EXHIBIT RC-5T

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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.	Docket No. UT-033044

REBUTTAL TESTIMONY OF

RICHARD CABE

ON BEHALF OF

WORLDCOM, INC. (MCI)

February 2, 2004

REDACTED

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Richard Cabe and my business address is 221 I Street, Salida, Colorado.

Q. ARE YOU THE SAME RICHARD CABE WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. PLEASE SUMMARIZE YOUR INITIAL RESPONSE TO QWEST'S EVIDENCE PRESENTED SO FAR IN THIS CASE.

A. In this case, the Commission will decide whether the FCC's national finding of impairment with respect to local switching is overcome by evidence specific to markets in the State of Washington. In so doing, the Commission should not lose sight of the fact that the local switching UNE performs the crucial function of providing CLECs with efficient access to loops.[1] In a very real sense, impairment is not so much about the switching function itself, as about CLECs' impaired access to local loops by any means *other* than through Qwest's local switch. Thus, CLECs are impaired without local switching not because they cannot self-provision local switching, but rather because use of ILEC local switching is the most efficient, and operationally the only effective means of access to

[1] "We have made detailed findings that competitors are impaired without access to incumbents' voice-grade local loops. Indeed, no party seriously contends that competitors should be required to self-deploy voice-grade loops. Thus, for the typical entrant, entry into the mass market will likely require access to the incumbent's loops, using the UNE-L strategy. As described below, this strategy raises operational and economic difficulties associated with accessing the loop. *Indeed, as discussed above, a crucial function of the incumbent's local circuit switch is to provide a means of accessing the local loop.*" *Triennial Review Order* ¶ 439 (footnotes omitted) (emphasis added).

Qwest's loops.[2] While the acknowledged barriers to entry associated with CLECs' inferior access to ILEC loops without the local switching UNE may or may not rise to the impairment standard defined in the *Triennial Review Order*, the Commission's focus in this proceeding should be directed to evidence that CLECs have actually, or can potentially, overcome those barriers to accessing loops.

Q. DO YOU HAVE A RESPONSE TO THE TESTIMONY OF MR. REYNOLDS AND MR. SHOOSHAN REGARDING WIRELESS SERVICES?

A. Yes. The Commission considered similar evidence in Qwest's recent competitive classification case and determined that it merited "light" weight.[3] In its Order issued in that case, the Commission discussed the increasing complexity of telecommunications markets and the subtleties of competition among "different providers, different services, different customer groups, different technologies, and different niches."[4] The Commission determined that it would rely on evidence based on its "relevance to the critical questions in the case."[5] In particular, critical questions related to competition for retail services. The Commission found that "wireless, VOIP and other intermodal services are further along the continuum of

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[2] For example, Mr. Weber describes the technological ease of CLECs providing the switching function, and the Direct Testimony of William R. Easton responds to the question "How do CLECs gain access to unbundled switching today?" In fact, CLECs may not want access to Qwest's unbundled switching for it's own sake, but for it's unique capacity to "provide a means of accessing the local loop" that does not impose the operational and economic barriers of other means of access to loops.

[3] *Order Granting Competitive Classification*, Order No. 17, WUTC Docket No. UT-030614, December 22, 2003, (hereinafter "*Order Granting Competitive Classification*"), ¶ 54.

[4] *Id.* ¶ 51.

[5] *Id.*

competitive substitutes," and should receive "light" weight in evaluating the critical questions of the case.[6]

The critical questions of this case are not about retail competition, but about CLECs' ability to compete without access to wholesale switching as a means of accessing UNE loops. Evidence of wireless and VOIP competition is clearly not relevant at all to a trigger analysis, and Qwest does not claim otherwise. The analysis is a bit more complex with respect to potential deployment. Here, the Commission seeks evidence of the feasibility of business plans that would allow CLECs to compete without access to the local switching UNE. Evidence of the role of wireless and VOIP technologies in such business plans *might* be relevant if it could inform the Commission's judgment regarding the suitability of the market for "multiple, competitive supply."[7] The evidence presented, however, does not go to this question, but rather is of a general nature describing services that the Commission has found are "further along the continuum of competitive substitutes." As such, it merits even less weight in the Commission's deliberations on the critical questions of this case than it did in the competitive classification case.

Q. WHAT IS AT STAKE IN THIS PROCEEDING?

A. If the Commission finds no impairment before operational barriers to entry are removed, or in areas where UNE-L service to the general public is unlikely to be economically feasible, consumers will be denied the benefits of competition from CLECs that can only access those customers' loops economically through the use of UNE-P. In that

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[6] *Id.* ¶ 54.

[7] *Triennial Review Order* ¶ 506.

case, the substantial number of customers presently served by UNE-P CLECs would face the prospect that their gains from competition would be rescinded.

Q. HAS THE COMMISSION RELIED ON THE EXISTENCE OF UNE-P COMPETITION IN RECENT DECISIONS?

A. Yes. The Commission's conclusion in its recent *Order Granting Competitive Classification* in Docket No. UT-030614 rests heavily on the existence and continued availability of UNE-P competition.[8]

Q. BY WAY OF INTRODUCTION, WHAT ARE THE MAJOR DIFFERENCES AMONG THE FRAMEWORKS PROPOSED FOR THE FCC'S TRIGGER ANALYSIS IN THE FIRST ROUND OF TESTIMONY?

A. Each of the frameworks proposed for trigger analysis contains two crucial elements: a definition of markets, and a means to determine whether an existing CLEC qualifies to be counted toward the retail trigger threshold. My testimony is in substantial agreement with that of AT&T regarding the determination as to whether a CLEC should be counted toward the retail trigger threshold: both AT&T and MCI propose that there "are a number of circumstances in which a CLEC might erroneously be counted toward meeting the trigger test."[9] Qwest, on the other hand, seems to require only "unaffiliated CLECs" serving mass market customers via self-provisioned local switching without giving effect to the other requirements of the *Triennial Review Order*.[10]

While I discuss market definition in detail below, the implications of these different approaches to identifying a self-provisioning CLEC must be understood in the context of the

[8] *Order Granting Competitive Classification.*

[9] Direct Testimony of William H. Lehr and Lee L. Selwyn at 52, lines 4-5.

markets the Commission will use for the trigger test. Qwest and AT&T both propose geographic markets comprised of many wire centers, while I propose that each wire center should be analyzed as a separate market. To illustrate the different implications of these two elements of the analytical framework, consider a large geographic area with a few wire centers each containing several self-provisioning CLECs and the other wire centers containing no self-provisioning CLECs.[11] In a large geographic "market," Qwest would count self-provisioning CLECs that serve customers in only a few wire centers, or possibly only in *part* of a single wire center. On that basis, Qwest would recommend a finding of no impairment, removing its obligation to offer the unbundled switching element in the entire large geographic area, *even though the area includes many wire centers not served by self-provisioning CLECs*. Under the same set of facts, AT&T would not count CLECs that serve only a small portion of the large geographic "market," and would recommend a finding of impairment, even though some wire centers may have several self-provisioning CLECs that otherwise offer evidence of having overcome barriers to entry, albeit in a restricted area.

I agree with AT&T that CLECs should not be counted toward the trigger threshold unless they credibly hold themselves out to serve the entire market, however defined; but the implication is very different under my proposed market definition based on individual wire centers. Under a wire center market definition, the Commission would not face the alternatives of either finding no impairment in a large geographic area containing many wire

[10] Direct Testimony of Mark S. Reynolds at 5, line 15.

centers without self-provisioning CLECs, as proposed by Qwest, or finding impairment in an area containing some wire centers with self-provisioning CLECs having overcome barriers to entry, as would result under AT&T's framework.

Rather, under the framework I propose, the Commission could find no impairment in those wire centers with qualifying, self-provisioning CLECs and simultaneously find impairment in those wire centers without self-provisioning CLECs. As I discuss in detail below, the current state of competition from CLECs operating without the local switching UNE does not satisfy the retail trigger test and justify a finding of no impairment, even for the most attractive individual wire centers. Moreover, the evidence suggests that potential deployment without access to the switching UNE is not economic at all in most wire centers and very questionable in the most economically attractive wire centers. Nevertheless, the framework I propose makes it easier to satisfy the trigger test than the approach favored by AT&T, yet does not allow geographically restricted competition to support a broad finding of no impairment, as would result from Qwest's approach.

Q. HOW IS YOUR REBUTTAL TESTIMONY ORGANIZED?

A. In the section following this introduction, I assume for the sake of argument that Qwest's factual allegations are correct and I show that the alleged facts do not support Qwest's claim that no impairment exists in certain Washington MSAs. The subsequent sections of my rebuttal testimony point out errors in Qwest's market definition analysis,

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[11] This scenario must be regarded as hypothetical, because existing evidence does not show many self-provisioning CLECs holding themselves out to serve more than a restricted set of mass-market customers, even in the relatively few wire centers in which self-provisioning CLECs are located.

respond to Qwest's analysis of market participants, and correct Qwest's overly optimistic choices of inputs and interpretation of results from Qwest's potential deployment model.

Q. PLEASE PROVIDE AN OVERVIEW OF UNE-L CLECS MARKET ENTRY PATTERNS.

A. UNE-L CLECs have won a very small fraction of the mass market in Washington. CLEC customers are almost exclusively business customers, and all but two UNE-L CLECs offer service *only* to businesses. Of those two UNE-L CLECs claiming to offer service to residential customers, one of them, SBC Telecom, does so under the requirements of a quid pro quo for its parent company's merger, and provides no evidence of an independent CLEC evaluation of market entry conditions. UNE-L entry occurs in larger wire centers with greater percentages of business customers, but not elsewhere, and there is no UNE-L entry in 25 of the 60 wire centers where Qwest argues for a finding of no impairment.

