EXHIBIT WHL-4T

BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of	**)**	
	)	**DOCKET NO. UT-033044**
QWEST CORPORATION	**)**	
	)	
To Initiate a Mass-Market Switching	**)**	
And Dedicated Transport Case	**)**	
Pursuant to the Triennial Review	**)**	
Order	**)**	

RESPONSE TESTIMONY

OF

WILLIAM H. LEHR

AND

LEE L. SELWYN

ON BEHALF OF

AT&T COMMUNICATIONS OF THE PACIFIC NORTHWEST, INC.,
AT&T LOCAL SERVICES ON BEHALF OF TCG SEATTLE, AND TCG OREGON
(COLLECTIVELY "AT&T")

ECONOMIC CONSIDERATIONS

February 2, 2004

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TABLE OF CONTENTS

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1

I. INTRODUCTION, PURPOSE, AND STRUCTURE OF THE TESTIMONY

Q. PLEASE STATE YOUR NAMES AND BUSINESS ADDRESSES.

A. My name is William H. Lehr. My business address is 94 Hubbard Street, Concord, Massachusetts.

My name is Lee L. Selwyn. My business address is Economics and Technology, Inc. ("ETI"), Two Center Plaza, Boston, Massachusetts 02108.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

Yes, we submitted direct testimony on December 22, 2003 on behalf of AT&T Communications of the Pacific Northwest, Inc., AT&T Local Services on behalf of TCG Seattle, and TCG Oregon (collectively AT&T).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY AT THIS TIME?

A. The purpose of our response testimony is to comment on the additional testimony and data filed by Qwest relating to its claims that CLECs would not be impaired without access to unbundled switching. Specifically, we will comment on the testimony of Harry M. Shooshan,[1]

[1] *See* Direct Testimony of Harry M. Shooshan III on Behalf of Qwest Corporation, *In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order, Before the Washington Utilities and Transportation Commission,* Docket No. UT-033044, December 22, 2003 ("Shooshan").

Peter B. Copeland,[2] and Mark S. Reynolds.[3] This testimony complements and supplements the direct testimony we have already filed.[4]

Q. PLEASE SUMMARIZE THE MAIN CONCLUSIONS IN YOUR RESPONSE TESTIMONY.

A. Our response testimony will explain why we believe the Commission should confirm the FCC Triennial Review Order's ("TRO's")[5] national finding of impairment with respect to unbundled switching used to serve mass market customers in Washington. Qwest witnesses present both a trigger analysis of selected MSAs in Washington that they claim satisfy the TRO's self-provisioning trigger, and a business case for potential competition that purports to demonstrate that CLECs would not be impaired without access to unbundled switching in selected markets in Washington. We explain why this analysis is flawed and why the evidence – properly analyzed – demonstrates that CLECs are impaired, and

[2] *See* Direct Testimony of Peter B. Copeland on Behalf of Qwest Corporation, *In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order*, Before the Washington Utilities and Transportation Commission, Docket No. UT-033044, December 22, 2003 ("Copeland").
[3] See Direct Testimony of Mark S. Reynolds on Behalf of Qwest Corporation*, In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order*, Before the Washington Utilities and Transportation Commission, Docket No. UT-033044, December 22, 2003 ("Reynolds").
[4] *See* Direct Testimony of William H. Lehr and Lee L. Selwyn on Behalf of AT&T Communications*, In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order*, Before the Washington Utilities and Transportation Commission, Docket No. UT-033044, December 22, 2003.
[5] *See 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*, Federal Communications Commission, CC Docket No. 01-338, (Released August 21, 2003.) ("TRO").

therefore, that access to unbundled switching should continue to be mandatory in Washington. Specifically, we will explain why we reach the following conclusions:

(1) We agree with Mr. Shooshan that the overall purpose of these proceedings is to promote efficient competition in Washington by implementing the Telecommunications Act of 1996 (the Act).[6] The Act requires Qwest to make available to CLECs unbundled network elements (UNEs) under non-discriminatory terms and cost-based rates, and the FCC's TRO establishes an impairment standard that should be used by states to confirm the TRO's national findings of impairment. Specifically, the Commission should continue to require Qwest to provide unbundled switching if CLEC entry to serve the mass market without access to such switching would be uneconomic.[7] We disagree with Mr. Shooshan on a number of important substantive points, however, which are further detailed below.[8]

(2) Application of the TRO's impairment standard and the two-phased analysis of actual (trigger test) and potential deployment competition

[6] *See*, for example, Shooshan at 10: "The decision to embrace a competitive structure in local telecommunications markets is based on a conviction – which I share – that the competitive process is the most successful process available for delivering the long-term benefits to consumers."
[7] *See*, for example, Shooshan at 15 and 27.
[8] We do not comment on his testimony related to dedicated transport nor the appropriate DS0 cut-off that should be used to distinguish between mass market and enterprise customers, but this should not be construed as concurrence with his arguments on those matters.

(business case analysis) are closely integrated and must be applied in a manner that is consistent with the TRO, the Act, and the overall goal of promoting the emergence of efficient competition. Mr. Shooshan's legal (not economic) interpretation[9] reduces application of the triggers to a simplistic CLEC-switch counting exercise,[10] which is inconsistent with the TRO and supports an erroneous claim that the triggers have been satisfied in three of the MSAs in Washington (Seattle, Tacoma, and the Vancouver portion of the Vancouver-Portland MSA[11]). Mr. Shooshan's interpretation of the trigger test is inconsistent with his own recommendation that the Commission consider the totality of evidence of actual and potential competition when assessing impairment.[12]

(3) Intermodal competitors, which include both wireless mobile telephony providers and cable television providers that offer cable telephony services should not be counted as qualifying as triggering firms. While intermodal competition is emerging and will contribute to enhancing consumer choice for telecommunications services, this

[9] In certain portions of his direct testimony, Mr. Shooshan exclusively provides legal analysis (see Shooshan at Section 4: FCC and Judicial Guidance Relating to the Proper Implementation of the Act"). As economists we do not directly comment on such legal analysis but instead refer to AT&T's contemporaneously filed legal brief rebutting Shooshan's legal claims.
[10] *See* Shooshan at 53, 58, 60, and 62.
[11] Hereafter, we will refer to this as the Vancouver MSA.
[12] *See* Shooshan at 52.

competition is still too new, and the substitutability of these services for the basic fixed-line telephony services offered by Qwest to qualify these firms as "trigger" firms is still largely speculative and unproven. Moreover, the business strategies being employed by these intermodal competitors are not generally applicable to efficient CLECs, and hence the services offered by intermodal competitors do not provide a reliable basis for concluding that CLEC competition would not be impaired without access to unbundled switching.

(4) Qwest advises the Commission to use MSAs as the relevant geographic area for assessing impairment with respect to unbundled switching used to serve mass market customers. We disagree that MSAs provide the appropriate geographic area for defining impairment in Washington. While we agree with Mr. Shooshan that it is generally unlikely that an efficient CLEC would find it economically viable to enter to serve mass market customers in a single wire center or small group of wire centers, we disagree that even an MSA is likely to provide a broad-enough geographic area to allow the CLEC to take advantage of available scale and scope economies. In keeping with the logic of Mr. Shooshan's own analysis and the analysis we set forth in our Direct Testimony, it would be more appropriate for the Commission to adopt LATAs or Qwest

serving areas in Washington as the geographic areas for assessing impairment in Washington. These coincide with the boundaries most commonly used to delineate telecommunication service markets and are closer to approximating the geographic scope of anticipated CLEC entry decisions.

(5) The trigger analysis offered by Mr. Shooshan and Mr. Reynolds fails to demonstrate that the self-provisioning triggers are met in any of the MSAs in Washington. The data demonstrate that CLEC competition is geographically localized even within the geographic market area they advocate using to apply the trigger tests. Moreover, they inappropriately count as trigger-qualifying firms intermodal competitors (cable television companies offering cable telephony services) and competitors offering services to only a selective niche of mass market customers (small business but not residential customers) or serving only an incidental number of mass market customers using their own facilities. The evidence of actual competition they offer does not provide a reliable basis for meeting the self-provisioning trigger test set forth in the TRO, and does not allow the Commission to conclude that additional CLEC entry would not face entry barriers throughout the MSAs.

(6) The business case analysis presented by Mr. Copeland also fails to demonstrate that potential competition would not be impaired without access to unbundled switching. The business case presented by Mr. Baranowski on behalf of AT&T demonstrates that it is not economic to provide mass market services throughout Washington's LATAs using CLEC-owned switching. There are substantial costs associated with connecting mass market customer UNE-L loops to CLEC switching that contribute to making entry via this business strategy uneconomic. The contrary result presented by Mr. Copeland for select MSAs in Washington is based upon an alternative business case model sponsored by Qwest, a model that is driven by numerous faulty and unsupported assumptions and erroneous inputs. When certain key modeling inputs and assumptions are corrected to conform more closely to real-world conditions, even the Qwest model confirms that CLECs would be impaired without access to unbundled switching.

(7) Therefore, the evidence of the highly limited extent of actual and potential CLEC competition demonstrates that the Commission should confirm the TRO's national finding of impairment for unbundled switching used to serve mass market customers.

Q. HOW IS THE REST OF YOUR RESPONSE TESTIMONY ORGANIZED?

A. The rest of our response testimony is organized into four sections in which we explain the basis for the conclusions summarized above. In Section II, we identify the substantive points of agreement and disagreement with Qwest's witnesses regarding the interpretation of the TRO that should be used by the Commission. In Section III, we explain why we disagree with Mr. Shooshan and Mr. Reynolds regarding the trigger analysis applied to the Seattle, Tacoma, and Vancouver MSAs. In Section IV, we rebut the business case analysis presented by Mr. Copeland and explain why proper interpretation of these results confirms a finding of impairment. Section V concludes.

II. QWEST INTERPRETATION OF THE TRO IMPAIRMENT STANDARD IS FLAWED

A. Mr. Shooshan's interpretation of the impairment standard is inconsistent with the TRO

Q. DO YOU AGREE WITH PORTIONS OF MR. SHOOSHAN'S TESTIMONY?

A. Yes. Both our Direct Testimony and the testimony of Mr. Shooshan emphasized the benefits of promoting the transition to effective and efficient competition for local telecommunications services.[13] We both recognize the importance of the

[13] *See* Shooshan at 10.

Telecommunications Act of 1996 ("the Act")[14] in this regard and the relevance of the FCC's TRO impairment standard to determine *which* elements should be unbundled under the Act.[15] We also agree that the Commission should consider evidence relating to the economic viability of both actual and potential CLEC competition when making its impairment determination.[16] In spite of our agreement with these basic principles, we have important substantive disagreements with Mr. Shooshan's and other Qwest witnesses' interpretation of the TRO and recommendations to this Commission.

Q. PLEASE EXPLAIN SOME OF THE PROBLEMS WITH MR. SHOOSHAN'S INTERPRETATION OF THE TRO AND HIS GUIDANCE TO THE COMMISSION REGARDING APPLICATION OF THE TRO'S IMPAIRMENT ANALYSIS.

A. As we explained in our Direct Testimony, the TRO's impairment standard establishes an *economic* framework for assessing when additional CLEC entry would be impaired without access to a particular unbundled network element (UNE). Mr. Shooshan's testimony does not provide an economic explanation of the impairment standard. Instead, he describes the legal history of important court decisions and FCC proceedings related to the implementation of the unbundling

[14] *See* Shooshan at 6, 28.
[15] *See* Shooshan at 15, 27.
[16] *See* Shooshan at 52, where he argues that the Commission should consider the "totality of evidence in an analysis of impairment."

provisions mandated by the Act.[17] This is not surprising, since Mr. Shooshan is an attorney, and not an economist.

The lack of an adequate economic explanation, however, results in Mr. Shooshan incorrectly characterizing the different phases of the impairment analysis as consisting of two "separate tracks."[18]

Q. WHY IS IT IMPORTANT TO CONSIDER THE RELATIONSHIP BETWEEN THE MECHANICAL TRIGGER TEST AND THE ECONOMIC BUSINESS CASE ANALYSIS?

