

1 **I. INTRODUCTION**

2

3 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

4 A. My name is John C. Klick. My business address is 66 Canal Center Plaza, Suite 670,
5 Alexandria, Virginia 22314.

6

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

8 A. Yes, I filed Response testimony on July 21, 2000.

9

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

11 A. I have been asked by Covad Communications Company (“Covad”) and Rhythms Links
12 Inc. (“Rhythms”) to address the Direct and Response testimony filed by witnesses for
13 Verizon Northwest Inc., formerly identified as GTE Northwest Incorporated (“Verizon”)
14 and Qwest Corporation, formerly identified as US WEST (“Qwest”). In particular, I have
15 been asked to evaluate the cost-based prices proposed by Qwest and Verizon
16 (collectively, “the ILECs”) for line-sharing and, where appropriate and where possible, to
17 restate those costs to make them more consistent with the costing principles that this
18 Commission has established in its Eighth and 17th Supplemental Orders. Where relevant,
19 my testimony also will address costs for collocation and OSS.

20

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

1 A. As I noted in my response testimony, there are three major components of line-sharing
2 that must be addressed by the Commission in this proceeding. The first is the high-
3 frequency portion of the loop, or HUNE; the second is the cost of collocating splitters in
4 the Verizon and Qwest central offices; and the third is the costs of installing and
5 disconnecting a shared line. Section II briefly addresses the HUNE (which is discussed in
6 greater detail in the rReply testimony of Dr. Cabe), Section III discusses the costs
7 properly associated with collocation of the splitter, and Section IV addresses the costs of
8 installing and disconnecting a shared line developed by Qwest and Verizon. Because, in
9 my view, proper treatment of OSS is related to the cost of installing and disconnecting a
10 shared line, Section IV also discusses certain aspects of the OSS costs developed by the
11 ILECs.

12

13 **Q. BEFORE PROCEEDING WITH YOUR DISCUSSION OF THE INDIVIDUAL**
14 **COMPONENTS OF LINE-SHARING, WHAT IS YOUR OVERALL REACTION**
15 **TO THE COST-BASED PRICES THAT HAVE BEEN DEVELOPED BY THE**
16 **ILECS?**

17 A. In important respects, these cost-based prices are inconsistent with this Commission's
18 prior decisions. In its Eighth Supplemental Order, the Commission made the following
19 observations:

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27. In judging the soundness of the cost inputs, we believe that

21

US WEST has proposed a useful standard: the inputs "must

1 Second, portions of these cost studies are internally inconsistent. For example, Qwest
2 seeks to recover engineering costs associated with line-sharing more than once.

3
4 Third – as I stated in my Response testimony – the studies are poorly documented and
5 internally inconsistent. After reviewing the ILECs’ response testimony, I conclude that
6 these problems have not been fully addressed by the ILECs. Until these deficiencies are
7 remedied, it is not possible for me (or for the Commission staff) to finalize an analysis of
8 the ILEC cost studies as they relate to line sharing.

9
10 Fourth, instead of offering prices for all of the relevant components, the ILECs (Verizon
11 in particular) seek to “price” certain elements on an individual case basis (“ICB”). As
12 discussed in detail in my Response testimony, this represents an inappropriate and
13 unnecessary barrier to competitive entry, because it deprives CLECs of a critical element
14 of certainty in their market entry decisions. Under an ICB approach, CLECs would have
15 to wait until they receive an ICB-based quote from an ILEC before they would be able to
16 make an intelligent market entry decision. In addition, ILECs seek to force CLECs to pay
17 the ILEC for preparing the quote, and the procedures for challenging the ICB cost that an
18 ILEC develops for a particular circumstance are unclear and, in any event, undoubtedly
19 would be time consuming. In short, one could hardly envision a pricing mechanism – to
20 use that term very loosely – that would be more likely to discourage competition.

21 **II. THE APPROPRIATE COST OF THE HUNE IS ZERO.**

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2 **Q. WHAT PRICES ARE THE ILECS PROPOSING FOR THE HIGH-FREQUENCY**
3 **PORTION OF THE LOOP (OR HUNE)?**

4 A. The ILECs in this proceeding have taken different approaches to pricing the HUNE, the
5 first of the three line-sharing components I have identified. Qwest seeks to recover \$9.08
6 per loop per month, which represents 50 percent of the \$18.16 UNE loop rate adopted by
7 the Commission. Verizon, on the other hand, has established a price of zero, consistent
8 with the FCC's Line Sharing Order.

9

10 **Q. HAVE YOU REVIEWED ALL OF THE ILEC TESTIMONY ON THE COST OF**
11 **THE HUNE?**

12 A. Yes, I have.

13

14 **Q. WHAT IS YOUR REACTION TO THIS TESTIMONY?**

15 A. None of the ILEC testimony I have read changes the following facts. First, Qwest's
16 proposal to charge CLECs \$9.08 for the HUNE would impose a direct (or incremental)
17 cost on the CLECs, even though the ILECs incur no comparable direct or incremental
18 loop cost to provide the HUNE element *or* to provide competing xDSL services over their
19 owned loops.