Q. DO YOU HAVE AN OPINION AS TO THE FORCES THAT ARE CAUSING THIS PATTERN OF ENTRY?

A. This pattern of entry is consistent with the existence of operational and economic barriers to entry that have been overcome with respect to business customers – but not residential customers – at least in some more profitable wire centers. I have seen no evidence of recent expansion of UNE-L CLECs into new wire centers, and very little evidence of movement of UNE-P residential customers to CLEC facilities, even when the CLEC has a collocation in place to serve business customers. The lack of expansion into new wire centers suggests that early UNE-L entrants may have been overly optimistic about their prospects; the lack of movement of UNE-P residential customers onto UNE-L facilities strongly suggests that CLECs are unable to overcome the "hot cut" barrier that formed the basis for the FCC's national finding of impairment.

Q. IF YOUR INTERPRETATION IS CORRECT, IS IT IN QWEST'S INTEREST TO ARGUE FOR A FINDING OF NO IMPAIRMENT?

A. Yes. In any instances in which CLECs are actually impaired without access to UNE-P, Qwest will benefit from a finding of no impairment by virtue of raising its rivals' costs.

Q. IS IT IN QWEST'S INTEREST TO ARGUE FOR A FINDING OF NO IMPAIRMENT IF YOU ARE MISTAKEN, AND CLECS ACTUALLY ARE NOT IMPAIRED WITHOUT ACCESS TO UNE-P?

A. No. If CLECs are not impaired without access to UNE-P in a particular wire center, CLECs will prefer to serve customers over their own facilities, or at least not over the facilities of a hostile rival, insofar as possible. In any situation in which CLECs are actually not impaired without UNE-P, Qwest has an interest in keeping CLEC traffic on Qwest switches, thereby receiving revenue that would be lost if the CLEC chooses to use a UNE-L strategy. Further, as I discussed in my direct testimony, Qwest will face more rigorous competition when UNE-L CLECs are established, and it has no interest in hastening the advent of a UNE-L competitive environment, if it is actually feasible under current conditions.

II. QWEST'S EVIDENCE DOES NOT SUPPORT ITS CLAIMS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section I will show that, even if the Commission were to accept Qwest's factual allegations as correct, Qwest's claimed showing does not come close to overcoming the FCC's national finding of impairment or to supporting the goals of the Telecommunications Act. My testimony addresses the retail trigger analysis and the extent of economic barriers to entry. Issues associated with operational impairment are addressed in the testimony of MCI witnesses Mark Stacy and Cedric Cox.

Q. GENERALLY, WHICH OF QWEST'S CLAIMS ARE UNSUPPORTED, AND WHY DO QWEST'S ALLEGATIONS FAIL TO SUPPORT THESE CLAIMS?

A. Qwest would have the Commission "extrapolate" from alleged actual or potential competition in some wire centers to reach a finding of no impairment over a larger area, including wire centers for which Qwest does not even allege the existence of actual or economically feasible potential competition. This approach is in direct conflict with the requirements of the *Triennial Review Order*. At paragraph 520, the *Triennial Review Order* concludes:

> Before finding "no impairment" in a particular market, therefore, state commissions must consider whether entrants are likely to achieve sufficient volume of sales *within each wire center*, and in the entire area served by the entrant's switch, to obtain the scale economies needed to compete with the incumbent.

(Emphasis added).

Thus, if markets are defined as areas larger than wire centers, which I do not recommend, the *Triennial Review Order* simply does not allow the analyst to ignore those wire centers that appear not to be "suitable for multiple competitive supply."[12] The *Triennial Review Order* contemplates evidence either in the form of actual self-provisioning CLECs or in the form of a business case analysis showing the economic feasibility of potential deployment. In each of the MSAs in which Qwest claims no impairment, there are wire centers – a total of 16 in all – for which Qwest does not claim the existence of a single UNE-L provider, *and* for which Qwest's potential deployment model finds that entry is not

[12] *Triennial Review Order* ¶ 506.

economically feasible.[13] Qwest would nevertheless have the Commission ignore the *Triennial Review Order's* admonition to pay attention to individual wire centers in order to find no impairment without any evidence that entry is a fact or even a realistic future possibility.

A. Trigger Analysis

Q. PLEASE PROVIDE AN OVERVIEW OF THE TRIGGER ANALYSIS PRESCRIBED IN THE TRIENNIAL REVIEW ORDER.

A. As I described in my Direct Testimony, the FCC's prescribed trigger analysis is intended to provide "bright-line rules" that "can avoid the delays caused by protracted proceedings and can minimize administrative burdens."[14] If the Commission finds that the triggers are not satisfied, then the Commission will proceed to analysis of potential deployment – or Qwest can re-file after sufficient actual deployment materializes. For these

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[13] The count of wire centers for which Qwest offers no evidence in favor of a finding of no impairment is taken from the summary tables in the Direct Testimony of Harry M. Shooshan. I must emphasize that in this section of my rebuttal testimony I am not questioning the evidence presented in these tables, but the tables themselves suggest that the evidence is questionable. The tables show a contrast between actual deployment and Qwest's business case model's finding of a positive business case. Qwest's business case model almost invariably finds that CLECs are missing opportunities to profitably enter wire centers that currently have no UNE-L provider. This contrast would be consistent with an environment in which UNE-L service being profitable, attracting new capital, and expanding to new wire centers – not one of no expansion, financial distress, and consolidation. Of the **BEGIN HIGHLY CONFIDENTIAL *****[redacted]***** END HIGHLY CONFIDENTIAL** Qwest wire centers shown on Qwest's highly confidential response to WUTC Bench Request 11 as having no stand-alone DS-0 level UNE loops in service at the end of January, 2003, **BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL** While growth is apparent in the number of UNE-L loops in wire centers with collocations in place **BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL** CLECs are simply not expanding into those wire centers that Qwest's business case model identifies as attractive.

[14] *Triennial Review Order* ¶ 498.

reasons, the Commission should err on the side of caution in finding that the trigger has been satisfied.

Q. PLEASE BRIEFLY RESTATE THE TESTS ON SELF-PROVISIONING CLEC'S MARKET PARTICIPATION NEEDED TO SATISFY THE REQUIREMENTS OF THE *TRIENNIAL REVIEW ORDER.*

A. The flowchart attached to my Direct Testimony as Exhibit RC-3 captures rules set forth by the FCC in the *Triennial Review Order* under which a carrier can be considered as a triggering company for mass-market switching only if the company self-deploys switching to provide local service to mass-market customers, and meets specific requirements in the following four areas: (1) corporate ownership; (2) active and continuing market participation; (3) intermodal competition; and (4) scale and scope of market participation. Applying these criteria rigorously in a properly defined market is essential to ensuring that "[i]f the triggers are satisfied, the states need not undertake any further inquiry, ***because no impairment should exist in that market.***"[15]

Again, I discussed the FCC rules at length in my direct testimony and will not repeat that discussion here.

1. <u>Geographic Coverage of Claimed Triggering CLECs</u>

Q. DOES QWEST CLAIM THAT CLECS HAVE ACTUALLY DEPLOYED FACILITIES TO SERVE THE ENTIRE GEOGRAPHIC AREAS OF MSAs FOR WHICH IT MAKES ITS "NO IMPAIRMENT" CLAIMS?

A. No. Of the 60 wire centers that comprise the MSAs in which Qwest claims CLECs are not impaired without access to the local switching UNE, Qwest claims that the retail

[15] *Id.* ¶ 494 (emphasis added).

trigger is satisfied in only 16. Qwest refers to actual competition that falls short of the trigger threshold in an additional 28 wire centers. Such evidence should be evaluated and given appropriate weight in a potential deployment analysis, but has no relevance to the prescribed trigger analysis.

Q. IS IT IMPORTANT THAT THE COMPANIES QWEST OFFERS AS SATISFYING THE REQUIREMENTS OF THE TRIGGER ANALYSIS DO NOT ACTUALLY SERVE THE ENTIRE MSA?

A. Yes. First, in paragraph 520 of the *Triennial Review Order*, quoted above, the FCC admonished the state commissions to give specific attention to wire centers in which CLECs may not be able to achieve sufficient economies of scale to allow them to compete with Qwest. In addition, the FCC also stated that "if competitors with their own switches are only serving certain geographic areas, the state commission should consider establishing those areas to constitute separate markets."[16] In the present instance, competitors with their own switches are serving only smaller geographic areas, within the MSAs proposed by Qwest. Those areas being served (and those not being served) are best, although not perfectly, defined by wire center serving areas. This circumstance clearly suggests establishing separate markets that reflect the wire centers being served and those not being served.

2. <u>Scale and Scope of Claimed CLECs' Market Participation</u>

Q. WHAT IS THE POINT OF EXAMINING THE SCALE AND SCOPE OF CLECS' PARTICIPATION IN THE MARKET AS PART OF THE COMMISSION'S RETAIL TRIGGER ANALYSIS?

A. As I explained in my Direct Testimony, Section IV.B.4, a CLEC should not be counted for the trigger analysis unless the nature of its market participation affords evidence

[16] *Id.* at n.1537.

that: (1) it is capable of holding itself out to provide retail local exchange service to all, or virtually all, mass-market customers within the relevant market; and (2) the volumes at which it is presently providing service demonstrate that it has overcome the hot cut barrier to entry, as well as all of the other economic and operational barriers to entry that the FCC identified as appropriate topics for consideration in a potential deployment analysis. Otherwise, the trigger analysis will have failed to perform its function of demonstrating that "the states need not undertake any further inquiry, because no impairment should exist in that market."[17]

Q. HOW DO YOU APPLY THIS TEST FOR THE MSA MARKETS QWEST HAS PROPOSED?

A. Regarding an analysis under Qwest's proposed MSA market definition, I simply call the Commission's attention to the market participation of the *entire group of active CLECs*. The following table describes the scale of UNE-L CLEC participation, in the aggregate, in the MSAs in which Qwest claims that requesting carriers are not impaired without access to the local switching UNE. The first column of the table shows the total of UNE-L loops, *of all CLECs,* as a percentage of Qwest DS0 lines in the MSA. Only in the case of the Vancouver portion of the Portland/Vancouver MSA does the number of stand-alone UNE loops in use by all CLECs rise to the level of **BEGIN HIGHLY CONFIDENTIAL** ***[redacted]*** **END HIGHLY CONFIDENTIAL** percent.