A. The trigger test and the analysis of potential entry that follows if the trigger tests are not satisfied are closely related. Both have the same goal of providing a consistent empirical basis for assessing whether additional CLEC entry would be impaired without access to UNEs. Failure to carefully articulate this common goal reduces the trigger analysis to a simplistic switch counting exercise.

The goal of the impairment analysis is to assess whether UNEs are needed for additional CLEC entry to be *economically* viable (not *legally* viable). The trigger test evaluates current mass market competition to determine if there is sufficient evidence of actual competition such that one may reliably conclude that entry is economically viable without UNEs. If current competition is insufficient or the

[17] *See* Footnote 9 above.
[18] *See* Shooshan at 31, 80.

evidence is ambiguous or inconclusive, then the regulatory short-cut implied by the trigger test is not valid.

In contrast, our Direct Testimony provides an economic explanation of how to apply the triggers in a meaningful way. This depends upon (1) adopting an appropriate geographic area for the relevant market; and (2) appropriately qualifying CLECs as "triggering" firms.

As we explain further below, Qwest's trigger analysis fails to demonstrate non-impairment if one properly evaluates the evidence of mass market competition even in the MSA markets where Mr. Shooshan and Mr. Reynolds argue that the self-provisioning triggers have been satisfied.

B. UNEs remain necessary to promote efficient competition in Washington

Q. PLEASE COMMENT ON MR. SHOOSHAN'S IMPLICIT ARGUMENT THAT UNE COMPETITION IS UNDESIRABLE OR LESS EFFICIENT THAN FACILITIES-BASED COMPETITION.

A. As we explained in our Direct Testimony, the Act recognizes that local telephone competition can occur in a variety of modes, ranging from facilities-based to partial-facilities-based to resale competition. Mr. Shooshan is incorrect when he argues as if the only real competition is facilities-based competition. The Act wisely did not specify a preference for a particular mode of competition because consumers benefit from all types of competition – wholesale and retail, facilities-

based and resale. Which mode of business is most efficient will depend upon the circumstances, and it is likely that all of these alternative forms of entry may be efficient and viable, and in the public interest.

When there is already adequate capacity, investment in excess capacity would be inefficient and contrary to the public interest. For example, no one is arguing about the fact that CLECs continue to require access to ILEC loops to avoid being impaired. Everyone recognizes that it would be inefficient to try and induce CLECs to overbuild the ILECs' ubiquitous copper loop infrastructure in the foreseeable future. Thus, the debate is not about whether facilities-based competition is *superior*, but whether it is economically viable without access to particular UNEs. UNEs complement CLEC entry in all its forms, including facilities-based entry.

Appropriate UNE policy needs to ensure that UNEs are priced at appropriate per-unit TELRIC levels to ensure that CLECs make efficient choices when deciding between leasing Qwest facilities or investing in their own networks. When investing in CLEC facilities is economically viable, CLECs have an obvious preference to invest in order to benefit from the important strategic benefits they derive from controlling their network facilities and from reducing their dependence upon their dominant competitor, Qwest.

UNEs complement facilities-based investment and have played a critical role in facilitating the emergence of the limited CLEC competition we see today. For

example, as of December 2002, CLECs accounted for 13 percent of end-user lines nationwide (but only 10 percent of end-user lines in Washington); however, less than 4 percent of end-user lines are served over CLEC-owned facilities – and the percent for mass market customers is even smaller.[19] If UNEs were eliminated as advocated by Mr. Shooshan, most of the competition that exists today would disappear.

Furthermore, contrary to what Mr. Shooshan seeks to imply, UNE competition is certainly not low risk.[20] The numerous CLEC bankruptcies that have occurred since 2000 and the billions of dollars lost by CLEC investors provides ample evidence that Mr. Shooshan is incorrect. Since 1996, CLECs have invested over $71-billion nationwide.[21] When UNEs are appropriately priced at appropriate per unit TELRIC levels, UNE rates provide full compensation for all costs *including a risk-adjusted return* for investors.[22]

[19] As of December 2002, CLECs served 6,396k lines nationwide using their own facilities out of 187,509k total end-user lines nationwide. That represents 3.4% of the end-user lines. Because most of the lines served by CLECs are for business customers, the share of mass market residential and small business lines served by CLECs using their own facilities is much smaller (see Table 3 and 6 in *Local Telephone Competition: Status as of December 31, 2002*, Federal Communications Commission, June 2003).
[20] *See* Shooshan at 16, 32.
[21] Association for Local Telecommunications Services, *The State of Local Competition*, April 2003.
[22] See R. Glenn Hubbard and William H. Lehr, "TELRIC and the Cost of Capital," white paper prepared on behalf of AT&T for *ex parte* submission to the FCC, December 2003.

Q. PLEASE COMMENT ON WHY YOU BELIEVE MR. SHOOSHAN'S IMPLICIT ARGUMENT THAT UNE-BASED COMPETITION IS UNDESIRABLE.

A. In many – perhaps even most – US industries, there is far less competition at the manufacturing or supply level than there is at the retail level. There are only a handful of oil companies, yet there are tens of thousands of independently-owned gas stations; there are only a few automobile manufacturers, yet there are thousands of car dealerships competing with one another, frequently offering the very same brands of automobiles. It obviously makes no sense to require that in order to sell cars at retail the retailer also has to manufacture them. Indeed, the imposition of such an absurd requirement would instantly transform the highly competitive retail distribution end of the automobile industry into a highly concentrated and vertically integrated retailing sector. Yet that appears to be precisely the vision of the telecommunications industry that Mr. Shooshan espouses.

As he apparently sees it, competition at the retail end user level can only be permitted if the retailer is integrated with the underlying network service producer. And since the prospects for competition in many segments of the network services market – such as local distribution and associated line termination and switching – are far more limited than for competition at the retail level, Mr. Shooshan's vision can only lead to extreme concentration and

ultimately to remonopolization and total vertical integration of all segments of the telecommunications industry. It is simply unthinkable that when Congress described the Telecommunications Act of 1996 as "An Act To promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies,"[23] it could possibly have had Mr. Shooshan's vision in mind.

It is also noteworthy that when the shoe is on the other foot, Mr. Shooshan apparently has no problem with non-facilities-based competition. With the exception of Qwest, which started out life as an interexchange carrier, none of the other RBOCs own nationwide long distance networks, and have each adopted a long distance entry strategy based largely, if not entirely, upon resale to the RBOCs' retail customers of long distance services produced by other carriers. If the only "real" competition is facilities-based competition, then Mr. Shooshan's clients' long distance entry has exactly the same illegitimacy that he seeks to ascribe to non-facilities-based CLECs.

[23] 47 USC 609 (note).

C. MSAs are not the appropriate geographic area over which to assess impairment

Q. DO YOU CONCUR WITH MR. SHOOSHAN'S ARGUMENT THAT THE APPROPRIATE GEOGRAPHIC MARKET AREA FOR ASSESSING IMPAIRMENT SHOULD BE THE MSA?

A. No, we do not. Mr. Shooshan supports choosing the MSA because it offers a "practical" solution.[24] He argues that wire centers are too small because an efficient CLEC would not be able to realize adequate economies of scale and scope entering in a single wire center. We agree that CLEC mass market entry is unlikely to be viable in one or a few wire centers, and that therefore a larger geographic market area should be used to assess impairment. However, we note that the CLEC entry perspective is only one of the perspectives that must be considered when evaluating impairment. It is also important to consider the consumer perspective in order to ensure that competition is not impaired for *any* class of mass market customers (i.e., competition is viable for small business *and* residential customers, *and* is viable in *each* wire center in the defined market).

We support defining the relevant geographic market area as larger than a wire center, but disagree with Mr. Shooshan that an MSA is large enough in Washington. While Mr. Shooshan's arguments explain why a wire center may be

[24] *See* Shooshan at 49. Mr. Reynolds repeats several of Mr. Shooshan's arguments (see Reynolds at 8, 9), but appears to be relying on Mr. Shooshan for an "expert" opinion (see Reynolds at iv).

too small, they fail to support why an MSA is large enough. As Mr. Reynolds correctly notes,[25] when CLECs install switches, they use them to serve customers in a broad geographic area. The area is *not* limited to the boundaries of an MSA. While some of the costs associated with serving mass market customers may be incurred on an MSA basis (e.g., some, but by no means all, advertising costs), other important costs are incurred on an even larger area (e.g., CLEC switching and back-office support functions). Defining the market larger allows scale and scope economies to be realized for these important costs, and is also more likely to reflect the scope of entry of an efficient CLEC seeking to provide service to mass market customers.

Furthermore, from a practicality perspective, it would be better to adhere to the boundaries to a region that already reflects the boundaries used to define telephone local service markets. This will simplify collecting cost and revenue data, and with aggregating wire center data.[26] Therefore, using the LATA as the relevant geographic area for assessing impairment in Washington would be both more practical and more coincident with the scope of entry for an efficient CLEC.

[25] *See* Reynolds at 9.
[26] Mr. Reynolds notes that wire center boundaries do not match MSA boundaries (see Reynolds at 14).

Q. DO YOU AGREE WITH MR. SHOOSHAN THAT THE ECONOMICS OF SERVING MASS MARKET CUSTOMERS ARE LIKELY TO BE SIMILAR ACROSS THE DIFFERENT WIRE CENTERS INCLUDED IN THE MSA?

A. No. The costs of serving mass market customers using CLEC-provided switching depends, in part, upon the costs of connecting the CLEC switch to the UNE-L loop which terminates in a particular wire center. These costs vary, in part, based upon the number of mass market loops that are expected to be served in the wire center and the distance the wire center is from the CLEC switch. Additionally, customers in different wire centers may offer different per customer revenue profiles. Without examining the business case for providing service to different collections of wire centers, it is not possible to conclude (as Mr. Shooshan does) that the economics do not vary. The evidence that actual CLEC competition is geographically localized provides convincing empirical evidence that the economics *do* vary across wire centers.

Although the economics of serving mass market customers are likely to vary across a geographic area as large as a LATA, this is also true if one uses an MSA as the relevant geographic area. This does not mean that the wire center should be used as the relevant market, but rather that the Commission should consider suitably granular data (i.e., wire center-specific data) when assessing both actual competition (trigger test) and potential competition (business case). In the context

of the trigger test, this means that CLECs need to be qualified as we explained in our Direct Testimony before counting them toward satisfying the trigger test if the market is defined to encompass a large geographic area across which the economics of serving mass market customers can reasonably be expected to vary.

Q. PLEASE COMMENT ON THE RELATIONSHIP BETWEEN MR. SHOOSHAN'S DISCUSSION OF HOW THE MARKET SHOULD BE DEFINED AND HIS SUBSEQUENT DISCUSSION OF THE TRIGGERS AND THE ANALYSIS OF POTENTIAL COMPETITION.

A. As we explained above, Mr. Shooshan fails to provide an adequate economic justification for why the MSA would be the appropriate geographic market area. In addition, Mr. Shooshan acts as if the market definition exercise can be undertaken independently from the analysis of actual (trigger test) and potential (business case) competition. To apply the impairment analysis in a logically consistent and economically sound way, all three parts of the analysis must be consistent. If the geographic area is defined to be as large as an MSA or larger, then it is necessary to consider whether it is appropriate to count particular CLECs towards meeting the self-provisioning trigger.

D. Intermodal competitors should not be counted toward meeting the triggers

Q. PLEASE COMMENT ON QWEST'S ARGUMENT THAT CABLE COMPANIES OUGHT TO BE COUNTED TOWARDS MEETING THE TRIGGERS.

A. Mr. Shooshan and Mr. Reynolds count cable companies that provide cable telephony services towards meeting the trigger threshold. This is not appropriate. Even when the cable company is certified as a CLEC, it is not appropriate to count a cable company as a trigger-qualifying firm.