20

21 Second, imposition of the \$9.08 charge – or any non-zero charge for the HUNE – serves

1 only to establish an artificial floor on xDSL prices in the state of Washington. This
2 would deprive Washington consumers of the full potential benefit of competition for
3 xDSL services, assist the ILECs in discouraging competition for xDSL service, and
4 distort the economically efficient allocation of resources. Furthermore, because the
5 ILECs *already* recover the full cost of each loop that could be used for line-sharing –
6 either through existing retail rates or through TELRIC-based UNE rates – permitting
7 ILECs to charge a non-zero rate for the HUNE would permit them to over-recover the full
8 economic cost of the loop. Such a result could not be sustained in a competitive market,
9 which should be the touchstone for effective regulatory policy.

10
11 A zero charge for the HUNE is consistent with the fact that there are no direct loop costs
12 associated with line-sharing. Furthermore, such an approach would not adversely affect
13 the ILECs' ability to compete for xDSL customers, nor would it deprive the ILECs of
14 revenues now earned from non-xDSL services provided over the local loop.

15
16 **IV. COSTS ASSOCIATED WITH SPLITTER COLLOCATION**

17
18 **Q. WHAT IS THE FIRST STEP REQUIRED IN ESTABLISHING COST-BASED**
19 **PRICES FOR SPLITTER COLLOCATION?**

20 A. Before cost-based prices can be developed, it is critical to define the different central
21 office configurations that can be used to provide line-sharing, and to determine the

1 implications that each definition has for the various resources that will be provided. Once
2 this step has been taken, the process of developing cost-based prices is simplified.

3
4 **Q. WHAT IS THE SECOND STEP REQUIRED IN ESTABLISHING COST-BASED**
5 **PRICES FOR SPLITTER COLLOCATION?**

6 A. The second step is to determine how the varying resource requirements identified in step
7 1 affect four categories of cost, *i.e.*, planning and engineering, relay racks (including
8 associated land and building costs), tie cables and MDF/block space.

9
10 **Q. WHAT LINE-SHARING CONFIGURATIONS IS QWEST SUGGESTING?**

11 A. In Mr. Hubbard's Direct testimony, Qwest proposes two alternatives, *i.e.*, "placement of
12 the splitter in a common area, such as at the IDF, so that all parties have ready access to
13 the splitter," and "placement of the POTS splitter in the CLEC/DLEC's collocation area."
14 Hubbard Direct at 6-7. Although Mr. Hubbard notes that each of these two alternatives
15 "has unique costs, requirements, and benefits," the costs developed by Mr. Thompson do
16 not appear to distinguish between these alternatives.

17
18 **Q. WHAT LINE-SHARING CONFIGURATIONS IS VERIZON SUGGESTING?**

19 A. In the Direct testimony of its witness Boshier (at pages 9 and 10), Verizon identifies three
20 configurations. First, use of a CLEC-owned splitter placed in a "virtual collocation-like
21 arrangement." Second, use of a CLEC-owned splitter located in the CLEC's physical

1 collocation area. Third, use of Verizon-owned splitters on a “port-at-a-time” basis. See
2 also Bykerk Response at 3.

3
4 **Q. WHAT LINE-SHARING CONFIGURATIONS ARE COVAD AND RHYTHMS**
5 **RECOMMENDING THIS COMMISSION CONSIDER?**

6 A. As set forth in the Direct testimony of Michael Zulevic (Covad’s Director of Network
7 Deployment), there are three configurations that should be considered. The first is
8 locating the splitter on the MDF. The second is to locate the splitter on a relay rack in the
9 common area of the central office. The third is to locate the splitter in the CLEC’s
10 physical or virtual collocation area.

11
12 **Q. HAVE EITHER QWEST OR VERIZON ADOPTED MR. ZULEVIC’S**
13 **RECOMMENDED CONFIGURATIONS IN OTHER STATES?**

14 A. Yes. In a Minnesota proceeding conducted in mid July of this year, Mr. Thompson
15 revised Qwest’s prices to provide cost-based prices for the three line-sharing
16 configurations recommended there (and here) by Mr. Zulevic. In addition, I understand
17 that Qwest has advised that it intends to develop cost-based prices in this proceeding for
18 line-sharing assuming that a splitter would be located on the MDF.² If it does so, it will
19 be employing the same three configurations recommended by Mr. Zulevic.

1 ² Qwest Response to COVAD 01-043 states, "U S WEST is in the process of a developing a study for frame
2 mounted splitters and will supplement this data request when the study is complete."

1

2 **Q. HAVE YOU EVALUATED QWEST’S PROPOSED COSTS FOR**
3 **COLLOCATION OF LINE SHARING EQUIPMENT?**

4 A. Yes I have. The principle fault of Qwest’s cost study is that it fails accurately to reflect
5 the specific inputs required to reflect the actual activities that are necessary for line
6 sharing. This results in a misleading proposal that would allow Qwest to significantly
7 overcharge CLECs for splitter collocation.

8

9 **Q. HOW DOES QWEST’S PRICE PROPOSAL FAIL TO REFLECT THE**
10 **ACTIVITIES REQUIRED IN A LINE SHARING ARRANGEMENT?**

11 A. Simply put, Qwest has provided a single set of supposedly cost-based prices that do not
12 take into account the different demands – in terms of number of cables and number of
13 MDF blocks – that would be associated with each of the splitter collocation
14 configurations. By not making appropriate adjustments, it appears that Qwest seeks to
15 inappropriately overcharge CLECs.