[17] *Id.* ¶ 494.

BEGIN HIGHLY CONFIDENTIAL ***

[redacted]

***** END HIGHLY CONFIDENTIAL**

Q. HOW DO YOU EVALUATE A NUMBER LIKE THE [BEGIN HIGHLY CONFIDENTIAL] * [redacted] *** [END HIGHLY CONFIDENTIAL] PERCENT SHOWN FOR VANCOUVER?**

A. First, note that this number is the percentage of lines won by all UNE-L CLECs in the market, not just one market participant. Thus, the strongest evidence that the market is one in which CLECs have actually entered and overcome barriers to entry (and there is no need for the Commission to proceed to a potential deployment analysis) would be three CLECs of equal size.[18] This would mean that each CLEC had won **BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL** of the market. To put this **BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL** in context, the scenario for growth of the UNE-L CLEC in Qwest's

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[18] Presuming that three CLECs are of equal size yields the highest market share possible for each of the minimum number of CLECs necessary to satisfy the retail trigger.

potential deployment model would have a firm grow to **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** of the market in about four and a half months. Thus, the most generous interpretation of this aggregate market participation is that three CLECs have, over the last several years, accomplished the market penetration that Qwest's potential deployment model assumes to occur in about four and a half months. Comparable periods are indicated for the other MSAs in which Qwest claims that no impairment exists.

Q. WHAT CONCLUSION DO YOU DRAW FROM THE SCALE OF MARKET PARTICIPATION IMPLIED BY QWEST'S EVIDENCE?

A. In each of the six MSAs, Qwest identifies UNE-L CLECs that have, in the aggregate, won the business of a **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** fraction of mass-market customers. It is implausible to suggest that such tiny percentages affords the Commission with any comfort that a "no impairment" finding is justified.

Q. REGARDING THE SCOPE OF UNE-L CLEC PARTICIPATION IN QWEST'S PROPOSED MARKETS, ARE UNE-L CLECS GENERALLY OFFERING SERVICE TO THE GENERAL POPULATION OF TELECOMMUNICATIONS USERS IN THOSE MARKETS?

A. **BEGIN HIGHLY CONFIDENTIAL** *** [redacted]

[redacted] *** **END HIGHLY CONFIDENTIAL**. This level of market penetration, for either company, is certainly no evidence that operational and economic barriers to entry have been overcome. Further, T6's entry in 10 Seattle wire centers was a quid pro quo for approval of its merger. T6 incurred the cost of deploying switching capacity and establishing collocations to satisfy the conditions placed on its merger, and I recommend that the Commission not attach any weight to the use of those facilities to serve a **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** of mass-market customers. T6's entry provides absolutely no evidence of a company successfully acting on its expectations that it can overcome operational and economic barriers to entry and profitably serve mass-market customers.

Q. PLEASE STATE YOUR CONCLUSION REGARDING THE SCOPE OF UNE-L SERVICE OFFERINGS.

A. Of more than a million residential lines in the six MSAs for which Qwest claims CLECs are not impaired without access to the local switching UNE, **BEGIN HIGHLY CONFIDENTIAL** ***[redacted]*** **END HIGHLY CONFIDENTIAL** CLECs report serving a total of **BEGIN HIGHLY CONFIDENTIAL** ***[redacted]*** **END HIGHLY CONFIDENTIAL** residential lines using the UNE-L strategy. Such a tiny amount of experience in using the UNE-L strategy to serve residential customers, together with the fact that most CLECs explicitly decline to serve residential customers, cannot be regarded as reasonable evidence that CLECs are not impaired without access to the local switching UNE.

B. Potential Deployment

Q. PLEASE BRIEFLY DISCUSS THE FCC'S PRESCRIBED POTENTIAL DEPLOYMENT ANALYSIS.

A. Under the FCC's prescribed potential deployment analysis the Commission must reach a decision regarding each market's "suitability for multiple competitive supply"[19] after considering operational barriers, economic barriers and giving suitable weight to any actual deployment in the market. As I noted in my Direct Testimony, economic analysis of the feasibility of entry probably will not consider extraordinary difficulties associated with operational barriers, such as the hot cut barrier that justified the FCC's national finding of impairment. Such difficulties can result in extraordinary costs, or damage to a carrier's reputation and revenue prospects.

Q. DOES QWEST'S POTENTIAL DEPLOYMENT MODEL INCORPORATE EXTRAORDINARY COSTS OR DIMINISHED REVENUE ASSOCIATED WITH OPERATIONAL PROBLEMS WITH UNE-L SERVICE?

A. No. I am not aware of any attempt to quantify the cost or revenue impacts of making the transition from an environment where UNE-L entry is impaired by operational barriers, to an environment in which operational barriers have been removed. Thus, as I discussed in my Direct Testimony, any business case analysis must be understood as proceeding under the assumption – an assumption I would dispute – that operational barriers have been removed.

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[19] *Id.* ¶ 506.

1. <u>CLECs Will Not Enter Without a Positive Business Case</u>

Q. WILL CLECs OFFER SERVICE AT WIRE CENTERS WHERE A REALISTIC BUSINESS CASE ANALYSIS PREDICTS THAT THE NET PRESENT VALUE OF THE INVESTMENT IS NEGATIVE?

A. No. This simply will not happen. The nature of the investment decision for a UNE-L CLEC is to decide, on a wire center basis, whether to sink capital into providing service throughout that wire center. A recent response of Allegiance Telecom of Florida to an interrogatory from BellSouth is particularly articulate.

> The single most important criterion for Allegiance in determining where to build a collocation is the number of lines served by the individual wire center. Given the costs of collocation construction, equipment, power, and the like, a CLEC must be reasonably confident it can acquire enough customers in a wire center to cover those costs and earn a profit in order to proceed with construction of the collocation. Allegiance generally has not built collocations in wire centers with fewer than 9,000 – 10,000 business lines.[20]

Q. MR. SHOOSHAN SUGGESTS THAT CLECs MIGHT CHOOSE TO ENTER A WIRE CENTER FOR WHICH ITS BUSINESS CASE PREDICTS A LOSS IN ORDER TO AVOID THE "ILL WILL" OF CUSTOMERS WHO RECEIVE ADVERTISING MESSAGES INTENDED FOR THOSE IN NEARBY AREAS WHERE SERVICE IS AVAILABLE. IS THIS PLAUSIBLE?

A. No. It is very common for companies, including Qwest, to advertise in media that cover areas in which the products offered are not available. Caveats like: "some products and services are not available in all locations" are common.[21] I understand that Qwest

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[20] BellSouth Telecommunications Inc.'s Second Set of Interrogatories to Allegiance Telecom of Florida, Inc., Docket No. 030851-TP, attached as Exhibit RC-6.

[21] *See* SBC Telecom's web site announcement of its Seattle serving area, attached as Exhibit RC-7. Apparently SBC is not deterred by the prospect of incurring the "ill will" of those not in the handful of wire centers in which SBC actually offers service. Note also that there are precisely ten communities mentioned, as required by the SBC – Ameritech Merger Agreement. SBC has not yet found it profitable to offer service in the eleventh community.

commonly advertises in Seattle print and television media that include Verizon serving areas within their audiences. MCI advertises its Neighborhood offerings on national television. That advertising covers many areas in which the advertised service is not available, yet MCI is not dissuaded by the fear of incurring "ill will," even among its long distance customers in areas where the Neighborhood is not available.

There is a point, however, to the fact that advertising is subject to some economies of scale. The availability of UNE-P in areas where CLECs are impaired without access to the local switching UNE ensures that CLECs can offer service over a wide geographic area, using UNE-P where impaired and UNE-L where not impaired, and thereby take advantage of economies of scale in advertising.[22] If the Commission mistakenly finds no impairment in an area in which CLECs actually *are* impaired without the local switching UNE, then the CLECs' cost disadvantage in nearby areas will be exacerbated by the inability to share the cost of advertising between remaining areas served – whether by UNE-P or by UNE-L – and the area in which UNE-P is no longer available but UNE-L is not feasible.

[22] CLECs will continue to have Mr. Shooshan's "ill will" problem if they offer additional features or lower pricing for "on-net" locations that are impossible or uneconomic when service is provided through the ILEC's switch using UNE-P. Since consumers are accustomed to various restrictions on availability of offerings, I am confident it is not a big problem.

Q. MR. SHOOSHAN GOES ON TO SPECULATE THAT A NEGATIVE BUSINESS CASE FOR A CLEC IN A PARTICULAR WIRE CENTER SUGGESTS THAT "IT IS LIKELY THAT QWEST IS NOT SERVING THE CUSTOMERS IN THESE WIRE CENTERS PROFITABLY EITHER."[23] IS THIS A REASONABLE INFERENCE?

A. No. If there were two companies, *with similar costs*, each in a position to serve a group of customers, and if it were determined that one of the companies could not serve those customers profitably, it would be reasonable to conclude that it is probably unprofitable for the other company to serve the same group of customers. However, the premise that costs are similar is not satisfied in the present case.

There can be no question that CLECs operate at a substantial cost disadvantage in serving customers without access to the local switching UNE, at least in small wire centers such as those that Mr. Shooshan mentions in the answer cited. In the Triennial Review proceeding the FCC noted "[a]ll the studies found that in such wire centers, entry would be much more expensive for the competitive LEC than for the incumbent, or simply would be uneconomic." [24] Thus, the fact that the CLECs' cost disadvantage rises to the level of making entry uneconomic – in Qwest's own study – offers no support for Mr. Shooshan's inference that Qwest must be selling at a loss in those wire centers. Mr. Shooshan should take the result at face value: there are wire centers – 17, or almost a third, of the 60 wire centers in which Qwest would have the Commission find no impairment – where UNE-L entry has not occurred and is unlikely to occur soon because it is simply uneconomic.

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[23] Direct Testimony of Harry M. Shooshan at 56, lines 8-9.