First, cable telephony is too new a service to be regarded as of comparable maturity and quality to the fixed line services offered by Qwest. Nationally, there are less than 3 million cable telephony customers. While we hope that cable telephony will provide an important source of competition for the incumbent Qwest in the future, the goal of these proceedings is *not* to control Qwest's market power but to ensure that CLEC competition (beyond just that which may be offered by a cable company) remains economically viable if unbundled switching is no longer available.

Second, the "cable telephony" business case does not demonstrate that a traditional CLEC would not be impaired without access to unbundled switching. Constructing a cable television network and then adding cable telephony services

to that network is not a business strategy that is generally available to efficient CLECs. Therefore, the fact that some cable companies in some locales find it advantageous to offer local telephone services does not support the conclusion that additional CLEC entry is viable without UNEs. Since the footprint of cable networks does not generally coincide with MSA boundaries, Qwest's advocacy of counting cable carriers as "trigger" firms is inconsistent with Mr. Shooshan's argument for adopting the MSA as the relevant geographic area for assessing impairment.

Q. PLEASE COMMENT ON THE RELEVANCE OF COMPETITION FROM VOIP SERVICES OR FROM WIRELESS SERVICE PROVIDERS?

A. Mr. Shooshan does not argue for counting wireless providers as trigger firms. We agree, and so such competition is irrelevant to the impairment analysis. The arguments against included mobile wireless providers or Voice over IP (VoIP) services in the impairment analysis are similar to the arguments cited above as to why cable telephony providers should be excluded, but are even more applicable with respect to these technologies.

Although mobile services are now widespread, the instances where mobile phone service is serving as an adequate substitute for fixed line service remain marginal. Additionally, there are substantial entry barriers associated with becoming a mobile carrier in order to compete as a CLEC in the market for fixed telephony services (e.g., you have to have a spectrum license). In the case of VoIP, the

services are too new and the future of these services remains too uncertain to regard them as a viable substitute for the POTS services offered by Qwest. In any case, most of the VoIP services that are being used are being used as for long distance domestic and international calling, not as a substitute for local calling services.

Collecting information on the extent of such services in Washington is useful as part of the effort to assess the economics of local telecommunication markets in Washington, but the fact that service providers are offering mobile telephone or VoIP services to consumers, does not demonstrate that CLECs would be unimpaired without access to unbundled switching.

III. TRIGGER TESTS FAIL IN WASHINGTON MSAS

A. The trigger test is not a simplistic counting exercise as employed by Mr. Shooshan and Mr. Reynolds

Q. PLEASE COMMENT ON THE APPLICATION OF THE TRIGGER TEST BY MR. SHOOSHAN AND MR. REYNOLDS.

A. Mr. Shooshan's and Mr. Reynolds' application of the trigger test is inconsistent with the TRO's impairment standard. As we explained in our direct testimony, the TRO's impairment standard is intended to provide a basis for assessing whether an efficient CLEC would face economic entry barriers if UNEs are not available. Mr. Shooshan and Mr. Reynolds do not consider whether the evidence

of actual CLEC competition provides an adequate basis for determining whether entry is viable throughout an MSA.

There approach is inconsistent because it ignores data of actual competition that if considered would suggest that entry barriers *do* exist, while application of their approach would allow the triggers to be satisfied and therefore produce a contrary and inconsistent conclusion.

To understand why Qwest's approach is incorrect, it is worthwhile to consider the following example of a hypothetical MSA:

> There are 30 wire centers in the MSA.
>
> In 29 wire centers there is no CLEC competition.
>
> In the remaining single wire center there are exactly two CLECs, each of which is providing service to a single DS0 customer using the CLEC's switch. The two customers happen to be senior executives of enterprise accounts that are the sole business focus of the two CLECs.
>
> In the area that includes the single wire center, there is a cable TV provider that is offering cable telephony services, but has yet to sign up a single customer.

If the above represented an MSA in Washington, Mr. Reynolds and Mr. Shooshan would conclude there are three CLECs in that MSA and, hence, that the trigger test is satisfied. They would have the Commission reach a finding of "no impairment" without further consideration when, in fact, the distribution of

"actual" competition implies that CLECs face significant barriers to entry throughout the MSA. That such an absurd finding is consistent with the approach advocated by Qwest demonstrates that it is not correct.

Whether the above scenario actually fits any MSA is irrelevant since were the Commission to adopt the approach advocated by Qwest, the distribution of actual competition would never even be considered. Fortunately, partial data on the actual distribution of competition has been provided on a wire center-by-wire center basis. We will explain below why we conclude that this evidence indicates that the triggers fail in all six of the MSAs analyzed by Qwest.

Before turning to this discussion, it is important to reiterate that to adequately incorporate both the CLEC entry perspective and the customer perspective in the impairment assessment, the analysis of impairment must consider suitably granular data and the triggers must be applied in a way that allows one to conclude that the *evidence of actual competition really provides an adequate basis for inferring that additional potential CLEC competition would not face economic barriers to entry throughout the geographic market as defined.*

B. Evidence of actual competition fails to satisfy the trigger test in Washington MSAs

Q. IS THE SELF-PROVISIONING TRIGGER TEST FOR UNBUNDLED SWITCHING TO SERVE MASS MARKET CUSTOMERS SATISFIED IN ANY MSA IN WASHINGTON?

A. No. Qwest only alleges that the self-provisioning trigger is met in three MSAs: the Seattle, Tacoma, and Vancouver MSAs. They reach this conclusion based upon the total count of unaffiliated CLECs serving customers with three or fewer DS0 lines (i.e., mass market customers as defined by Qwest) using CLEC-owned switching. Even in the three MSAs that Qwest argues satisfy the triggers, the triggers are not satisfied. As discussed more thoroughly in the testimony of Natalie Baker,[27] the data summarized by Mr. Shooshan and Mr. Reynolds demonstrates that there are *not* three qualifying CLECs providing service to mass market customers throughout the MSA.

Although Mr. Reynolds ignores the data when applying the trigger test, the data on actual competition that Qwest presents allows one to infer the geographic distribution of competition within each MSA. This is important, because as the testimony of Mr. John Finnegan demonstrates, the competition offered by CLECs

[27] *See* Responsive Testimony of John Finnegan on Behalf of AT&T Communications, *In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order*, Before the Washington Utilities and Transportation Commission, February 2, 2004.

in Washington is geographically localized within each MSA and CLECs collectively (and, of course, each CLEC individually) serve only a very small number of mass market customers using CLEC-switching in any MSA. The limited evidence of actual CLEC facilities-based competition suggests that economic barriers to entry *do exist* for using CLEC switching to serve mass market customers with UNE-L.

Q. IN YOUR DIRECT TESTIMONY, YOU INDICATED THAT TO QUALIFY AS A TRIGGERING CLEC AS DESCRIBED AT PARAGRAPH 499 OF THE TRO, "ONLY CLECS THAT ARE PRESENTLY OFFERING BASIC TELEPHONE SERVICE TO MASS MARKET CUSTOMERS WITHOUT UNBUNDLED SWITCHING AND AS MORE THAN AN INCIDENTAL ELEMENT OF THE CLEC'S BUSINESS PLAN SHOULD BE COUNTED TOWARDS MEETING THE TRIGGER." IN REVIEWING THE TESTIMONY OF MR. REYNOLDS, DID YOU IDENTIFY ANY DATA THAT PERTAINS TO THE QUESTION OF HOW MANY OF THE CLECS HE PROFFERS AS "TRIGGERS" ARE ACTUALLY SERVING MORE THAN AN INCIDENTAL NUMBER OF MASS MARKET CUSTOMERS VIA UNE-L?

A. Yes. Mr. Reynolds relies upon information regarding listings for CLEC customers in a confidential E-911 database, managed by a Qwest contractor, to arrive at his estimate for the number of CLEC mass market customers served via

UNE-L. However, the inferences that Mr. Reynolds draws from the E-911 records are not correct.

Mr. Reynolds argues that E-911 listings for residential customers not served by Qwest are necessarily associated with mass market customers served over CLEC loops, since CLEC customers served via a UNE-P arrangement show up in the E-911 database as Qwest lines. But the vast majority of the E-911 listings that he has attributed to CLECs using their own switching facilities are not associated with the mass market customers of those CLECs that are currently utilizing Qwest-provided UNE loops with their own switches. They are, instead, customers who receive their telephone service from cable television providers.

Q. HOW DID YOU ARRIVE AT THIS CONCLUSION?

A. Mr. Reynolds concludes, based upon the E-911 data, that CLECs have over BEGIN CONFIDENTIAL [redacted] END CONFIDENTIAL residential customers in the Seattle, Tacoma and Vancouver MSAs.[28] However, according to Mr. Reynolds' Exhibit MSR-6HC, Qwest currently provides only about BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL UNE loops for mass market customers (including small business in addition to residential customers) in those same three MSAs. Mr. Reynolds' Exhibit MSR-6HC also identifies BEGIN HIGHLY CONFIDENTIAL [redacted] END

[28] Reynolds Exhibit MSR-3C

HIGHLY CONFIDENTIAL CLECs with NXX codes registered in a large number of rate centers but who are not using any Qwest mass market UNE-Ls at all.

The most likely explanation for the gap between the E-911 numbers and the quantity of mass market UNE-Ls is that the vast majority of the residential customers in the E-911 database – i.e., BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL – who are not included in the Qwest access line count are not CLEC customers served via CLEC switching and UNE-L, but rather are customers who receive their dial tone telephone service from cable companies. We would also note that while the E-911 figures that were presented by Mr. Reynolds were specifically characterized as "residential" subscribers, the UNE-L counts are for *all* mass market customers, which includes residential customers as well as business customers with three or fewer access lines. Qwest has provided no information as to whether those UNE-Ls are associated with residential or with small business customers. Thus, the maximum number of residential customers currently being served by UNE-L CLECs is BEGIN HIGH CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL, but in fact the actual number could be as low as zero.

Moreover, according to Mr. Reynolds' Exhibit 6HC, those BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL mass market UNE-Ls are spread across BEGIN HIGHLY CONFIDENTIAL [redacted] END

HIGHLY CONFIDENTIAL different Qwest wire centers and among BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL different CLECs. The largest number of mass market UNE-Ls for any one CLEC in any one Qwest wire center is BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL, representing only BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL of total Qwest installed access lines in that wire center. The smallest number of CLEC UNE-Ls is BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL, representing only BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL of total Qwest installed access lines in that wire center. In terms of the percentage of UNE-Ls in any one wire center, the largest CLEC penetration, for all CLECs combined, is BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL. Table 1 below summarizes the presence of UNE-L CLECs in Qwest wire centers in the Seattle, Tacoma and Vancouver MSAs. As Table 1 shows, even in the largest MSA (Seattle), there are fewer than three CLECs in BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL of Qwest's 26 wire centers. And in each of the Tacoma and Vancouver MSAs, there are three or more CLECs with a UNE-L presence in BEGIN HIGHLY

CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL Qwest wire center.

Table 1

Distribution of Mass Market UNE-L CLECs by MSAs in Washington

MSA	Qwest Wire centers	Qwest Wire Centers with 1 CLEC	Qwest Wire Centers with 2 CLECs	Qwest Wire Centers with 3+ CLECs
Seattle	26	[redacted]	[redacted]	[redacted]
Tacoma	16	[redacted]	[redacted]	[redacted]
Vancouver	5	[redacted]	[redacted]	[redacted]

Source: Exhibit MSR-6HC

Some of these CLECs have been providing mass market services in Washington for several years, and yet, as Table 2 demonstrates, their *combined* UNE-L penetration rates across the entire MSA are typically in the BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL range.

Table 2

Distribution of Mass Market UNE-Ls by MSAs in Washington

MSA	Qwest Installed Access Lines	Number of CLECS	CLEC Mass Market UNE-Ls	CLEC Mass Market UNE-L Share
Seattle	[redacted]	[redacted]	[redacted]	[redacted]
Tacoma	[redacted]	[redacted]	[redacted]	[redacted]
Vancouver	[redacted]	[redacted]	[redacted]	[redacted]

Source: Exhibit MSR-6HC, Qwest response to AT&T 01-005, Attachment C

Q. IN HIS TESTIMONY, MR. FINNEGAN OBSERVES THAT ALLEGIANCE IS LIKELY TO BECOME AN AFFILIATE OF QWEST AND THAT SBC'S ENTRY INTO THE WASHINGTON MARKET IS INFLUENCED, IF NOT DRIVEN ENTIRELY, BY THE GOAL OF AVOIDING A $40-MILLION FINE. WHAT IS THE EFFECT OF REMOVING THESE TWO CLECS FROM YOUR TABLES 1 AND 2 ANALYSIS?