16

17 This concern is most apparent in the price that Mr. Thompson provides for the cross-
18 connect cost “per 100 voice grade circuits.” This price does not appear to take into
19 account either (1) the fact that cable runs will be different lengths, depending upon the
20 particular splitter collocation configuration under study, or (2) the fact that the number of
21 blocks required does not necessarily match the number of cables required by each of the

1 three splitter collocation configurations (Mr. Thompson's recurring and non-recurring
2 costs include *both* the cable and the block).

3
4 If Qwest were to take the position that under *any* line-sharing scenario, three cables are
5 required (one carrying voice and data from the MDF to the splitter, one carrying voice
6 from the splitter to the MDF, and one carrying data from the splitter to the collocation
7 area) it could be suggesting that a CLEC be charged \$3,798.33 (3X\$1,266.11) for cross-
8 connects. This is entirely inappropriate. As Mr. Zulevic's Direct testimony describes, the
9 most efficient placement of the splitter is on or adjacent to the MDF. Accordingly, in an
10 "adjacent to" scenario the relay rack housing the splitter should be across the aisle from
11 the MDF, requiring about 25 feet of cable distance, plus 7.5 feet of tie cable on either side
12 of the ladder racking, to connect the splitter and the terminating block on the MDF.

13 Therefore, cross-connects between the MDF and the splitter rack should only require 40
14 feet (25+7.5+7.5) of cable. Qwest's cost proposal, in contrast, would allow it to recover
15 costs for almost 108 feet of cable, more than 2.5 times the appropriate costs of the cables
16 between the MDF and the splitter.

17
18 Also, because Qwest's cross-connect cost bundles the cost of the tie cable together with
19 the cost of the MDF block terminal, it's pricing proposal would allow it to recover the
20 costs of three MDF block spaces for a configuration that uses only two.

21

1 In my testimony below, I will take Mr. Thompson's study as a starting point and explain
2 the specific input adjustments that are necessary to calculate the appropriate cost of line
3 sharing.

4
5 **Q. WHAT ARE THE UNDERLYING GUIDELINES THAT SHOULD GOVERN**
6 **ANY ADJUSTMENTS TO QWEST'S COST STUDY?**

7 A. In its earlier orders, cited above, the Commission adopted Qwest's recommendation that
8 cost study inputs "must be *realistic, accurate estimates* of all of the *actual* costs a
9 provider would incur if it built out a new network using the least cost, forward-looking
10 technology." In examining costs incurred inside a central office to provide line-sharing,
11 paraphrasing the above recommendation would require that cost study inputs "be realistic,
12 accurate estimates of all of the actual costs a provider would incur if it built out a new"
13 central office "using the least cost, forward-looking technology." A forward-looking
14 central office would contemplate outside loop plant terminating at the ILEC's MDF, and
15 it would contemplate CLEC collocation areas located throughout the central office, not
16 concentrated in one area far distant from the MDF. Splitter collocation assumptions must
17 be consistent with this forward-looking central office design and location of the CLEC's
18 collocation facilities.

19
20 **Q. ARE QWEST'S PRICING PROPOSALS CONSISTENT WITH THESE**
21 **GUIDELINES?**

1 A. No. Qwest apparently is attempting to recover the cost of an intermediate distribution
2 frame (“IDF”) between the main distribution frame (“MDF”) and the splitter because
3 Qwest currently uses COSMIC frames in many of its central offices. Qwest’s reliance on
4 technology that is not based on the forward-looking methodology that this Commission
5 has already adopted is not relevant to what the ILEC should be able to charge a CLEC for
6 line sharing. Specifically, forward-looking costing principles would preclude use of an
7 IDF between an ILEC’s MDF and the CLEC’s collocation area.

8
9 As noted earlier, Mr. Zulevic’s testimony accurately describes three variations of splitter
10 collocation configuration that are consistent with a forward looking network design, and
11 Mr. Thompson has previously relied upon these configurations – which *exclude* use of an
12 IDF – in developing line-sharing costs in Minnesota. As Mr. Zulevic illustrates, a
13 forward-looking central office would either have the splitters mounted directly on the
14 MDF or have a block mounted on the MDF which is directly cabled (hardwired) to the
15 splitter located either on a relay rack adjacent to the MDF or in the CLEC’s collocation
16 space. Adding yet another piece of equipment -- the IDF -- to this configuration creates
17 unnecessary additional costs with absolutely no benefit to the consumer. While Qwest
18 may choose to add these additional costs to provide its own MegaBit service, a CLEC
19 should not be forced to defray the costs of Qwest’s inefficient decisions.

20

21 **Q. ARE THERE DIFFERENCES BETWEEN THE COST OF SPLITTER**

1 **COLLOCATION AND THE COSTS OF OTHER FORMS OF COLLOCATION**
2 **THAT THE COMMISSION SHOULD CONSIDER?**

3 A. First, the splitters used for line sharing do not require any power. In addition, splitter
4 collocation does not require modifications to the outside plant to accommodate CLEC
5 entrance facilities. Finally, collocation of splitters does not require any of the costs of
6 optical components that often are reflected in the costs for virtual collocation. On the
7 other hand, many of the functions required to initially plan and engineer for virtual
8 collocation are required for line sharing collocation, and some of the same equipment is
9 used. Thus, the costs for virtual collocation *may be* an appropriate starting point for
10 estimating the costs of line-sharing.