[24] *Triennial Review Order* at ¶ 484.

2. Uncertainty and Sunk Costs are Not Considered

Q. DOES QWEST'S POTENTIAL DEPLOYMENT MODEL CONSIDER UNCERTAINTY?

A. No. Qwest's model assumes that the economic, technological, and competitive environment will stay the same for 25 years, and that everything will go as planned. In Qwest's world, the CLEC can accurately look ahead and size equipment accordingly; the CLEC does not need to wonder whether it will be able to win customers away from the incumbent and other CLECs; it does not need to wonder what customer acquisition costs it will have to incur to compete, or what price concessions it may have to make; it is not required to contemplate the possibility that the market may experience periods of volatility during which competitors vie for customers with targeted offers that lead to very high customer churn. The modeled CLEC is not concerned about the possibility that UNE prices might rise. This is an utterly unrealistic approach to a CLEC's considerations regarding a very large investment decision, and it is inconsistent with the requirements of the *Triennial Review Order*: "In judging whether entry is economic, states must also consider how sunk costs and competitive risks affect the likelihood of entry."[25]

Q. DOES QWEST'S MODEL DISTINGUISH SUNK COSTS AND ACCOUNT FOR THE INFLUENCE OF THE SUNK COST BARRIER TO ENTRY DISCUSSED IN THE *TRIENNIAL REVIEW ORDER*?

A. While Qwest's model appears to include expected sunk costs, it does not account for the fact that "sunk costs, particularly when combined with scale economies, can pose a

[25] *Id.* ¶ 517.

formidable barrier to entry."[26] Indeed, in the modeled world, without uncertainty, sunk costs are no different than other investments, because there is no possibility that things may go wrong. In the real world, investors recognize that things may not go as planned and the firm may find it necessary to exit the market. The model includes a variety of sources of scale economies, the other ingredient in the "formidable barrier to entry." Scale economies, primarily fixed costs incurred at the wire center level, that must be justified by the volume of customers at that wire center, explain the model's finding of profitable entry in large wire centers, but not in small ones.

Q. HOW DO INVESTORS ACCOUNT FOR SUNK COSTS AND SCALE ECONOMIES IN AN UNCERTAIN WORLD?

A. The two most common approaches are to impose a high "hurdle rate" as the cost of capital required for the investment, or to require a very short payback period for the investment. However, Qwest's model does not account in any way for the fact that "sunk costs also increase the cost of failure, so if there is a substantial risk of failure, entrants may be reluctant to take the risk, and investors may be reluctant to finance entry."[27] As a consequence, the results of Qwest's model must be viewed as optimistic. By not recognizing uncertainty and the fact that many of the costs of UNE-L entry are sunk costs, the model overestimates the prospects for potential deployment. In Section V below I illustrate the effect of some sources of uncertainty on possible outcomes estimated by the model. Recognizing the effect of uncertainty in even this simple way will allow the Commission to

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[26] *Id.* ¶ 88.

[27] *Id.* ¶ 80.

more effectively judge whether CLECs considering investments in UNE-L entry will be willing to incur substantial sunk costs to participate in such a project.

III. QWEST'S MARKET DEFINITION IS FLAWED

Q. DOES THE COMMISSION'S RECENT ORDER IN QWEST'S COMPETITIVE CLASSIFICATION CASE HAVE BEARING ON MARKET DEFINITION IN THIS PROCEEDING?

A. Yes. In the *Order Granting Competitive Classification*, the Commission notes that Staff and Qwest acknowledged that "an exchange or wire center level as a geographic market might be appropriate if the evidence of entry were limited to facilities based CLECs, and there were not widespread established CLEC entry by means of UNE-P and other wholesale products."[28] In this proceeding, UNE-P entry offers no basis for overcoming the national finding of impairment, and the Commission must consider actual and well as potential "facilities based" entry.

Q. QWEST'S MARKET DEFINITION REQUIRES LUMPING TOGETHER WIRE CENTERS INTO MSA MARKETS. IS IT APPROPRIATE TO AGGREGATE WIRE CENTERS FOR A MARKET DEFINITION IN THIS PROCEEDING?

A. No. Aggregating wire centers into larger markets serves no purpose but to paint the geography of Washington mass-market customers with a broad brush, including areas of no UNE-L competition in the same market as areas where UNE-L competition is developing. This approach unnecessarily raises the stakes on Commission findings of no impairment, where a wire center or two may afford evidence supporting such a finding, but there is no UNE-L entry in outlying areas, and none is likely to occur for some time. Aggregating wire

[28] *Id.* ¶ 69.

centers is entirely at odds with the FCC's mandate for "accuracy and practicality," because it unnecessarily introduces both inaccuracy and practical difficulties.[29]

A. Qwest's Reliance on Scale Economies to Define Markets is Misplaced

Q. IN ARGUING AGAINST DEFINING THE WIRE CENTER AS THE GEOGRAPHIC MARKET, QWEST ARGUES THAT ECONOMIES OF SCALE REQUIRE ENTRY AT A LARGER SCALE. DOES THIS CONSIDERATION SUPPORT A MARKET DEFINITION LARGER THAN THE WIRE CENTER?

A. No. As I discussed in my Direct Testimony, economies of scale may interact with other factors, notably the cost of transportation, to influence the geographic scope of alternatives available to consumers, which is the real criterion for defining markets. However, directly using economies of scale to define markets, as required for this proceeding, inevitably leads to contradiction. First, Qwest recognizes that the criterion of a "market" large enough to capture all important economies of scale would require defining markets larger than the state. Mr. Reynolds' Direct Testimony notes "that a statewide or larger geographic market definition might, absent the FCC's pronouncement in the TRO, be appropriate," and Mr. Shooshan endorses the conclusion.[30] It is inevitable that a desire to define markets by reference to economies of scale will collide with the FCC's requirement that markets not be defined to be as large as a state. Mr. Reynolds and Mr. Shooshan seem to regard this constraint as unfortunate, but the point of defining a geographic market is to determine the area in which service offerings represent alternatives acceptable to consumers, not areas required to exhaust economies of scale.

[29] *Id.* ¶ 130.

In spreading the fixed costs of Operations Support Systems "across all states" Mr. Copeland also recognizes that economies of scale will not generally be exhausted within a single state.[31] The observed pattern of UNE-L CLEC entry corroborates the existence of such economies of scale, which clearly extend well beyond state boundaries.

While not conclusive evidence, the fact that UNE-L providers typically enter many markets over a broad geographic area is suggestive of the existence of such economies of scale. The following table gives a rough characterization of the geographic scope of the UNE-L CLECs mentioned at page 31 of Mr. Reynolds' direct testimony.[32]

Company	Headquarters	Geographic Scope
Advanced Telecom Group	Santa Rosa, CA	West Coast
Allegiance Telecom, Inc.	Dallas, TX	Nationwide
Eschelon Telecom, Inc.	Minneapolis, MN	West and Midwest
Integra Telecom, Inc.	Beaverton, OR	West and Midwest
MCI	Ashburn, VA	Worldwide
McLeodUSA Inc.	Cedar Rapids, IA	West and Midwest
SBC Telecom Inc.	San Antonio, TX	Nationwide
XO Communications	Reston, VA	Nationwide

Source: company web sites

Thus, it should be clear that the geographic markets cannot be determined in such a way as exhaust all economies of scale. It is clear that economies of scale extend well beyond

[30] Direct Testimony of Mark S. Reynolds at footnote 11; Direct Testimony of Harry M. Shooshan at footnote 74.

[31] Exhibit PBC-2 at §§ 2.8.5 and 2.9.1.

[32] I include SBC Telecom for completeness, but I would exercise extreme caution in drawing inferences from SBC Telecom's actions without recognizing the influence of the SBC-Ameritech merger conditions on those actions.

state boundaries. If the FCC had sought to define geographic areas sufficient to allow exhaustion of economies of scale, but, for some administrative reason didn't want to expand beyond state boundaries, the FCC could have defined each state as a market. Rather, the FCC requires the states to conduct a "granular" analysis, "on the most accurate level possible, while still preserving administrative practicality," and took the "lesson of geographic granularity from the HMG."[33]

Q. WHAT IS YOUR UNDERSTANDING OF THE FCC'S REQUIREMENT REGARDING ECONOMIES OF SCALE IN MARKET DEFINITION?

A. In my understanding, the clearest, most unequivocal guidance provided by the FCC is that impairment analysis must be conducted on a granular, market-by-market basis, with geographic markets being defined as areas smaller than entire states. The FCC stated that "states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market."[34] However, a tension arises from a too-literal reading of the requirement.

There is no dispute that there is a need to give effect to the FCC's requirement regarding scale economies by incorporating suitable assumptions into a business case analysis that allow the modeled CLEC to spread some costs to other states' operations, thereby taking advantage of economies of scale. This is an absolutely crucial feature of Qwest's business case model; without this assumption with respect to the cost of OSS, I doubt there would be a possibility of a positive business case for any area in Washington.

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[33] *Triennial Review Order* ¶ 130 and n.439.

[34] *Id.* ¶ 495.

However, I believe that this approach, or a similar alternative, gives full effect to the quoted requirement.

Q. WOULD EXPANDING THE MARKET BEYOND THE WIRE CENTER TO AN MSA, OR A LATA, GIVE EFFECT TO THIS REQUIREMENT?

A. No. As I noted above, expanding the definition of the geographic market, even to encompass the entire state, will not, under the most literal reading, allow a CLEC "to take advantage of available scale and scope economies from serving a wider market."

Q. WHAT DO YOU BELIEVE IS THE CORRECT READING OF THIS REQUIREMENT?

A. I believe that this statement is best understood as requiring that the analysis ***not*** be conducted in such a way that the definition of the market, being too small to allow a CLEC to achieve economies of scale, predetermines, or favors a finding of impairment by artificially imposing a cost disadvantage on the modeled CLEC. Under this reading of the requirement, there is no need to introduce inaccuracy by expanding the geographic scope of the market in a way that doesn't reflect the availability of alternatives to consumers. Neither is the expansion of the market definition within the State's boundaries sufficient to afford volumes necessary for economies of scale, nor is it necessary.