A. Although SBC's mass market UNE-L presence in Washington is incredibly tiny (with only about BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL mass market UNE-Ls spread across BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL Qwest wire centers in the Seattle MSA), Allegiance accounts for roughly BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL of all CLEC mass market UNE-Ls in the three candidate MSAs, and nearly BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL of CLEC mass market UNE-Ls in the Seattle MSA. Elimination of these two CLECs as potential triggering firms reduces the total CLEC mass market UNE-L share to slightly more than three-tenths of one percent.

Tables 1a and 2a below recast Tables 1 and 2 to exclude Allegiance and SBC. When the total CLEC mass market UNE-L shares are spread among all of the CLECs in each MSA, the resulting per-CLEC shares are so incredibly minuscule

that there is no credible economic basis to infer, as the FCC's trigger test requires, that their presence *proves* the economic viability of UNE-L.

Table 1a

Distribution of Mass Market UNE-L CLECs by MSAs in Washington (excluding Allegiance and SBC)

MSA	Qwest Wire centers	Qwest Wire Centers with 1 CLEC	Qwest Wire Centers with 2 CLECs	Qwest Wire Centers with 3+ CLECs
Seattle	26	[redacted]	[redacted]	[redacted]
Tacoma	16	[redacted]	[redacted]	[redacted]
Vancouver	5	[redacted]	[redacted]	[redacted]

Source: Exhibit MSR-6HC

Table 2a

Distribution of Mass Market UNE-Ls by MSAs in Washington (excluding Allegiance and SBC)

MSA	Qwest Installed Access Lines	Number of CLECS	CLEC Mass Market UNE-Ls	CLEC Mass Market UNE-L Share
Seattle	[redacted]	[redacted]	[redacted]	[redacted]
Tacoma	[redacted]	[redacted]	[redacted]	[redacted]
Vancouver	[redacted]	[redacted]	[redacted]	[redacted]

Source: Exhibit MSR-6HC, Qwest response to AT&T 01-005, Attachment C

Table 3 provides wire center level data for each of the Qwest wire centers in the three MSAs, and demonstrates the *de minimus* presence of mass market UNE-L CLECs in virtually all of them. Inasmuch as Qwest's UNE-L business case model assumes per-CLEC UNE-L shares starting out at 1% and increasing to 5%,

none of the existing CLECs or, for that matter, all of the UNE-L CLECs *combined*, comes even remotely close to satisfying the CPRO Year 1 share assumption, let alone the share that would be commensurate with the CLEC's longevity in Washington. If these actual shares were substituted for the hypothesized levels used by Qwest in the CPRO model, we have no doubt that the NPV would be decidedly negative.

Q. WHAT DO YOU CONCLUDE FROM THIS ANALYSIS?

A. We conclude that Qwest's interpretation and application of the triggers does not support a conclusion that the presence of a few CLECs serving an incidental number of mass market customers via UNE-L can be advanced as proving the economic viability of a UNE-L business model. Accordingly, the trigger cannot be used as a basis for concluding that CLECs in the Seattle, Tacoma and Vancouver MSAs are not impaired.

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Q. WHAT SHOULD THE COMMISSION CONCLUDE WITH RESPECT TO THE OTHER PARTS OF QWEST'S SERVING AREAS OUTSIDE OF THE THREE MSAS THEY ALLEGE MEET THE TRIGGER TEST?

A. Because even Qwest does not seek to argue that actual facilities-based competition is sufficient to demonstrate a lack of entry barriers, the Commission may safely conclude that the self-provisioning triggers fail for these areas as well. Qwest's own evidence confirms that the CLECs being proffered as "triggering firms" are in fact serving a *de minimus* number of mass market customers via UNE-L and their own switching.

IV. ANALYSIS OF POTENTIAL COMPETITION CONFIRMS FINDING OF IMPAIRMENT

A. The seemingly positive CLEC business case that Qwest has developed with its "CLEC Profitability Model" is the result of extraordinarily unrealistic and unsupported inputs and assumptions that, when corrected, produce exactly the opposite result.

Q. PLEASE SUMMARIZE YOUR OVERALL OPINION AS TO THE MERITS OF THE BUSINESS CASE THAT QWEST HAS PRESENTED IN SUPPORT OF ITS CLAIM THAT POTENTIAL COMPETITION IS ECONOMICALLY VIABLE IN WASHINGTON WITHOUT ACCESS TO UNBUNDLED SWITCHING.

A. Qwest's business case analysis of potential competition is fatally flawed and produces incorrect conclusions. However, when certain of these errors are partially corrected, Qwest's own model shows that efficient CLEC competition

for mass market customers is not economically viable in Washington without access to unbundled switching. The Qwest business case is set forth in the testimony of Mr. Copeland who presents the so-called *CLEC Profitability Model* ("CPRO").[29] This model purports to demonstrate that a start-up CLEC would find it profitable to serve mass-market customers using its own switch in each of the six MSAs where Qwest is seeking a finding of non-impairment.[30] The CPRO seeks to compute the net present value (NPV) of the cash flows from a twenty-five year business model of the hypothetical CLEC's business case, and finds in its "base case" that the NPV is positive for each of the six MSAs. From this, Mr. Copeland concludes that potential deployment is economically viable.

The model's structure is superficially reasonable; however, on closer inspection it is clear why the model produces the incorrect results that it does. The modeling faults are numerous, and include:

(1) The CPRO makes unreasonable assumptions regarding the entry strategy that would be made by an efficient CLEC;

(2) The CPRO does not attempt to demonstrate that it is economically viable to serve mass market customers throughout the MSA (nor

[29] *See* Copeland at 1.
[30] This includes the three MSAs in which Qwest argues that the trigger test has been met (Seattle, Tacoma, and the Vancouver portion of the Portland-Vancouver MSA), as well three other MSAs in Washington (Bremerton, Olympia, and Bellingham).

elsewhere in the LATA, outside of the MSAs that Qwest chooses to model);

(3) The CPRO is structurally flawed and poorly supported, making it unacceptable as a business case for assessing impairment; and,

(4) The CPRO relies upon unrealistic input assumptions that guarantee that, even if the other faults were corrected, the results would still be incorrect.

Q. HAVE YOU EXAMINED THE FINANCIAL AND OTHER ASSUMPTIONS THAT MR. COPELAND DESCRIBES AS BEING USED IN THE CPRO, AND IF SO, CAN YOU COMMENT ON THOSE ASSUMPTIONS?

A. Yes, we have examined the assumptions. Although superficially, the CPRO appears reasonable in attempting to simulate the financial mechanics of a CLEC's business operations, the specific results reported by Mr. Copeland are critically dependent upon a number of assumptions and input values that are unrealistic and internally inconsistent, and in any event, are unsupported by substantive facts or evidence. On closer inspection, the input values and assumptions are biased so as to consistently understate costs and overstate revenues, thereby rigging the model to ensure that the results support Qwest's desired outcome. Mr. Copeland has virtually *guaranteed* that his model will paint a far rosier picture of the CLEC UNE-L business case than in fact exists. Moreover, the inputs that Mr. Copeland

has specified violate a core principle that he himself emphasizes, namely that all of the assumptions for the model are interrelated and thus must be internally consistent.[31] Many of Mr. Copeland's assumptions fail to meet this reasonable standard.

Q. CAN YOU DESCRIBE SOME OF THE PRINCIPAL ERRORS THAT YOU HAVE IDENTIFIED IN MR. COPELAND'S FINANCIAL ASSUMPTIONS?

A. The Qwest CPRO model incorporates the following, seriously flawed and entirely unsupported input assumptions:

The CPRO assumes an absurdly long 25-year investment recovery horizon.

The CPRO significantly overstates revenues because it:

Assumes that all of the CLEC's customers subscribe to either a flat-rate or other bundle of local and limited long distance service, thereby grossly overstating expected average per-customer revenues that the CLEC could reasonably anticipate realizing.

Assumes excessive revenue contributions from long distance and other services.

[31] *See* Copeland at 38-39.

Assumes that prices will remain constant over the entire 25-year planning horizon, when in fact competition and cost reductions from further technical innovation can be expected to push prices down.

Assumes that the aggregate market volume of services such as long distance calling will remain constant over the entire 25-year planning horizon, completely ignoring the impact of the intermodal competition that other Qwest experts like Mr. Shooshan and Mr. Reynolds are so keen to argue will be common.

Assumes that CLECs will capture an unrealistically large market share without any support for the assumption and in contradiction to the evidence provided by actual CLEC competition.

Assumes that the CLEC business plan will ramp-up excessively quickly, thereby realizing scale and scope economies and larger revenues sooner than is reasonable. This has the net effect of inflating the NPV of the business case.

The per-customer acquisition costs assumed in the CPRO are too low to be consistent with the aggressive ramp-up and market share assumptions, and are unrealistically low for a CLEC starting up in a market without a brand name and in the face of an entrenched incumbent.

Assumes that customer churn will be unrealistically low, which contributes to understating aggregate customer acquisition costs.

B. Mr. Copeland's inputs and assumptions regarding CLEC revenue, customer churn, customer acquisition cost, and market share are internally inconsistent and violate his own admonition that the complex interrelationships among these factors be accurately considered.

Q. ARE THESE AND OTHER PROBLEMS WITH THE CPRO ALSO ADDRESSED BY MR. BARANOWSKI?

A. Yes. The testimony of Michael Baranowski details various problems with the CPRO model and the results presented by Mr. Copeland. The problems we have summarized demonstrate why the business case results provided by Mr. Copeland are not reasonable. Moreover, as we explain further below, when those problems that can be fixed are fixed (e.g., more appropriate input assumptions are substituted for the faulty input data relied upon by Mr. Copeland), the CPRO supports a finding of impairment.

Q. WHY ARE THESE ASSUMPTIONS UNREALISTIC?

A. To answer that, we will need to examine each of the assumptions individually and also in combination, since part of the problem arises because Mr. Copeland has ignored the very types of interactions and interrelationships that must be considered if one is to develop an internally consistent set of input assumptions as Mr. Copeland himself stresses. According to Mr. Copeland:

> To produce accurate estimates of the value of entry, input values should be as realistic as possible and consistent with the purpose of the analysis, the publicly available facts and the values of other inputs. ... The values for revenue per line, customer acquisition cost, market share and churn are interrelated in the real world, and

> values for these inputs were selected such that they are consistent with each other, the TRO, the best publicly available facts, and my intent to use conservative assumption, in order to lend a high level of confidence to the results. ...A firm that sets lower prices will, all else being equal, achieve higher market shares and have lower churn rates; a firm that spends more on customer acquisition will achieve a higher market share and achieve it more quickly.[32]

However, we see little evidence that Mr. Copeland has followed his own advice. Mr. Copeland never explains how and to what extent each of the various values that he selects for key model inputs are related to other key inputs, and when he tests the sensitivity of his model, he varies each input independently. Contrary to what he advocates, many of the input assumptions for Mr. Copeland's model are internally inconsistent. If by the testimony cited above Mr. Copeland was seeking to portray the CPRO as incorporating these interactions into its analysis, then he was clearly exaggerating the model's design and capabilities. In response to an AT&T interrogatory, Mr. Copeland conceded that:

> The CPRO model has inputs for prices, market share, customer churn, and customer acquisition costs. The model does not have any reaction functions that change the value of one of the inputs based on changes to one of the other inputs. The developers of CPRO have not completed any studies to quantify the relationship between these variables at this time. ...[33]

[32] Copeland at 38-39.
[33] Qwest response to AT&T 02-135.