11
12 In addition, the CLECs and Qwest have agreed that the CLECs will purchase splitters
13 through Qwest and pay the direct costs of those splitters. Accordingly, the price of the
14 splitter itself should not be included in Qwest's cost analysis.

15
16 **Q. EARLIER, YOU STATED THAT CHANGES ARE REQUIRED TO MR.**
17 **THOMPSON'S COST STUDIES TO ACCURATELY REFLECT THE COSTS**
18 **ASSOCIATED WITH EACH OF THE THREE LINE-SHARING**
19 **CONFIGURATIONS RECOMMENDED BY MR. ZULEVIC. GENERALLY,**
20 **WHAT KIND OF MODIFICATIONS ARE REQUIRED?**

21 A. I have modified, where appropriate, the quantities of various elements (manpower hours,

1 cable lengths and equipment units) to comport with the requirements of each of the three
2 splitter collocation configurations and to be consistent with the forward-looking approach
3 to costing mandated by this Commission. I continue to rely upon Mr. Thompson's input
4 prices (such as the hourly labor rate and the cost for a tie cable), as appropriate, but have
5 modified the quantities of resources that would be used for each line sharing arrangement.

6
7 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE SUPPORT FOR THE**
8 **CALCULATIONS OF CHARGES PROPOSED BY QWEST?**

9 A. In response to separate data requests from Rhythms and Covad for all workpapers, cost
10 studies and source documents underlying costs proposed for line sharing in Washington,
11 outlined in Thompson Exhibit JLT-6, Qwest produced identical copies of three
12 confidential attachments.³ However, these documents do not in anyway explain the
13 calculation of the costs in Thompson's Exhibit. In fact, they further confuse the matter.
14 Qwest sets forth the calculation of investment for "Cost of Connections to Splitter" and
15 "Cost of Connections to Shelf" in one document, and in another calculates directly
16 assigned, directly attributed, and common costs based on a *different* set of investments.
17 As I noted in my Direct testimony, Qwest conceded that the investments used were
18 different, and had promised it would supplement their response to eliminate these
19 inconsistencies upon completion of a review. I have yet to see any such supplemental
20 calculation.

¹ ₃ WUTC 01-007, COVAD 01-013, and RLI 03-010

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Second, the documents provided by Qwest support only the recurring and non-recurring charges associated with the "Bay" and the non-recurring charge for cross-connects. They do not include a calculation of the recurring charge for cross connects.

Due to these discrepancies in the support for the charges proposed by Qwest, I have been forced to make certain assumptions regarding Qwest's calculations and the intentions of its witnesses.

In terms of the Non-recurring Cross Connect Charge, I substituted the investment assumed in the additional costs calculation with the auditable direct investment from the build-up of costs. I did the same thing with the "Cost for Bay" to establish the Non-recurring charge for Bay Per shelf. The recurring charge for Bay Per shelf was calculated as maintenance portion of "direct investment.": I assumed this "direct investment" should be the same as that developed for the non-recurring charge, as there was no other support for a third "investment" for Bay Per Shelf.

After searching the Qwest data responses, and all of the testimony, and finding no support for the \$2.38 recurring charge for cross connections, I turned to the collocation model filed by Qwest in this proceeding. Exhibit JLT-4 of Thompson's direct testimony in Docket No. UT-960369, et al., contains the results of the Qwest collocation model, which

1 included the Quote Preparation Fee (as originally proposed by Mr. Thompson) and
2 several costs that seemed applicable to line sharing. I discovered that the \$2.38 for cross
3 connects per block from Thompson's Exhibit JLT-6 was to the same as the sum of
4 monthly rates proposed in the collocation model for Cable Placement, Cable, Blocks, and
5 Block Placement Per Block.⁴ Because no other source has been identified by Qwest for
6 this recurring cost, I have assumed that it was simply "lifted" from the Qwest sponsored
7 collocation model. As a result, I have made my revisions of costs for this item to the
8 underlying assumptions of the calculations in the documentation of the collocation model.

9
10 **Q. HOW HAVE YOU CALCULATED MANPOWER REQUIREMENTS FOR**
11 **PLANNING AND ENGINEERING?**

12 A. In his Direct testimony, Mr. Thompson included a "Quote Preparation Fee." In his
13 Response testimony, however, Mr. Thompson eliminated that item and instead suggests
14 that he intends to develop costs for planning and engineering based upon the time
15 estimates set forth in Mr. Hubbard's Response testimony. I note, however, that Mr.
16 Thompson's non-recurring costs for the "Bay-per shelf" also include engineering time –
17 which would seem to duplicate much of the engineering work described by Mr. Hubbard.
18 In short, it is not entirely clear, at this point, what Qwest's position is on the planning and
19 engineering work required for splitter collocation. Therefore, I worked with Covad's

1 ⁴ See Page 2 of the Confidential Exhibit. Qwest originally filed the model on January 15, 2000, and then revised
2 some of the costs March 24, 2000. Those revisions did not affect the cable and block costs I address here.

1 Director of Network Deployment, Michael Zulevic, to determine what would be
2 appropriate estimates for the totality of the planning and engineering effort required to
3 provide line-sharing on a forward-looking basis. Mr. Zulevic has approximately 20 years
4 of experience engineering and working in a central office environment.