Q. DOES THIS APPROACH REQUIRE ANY QUALIFICATIONS?

A. Yes. As I discussed in my direct testimony, in order for this approach to lead to correct results, it must be the case that each wire center, defined as a market for the purposes of trigger and potential deployment analysis, can be economically included in a collection of other wire centers, which may not necessarily be nearby, in a way that affords the CLEC the opportunity to take advantage of economies of scale. An example of this requirement is that the availability of UNE-P in nearby wire centers where UNE-L is not feasible helps ensure the possibility of achieving economies of scale in advertising. I believe that this requirement is very similar, if not identical, to the analysis of Dr. Lehr and Dr. Selwyn on behalf of AT&T.[35]

B. The MSA Does Not Define an Appropriate Aggregation

Q. IF THE COMMISSION WERE DETERMINED TO ADOPT A MARKET DEFINITION THAT REQUIRES AGGREGATING WIRE CENTERS, WHAT CRITERIA SHOULD BE USED TO EVALUATE A PARTICULAR AGGREGATION SCHEME?

A. The most important criterion would be that a CLEC within the aggregation is in a position to serve customers anywhere within the aggregation. As I noted above, while this criterion is satisfied reasonably well in aggregating customer locations to the level of an individual wire center, there is no way to aggregate multiple wire centers to satisfy this criterion. Beyond this, the Commission should look for uniformity among aggregated wire centers in the characteristics that determine the feasibility of UNE-L entry. That is, while entry in one wire center does not assure a CLEC the economic feasibility of offering service beyond the boundaries of that wire center serving area, any aggregation of wire centers for the purpose of market definition ought to, at least, represent a group of wire centers that present CLECs with similar entry prospects.

MSAs do not perform well under this criterion. The most straightforward test of the uniformity of wire centers within an MSA under this criterion is depicted in the charts of Exhibit RC-8HC based on the incremental discounted cash flow analysis – roughly, wire

[35] Direct Testimony of William H. Lehr and Lee L. Selwyn at 38.

center profitability – from Qwest's potential deployment model, using Qwest's default input values. I'll discuss some of Qwest's chosen input values below, but the point of this exercise is simply to note the great variation among profitability levels of the wire centers within an MSA.

In every MSA, one wire center appears in the chart as a "profitability outlier" in Qwest's analysis. In every case, the differences among wire centers that explain these dramatic differences in profitability are the number of lines in the wire center and the ratio of business lines to residential lines. Again, this corroborates the predominant pattern of UNE-L CLEC entry – enter the **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** wire centers to offer service only to businesses – but it does not suggest MSAs as a reasonable aggregation of wire centers. MSAs are defined to include a "recognized population nucleus and adjacent communities."[36] It is in the nature of the geographic distribution of population that areas defined, roughly speaking, to include a population center and outlying areas, will include high density wire centers and lower density wire centers. The following table contrasts characteristics of wire centers within the six MSAs in which Qwest proposes that the Commission should find no impairment with respect to the local switching UNE. For each wire center, the table shows the ratio of business to residence lines in the high profit wire center – typically a central business district – contrasted with the same ratio calculated for the remainder of the MSA. Next, the table shows the number of DS0 loops in the high profit wire center and the average number of DS0

[36] Office of Management and Budget, *Standards for Defining Metropolitan and Micropolitan Statistical Areas; Notice*, Federal Register, Wednesday, December 27, 2000.

loops in the other wire centers of the MSA. These contrasting factors show important variation, not uniformity, within MSAs.

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[redacted]

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Q. ARE THE WIRE CENTERS WITHIN AN MSA SIMILAR IN REVENUE CHARACTERISTICS?

A. No, average expenditures on telecommunications services vary among wire centers, and there is greater similarity between MSAs than among the wire centers within a particular MSA. The following table, derived from quarterly Bill Harvesting® data collected by TNS Telecoms shows average revenue per line for the wire center with the highest revenue per line and the wire center with the lowest revenue per line in each of the MSAs in which Qwest claims a finding of no impairment is justified.[37] The highs vary from **BEGIN HIGHLY CONFIDENTIAL *****[redacted]

[37] I understand that wire center estimates reported by TNS are derived from Bill Harvesting® by use of a model based on demographic characteristics of wire centers.

[redacted]

***** END HIGHLY CONFIDENTIAL**

The last two columns show the simple averages for the six MSAs, treating the wire center as the unit of analysis, and the weighted average for each MSA, treating lines as the unit of analysis. Both measures of central tendency within MSAs are strikingly similar between the MSAs. This is not surprising, considering that MSAs are defined to include a central place and outlying areas. Each MSA includes the variation dictated by the continuum from central business district to outlying area. When you average out those differences within MSAs to compare nearby MSAs, less difference appears.

Q. DOES THE OBSERVED PATTERN OF ENTRY BY UNE-L CLECS SUGGEST AN MSA MARKET DEFINITION?

A. No. If this were the case a CLEC entering the MSA using the UNE-L strategy would present an alternative for consumers throughout the MSA. In fact, UNE-L CLECs enter a wire center or a few wire centers but do not typically offer service throughout the MSA. As noted in the *Order Granting Competitive Classification*, Staff and Qwest acknowledged that "an exchange or wire center level as a geographic market might be appropriate if the evidence of entry were limited to facilities based CLECs, and there were not widespread established CLEC entry by means of UNE-P and other wholesale products."[38] In the present case, the Commission seeks evidence that might overcome the FCC's national finding of impairment based on operational barriers to entry associated with the UNE-L CLEC's need for "hot cuts" to migrate customers. That is, the relevant evidence is "limited to facilities based CLECs," the first premise that would lead Staff and Qwest to favor an exchange or wire center market definition. Further, the Commission will make a decision in this case that could lead to overturning the "widespread established CLEC entry by means of UNE-P" that forms the other premise that would lead Staff and Qwest to favor an exchange or wire center market definition.

Q. DOES THE GEOGRAPHIC PATTERN OF ENTRY OF UNE-L CLECS LEND ANY SUPPORT TO AN MSA MARKET DEFINITION?

A. No. As I explained in my Direct Testimony, the correct criterion for market definition is the availability of alternatives to consumers. Conditions in a particular industry with great economies of scale may lead to firms operating in geographically large markets, or it may lead to firms entering many geographically small markets. Local telecommunications is an example of the latter. In any case, the observed pattern so far is that UNE-L CLECs typically enter many MSAs, but only enter a few wire centers in each MSA. I do not see any basis for arguing from this pattern that markets should be defined by MSAs.

[38] *Order Granting Competitive Classification* at 69.

C. The Commission Should Determine the Mass-Market Boundary to Include All DS0 Switching

Q. IN YOUR DIRECT TESTIMONY YOU STATED THAT THE COMMISSION SHOULD CONSIDER "THE EMPIRICAL EVIDENCE OF MARKETPLACE BEHAVIOR TO DETERMINE WHETHER THERE ARE OTHER FACTORS THAT ARE AFFECTING A CUSTOMER'S DECISION TO GO DS-1 VERSUS MULTIPLE VOICE-GRADE LOOPS." HAVE YOU REACHED A CONCLUSION ON THIS ISSUE?

A. Yes. As the Commission observed in the *Order granting Competitive Classification*, there is some price at which "a customer might choose digital service, after taking into account the cost of digital CPE and other factors."[39] In my Direct Testimony I discussed some of the customer-specific factors that might lead individual customers to prefer service either a DS-1 or several DS-0 circuits. Since filing that testimony I have come to believe that capturing all of these customer-specific considerations in a "one-size-fits-all" calculation of the economic crossover point between DS-1 and voice-grade loops is virtually impossible. Therefore, I recommend that the Commission rely on the market to "validate" the efficient crossover point, as Verizon has proposed in California and elsewhere.

Q. HOW COULD THE COMMISSION RELY ON THE MARKET TO "VALIDATE" THE EFFICIENT CROSSOVER POINT?

A. The Commission could presume that each CLEC and its customer have made a rational decision as to whether to serve its end-user customer via an analog, voice-grade loop or a DS-1 (or higher capacity) loop, given the specific circumstances for each customer. This is the approach that Verizon has taken. Hence, Verizon does not attempt to perform its own

[39] *Id.* ¶ 53.

crossover analysis to replicate the decision analysis of the CLEC.[40] Instead, it merely counts every instance in which a CLEC obtains an analog loop to provide voice-grade service in conjunction with its own switching as a mass-market loop.

Q. HOW WOULD THE COMMISSION IMPLEMENT SUCH A PROCEDURE?

A. The Commission would consider in its impairment inquiry all evidence concerning CLEC self-deployment of switching in conjunction with analog, voice-grade loops without limitation as to the number of analog lines per customer location that the CLEC obtains. For each geographic area in which the Commission subsequently affirms the national finding of impairment (including those areas for which Qwest does not seek to challenge the national finding), the Commission would then permit CLECs to obtain UNE switching in conjunction with analog, voice-grade loops without any restriction as to the number of loops per customer location for which the CLEC could obtain unbundled switching at TELRIC-based prices. Under this approach, the enterprise market is defined effectively as the market for DS-1 level switching.

Q. QWEST HAS STATED THAT IT IS ACCEPTING THE FCC NATIONAL DEFAULT OF MASS-MARKET SWITCHING BEING DEFINED AS LESS THAN FOUR LINES PER CUSTOMER LOCATION. WOULD IT BE FAIR TO QWEST TO ADOPT YOUR RECOMMENDATION CONCERNING THE AVAILABILITY OF TELRIC-PRICED SWITCHING IN GEOGRAPHIC MARKETS FOR WHICH THE COMMISSION MAKES A FINDING OF IMPAIRMENT?