Q. PLEASE DESCRIBE HOW THE INPUTS CHOSEN BY MR. COPELAND FAIL TO EXEMPLIFY THE CONSISTENCY THAT HE CLAIMS IS SO IMPORTANT TO HIS ANALYSIS.

A. A prime example of this problem is the fundamental disconnect between the revenue profile that Mr. Copeland portrays and the other assumptions in his model. Mr. Copeland assumes that all customers who take local service from a CLEC will be the "cream" of the customer crop. Mr. Copeland's explanation is that since MCI has had success in marketing "The Neighborhood" and other CLECs have offered similar bundled plans, it is "reasonable" to assume that the CLEC being modeled would also go after the high-revenue, bundled service customers. Mr. Copeland does not account for the business models of other CLECs, like AT&T, that also offer stand-alone local exchange service options with *a la carte* pricing of long distance and vertical features and, as we discuss in more detail later on, the per-customer revenue assumed by Mr. Copeland is unrealistic. However, Mr. Copeland compounds this error by failing to adjust his other assumptions – with respect to market share, churn, and acquisition costs – to be consistent with the exclusive, high-revenue-customer base he chooses to model. Any business can make the decision only to go after high-end customers, but such a decision has direct implications for the business' costs and market growth opportunities. Also, if *every* new competitor were to target only the upper end of the customer spectrum, the head-to-head competition for such customers

would limit the market share that any one company would be able to acquire and would drive up the costs of obtaining the "best" customers.

Q. IN WHAT RESPECT IS QWEST'S REVENUE ASSUMPTION INCONSISTENT WITH ITS MARKET SHARE ASSUMPTIONS?

A. While MCI may have targeted the highest-revenue residential subscribers when it introduced "The Neighborhood" in 2002, there simply are not enough of these potential customers out there to meet the market share assumed for purposes of Qwest's model. Qwest is assuming that its hypothetical CLEC will achieve a market share of 5% after five years. But Qwest is also assuming, at least implicitly, that there will be at least four CLECs,[34] each one of which will possess at least a 5% share as of that date. In effect, then, Qwest's assumption that CLEC residential customers will take a high-revenue bundle[35] is equivalent to saying that at least 20% of consumers in the market will subscribe to such premium service B and that doesn't even include the ILECs' customers.

This market share projection for high-revenue bundles far exceeds the experience of the industry to date, despite aggressive market efforts. According to *The Wall*

[34] *i.e.,* three trigger-satisfying UNE-L CLECs plus the cable telephony provider.
[35] For purposes of the CPRO for Washington, Qwest assumes that 60% of all CLEC residential customers spend $49.99 per month for a rate plan similar to MCI's "The Neighborhood Complete," which includes unlimited local service, some vertical services, and unlimited long distance, and that the remaining 40% of CLEC residential customers spend $33.99 for a rate plan similar to MCI's "The Neighborhood Advantage," which also includes unlimited local use, vertical services, and 200 minutes of toll use, with additional toll use priced at $0.05/minute. The weighted average of these rates is $43.59. This does not include the $3.00 in "additional" revenues that Qwest also includes.

Street Journal, MCI had signed up about 3-million "The Neighborhood" customers between the April 2002 launch and November 2003, and that AT&T had attracted 415,000 "One Rate USA" customers since introducing that service in April 2003. MCI's bundle was the first to be introduced (i.e., predating the RBOCs' unlimited long distance packages). BellSouth, which has been offering long distance service in a number of its states for less than one year, reported that as of the end of December 2003 it had signed up some 3.9-million mass market subscribers, or about 30% of its local service customer base, for its long distance service, but that only about 1-million of these had elected the unlimited service bundle. If CLECs are collectively to attract as much as a 20% share of all mass market customers, they will need to be serving a broad cross-section of the market, and will simply not be able to limit their offering solely to the highest-priced bundles.

Q. HOW IS MR. COPELAND'S ASSUMPTION ABOUT CLECS' HIGH-REVENUE CUSTOMER BASE INCONSISTENT WITH HIS CHURN AND CUSTOMER ACQUISITION COST ASSUMPTIONS?

A. If the hypothetical CLEC is assumed to be targeting only the highest revenue, local/long distance bundle customers, then the 3% monthly churn that Mr. Copeland has assumed is highly unrealistic, because it is precisely these same customers who are being regularly targeted by competing CLECs and by BOCs with a variety of inducements, such as cash and airline miles, to switch carriers.

The November 7, 2003 *Wall Street Journal* reported that MCI "loses about half its new [The Neighborhood] customers within the first six months, though turnover drops after that."[36] The same article, which we have provided as Exhibit WHL-5, quotes a Merrill Lynch telecommunications analyst as saying that "turnover in bundled plans offered by Bell rivals is as high as 8% a month – or nearly 100% in a year – in some highly competitive areas." It is possible that overall CLEC churn rates are lower (although we doubt that they are as low as the undocumented 3% per month figure that Qwest had input to its model), but if Qwest is to assume (incorrectly) that all CLEC residential customers take a high-priced bundle, then it must use a churn rate that is consistent with that assumption.

There is a similar inconsistently with respect to Qwest's use of $120 as representing the per-customer acquisition cost that the hypothetical CLEC would confront. While $120 might represent the average acquisition cost for an average CLEC customer, it is likely that the acquisition cost for a high-revenue bundled service customer is considerably higher. For example, AT&T is offering a cash signing bonus of $75 to residential customers who sign up for its "One Rate USA" bundle (see Exhibit WHL-6). However, for a local service plan without unlimited long distance, AT&T's signing bonus is only $35, (i.e., $40 less than for the bundled plan (also shown in Exhibit WHL-6)). Also included in Exhibit

[36] "Phone-Service Bundles Could Backfire as Customers Switch," *Wall Street Journal*, November 7, 2003.

WHL-6 is an offer from MCI for 10,000 Northwest Airlines miles (representing a cost to MCI in the range of $100) for signing up for The Neighborhood.[37]

Q. WHAT ARE THE CONSEQUENCES OF QWEST'S FAILURE TO PROPERLY CONSIDER THE INTERACTIONS AMONG AVERAGE REVENUES, AVERAGE CHURN, MARKET SHARE, AND CUSTOMER ACQUISITION COST?

A. The grossly exaggerated revenues being assumed in the CPRO model work to produce an excessive discounted present value of the modeled CLEC. As Mr. Baranowski demonstrates, when Mr. Copeland's revenue assumptions are replaced with more realistic amounts – and even without the various other necessary corrections to Qwest's assumptions – the enterprise value becomes decidedly negative.

Q. HOW DO THE CHURN AND CUSTOMER ACQUISITION COST ASSUMPTIONS AFFECT THE CALCULATED CLEC ENTERPRISE VALUE?

A. Holding the assumed rate of market share growth unchanged, increased churn means that more cash will need to be expended to *replace* customers who have

[37] Interestingly, Verizon's promotion for its unlimited local/long distance bundle, Verizon Freedom, does not include any signing bonus, further underscoring the disadvantage CLECs confront relative to ILECs with respect to customer acquisition efforts (and belying the implication in Mr. Copeland's testimony [see PBC-4C (Redacted) at §4.2.4] that CLECs have some inherent advantages in obtaining bundled service customers).

defected to other carriers. By using an unrealistically low churn rate in light of the revenue assumption that Mr. Copeland has adopted, the aggregate customer acquisition costs necessary to maintain the target share growth levels are seriously understated. Additionally, assuming a per-customer acquisition cost that is too low given the per-customer revenue assumption causes aggregate customer acquisition costs to be further understated.

Q. ARE THERE OTHER AREAS OF INCONSISTENCY IN MR. COPELAND'S ASSUMPTIONS THAT RESULT IN UNREALISTIC REVENUE PROJECTIONS?

A. Yes. In addition to starting out with an overly optimistic per-customer revenue level, Mr. Copeland then compounds his exaggeration by also assuming (a) that price levels would remain constant over the entire 25-year time horizon over which the business case is being considered, and (b) that the demand for wireline long distance calling would also remain constant over the entire period. These assumptions are utterly inconsistent with Qwest's claims as to the emergence of competition – and particularly *intermodal competition* from wireless and VoIP, which will grow in the next twenty five year time horizon. While the potential impact of wireless and VoIP on the demand for mass market primary wireline telephone service is far from clear (and has perhaps actually been overstated by Qwest's witnesses), there can be no question that these alternative services are seriously impacting the demand for mass market wireline long distance calling.

Most wireless customers subscribe to calling plans that provide *both* unlimited night and weekend airtime *and* free long distance calling, thus enabling consumers to make most of their long distance calls without any additional charge by using their wireless phones. VoIP services provide a similar capability to customers who have ADSL or cable high-speed Internet access. Even if most residential subscribers retain their primary wireline residential phone service, more and more of them will be less willing to shell out $50 a month for an unlimited long distance plan when they can make as many long distance calls as they want using their cell phones at no additional cost. All of these factors, both individually and collectively, render Mr. Copeland's revenue projections grossly optimistic and certainly unsustainable over the full time frame of the business case model.

C. Mr. Copeland's decision to evaluate the CLEC business case based on a forecast of revenues going out 25 years is completely unrealistic and unsupported.

Q. AT PAGE 11 OF HIS TESTIMONY, MR. COPELAND STATES THAT "A BUSINESS CASE NEEDS TO SIMULATE WHAT IS EXPECTED TO HAPPEN TO A BUSINESS VENTURE OF A REASONABLE PERIOD OF TIME." DO YOU AGREE?

A. Yes.

Q. WHAT IS THE TIME FRAME THAT MR. COPELAND USES FOR PURPOSES OF HIS CLEC PROFITABILITY MODEL?

A. According to Mr. Copeland, the CPRO "projects cash flows for each year for twenty-five years."[38]

Q. WHAT JUSTIFICATION DOES MR. COPELAND GIVE FOR USING A TWENTY-FIVE YEAR PROJECTION OF CLEC CASH FLOWS, AND DOES HIS EXPLANATION SUPPORT THE REASONABLENESS OF THIS CHOICE?

A. Amazingly, he provides no support whatsoever for the adoption of a 25-year time frame. Inasmuch as this is a core assumption and has a significant impact upon the results of the CPRO, it is strange and troubling that Mr. Copeland provides no support for his choice. All he says is that "[a]dopting such a long time horizon ... obviates the need for estimating a terminal value."[39] Clearly, it is not reasonable to pick an excessively long time frame simply to avoid estimating the terminal value in a discounted cash flow analysis. Indeed, the very fact that Mr. Copeland foresees some difficulty in estimating a terminal value serves only to underscore the extraordinarily speculative nature of his 25-year cash flow forecasts.

[38] Copeland at 20.
[39] *Id.*

Q. IF THE MODEL WERE BASED UPON A TEN YEAR TIME FRAME, WOULDN'T IT THEN BE NECESSARY TO ESTIMATE A TERMINAL VALUE FOR THE CLEC, AS MR. COPELAND SUGGESTS?

A. No, and for the very same reason that any explicitly forecast post-year-ten events (of the type that are included in the 25-year CPRO run) would be ignored by investors. A terminal value is nothing more than a mathematical short-cut, and is often included in a DCF model as a short-hand means of extending the time frame of the analysis. However, the use of a terminal value implies a reasonable expectation that the investment or enterprise will have positive value at the end of the analysis period. In the case of a CLEC, there is little basis for making such a prediction, let alone predicting its amount. For one, the vast majority of a CLEC's physical assets (switches, transmission equipment, computers, etc.) will be largely obsolete at the end of ten years and have no market value to speak of at that time. If the firm is able to stay in business for the full period, it will have a going business value, but its magnitude would be entirely speculative. The point we are making here is that investors will look to a shorter time frame than twenty-five years as a basis for determining whether the venture will be profitable. If the DCF is negative when viewed over ten years without inclusion of a terminal value, but would become positive if a terminal value were incorporated into the analysis, it is highly unlikely that investors would afford any weight or

importance to that fact, and would still reject the investment, terminal value notwithstanding.