5
6 Based on Mr. Zulevic's opinions regarding the amount of time that various collocation
7 personnel would be required to spend collocating splitters, I calculated manpower costs
8 on a per-request basis. For comparison purposes, I have assumed that every request is for
9 the planning and engineering of 96 lines of splitter capacity, which makes sense given
10 that the CLECs will own the splitters, but the costs I develop are per request regardless of
11 the number of lines.- Currently, relay rack mountable splitters have the capacity to
12 connect to 96 lines per splitter shelf. Frame mountable splitters have the capacity to
13 connect 16 lines per splitter block. Therefore, the costs associated with placing the
14 splitter on the MDF include space planning for six splitter blocks on the MDF to be the
15 functional equivalent of one splitter shelf. If the splitter is collocated either adjacent to
16 the frame or in the CLEC collocation area, space planning is still required for two blocks
17 on the MDF where the 96 lines will terminate, as described in Mr. Zulevic's Rebuttal
18 testimony. Planning and engineering manpower is also required for the relay rack in the
19 scenario where a splitter is placed on a relay rack adjacent to the MDF. This cost is
20 allocated on a per splitter basis by dividing the cost of a relay rack by the number of
21 splitter shelves on the relay rack. The following table summarizes the costs I have

1 developed:

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8 ***** End Proprietary *****

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10 Attachment A to my testimony details the calculations used to arrive at the above
11 results, which are based on Mr. Zulevic's testimony. To avoid double-counting
12 planning and engineering, I also have eliminated these costs from Mr.
13 Thompson's non-recurring cost for "Bay-per shelf," which is discussed below.

14

15

16 **Q. WHAT CHANGES DO YOU RECOMMEND BE MADE TO QWEST'S**
17 **PROPOSED MONTHLY RECURRING AND NON-RECURRING**
18 **CHARGES FOR THE RELAY RACK?**

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A. First, the planning and engineering costs need to be eliminated from the non-recurring costs in order to avoid double-counting the planning and engineering estimates provided by Mr. Zulevic. Second, Mr. Thompson's calculations should be modified by adjusting the number of splitter shelves per rack from 8 to 12, and by eliminating the "fill factor" employed by Mr. Thompson, which is unsupported and inappropriate. The following table summarizes the revised recurring and non-

1 recurring costs I have calculated.

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10 ***** End Proprietary *****

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13 **Q. WHAT CHANGES DO YOU RECOMMEND BE MADE TO QWEST'S**
14 **ASSUMPTIONS CONCERNING CROSS CONNECTS?**

15 A. Mr. Thompson's assumptions about cable length and number of MDF blocks in
16 his cross connection charges need to be adjusted to reflect the material quantities
17 required by each of the three splitter collocation configurations, as discussed in
18 Mr. Zulevic's testimony. Doing so requires making generalized assumptions
19 about the locations of the splitter and the CLEC collocation space under each
20 scenario, consistent with a forward-looking approach in which, to use Qwest's
21 standard, the inputs are realistic, accurate estimates of all of the actual costs a
22 provider would incur if it built out a new central office using the least cost,
23 forward-looking technology. To do so, I have assumed that the total distance
24 between the MDF and a CLEC's *physical* collocation area will *average* 165 feet.

1 This would be sufficient to reach an average CLEC's physical collocation area in
2 a three-story 100 foot by 120 foot central office, if we assume the CLEC's
3 physical collocation area would be located between 40 feet and 260 feet from the
4 MDF.⁵ Based on this assumption, I have developed the following resource
5 requirements for each of the splitter collocation scenarios identified by Mr.
6 Zulevic:⁶

1 ⁵ As Mr. Zulevic notes in his testimony, if the CLEC is using *virtual* collocation, cable lengths would be substantially
2 shorter because it generally is possible to locate a CLEC virtual collocation area within 25 feet of the MDF. This
3 would substantially reduce cross connect costs from those that I calculate below.

1 ⁶ Because a frame-mounted splitter requires six block spaces to mount the block to handle 96 lines, while the other
2 two splitter collocation scenarios require only a single block space to mount a block handling 96 lines, it would be
3 desirable to separate the costs of a block space from the cost of a block. Unfortunately, the detail underlying Mr.
4 Thompson's calculations provided by Qwest has not permitted me to make this refinement in my restatement.

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A.Length of Cable

	Value	Rationale
Splitter Located on MDF	165	One cable (carrying data only) travelling 150 feet between the MDF and the CLEC's collocation area (plus 7.5 feet up and down)
Splitter Located in Common Splitter Area	40	One cable (carrying voice and data) going between the MDF and the relay rack (25 horizontal feet, plus 7.5 feet up and down), one cable
	40	(carrying voice only) coming back from the relay rack to the MDF (25 horizontal feet plus 7.5 feet up and down, and one cable (carrying data
	140	only) going from the relay rack to the CLEC's collocation area (125 horizontal feet plus 7.5 feet up and down, based on Zulevic testimony)
Splitter Located in CLEC Collocation Area	165	One cable (carrying voice and data) going between the MDF and the CLEC's collocation area (150 horizontal feet plus 7.5 feet up and down)
	165	and one cable (carrying voice only) coming back from the CLEC's collocation area to the MDF (150 horizontal feet plus 7.5 feet up and down)

A.Number of MDF Blocks

	Value	Rationale
My Restatement - Splitter Located on MDF	0	No block terminals required because the splitter replaces the block terminal on the MDF
My Restatement - Splitter Located in Common Splitter Area	2	One block terminal on the MDF capable of provisioning 100 lines (carrying voice and data) going to the splitter and one block terminal on the MDF capable of provisioning 100 lines (carrying voice only) coming back from the splitter
		One block terminal strip on the MDF capable of provisioning 100 lines (carrying voice and data) going to the splitter and one block terminal on the MDF capable of provisioning 100 lines (carrying voice only) coming back from the splitter

Based on the above characteristics, I have restated Qwest's recurring and non-recurring charges for cross connects as follows:

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*** End Proprietary ***

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Q. WILL YOU PLEASE SUMMARIZE YOUR RESULTS FOR SPLITTER COLLOCATION?

