charges apply in addition to other listed rates.	
When Routine Network Modifications are performed on a Loop and Transport that are combined, charges apply to both loop and transport.	
Other	
Commingled Arrangements- per circuit NRC	\$ 50.00
Conversion Service Order per request	\$ 15.00

[♦] The rate schedules shown are subject to unilateral change by Verizon, unless and until finalized in connection with an executed interconnection agreement amendment.

Exhibit A – Pennsylvania (East)

Conversion NRC per circuit	\$	5.00
Circuit Retag per circuit	\$	20.00
Access To Splice Point Sub-Loop Unbundling		Time and Material
Unbundled Fiber To The Home Loop Narrowband	NRC --- TBD	MRC --- TBD
Dark Fiber		
Dark Fiber Routine Network Modifications		Time & Materials



CONV-ATT -1	Refer to AT&T's cost model, described in AT&T's Panel Testimony of Michael Hou, Brenda Kahn and Richard Walsh at pp.63-70, with results attached as Attachment B. Can the AT&T cost model be used or modified to calculate the TELRIC cost of an individual hot cut? If so, please provide the calculations using the AT&T cost model. Please provide all supporting materials. Document all assumptions.
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RESPONSE:

Yes, with some modification.

The majority of tasks and the costs produced by the model can be used to produce the cost for individual hot-cuts. However, there are specific tasks that are unique to projects (i.e., bulk migrations) that would not be required when Verizon performs an individual hot-cut. In addition, the process flow (Attachment B to the Panel testimony) that supports the model tasks must be modified to reflect the appropriate task descriptions for an individual hot-cut. These modifications would then be incorporated into the non-recurring model to produce the underlying model calculation of the rate.

The most significant modification to the model is the rationale for the number of technicians required to perform the pre-wire and cutover activities as well as the number of activity tasks the technicians perform when they travel to a remote un-staffed central office.

The number of technicians needed for pre-wire and cutover activities is adjusted on the FACTORS worksheet (lines 10 & 11) by changing the variable value from 2 to 1. Within the same worksheet, the project size (Line # 8) is also adjusted (by changing the value from 100 to 1) to reflect a single or individual hot-cut.

The formula representing travel time (UNE-P to UNE-L worksheet, Tasks #33 & 38) is also modified to reflect an efficient distribution of cost when dispatching a technician to a remote central office. Normally, technicians are not dispatched to remote un-staffed central offices to perform a single task. They are dispatched to a remote office to perform multiple tasks, possibly a combination of service order and/or maintenance tasks. The travel task time is divided by the minimum amount of activities to appropriately assign the cost against all tasks performed while at the remote office. The minimum value used is four tasks (i.e., combination of service orders and or central office maintenance tasks equaling four).

Therefore, the formula in cell E39 (representing task #33) is modified to read: $(\text{Travel_Time} * \text{Technicians_Traveling_Pre_wire}) / 4$. Likewise, the formula in cell E56 (representing task # 38) is modified in the same way to read: $(\text{Travel_Time} * \text{Technicians_Traveling_Cut_over}) / 4$.

Finally, there are four tasks that relate specifically to bulk project activities (task numbers 2, 3, 33 & 51) and are not required when performing individual hot-cuts. For these four tasks, the frequency (column 4) is set to N/A indicating they are not required. They are highlighted in pink in the attached copy of the modified model. Task descriptions with wording changes, to reflect the activities of individual hot-huts, are highlighted in a brighter yellow color. With these adjustments, the model produces a cost estimate of \$11.32 for an individual hot cut.

Unlike the \$5.01 established by the FCC for an individual hot cut in the AT&T/Verizon Virginia arbitration decision where the most efficient technology and ILEC operations were assumed, the \$11.32 in this proceeding results from assumptions based on making the *existing* Verizon New York processes as efficient as possible. Therefore, substantial inefficiencies are embedded in the cost.