Q. WHY DOES IT NOT MAKE SENSE TO JUDGE THE VIABILITY OF A CLEC BUSINESS VENTURE OVER A TWENTY-FIVE-YEAR PERIOD?

A. First, and as Mr. Baranowski observes, the CPRO is modeling a *start-up* CLEC, taking it from the date of its initial entry and then projecting its future over a twenty-five year period. Given the extreme uncertainties of the CLEC business even for established firms such as AT&T and MCI, any forecast of a start-up CLEC's future over a twenty-five year time frame can only be characterized as pure fantasy. So once again we have yet another inconsistency, because if the CPRO is modeling a start-up CLEC, it needs to recognize an increasingly uncertain range of potential outcomes as the time frame is extended further and further away from today.

Even for the case of an established CLEC, the degree of uncertainty increases with time, and projections beyond a ten-year time frame are so unreliable as to be of no consequence to any investment decision. Separate and apart from the inherent uncertainties associated with any business venture, the volatility of the telecommunications and information technology industries in particular require that the investment worth of any enterprise be proven in over a period far shorter than the 25 years that Mr. Copeland has used in the CPRO model.

Consider, for example, the enormous technological, competitive, demand, and regulatory changes that have taken place in the telecommunications industry over the past twenty-five years. Indeed, so much that has happened in this industry since 1979 that we could go on for quite a while describing it, so we'll try to provide a general flavor of these changed with a limited number of examples. In 1979, less than a year had passed since the FCC had rejected the "primary instrument" concept, thereby permitting subscribers to obtain telephone service without leasing at least one telephone instrument from their local phone company. Even so, basic local telephone service – which was still the exclusive domain of Bell System operating companies and Independent telcos – included the primary instrument in a bundled monthly rate, and most customers still rented their handsets on a monthly basis from the telco. Twenty-five years ago there was still an integrated Bell System, and no state had authorized local competition.

In 1979, the competitive long distance industry was just starting to emerge, "equal access" was still seven to ten years in the future, AT&T and its Bell System affiliates held close to 100% share of the long distance market, and the price of a ten-minute weekday coast-to-coast long distance call was $3.96.[40] As summed up in the FCC's most recent Trends report,

[40] FCC, Common Carrier Bureau, Industry Analysis Division, *Reference Book of Rate, Price Indices, and Household Expenditures for Telephone Service*, March 1997, Table 13, "*AT&T Interstate Residential Tariff Rates for 10-minute Calls*."

> In 1984, AT&T's toll revenues were about 90% of those reported by all long distance carriers. In 1995, AT&T was classified as a non-dominant carrier and, by 2001, AT&T's revenues had declined to less than 40% of those reported by all long distance carriers. By year end 2001, the RBOC long distance affiliates collectively reported toll revenues representing 6% of the revenues reported by all long distance carriers.[41]

Today, those customers who would have paid $3.96 for a ten-minute coast-to-coast call in 1979 could make that same call for 50 cents or less (assuming they paid per minute), and for many customers the call can be placed without any additional usage-based charge at all.

In 1979, the nationwide licensing and construction of cellular systems for two-way wireless telecommunications was still three to five years away, and commercial use of the Internet was still fifteen years off. The number of households that had cable television service twenty-five years ago is very small fraction of the current subscribership, and the first cable telephony services did not appear until the latter half of the 1990s.

What sort of forecasts of telecommunications demand, prices, competition, or any of the myriad of other factors influencing the outcome of a business case analysis could have been made in 1979 that would even remotely resemble today's conditions? Only a prophet of biblical qualifications could have made such

[41] FCC, Wireline Competition Bureau, Industry Analysis and Technology Division, *Trends in Telephone Service*, August 2003, at 9-3.

forecasts, and even those would doubtless have been controversial and difficult to interpret.

Looking out into the future, there is every indication that the telecommunications industry will continue to undergo a rapid and unpredictable transformation in the first quarter of the twenty-first century. There is much uncertainty about if, when, and to what extent intermodal forms of competition, such as wireless and cable telephony services, will become full-fledged direct competitors of local wireline telephone service. We can expect significant changes in the availability and pricing of broadband services, but we cannot fully predict how this will change the nature of services offered to consumers or their prices. The increasing prevalence of VoIP portends to dramatically alter the telecommunications landscape. Video telephony might finally come into mainstream use, in which case carriers that rely upon voice-grade circuit switching technology (ILECs and CLECs) could well be supplanted altogether by companies that have constructed IP-based broadband networks. And as with the past quarter century, there will almost certainly be new technologies and new services that no one has even thought about today, things that may profoundly affect the economics of the CLEC business in perhaps unimaginable ways.

Since early 2001, no fewer than 44 CLECs, including Worldcom, Global Crossing, XO, and Covad, to name just a few have filed for bankruptcy

protection.[42] While some of the CLECs have been able to reorganize, many simply folded. Financial markets take these negative experiences into account when deciding whether to provide capital to CLECs, at what cost, and for how long.

Perhaps of greatest importance, it is highly doubtful that any CLEC today could obtain financing for a business plan that would not produce a positive net present value over a period that is longer than ten years at the very most. In other words, if the business case is positive when extended out 25 years but negative when truncated at ten years, it is extremely unlikely that any investor or venture capitalist would consider pursuing the opportunity.

Q. DO CLECS CONFRONT REGULATORY UNCERTAINTY AND, IF SO, DOES THAT UNCERTAINTY AFFECT THEIR ABILITY TO RAISE CAPITAL?

A. Indeed, yes, and in fact this very proceeding is an excellent example of the types of regulatory uncertainties that confound CLEC efforts to attract capital and pursue business plans. The persistence of ILEC litigation, appeals, remands, new rulemaking and other regulatory proceedings only contributes to the risks and uncertainties that CLECs confront in attempting to project future opportunities

[42] *See*, New Paradigm Resources Group, Inc., *CLEC Report 2003: Competitive Last Mile Providers*, 17th Edition, at 2; *see* also, Association for Local Telecommunications Services, *Progress Report on the CLEC Industry*, October 17, 2002.

and earnings. Not only is the outcome of the present "impairment" proceeding uncertain, but the outcome of ongoing appeals of the FCC's *Triennial Review Order* could well affect the extent of this Commission's jurisdiction. State-level UNE pricing dockets may be profoundly affected by the outcome of the ongoing FCC *TELRIC NPRM,*[43] and CLECs have been waiting for nearly three years to learn the outcome of the FCC's *Intercarrier Compensation NPRM*.[44]

Q. ARE THERE SPECIFIC INDICATIONS FROM THE FINANCIAL MARKETS THAT SUPPORT THE VIEW THAT BASING A BUSINESS CASE FOR CLECS ON A TWENTY-FIVE YEAR WINDOW IS UNREALISTIC?

A. Yes. One good indicator is the type of financing that is available to pure CLECs. In Tables 9 and 14 of his Exhibit PBC-4C, Mr. Copeland displays certain financial information for a group of nine CLECs. We examined the annual reports of these nine companies to test Mr. Copeland's assumptions. None of these companies had the ability to obtain bonds that extended past the year 2011 at most, eight years from the present time. Their bond ratings – to the extent that they existed at all – were very low, far below investment grade. And, even within a far shorter window of exposure than Mr. Copeland assumes, the interest rates

[43] FCC Docket CC-03-173.
[44] FCC Docket CC-99-68.

that these CLECs are able to obtain for long-term debt tended to be higher than what Mr. Copeland has assumed.

Table 4

**Investor Determined Financial Security
For Pure CLECs and Other Diversified Telecoms
As of FY 2002**

Company	S&P's Long-term Debt Rating	Last Year of Latest Long-term Obligation	Rate Paid on Latest Long-term Obligation	Total Long-Term Debt ($thousands)[2]
Pure CLECs				
Allegiance	CC	2008	12.87%	$639,691
ATX	unrated	2011	10.75%	$163,441
Choice One	unrated	2010	13.00%	$595,941
ITC Deltacom	CCC+[1]	2008	9.75%	$212,946
McLeod USA	CCC+[1]	2008	variable	$967,900
Mpower	unrated	2010	13.00%	$485,081
Pac-West	CCC[1]	2009	13.50%	$97,433
Talk America	unrated	2007	12.00%	$100,855
Z-Tel	unrated	2005	6.00%	$3,751
Interexchange Carriers				
AT&T	BBB+	2031	8.63%	$18,812,000
MCI	D	2031	8.25%	$30,038,000
RBOCs				
Verizon	A+	2042	7.00%	$44,791,000
SBC	AA-	2048	6.88%	$18,536,000
BellSouth	A+	2095	6.65%	$12,283,000

Notes: [1] These debt ratings were as of 12/31/01. By 12/31/02, they were no longer being rated.
[2] Total long-term debt includes all long-term obligations issued by the company, not just the latest long-term obligation as depicted in the previous two columns.

Sources: Company 10-Ks from the SEC's EDGAR database, http://www.sec.gov/edgar/searchedgar/companysearch.html.
Standard & Poor's, Bond Guide, December 2002 & December 2001.

Q. WHY IS TEN YEARS A MORE REASONABLE TIME FRAME FOR EVALUATING THE POTENTIAL VIABILITY OF CLEC BUSINESSES?

A. Before the end of ten years, we will know whether CLECs can survive under the efficient CLEC model that we can specify with current information. Anything beyond that is simply too speculative. Within the next ten years, we are likely to know whether competition for wireline local exchange service can be viable and sustainable. By the end of that time, we should have a much better sense of how intermodal alternatives and Internet-based services will affect the telecommunications industry.

Q. WHAT IS THE IMPACT ON THE BUSINESS CASE ANALYSIS OF ASSUMING A TWENTY-FIVE YEAR FLOW OF REVENUES, RATHER THAN SOMETHING MORE REALISTIC, SUCH AS TEN YEARS?

A. As Mr. Baranowski explains, truncating the CPRO after ten years, but making no corrections to any of the other erroneous assumptions and interactions that we have been discussing, converts the $16-million positive net present value into a decidedly *negative NPV*. In other words, even with the excessively optimistic revenue forecasts and understated costs that pervade Mr. Copeland's UNE-L CLEC business case, there would be no investment capital to pursue it, because the venture would not be profitable over a ten-year planning horizon.

D. <u>The various revenue assumptions in the CPRO, both with respect to price trends and with respect to the "ramp up" of the mass market segment of the CLEC's business, are unrealistic.</u>

Q. PLEASE COMMENT ON THE REASONABLENESS OF THE ASSUMPTION USED IN THE CPRO THAT PRICES WILL REMAIN UNCHANGED OVER THE ENTIRE 25-YEAR PERIOD.

A. The assumption in the CPRO model that prices will not change during the 25-year planning horizon in inconsistent with other assumptions in the model and is unrealistic in any case. The business case model is supposed to be premised upon an increasingly competitive market that includes the ILEC and several CLEC providers. Under these circumstances, basic economic principles tell us that prices will fall. In support of Qwest's decision to ignore one of the most likely outcomes of the increase in competition that their own witnesses (both Mr. Shooshan and Mr. Reynolds) argue is increasing in Washington, Mr. Copeland cites the TRO, which directs states to "consider prices and revenues prevailing at the time of their analyses," and continues by stating that he "believe[s] that these are reasonable proxies for likely prices and revenues after competitive entry and will result in a more administrable standard."[45]

[45] Exh. PBC-4C (Redacted), "Model & Input Consistency," citing TRO at &520, footnote 1588.

Q. DOES THE FACT THAT STATES ARE DIRECTED TO *CONSIDER* PREVAILING PRICES PRECLUDE THE CONSIDERATION OF CHANGES IN PRICES OVER TIME IN RESPONSE TO COMPETITION?

A. It is certainly appropriate to "consider" prevailing prices and revenues when constructing the business case. However, this is only the starting point and does not preclude taking into account other relevant considerations. Any business case that ignored the continuing price decrease trend would be so fundamentally flawed as to be devoid of economic merit or meaning. To read the FCC's guidance as requiring the business model to assume that today's rates remain constant indefinitely makes absolutely no sense. It is one thing to suggest that the initial price inputs should be based upon "real" rather than theoretical rates. It is something entirely different to assume that rates will not change over time in response to increased competition.