A. Yes. Using the methodology described above with input from Mr. Zulevic, I have modified Qwest's calculations to more accurately develop cost-based prices for all three splitter collocation configurations, assuming the CLEC is physically collocated. I believe these results are conservative and consistent with this Commission's costing standards and with the framework of Qwest's filing.

Q. HOW WOULD THESE COSTS CHANGE IF A CLEC CHOOSES TO USE TIE CABLES IT ALREADY HAS AVAILABLE IN THE ILEC'S CENTRAL OFFICE?

A. In a scenario where the CLEC is already collocated in the ILEC's central office, the CLEC may have existing tie cables connecting the MDF to the CLEC's collocation area. If the CLEC chooses, it should be able to use the tie cables previously used for other purposes for line sharing. Based on the elements discussed above and the attachments to this testimony, it is easy to identify the reductions that should be applied to the costs I have proposed above. Confidential Exhibit (JCK-4?) contains the details of both my replication of Qwest's calculations, and my adjustment to the underlying assumptions therein.

Q. HAVE YOU BEEN ABLE TO MAKE CORRESPONDING

1 **ADJUSTMENTS TO THE COSTS FOR LINE-SHARING PROVIDED BY**
2 **VERIZON?**

3
4 A. No, for several reasons. First of all, Verizon provides apparently incomplete
5 prices for its first, “preferred” line-sharing scenario, *i.e.*, in which the CLEC owns
6 the splitter and places it in a “virtual collocation-like arrangement.” In his Direct
7 testimony, Verizon witness Boshier notes that “[Verizon] proposes that the rates,
8 terms and conditions for this type of configuration be negotiated on a case-by-case
9 basis.” Boshier Direct at 9. While Mr. Tanimura does include prices for this
10 scenario in his Response testimony (Tanimura Response at Exhibit No. __ (RT-
11 6)), Verizon’s Response testimony does not expressly state that these represent the
12 full price for Line Sharing Configuration 1, which would moot the need for ICBs.
13 Therefore, I assume Verizon still intends to rely on ICBs in this scenario.
14 Furthermore, I can find no backup support for the monthly recurring rate in
15 Exhibit No. __ (RT-6), which makes it impossible to evaluate what is and is not
16 included in this item. Finally, the cost back-up for the non-recurring rate of ***
17 **Begin Proprietary *** , *** End Proprietary ***** shown in Exhibit No. __ (RT-
18 6) appears to *include* the cost of the splitter (see Exhibit No. __ (LC-4C), page 2
19 of 2), even though this scenario is supposed to assume that the CLEC owns the
20 splitter. In addition, although Mr. Tanimura states that the cost calculations
21 underlying cross-connects are provided by Ms. Casey (which presumably would

1 identify the assumptions Verizon has made concerning cable lengths, MDF block
2 requirements, etc.),⁷ I can find no mention of these costs in either her written
3 testimony or her workpapers.

4
5 In short, while Verizon has provided a tall stack of purported workpapers, they do
6 very little to shed light on the derivation of any costs related to line-sharing other
7 than the non-recurring costs for OSS and installation/disconnection of a shared
8 line. In my view, this Commission should give no credence whatsoever to
9 Verizon's recommended prices until the necessary back-up support is provided.

10
11 **IV. INSTALL AND DISCONNECT OF LINE SHARING ARRANGEMENTS**

12
13 **Q. BEFORE GETTING INTO THE DETAILS, WHAT PRICES HAVE**
14 **QWEST AND VERIZON PROPOSED FOR INSTALLATION AND**
15 **DISCONNECT?**

16 A. Qwest's proposed prices are *** **Begin Proprietary** *** *** **End Proprietary**
17 *** for installation and *** **Begin Proprietary** *** *** **End Proprietary** *** for
18 disconnection. The following table summarizes Verizon's proposed prices for these two
19 components:

1 ⁷ At page 18 of his Direct testimony, Mr. Tanimura states: "The cost support associated with the various service
2 ordering and cross-connect activities is provided by Ms. Casey in Exhibit LC-2C."

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***** Begin Proprietary *****

***** End Proprietary *****

**Q. HAVE YOU EVALUATED THE ILECS' COST STUDIES FOR
INSTALLATION AND DISCONNECTION OF LINE SHARED LOOPS?**

A. Yes I have. It is clear that the ILEC's filings seek to charge CLEC's for manual ordering and provisioning. As this Commission is aware, the FCC required that incumbent LECs should be able to implement OSS and other loop facility modifications within 180 days of the Commission's release of this order to accommodate requests for access to this new network element. We believe that there may be interim measures that will allow competitive carriers to begin obtaining some form of access to this unbundled

1 network elements even before 180 days. *FCC Line Sharing Order* at 161.