A. Yes. I expect that, with properly applied trigger screens, the selected crossover point will not have a significant effect on the final result. Nonetheless, in its next round of

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[40] Testimony of Orville B. Fulp on Behalf of Verizon California Inc., California Public

testimony, Qwest will have the opportunity to identify whether it believes there are additional instances in which a competitor qualifies to be counted toward the trigger using the market-based approach to the crossover point that I recommend. Moreover, under the FCC's rules, Qwest will have future opportunities to make trigger filings before this Commission based on the more expansive crossover point. Hence, at worst (from Qwest's perspective), application of the broader crossover point definition will merely defer a finding of no impairment to its next trigger filing.

Finally, there is absolutely no justification to believe that it would ever make sense to serve residential customers on a DS-1 loop; therefore, I see no reason for the Commission to impose any limitation whatsoever on the number of analog ports that a CLEC can obtain at TELRIC-based prices to serve residential customers, who comprise the majority of mass-market customers under any plausible definition.

IV. EVEN UNDER A WIRE CENTER MARKET DEFINITION, QWEST'S TRIGGER ANALYSIS IS FLAWED

Q. SHOULD IT BE EASIER OR HARDER TO SATISFY THE RETAIL SELF-PROVISIONING TRIGGER UNDER A WIRE CENTER MARKET DEFINITION?

A. It should be much easier. As I discussed in my Direct Testimony, it is reasonable, with some reservations, for the Commission to presume that a CLEC serving in a particular wire center is in a position to serve all customer locations in that wire center.[41] As discussed

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Utilities Commission, R.95-04-043/I.95-04-044, December 12, 2003, at 15.

[41] The reservations I expressed are associated with the CLEC's ability to expand within the wire center because of impediments such as operational limitations or limited access to loops because of the existence of IDLC.

in my Direct Testimony and in the previous section, such a presumption is not justified with markets defined as MSAs.

A. Trigger Analysis under a Wire Center Market Definition

Q. HOW DO YOU TEST WHETHER THE FCC'S RETAIL SELF-PROVISIONING TRIGGER IS SATISFIED UNDER A WIRE CENTER MARKET DEFINITION?

A. The retail trigger requirement is satisfied in any wire center where 3 or more CLECs are actually providing qualifying service in ways that satisfy requirements of the *Triennial Review Order* for a finding of no impairment under the "bright line" standard of actual deployment. I discussed these requirements at length in my Direct Testimony, and briefly restated the tests in Section II.A above.

B. Qualifying Self-Provisioning CLECs in Qwest Wire Centers

Q. HOW DO YOU APPLY THESE TESTS OR SCREENS TO QUALIFY THE CLEC QWEST PROPOSES AS SATISFYING THE TRIGGERS.

A. I address each of the wire centers in which Mr. Reynolds' Exhibit MSR-6HC shows 3 or more CLECs serving customers with self-provisioned switching, and I evaluate each of the CLECs Qwest proposes as satisfying the requirements of the trigger analysis. Before applying the tests for compliance with requirements of the trigger analysis, I correct a claim that is contradicted by the CLEC's response to a Bench Request. According to Rainier Connect's response to Bench Request 43, Rainier Connect provides qualifying services to end users in only a single wire center, Graham, **BEGIN HIGHLY CONFIDENTIAL ***** [redacted]***** END HIGHLY CONFIDENTIAL.**

Q. WHAT IS THE FIRST TEST YOU APPLY?

A. I first test the scope of market participation as indicated in CLEC responses to Bench Request 45 by identifying, and removing from the list, those CLECs that provide service only to business customers. For the reasons discussed in my Direct Testimony at section IV.B.4, CLECs offering service only to business customers are "currently serving (or capable of serving) only part of the market," and cannot be regarded as satisfying the requirement of the trigger test for the entire market.[42]

After application of this test there are **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** offering service to both business and residential customers, and **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** but none remains with 3 or more. While the retail trigger analysis stops at this point, I proceed to comment on some of the remaining market participation.

Q. WHAT TEST DO YOU APPLY NEXT?

A. Next, for reasons discussed under Section IV.B.3, Intermodal Competition, of my Direct Testimony, I remove the two cable telephony providers listed on MSR-6HC. After applying this test, **BEGIN HIGHLY CONFIDENTIAL** *** [redacted]

[42] *Triennial Review Order* at n.1552.

[redacted] ***** END HIGHLY CONFIDENTIAL**

Q. WHAT ADDITIONAL COMMENTS WILL YOU OFFER RELATIVE TO THE QUALIFICATION OF THESE TWO CLECs TO BE COUNTED IN A RETAIL TRIGGER ANALYSIS?

A. **BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL**

Q. WHAT CONCLUSION DO YOU REACH AFTER EXAMINING QWEST'S PROPOSED TRIGGER COMPANIES' MARKET PARTICIPATION UNDER A WIRE CENTER MARKET DEFINITION?

A. Given the current state of deployment, the trigger threshold is not met in any Washington wire centers. The reason is simple: because of the operational and economic barriers to providing UNE-L services, CLECs employ UNE-L almost solely for the provisioning of services for business customers. While the business segment is substantial and important, and competitive gains in that segment should not be underestimated, UNE-L CLECs have not demonstrated a willingness or ability to serve residential customers, and the

Commission should require such evidence before making a finding of no impairment under the bright line rule of the trigger test. [43]

V. QWEST'S POTENTIAL DEPLOYMENT MODEL LEADS TO OPTIMISTIC AND MISLEADINGLY PRECISE RESULTS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section I will discuss the evidence that Qwest offers regarding potential deployment.

Q. HAVE YOU ALREADY REFERRED TO QWEST'S POTENTIAL DEPLOYMENT EVIDENCE?

A. Yes. I have already referred to this evidence, without questioning Qwest's chosen default inputs, in several contexts above. I noted that Qwest's own analysis suggests that entry into many wire centers is not economically feasible, even using Qwest's own input values and ignoring the role of sunk costs in an uncertain environment. I noted the diversity of profitability results that Qwest reaches for different wire centers within a single MSA. I adopted the model's assumption that an efficient UNE-L CLEC could grow to 5% of the market in 5 years to provide context for evaluating the scale of participation of UNE-L CLECs in Qwest's proposed MSA markets. I noted that Qwest's model assumes that economies of scale are achieved by spreading some costs to CLEC operations in other LATAs or states and noted that an assumption to allow economies of scale in a small

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[43] **BEGIN HIGHLY CONFIDENTIAL ***** [redacted]

geographic area is straightforward, but defining markets on the basis of the extent of economies of scale is impossible, within the constraint of the FCC's requirement that the entire state is too large a market.

Q. DO YOU BELIEVE THAT QWEST'S MODEL PROVIDES A REASONABLE BASIS FOR THE COMMISSION TO REACH DECISIONS REGARDING THE FEASIBILITY OF UNE-L ENTRY?

A. No. While I adjust some inputs to illustrate the uncertainty associated with investments in UNE-L entry, and I interpret outcomes from the model to point out several facets of the evidence in this case, I do not believe the model can be relied on to reach a "yes" or "no" conclusion about the feasibility of UNE-L entry, either at an MSA level or at a wire center level. I believe that it will be very difficult for the Commission to conclude, from any model, that entry is feasible and customers in a given area should be denied alternative service offered by UNE-P CLECs.

A. Uncertainty Regarding Model Inputs and Output

Q. YOU DISCUSSED THE IMPORTANCE OF UNCERTAINTY AT SOME LENGTH IN YOUR DIRECT TESTIMONY AND IN SECTION II.B.2 ABOVE. HOW DO YOU QUANTIFY THE EXTENT OF THIS UNCERTAINTY?

A. As I indicated in my Direct testimony, it is possible to specify input values as ranges rather than as specific values. Executing the model requires selecting a value at random from the range specified for each input about which substantial uncertainty obtains. The model is then executed many times, with new input values chosen randomly from their ranges, recording the profitability outcome for each execution of the model. In this approach, known

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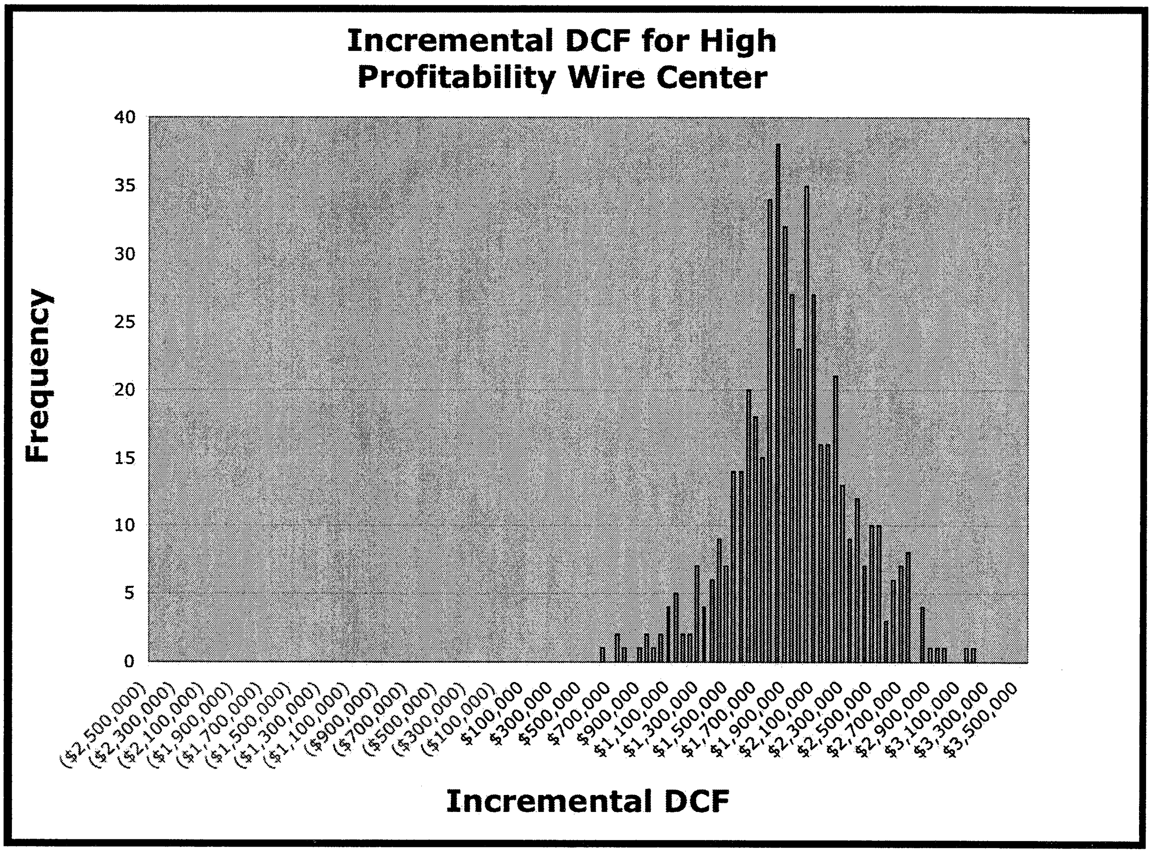
[redacted]***** END HIGHLY CONFIDENTIAL.**