Indeed, given the claims being advanced by other Qwest witnesses in this proceeding (e.g., Shooshan) as to the emergence of intermodal competition from wireless, cable, and VoIP, it is difficult to believe that a CLEC could sustain current (2004) price levels all the way to 2029. We cannot imagine any investor affording any weight to a CLEC business case that failed to recognize the continuing downward trend in prices.

Q. HAVE CONGRESS AND THE FCC EXPRESSED THE EXPECTATION THAT COMPETITION WILL BRING ABOUT LOWER PRICES?

A. Absolutely. The 1996 Telecommunications Act – "[a]n Act to *promote competition* and reduce regulation *in order to secure lower prices* and higher quality services for American telecommunications consumers..." – explicitly links competition with lower prices [46]

Q. WITH RESPECT TO OTHER SEGMENTS OF THE TELECOMMUNICATIONS INDUSTRY THAT HAVE ALREADY BECOME COMPETITIVE, HAS THIS PREDICTION BEEN BORNE OUT?

A. Yes. Competition has helped lower prices for customer premises equipment, long distance service, Internet access, and wireless.[47]

Q. IS THIS EXPECTATION ADDRESSED BY ANY INDUSTRY FINANCIAL ANALYSTS?

A. Yes The expectation of declining prices is also reflected in financial analysts' reports. For example, in a February 2003 investor briefing looking at the

[46] Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56 (1996), is "An Act to *promote competition* and reduce regulation *in order to secure lower prices* and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."

[47] "Are CLECs Down For The Count? Don't Believe It," Jim Marsh, Senior Consultant, The Management Network Group (http://www.isp-planet.com/cplanet/business/marshsept17.html) ("The IXC market proved that competition breeds innovation and reductions in price.")

prospects for AT&T Consumer, Credit Suisse First Boston (CSFB) projects that prices for mass market customers served via UNE-P will fall by 5 percent per year, in the period addressed by the report (2002 and 2008).[48] Additionally, the CSFB report predicts that mass market long distance prices for CLEC-IXCs such as AT&T will continue to fall, in the face of RBOC long distance entry and increasing wireless substitution.[49] This is relevant because Mr. Copeland's model assumes that the CLECs receive long distance revenues and because it assumes that CLEC customers are buying bundled local and long distance service packages.

Q. WHAT HAPPENS IF ONE CHANGES THE REVENUE INPUT TO THE QWEST MODEL TO REFLECT DECLINING PRICES OVER TIME?

A. Clearly the CLEC business case looks less favorable. But bear in mind that in addition to ignoring the downward trend in price levels, Mr. Copeland has also ignored the downward trend in wireline long distance usage and has grossly overstated average revenue per customer to begin with. When all of these errors are corrected and a realistic revenue forecast is used, the NPV turns decidedly negative.

[48] Credit Suisse First Boston, "AT&T Consumer: A Base Case Ahead of the Triennial Review," February 5, 2003, at 7.
[49] *Id.* at 5-6.

Q. FOR THE SAKE OF ARGUMENT, ARE THERE ANY OTHER IMPLICATIONS OF QWEST'S ASSUMPTION THAT PRICE AND DEMAND LEVELS WILL REMAIN CONSTANT?

A. Those assumptions are fundamentally inconsistent with the oft-repeated Qwest claim that competition is rampant and growing. An expectation that no further price decreases will take place implies an expectation that Qwest will be successful in shutting down its local service rivals and in pushing its long distance rivals out of the market altogether. Even then, it would require that Qwest come to dominate the wireless and VoIP markets as well. Such an outcome is hardly consistent with a no impairment finding in this proceeding.

E. Qwest's model understates costs to the CLEC for providing long distance calling

Q. DOES QWEST'S MODEL ASSIGN A REASONABLE VALUE TO THE COSTS INCURRED BY A CLEC TO PROVIDE LONG DISTANCE SERVICE?

A. No. The costs Qwest assumes a CLEC would incur to provide customers an unlimited long distance calling plan are understated, because Qwest's assumption regarding the likely volume of long distance calling that customers selecting this

option would make is too low. Specifically, Qwest has assumed "that the flat-rate caller uses 400 toll MOUs as this is the break-even point."[50]

Q. WHAT, ACCORDING TO QWEST, IS THE "BREAK-EVEN" POINT?

A. In response to an AT&T interrogatory, Mr. Copeland further clarified his rationale for using the "break-even point" level of usage as follows:

> The "break-even point" of toll usage is the same as the average toll MOUs because customers are willing to pay a premium for knowing their bill will never exceed the price of a plan that includes unlimited usage. Therefore, some customers are willing to move to the unlimited usage plans even though their individual usage is less than the "breakeven point". It is also assumed that all customers with usage over the "breakeven point" move to the unlimited plan. It is assumed that, on average, the toll usage equals the "breakeven point". This is reasonable because consumers are acting in this manner in the marketplace.[51]

Q. USING MR. COPELAND'S DEFINITION, DO YOU AGREE THAT 400 MINUTES IS THE BREAK-EVEN POINT?

A. Not as we understand his approach. Mr. Copeland models a 60/40 mix of two MCI "The Neighborhood" services. For residential customers in Washington,[52] the differential between getting an MCI residential plan with flat-rate long distance versus one with 200 minutes of long distance usage is $16 ($49.99 as

[50] Copeland Exhibit PBC-4C (Redacted) at § 4.2.2.
[51] Qwest response to AT&T 02-158 (Copeland).
[52] Another reason that Mr. Copeland ends up with a smaller number of minutes is because, although his testimony appears to state otherwise, the CPRO model uses the average MCI rates for across the Qwest territory. The rate ($33.99) for The Neighborhood Advantage in Washington is lower than in most other Qwest states and is $3.80 less than the average rate shown in Table 10 of Mr. Copeland's Exh. PBC-4C (Redacted).

compared to $33.99), and long distance usage over the 200 minutes included in the lower priced package is $0.05 per minute. Thus, even using Mr. Copeland's definition, the "break-even point" for a residential customer in Washington is actually 520 minutes of use (the 200 included minutes plus the additional 320 that the customer could buy for $16.00 at the $0.05 rate). For Washington business customers, the "break-even," according to Mr. Copeland's definition, would be 467 minutes, again higher than what he assumes for cost purposes.[53]

Q. DO YOU AGREE THAT IT IS REASONABLE TO ASSUME THAT THE AVERAGE USAGE BY CUSTOMERS ON THE FLAT-RATE PLAN FALLS RIGHT AT THE BREAK-EVEN POINT?

A. No. For this view of average usage to hold true, then for every customer who exceeds the breakeven usage level, there has to be a customer whose usage falls (by an equal increment) below the amount he or she is actually paying for. While it is likely that consumer risk-aversion of the type being described by Mr. Copeland exists in some limited group of customers, it is unlikely to be present to the extent that the average level of usage by customers who are below the break-even point (and hence should not be subscribing for the flat-rate plan) is

[53] As shown in Exh. PBC-4C (Redacted), Table 10, the difference in Washington between MCI's Business Complete Unlimited ($59.99) and Business Complete Advantage ($31.99) is $28.00. We then divided this amount by $0.06/minute, the rate for long distance usage under the Advantage Plan.

sufficiently far below that point as to offset the excess usage by those customers above the break-even point.

Q. WHAT DO QWEST'S PRICING PRACTICES FOR ITS OWN LONG DISTANCE CUSTOMERS TELL US ABOUT ITS EXPECTATIONS OF CUSTOMER BEHAVIOR?

A. Qwest appears to address consumer risk-aversion by offering a measured long distance pricing plan with a $25 cap on monthly long distance usage charges. Thus, while high-usage customers can save some money by subscribing to Qwest's unlimited calling plan, the risks of using a measured rate option are small, such that customers are able to make economically rational decisions as to which pricing option is best for their needs. Thus, Mr. Copeland's suggestion that "consumers are acting in this manner in the marketplace" is actually belied by Qwest's own pricing practices "in the market." Moreover, as competition intensifies for these types of unlimited long distance calling plans, it is also likely that this type of economically irrational consumer conduct will be weeded out as rival offerings (such as Qwest's) weed out the price that consumers are being forced to pay to avoid the risk of an unexpectedly high long distance bill. Qwest's own pricing demonstrates precisely this type of response: By "capping" consumer long distance charges as $25 per month, the risk of a large bill is significantly reduced, thereby reducing what customers will be willing to pay to avoid such risk.

Q. WHAT WOULD BE A MORE APPROPRIATE ESTIMATE OF AVERAGE USE, AND HOW WOULD THIS AFFECT THE COST OF PROVIDING UNLIMITED LONG DISTANCE SERVICE?

A. Verizon, for example, indicates that its advertised estimate of average consumer savings from the Verizon Freedom unlimited long distance package assumes 300 intraLATA toll minutes and 350 interLATA toll minutes per month, i.e., 650 minutes total (see Exhibit WHL-6). CPRO assumes a per-minute cost (exclusive of access charges) of 1.5 cents; using Verizon's 650 minutes rather than Mr. Copeland's 400 minutes would increase the monthly cost by $3.75 per line.

F. Although purporting to model "an efficient CLEC" that provides mass market services via UNE-L and the CLEC's own switching and interoffice transport facilities, Qwest neither defines what would constitute "an efficient CLEC" nor provides any evidence that the CPRO actually incorporates any of those (undefined) efficiency attributes.

Q. DOES MR. COPELAND RELATE HIS CHOICES OF CPRO INPUTS AND ASSUMPTIONS TO HIS CLAIM THAT THE CPRO IS MODELING AN "EFFICIENT" CLEC?

A. No. While Mr. Copeland argues that his inputs are interrelated, he does nothing to show that the selected inputs reflect an efficient CLEC, nor does he describe the process, if any, by which those input have been optimized.[54] Moreover,

[54] Qwest response to ATT 02-138; see also Qwest response to ATT 02-140.

Qwest expressly discloses that the model itself "does not have any reaction functions that change the value of one of the inputs based on changes to one of the other inputs."[55]

Let us provide an example. Mr. Copeland has selected $120 as the customer acquisition cost for the CPRO. He also states, however, that a CLEC could grow more rapidly if it spent more on customer acquisition costs.[56] However, when asked to explain the relationship between the $120 figure and other assumptions in the model, Qwest could only point back to Mr. Copeland's testimony, which in fact never provides any supporting explanation of how this input relates to other assumptions in the model.[57]

Q. WHAT WOULD AN "EFFICIENT" CLEC DO WITH RESPECT TO DECIDING UPON HOW MUCH TO SPEND ON CUSTOMER ACQUISITION?

A. It would undertake to achieve the optimum trade-off between what it spends on customer acquisition and what it realizes in revenues from the customers it acquires. As we have previously noted, CLECs are apparently willing to spend more on customer acquisition directed at attracting the high-revenue (service bundle) customer, but (as is the case with AT&T) are also willing to target lower

[55] Qwest response to ATT 02-135.
[56] Exh. PBC-4C (Redacted) at 3.1.5.
[57] Qwest response to ATT 02-140.

revenue customers, albeit with less costly up-front signing bonuses. Qwest has offered no indication as to how it arrived at the $120 per customer amount, or how it concluded that this was the optimally efficient level. For example, suppose that the CLEC were to spend $200 per customer on acquisition, but by so doing it would achieve the five percent market share target after only three years rather than five. If, under that strategy, the NPV of the venture would be increased, then that is precisely what an "efficient" CLEC would undertake to do.

Q. IN RESPONSE TO AT&T DATA REQUEST 02-138, MR. COPELAND STATES THAT THE VALUE USED IN THE CPRO MODEL FOR CLEC MARKET SHARE IS A VALUE "THAT CLECS ACHIEVE TODAY." DO YOU AGREE?