2
3 In light of the FCC's order, these systems should already be in place by the time
4 the hearing takes place in this proceeding. For this reason, alone, the installation
5 and disconnection charges should incorporate the much reduced manual effort that
6 will be required once full electronic, flow-through OSS are available.

7
8 **Q. EARLIER, YOU SUGGESTED THAT YOU FOUND INCONSISTENCIES**
9 **IN THE ILEC POSITIONS ON INSTALLATION, DISCONNECTION,**
10 **AND OSS. CAN YOU EXPAND ON THAT STATEMENT?**

11 A. Sure. There are a number of issues that must be parsed by the Commission as it
12 considers the appropriate prices for OSS, installation and disconnect. These
13 issues include:

14
15 The extent to which the expenses being incurred by the ILECs to convert OSS
16 systems to the full electronic, flow through standard established by the FCC are
17 being incurred efficiently.

18 The extent to which CLECs, who also have to pay to develop their own OSS,
19 should be required to defray the full amount of the ILEC's costs in this area.

20 The extent to which ILEC customers, and/or the ILECs themselves, also stand to
21 benefit from the development of this state-of-the-art OSS capability. While the

1 ILECs claim that they receive no benefit from these expenditures (thereby
2 suggesting that CLECs should bear the entire cost – whatever it is), this is almost
3 certainly wrong. In the first place, *all* xDSL customers – whether ILEC or CLEC
4 – will obviously benefit from the competitive pressures that will be significantly
5 facilitated by full electronic, flow through OSS. Under such circumstances, if *all*
6 xDSL customers – not ILEC stockholders – are going to bear the cost of meeting
7 the current state of the art, it is appropriate that *all* xDSL customers pay a portion
8 of the cost because all will benefit as a result. Second, as a result of major
9 mergers and consolidations (that continue to this day), the ILECs currently are
10 burdened with numerous legacy OSS systems that do not communicate well with
11 each other. To-date, the ILECs have dealt with this problem by maintaining
12 separate “call centers” for each legacy system, staffed with individuals familiar
13 with the particular rules required to utilize each system. This is inefficient, and in
14 a competitive environment, the ILECs will soon be forced to consolidate into
15 region-wide or nationwide call center environments. Such consolidation will be
16 feasible only if a single set of local service ordering guidelines is used throughout
17 the entire company. Thus, much of the OSS work being undertaken by ILECs
18 now – in terms of eliminating database errors and developing a single set of rules
19 to be utilized system wide – will be extremely valuable to ILECs in the near
20 future. Specifically with respect to line sharing, the possibility that Qwest’s will
21 establish a separate subsidiary to provide Megabit service throughout its region

1 further suggests that Qwest's customers also will benefit from whatever OSS
2 modifications are made to permit CLECs to implement line-sharing.

3 From the perspective of line-sharing, the appropriate approach to calculating OSS
4 costs is to determine what it would cost Qwest and Verizon to develop full
5 electronic, flow-through OSS systems that include the capability to line share, and
6 to subtract what it would cost Qwest and Verizon to develop full electronic, flow-
7 through OSS systems that *exclude* the capability to line share.

8 The ILECs in this proceeding seek both to charge CLECs for the full cost of
9 converting their OSS systems to full electronic, flow-through capability *and* to
10 charge them the higher cost of manually processing requests for UNEs. This is
11 fundamentally wrong, and completely inconsistent with the

12 [REDACTED] competitive market standard. If CLEC's are going to be forced to
13 invest in creating the full electronic, flow-through OSS systems, at
14 least they should pay transactional costs that reflect the benefit of
15 that investment. As the ILECs would have it, CLECs are forced to
16 pay for the upgrade but denied any of the associated benefits.

17
18 [REDACTED] One can hardly imagine a scenario more consistent with a monopolist's desire to
19 maintain its market power by raising the cost of potential competitive entry than
20 the way in which ILECs have approached the issue of upgrading their OSS
21 systems. They delay the implementation of these systems until it suits their own

1 purposes (witness Bell Atlantic's Herculean efforts only when it became an issue
2 in its merger with GTE and its desire to provide long distance services in New
3 York), seek to stick potential competitors with the full capital cost of these
4 conversions (even though they stand to benefit immensely from these upgraded
5 systems), and at the same time seek to assess "TELRIC-based" rates on the basis
6 of the inefficient, costly manual processes inherent in their embedded legacy
7 systems. This can hardly be consistent with the pro-competitive attitude
8 envisioned by the Telecommunications Act.

9
10 **Q. HOW WOULD YOU PROPOSE THIS COMMISSION DETERMINE THE**
11 **COSTS OF INSTALLATION AND DISCONNECTION FOR LINE**
12 **SHARING?**

13 A. I recommend the Commission seek to determine what these costs would be if the
14 full electronic flow-through OSS systems were available. In testimony I recently
15 provided in

16 Minnesota, I estimated such costs by using the output from that Commission's
17 compliance run of the AT&T Non-Recurring Cost Model, which that Commission
18 had previously adopted as the basis for NRCs associated with the ordering and
19 provisioning of UNE loops *precisely* because it reflected the efficiencies
20 associated with upgraded OSS systems. Specifically, I started with the costs that
21 had been adopted by the Minnesota Commission for customer migration of POTS

1 service, and made appropriate modifications to account for differences associated
2 with a line sharing arrangement. Absent the necessary information from the
3 ILECs in this proceeding, I would recommend using these results as a reasonable
4 estimate of appropriate installation and disconnection costs.⁸