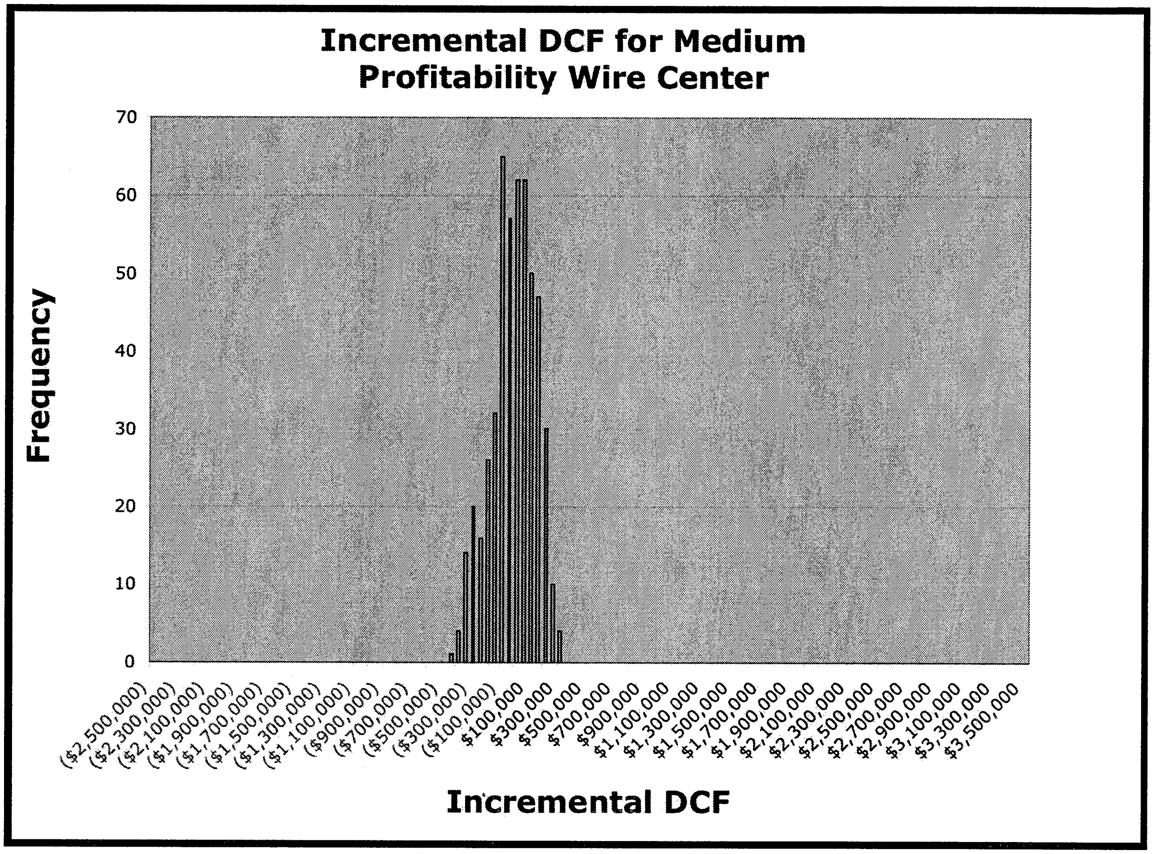
as Monte Carlo simulation, the profitability results reported for the specified ranges of input values capture the uncertainty that must be attached to the level of profitability projected by the model.

The following three charts show approximations of the more or less "bell shaped curves" that capture uncertainty about the future profitability of a CLEC's potential investment in UNE-L market entry. Input ranges are specified for the level of market share the CLEC will attain at the end of 5 years, anticipated revenue, and churn. The model is then executed 500 times with input values chosen randomly from the specified ranges, and recorded results for a particular wire center are displayed in graphs such as the following. In each of the graphs, known as histograms, the horizontal axis shows a level of profitability, or Incremental Discounted Cash Flow (IDCF), as calculated by Qwest's potential deployment model. Roughly, a positive number projects that adding the wire center under study leads to an increase in the net present value of the CLEC's investment over its entire 25 year life. The vertical axis shows the frequency with which a particular range of profitability values occurs in the repeated executions of the model. Ranges of profitability values associated with high frequency are more likely outcomes from the uncertain process, and ranges of profitability values with lower frequency values are less likely outcomes.

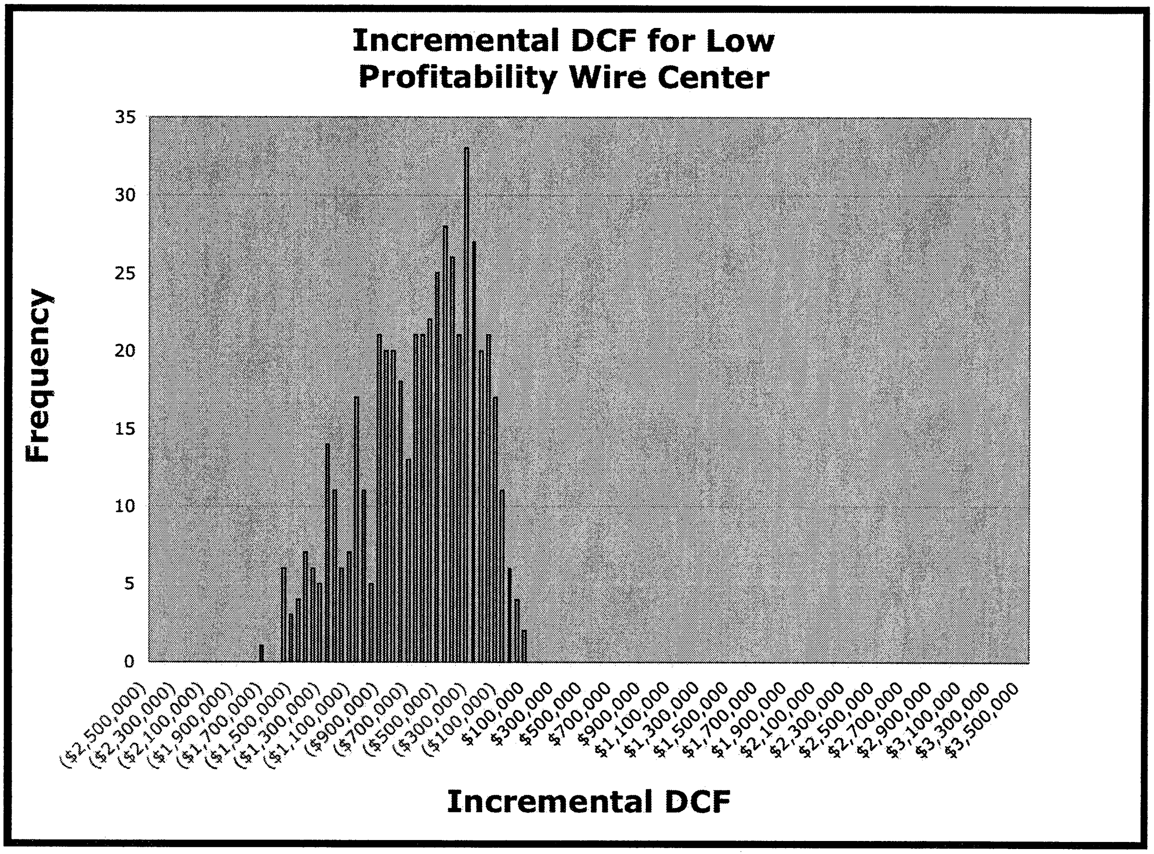
Illustrative charts are provided for three different wire centers. The first, a large central business district wire center with many business lines, is highly profitable, showing a substantial range of possible outcomes for the CLEC's investment, but no significant losses.



The second illustrative chart, for a less attractive wire center, shows a range of possible outcomes that includes a substantial probability of losses. A CLEC entering this exchange must anticipate the possibility that things may not go as planned, in a large enough way that serious losses may be incurred.



Finally, a smaller wire center is analyzed, for which the entire range of likely levels of profitability appear to be less than zero.



The results of the 500 executions of the model used for these charts are contained in Exhibit RC-10 The user can enter a wire center code in the cell indicated in the upper left of the spreadsheet to generate a chart for the indicated wire center.

B. Revenue Inputs

Q. WHAT IS THE PERIOD OVER WHICH QWEST MODELS CLEC REVENUE?

A. 25 years.

Q. PLEASE DESCRIBE QWEST'S APPROACH TO MODELING CLEC REVENUE OVER THE NEXT 25 YEARS?

A. Qwest models CLEC revenue on the rate structures of two MCI Neighborhood plans. In addition to the published prices for the plans, the model makes assumptions regarding long distance usage and the relative proportions of customers who choose the two plans. The outcome of the analysis, using Qwest's default input values, is an average revenue per customer of $54.10 for residential customers. All of these factors – prices, volumes of long distance usage, and preferences between the two plans – are assumed to remain constant over the next 25 years. This complex approach to revenue modeling suggests precision which is simply not possible in projecting next year's revenue, much less revenue that will be attainable in 25 years.