A. No. The CPRO assumption for market share is that several CLECs will each reach a market share of 5 percent within five years, at a linear rate of growth, provisioning their service with UNE-L rather than UNE-P. Yet Qwest's data show that such an assumption is highly unrealistic. As shown in Table 2 above, the number of UNE loops currently being provided by Qwest to CLECs to serve mass market customers (including both residential and small business customers represents well below BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL of total Qwest access lines *for all CLECs combined*. And, according to Mr. Reynolds' Exhibit MSR-6HC, this minuscule share is being divided up among some BEGIN HIGHLY CONFIDENTIAL [redacted]

END HIGHLY CONFIDENTIAL CLECs across all three MSA, several of which have already been offering local service in Washington for some time. *None of these carriers have come even close to the five percent market share that Qwest has assumed will be achieved*.

Q. WHAT ABOUT MR. COPELAND'S ASSUMPTION FOR THE RATE OF CUSTOMER CHURN?

A. Even if Mr. Copeland were looking at a broader mix of CLEC mass market customers, which he is not, his estimate of a 3.0 percent rate of customer churn for a CLEC[58] would be low. Mr. Copeland notes that mass market customers have a higher rate of churn than enterprise customers,[59] but nowhere does he address differences that might exist among mass market customers that relate to the size of their monthly expenditures. It is easy to see why larger enterprise customers are likely to stick with a provider and thus have a lower rate of churn.[60] Among other reasons, enterprise customers are frequently required to enter into a term contract under which they agree to keep the service in place for a specified number of months or years. Just as churn varies among customer classes, there is also evidence that customer churn is greater among mass market customers that

[58] Exh. PBC-4C (Redacted) at §4.3.3.
[59] *Id.*
[60] For example, they frequently get better prices by taking their services under a term contract (and prices decrease as the term increases). With more sophisticated services, the disruption associated with a change in service providers also increases, compared to what is involved for a mass market customer.

make larger expenditures, compared to the average revenue customer. As explained earlier, these customers receive more frequent solicitations and large enticements to change providers. Because of their larger monthly expenditures, they are also more likely to take an active role in managing their telecommunications costs and thus to be on the lookout for a better deal.

The recent *Wall Street Journal* article cited earlier discusses the increased churn associated with customers who take flat-rate local and long distance service bundles.[61] The article points out that customers have an easier time comparing their total telecommunications costs with the bundled plans and "hopping from one offer to another, since it involves switching just one account." One industry analyst quoted in the article estimated that the turnover for bundled plans offered by CLECs "is as high as 8% a month B or nearly 100% in a year in some highly competitive areas."

A recent Banc of America Securities Equities Research Brief concludes that churn for local/long distance bundles, such as MCI's The Neighborhood, is even higher. It states:

> Churn is a key driver of the decline in net adds. MCI disclosed in an ex-parte bankruptcy court filing on November 15, 2002 that it is experiencing high levels of monthly churn for its local and long distance bundled

[61] Phone-Service Bundles Could Backfire As Customers Switch," The Wall Street Journal Online, November 7, 2003.

"neighborhood" subscribers. On average, MCI loses 25% of its Neighborhood customers within three months (9.1% monthly churn) and 50% within six months (12.7% monthly churn in months 4, 5 and 6).[62]

Q. WHY MIGHT THESE CHURN RATES DIFFER SO GREATLY FROM THE ONES SUMMARIZED BY MR. COPELAND IN HIS TABLE 17?

A. This is yet another example of how Mr. Copeland mixes his assumptions. On the one hand, he uses MCI's The Neighborhood as a baseline service offering for revenue estimation purposes (and thus assumes that the CLEC has only high-revenue customers and that it provides facilities-based long distance), but chooses a group of very dissimilar CLECs who by and large do not have the same customer profile as MCI and do not have facilities-based long distance networks B for purposes of selecting a churn rate.

Q. CAN YOU POINT TO ANY OTHER INCONSISTENCIES IN MR. COPELAND'S ASSUMPTIONS CONCERNING CUSTOMER ACQUISITION COSTS?

A. Mr. Copeland also claims that "[c]ustomer acquisition costs cannot be explained by the local market alone. The AT&T and MCI strategy, once a Bell Operating Company obtained 271 relief, has been rapid market expansion, in part in order to ameliorate losses of long distance revenues. This strategy is obviously not

[62] Banc of America Securities Equity Research Brief, Wireline Telecommunications, "AT&T Corporation: A Case for Consumer Services," April 30, 2003, p. 10.

appropriate for the start-up CLEC."[63] Yet, the CPRO consistently assumes a CLEC that is going after customers who will purchase every conceivable service from that CLEC alone. It is totally inconsistent to hypothesize this selective customer base for some purposes but not others.

G. Qwest's proposed treatment of potential CLEC revenues from long distance usage and additional services are inconsistent with Qwest's own treatment of these revenues for regulatory purposes.

Q. DOES MR. COPELAND INCLUDE ANY REVENUES ASIDE FROM LOCAL SERVICE REVENUES IN HIS MODEL?

A. Yes. He includes revenues from long distance services (generated through the flat-rate long distance bundle monthly rate) and from certain "additional services."[64] In doing so, he relies upon the TRO, which indicates that in evaluating a CLEC's business model, the state commission is to consider all "*all* revenues that will derive from service to the mass market," including those from "the sale of vertical features, universal service payments, access charges, subscriber line charges, and, if any, toll revenues." Mr. Copeland also includes directory assistance/operator services, calling cards, international calling, and

[63] Exh. PBC-4C (Redacted) at 3.1.5.
[64] Exh. PBC-4C (Redacted), 4.2.2, 4.2.5.

inside wire maintenance plans, "among others," in the "additional revenues" category.[65]

Q. DO YOU AGREE THAT LONG DISTANCE REVENUES ARE RELEVANT TO A CLEC'S PROFITABILITY?

A. At a theoretical level, we agree with the FCC that all revenues related to entry into the mass market should be considered. But there is one important factor that the FCC did not consider that alters this conclusion. It is fundamentally inconsistent (and would ultimately lead to competitive inequities) to evaluate CLEC viability with the inclusion of long distance revenues when, under rate of return regulation as applicable to Qwest here in Washington, the costs and revenues associated with QC's long distance affiliates are "off-limits." When Qwest Corporation seeks rate relief and asks to raise the prices for local exchange and other regulated services on the grounds that its revenues are insufficient to provide its allowed rate of return, it does not report or include its revenues (or profits) from its long distance affiliate (QLDC).

Moreover, as Mr. Baranowski points out at page 15 of his direct testimony, most potential CLECs are not also facilities-based IXCs. Thus, their profits from the sale of long distance service are limited to what they can earn via resale. For this

[65] *Id.*, 4.2.5.

reason, a model that purports to examine profit opportunities for potential CLECs should not assume a facilities-based long distance business.

Q. DOES THE SAME REASONING APPLY TO THE "ADDITIONAL" SERVICES[66] (SUCH AS "CUSTOM CALLING" FEATURES FOR WHICH THE CUSTOMER PAYS A DISCRETE CHARGE, DIRECTORY ASSISTANCE/OPERATOR SERVICES, CALLING CARDS, INTERNATIONAL CALLING, AND INSIDE WIRE MAINTENANCE PLANS) THAT MR. COPELAND INCLUDES IN HIS REVENUE ESTIMATES?

A. To the extent that these services are "below-the-line" items for Washington ILECs, they should not be counted for CLECs either, for the same reason we have explained with respect to long distance services.

[66] AT&T's BCAT includes these costs in two categories: "vertical features" and "ancillary revenues" (voice mail and inside wire). Baranowski Direct at 23-24.

H. The extremely limited scope of Mr. Copeland's sensitivity analyses and the illogical constraints that he places thereon invalidate the conclusion that the CPRO is a robust model.

Q. MR. COPELAND CLAIMS TO HAVE VERIFIED THE "ROBUSTNESS" OF THE CPRO THROUGH A SERIES OF SO-CALLED "SENSITIVITY ANALYSES" IN WHICH CERTAIN INPUT ASSUMPTIONS ARE VARIED. HAVE YOU REVIEWED THESE SENSITIVITY ANALYSES AND, IF SO, DO THEY SUPPORT MR. COPELAND'S CONCLUSION THAT THEY PROVE THE CPRO IS ROBUST?

A. Yes, we have reviewed the sensitivity analyses presented in Mr. Copeland's testimony. However, we disagree with his assertion that these sensitivities prove the robustness of the CPRO. In fact, they prove just the opposite.

Mr. Copeland makes minor (+/10%) variations in only five of the multiple inputs to the model churn, revenue per line, per-customer acquisition cost, long distance usage, and additional services profit per line.[67] Mr. Copeland makes no effort to examine the sensitivity of his various other financial and network assumptions, such as the use of a 25-year valuation horizon, network architecture and costs, number of CLEC switches per LATA, or share growth.

Although Mr. Copeland had emphasized the interdependence of all of the model's inputs B specifically admonishing that "[t]he values for revenue per line, customer

[67] Copeland at 45-46 (Tables 10-11).

acquisition cost, market share and churn are interrelated in the real world, and values for these inputs were selected such that they are consistent with each other," in performing the sensitivity analysis, he only varies one "value" at a time, holding all others constant. For example, a change in per-customer acquisition outlays would, according to Mr. Copeland, affect market share, but as we have noted, Mr. Copeland has conceded that the CPRO does not actually adjust for these interrelationships and interactions. Since higher customer acquisition costs and higher churn rates are associated with higher revenue mass market customers, then it is not reasonable to test these assumptions independently in the sensitivity analysis. Moreover, in a real-world situation, it is not realistic to consider variance in only one isolated input at a time. Realistically, several inputs are likely to vary at once.

Additionally, Mr. Copeland varies each input by only 10 percent, up and down. We have already shown that several of Mr. Copeland's assumptions are off by many times that small amount. For example, he assumed a 3% churn rate despite industry experience reported to be as high as 8% nearly three times as much. The only alternative churn rates that he tested in his "sensitivity analyses" were 2.7% and 3.3% not even close to the more realistic 8% level. Similarly, Mr. Copeland varied the $50 per month revenue per line by $5 up and down, despite the fact that, as noted by Mr. Baranowski, the widely-used TNS bill harvesting data puts average residential revenue per line closer to $30. The effect of the extremely

small variances that Mr. Copeland claims to have tested was further limited by the fact that he only examined variation in one input assumption at a time. For example, a 10% change in an element that accounts for only 5% of total cost changes the overall result by one-half of one percent. With such a minimal variation, it is hardly surprising that the outcome of the CPRO analysis was hardly impacted by these not-particularly-sensitive "sensitivities." A true test of the robustness of the CPRO model would have involved larger variances that more accurately captured real-world conditions, and the combined effects of several (or all) of the modifications simultaneously. Additionally, the model would have to have responded to interactions between these and other (untested) assumptions, such as increasing or decreasing market share growth as acquisition expenditures are correspondingly increased or decreased. And we know that the model did not do that because Mr. Copeland conceded as much in Qwest's response to AT&T 02-135.

In a model with as many inputs as the CPRO, changing a handful of assumptions, each independently, and each only by a small increment, cannot reasonably test for robustness.

Q. HAS AT&T ATTEMPTED TO USE THE CPRO MODEL WITH MORE REALISTIC INPUTS AND ASSUMPTIONS?

A. Yes. These results are being presented by Mr. Baranowski. As those results demonstrate, when used and specified correctly, Qwest's model confirms that a

CLEC required to provide mass market services without access to UNE-P cannot achieve economic viability.

V. CONCLUSION

Q. PLEASE SUMMARIZE YOUR RESPONSE TESTIMONY.

A. The evidence of actual and potential CLEC competition in Washington demonstrates that the Commission should confirm the national finding of impairment with respect to unbundled switching to serve mass market customers. The actual CLEC competition using CLEC-switching that exists is geographically-localized in a small subset of wire centers and serves only an incidental number of mass market lines for only a limited class of mass market customers (small business). Therefore, the self-provisioning trigger test set forth in the TRO is not met. An analysis of the business case for potential deployment using realistic assumptions confirms that CLEC competition would be impaired.

Q. DOES THIS CONCLUDE YOUR RESPONSE TESTIMONY?

A. Yes.