5
6 **Q. WHAT CHANGES DO YOU MAKE TO THE MINNESOTA**
7 **COMMISSION'S ADOPTED INSTALLATION AND DISCONNECTION**
8 **COSTS FOR MIGRATION OF A UNE LOOP IN ORDER TO ESTIMATE**
9 **THESE COSTS IN A LINE SHARING ENVIRONMENT?**

10 A. First, the Minnesota Commission's adopted rates were based on a mix of copper
11 and fiber feeder technology inherent in a forward-looking network architecture.
12 However, it is my understanding that in this proceeding (as was the case in
13 Minnesota) the Commission is addressing only customers served by all copper
14 loops. Therefore, the Non-Recurring Cost Model used in Minnesota needs to be
15 adjusted to reflect a 100% probability that the customer will be served on copper.

16
17 In addition, the NRC Model installation rates must be modified to account for one
18 jumper disconnection and two jumper connections, as described in Mr. Zulevic's
19 testimony. The NRC Model disconnection rate similarly needs to be modified to

1 ⁸ The validity of the time estimates and labor rates inherent in the AT&T NRC model can be demonstrated by setting
2 the fall out rates to 100 percent. When this is done, the costs for installation and disconnect come quite close to the
3 costs presented in this proceeding by the ILECs.

1 account for two disconnections and a connection (so the customer can again
2 receive voice service from the ILEC when it discontinues DSL service from a
3 CLEC). However, this re-connection cost should be adjusted to reflect the
4 probability that a customer would discontinue a CLEC's DSL service but maintain
5 a voice service (*i.e.*, when a customer is not moving or discontinuing all service).
6

7 **Q. HOW DO YOUR PROPOSED INSTALL AND DISCONNECT COSTS**
8 **COMPARE TO QWEST'S PROPOSAL AND TO THE MINNESOTA**
9 **COMMISSION RATES FOR POTS?**

10 A. The costs I propose (\$ 5.75 per install and \$ 4.32 per disconnect) are significantly
11 lower than the costs that the ILECs have proposed in this proceeding, which
12 reflect manual ordering and provisioning. On the other hand, the costs I propose
13 are about double the POTS migration rates that the Minnesota Commission
14 determined were appropriate for POTS (\$ 2.45 per install and \$ 1.95 per
15 disconnect) in its Generic Cost Docket. A copy of the results of the Minnesota
16 compliance run, and my modifications to the POTS migration costs, is attached as
17 Exhibit__(JCK-5).
18

19 **Q. WHEN SHOULD THE DISCONNECT CHARGES BE ACCESSED**
20 **AGAINST A CLEC?**

21 A. The answer must be that this charge is applied *only* when the CLEC customer

1 actually cancels its DSL service from the CLEC and the line is no longer shared.
2 Based on the type of product that xDSL is, I am assuming that the majority of
3 xDSL customers will maintain service until they move. Thus, there would be a
4 very long period of time between the initial connection of service and the
5 termination of service. The CLEC should not be required to pay the ILEC for
6 disconnection until it actually ceases to line share. This also eliminates the need
7 to estimate the DSL churn rate which would be required calculate the present
8 value of the future disconnection. If the Commission determines to require a
9 CLEC to pay the cost of disconnection as part of the NRC for installation, then it
10 would be necessary to also determine the churn rate and reduce the costs to its
11 present value to avoid a windfall to the ILECs.

12
13 **V. SUMMARY**

14
15 **Q. HOW SHOULD THE COMMISSION DETERMINE WHICH SET OF**
16 **SPLITTER COLLOCATION PRICES SHOULD BE APPLIED TO A**
17 **CLEC'S SPLITTER INSTALLATION?**

18 A. All three splitter collocation scenarios should be available for a CLEC to choose
19 from. If, for some reason, an ILEC cannot or is unwilling to accommodate the
20 CLEC's preferred splitter collocation arrangement, the ILEC should bear the
21 incremental cost of placing the splitter at the CLEC's next best available option.

1 Again, a CLEC should not be penalized for the ILECs' existing inefficiencies.

2
3 **Q. WILL YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

4 A. Yes. I have restated Qwest's proposed cost studies and, using a TELRIC-based
5 approach, modified those calculations in order to match the resource requirements
6 necessary to accommodate line sharing. The costs I propose are based on the
7 forward looking network that underlies unit cost inputs and network design
8 criteria consistent with this Commission's earlier findings in the Eighth
9 Supplemental Order. Until Verizon provides back-up material sufficient to fully
10 understand the way it developed its costs, I would recommend applying to
11 Verizon the cost-based rates I have developed by modifying Qwest's calculations.

12 ***** Begin Proprietary *****

13 ***** End Proprietary *****

14
15 The four primary problems with the costs proposed by the ILECs in this
16 proceeding are: 1) they did not reflect accurately the engineering requirements for
17 splitter collocation in a line sharing environment; 2) they seek to charge CLECs
18 higher NRCs for provisioning which are a result of their own inefficient OSS
19 systems; 3) they include certain assumptions in the network architecture that are
20 inconsistent with a forward-looking network configuration, and 4) the ILECs
21 provide insufficient back-up documentation showing how the costs were

1 developed and how they would be applied in a line-sharing environment.

2 Following is a table summarizing these costs:

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

12 A. Yes it does.

13