Q. IS IT REASONABLE FOR QWEST TO BASE ITS MODEL'S REVENUE ESTIMATE ON A PARTICULAR CARRIER'S PRICES?

A. No. First, it is unreasonable to model revenue results starting from plans designed to attract "high end" customers. While some CLECs may at some times be able to earn the revenues generated by such plans, it will not be possible for any efficient entrant to count on revenues that may be generated by a particular CLEC's prices, reputation, customer relationships, etc. Thus, an efficient entrant may aspire to the high end of the market, but will also consider the average customer. National expenditure on local and long distance services from 1998 through 2002 are depicted in the following table. The sum of local and long distance expenditures, corrected for inflation, and expressed on a monthly basis appears in the right hand column, $48.75 for 2002. Qwest's model properly excludes taxes from its revenue calculation, but taxes amounting to approximately $3.14 are included in the $48.75 average.[44] Thus, the FCC's reported average expenditure excluding taxes but including End User Common Line Charge is $45.61. Note that total expenditure on local and long distance services has been declining over the last five years. The average annual rate of this decline

[44] Taxes, 911, and other charges from FCC Reference Book 2003, Table 1.1.

has been approximately 6%. If this trend continues, average expenditure will decline to approximately $40.30 in 2004.

Average Annual Household Telecommunications Expenditure

	Local Exchange	**Long Distance**	**Total in Current Dollars**	**Total in 2002 Dollars**	**Monthly Total in 2002 Dollars**
1998	$398	$270	$668	$737	$61.44
1999	402	257	659	712	59.30
2000	416	211	627	655	54.59
2001	426	176	602	612	50.96
2002	436	149	585	585	48.75

Source: FCC Reference Book 2003, Table 2.6, CPI from Bureau of Labor Statistics

Q. DO YOU BELIEVE IT'S REASONABLE TO ASSUME THAT PRICES – AND RESULTING REVENUES PER LINE – WILL REMAIN STABLE OVER THE NEXT 25 YEARS?

A. No. For reasons discussed in my Direct Testimony, I believe that successful establishment of UNE-L competition will lead to substantial reductions in prices. It follows that no reasonable CLEC would rely on a business case that requires prices to remain stable over the next 25 years. The prediction of economic theory that prices will fall was recently corroborated by Qwest's CEO, Richard Notebaert, in an interview published in the Wall Street Journal.[45] Mr. Notebaert's advice to the regional phone companies includes: "Accept that you're a commodity. Slash your prices." The model Qwest presents to this Commission uses current prices, together with assumptions about usage and mix of customer types, to arrive at revenues at the very high end of what might be possible. Notwithstanding Mr. Notebaert's advice to "slash prices," Qwest would have this Commission assume that prices,

[45] January 19, 2004, attached as Exhibit RC-9.

and all the other factors that go into the translation of prices into revenue, will remain stable for the next 25 years.

Q. DOES THE *TRIENNIAL REVIEW ORDER* REQUIRE THIS COMMISSION TO DETERMINE REVENUE OVER THE NEXT 25 YEARS THROUGH A MECHANICAL CALCULATION THAT DOES NOT ALLOW THE POSSIBILITY OF CHANGE.

A. I do not believe it does, and such an action certainly would not make good economic sense – especially in light of Qwest's CEO recommending that regional phone companies "slash prices." Qwest quotes the *Triennial Review Order's* footnote 1598, which states that the majority "expect[s] states to consider prices and revenues prevailing at the time of their analyses."[46] This "expectation" was not codified in the rules promulgated by the *Order*. Indeed, the rules are about evaluating the extent of "economic barriers."[47] In discussing economic barriers in the context of local switching, the *Order* makes clear that "whether entry will be economic depends critically on the values of certain factors affecting a competing carrier's likely costs and revenues, and that these factors vary significantly among locations and types of customers."[48] The *Order* elaborates on this statement in footnote 1497:

> According to the standard set forth above, our analysis must take into consideration the full range of revenues that are likely to be obtained by an entrant providing voice and related services, and the costs likely to be incurred. All factors affecting a competing carrier's likely revenues and costs must be examined to determine if they affect its ability to enter a market economically. Because economic entry

[46] Note that there are various ways to "consider" price. I believe it would be at least as reasonable to project the 6% rate of decline of expenditure discussed above as it is to treat revenue as remaining stable over the next 25 years.

[47] 47 C.F.R. 51.319(d)(iii)(B)(3).

[48] *Triennial Review Order* ¶ 484.

> depends on whether the sum total of all likely revenue sources exceeds the sum total of all likely costs of serving the market, any factor that limits or lowers the potential revenues available to a competing carrier, or raises the cost of serving a set of customers, is a potential barrier to entry. It is only by evaluating all the factors together that we may determine whether the likely revenues from entry will exceed the likely costs. Therefore, no factor should be examined in isolation.

Elsewhere in the *Order*, in discussing economic barriers to entry as they apply to all impairment analyses, the FCC notes that "an entrant that knows that an incumbent LEC has incurred substantial sunk costs may be disinclined to enter a market because the incumbent LEC is likely to drop its prices, possibly to levels below average cost, in response to entry."[49] This is precisely the phenomenon illustrated in Mr. Notebaert's interview with the Wall Street Journal; he emphasizes the importance of existing infrastructure (sunk cost) and counsels phone companies to "slash prices."

Qwest's model considers prevailing prices in isolation – to the exclusion of discounts offered on those prices and "revenues prevailing" at the present time. Importantly, Qwest's model does not simply take prevailing prices and perform a straightforward calculation requiring no consideration of other factors. This is not a possibility. Insofar as price is considered in a business case analysis, it is an input used to derive revenue. In order to derive revenue from prevailing prices – ignoring discounts and information about prevailing revenue – Qwest's model relies on assumptions about the customers that take service under the two price plans modeled, and about the proportions of those two types of customers that will be won by the CLEC. In sum, Qwest has adopted a way to "consider prevailing prices" that I believe is just wrong – it ignores factors that will affect "a competing carrier's likely

[49] *Id.* ¶ 88.

revenues," is contrary to the requirements of the *Order* and to conventional economic analysis of entry decisions.

Q. HOW DO YOU ARRIVE AT A RANGE OF VALUES FOR REVENUE?

A. The illustrative charts in this testimony are based on a range of residential revenue from the $54.10 implied by Qwest's approach, down by almost exactly 25% to $40.30. I regard the prospect of Qwest's $54.10 being maintained for 25 years, even by CLECs with the strongest reputations and longstanding customer relationships, as implausible. I use this value, nevertheless, as the top of the range. The bottom of the range is defined by the projected 2004 average expenditure developed above.

C. Churn and Market Share

Q. IS QWEST'S MODEL BASED ON REASONABLE ASSUMPTIONS ABOUT CHURN AND MARKET SHARE?

A. No. First, like prices and revenue, churn and market share are outcomes of a competitive process that we have not yet observed. As such, they are subject to a great deal of uncertainty. It simply cannot be known with any precision what levels of churn are likely in the world of competition among an incumbent and UNE-L based CLECs and, therefore, what market share an efficient entrant should project. I provide a range for churn extending from Qwest's proposed 3% to a high of 7%, based on MCI's churn reported in response to Bench Request 49. Substantially higher churn rates were reported by other carriers, and the objective of the top of the range is to establish a reasonable maximum, with higher values considered unlikely.

Establishing a range of possible values for market share attainable by a new UNE-L entrant is inherently somewhat arbitrary, as is Qwest's assumption that the modeled CLEC grows linearly for 5 years and remains stable for the next 20 years. The FCC's December 22, 2003 release of the *Local Telephone Competition* report calculates a nationwide CLEC share of end-user switched access lines of 15%, as of June 30, 2003. Thus, if there were 3 CLECs sharing that percentage equally, each would have 5% of the total. Qwest's support for its choice of 5% refers to the growth necessary to achieve 5% within 5 years.[50] The UNE-P growth cited, especially insofar as it comes from early in the development of UNE-P competition, may not be representative at all of growth rates achievable under UNE-L, especially considering the much more complicated migration of loops necessary under UNE-L. Essentially, the range of market share values on which an investor will rely on when evaluating a UNE-L investment is the range of values that seem likely, considering the CLEC's business plan for how it intends to win customers away from competitors. While I regard 5% as plausible, I believe it is quite optimistic, and a reasonable investor would certainly want to consider the possibility that the implied growth may not be attained. For the sake of the illustrative charts in this testimony I specify a range from 3% to 5%.

D. Consistency of Inputs

Q. MR. COPELAND DISCUSSES THE IMPORTANCE OF CONSISTENCY AMONG INPUTS. IS THIS CONCEPT A PART OF THE ECONOMIC LITERATURE?

A. Wherever there is a well understood relationship among variables, it would be an error to adopt values that are inconsistent under that relationship. In the case of the variables about which Mr. Copeland expresses concern, especially those that will arise from competition in a UNE-L environment, there is no well understood relationship to be violated.

[50] Exhibit PBC-4C at 4.2.4.

For example, where price competition is particularly rigorous, one would expect some price reductions to be successful in attracting customers away from the competition, resulting in higher churn; that same price competition will also cause revenue per line to fall, unless price reductions elicit sufficient increases in volume to offset the fall in price. Of course, price reductions can take many different forms.

A recent list of correspondence with the Colorado Public Utilities Commission, attached as Exhibit RC-11, shows a variety of promotional discounts providing a small example of the creativity that can be elicited by the force of competition. The list includes promotional discounts offered by Qwest that suggest opposite relationships between price and churn. The very first item on the list allows Qwest's sales agents to offer price concessions to potential customers "that currently subscribe to service from another telecommunications provider." This type of price concession, if practiced by all firms in the market, suggests that the revenue decrease caused by the promotion will be associated with an increase in churn as customers move among providers and take advantage of the promotions. This would be an inverse relationship between revenue and churn. Promotional letter 123, in the middle of the second page provides for price discounts to be offered to Qwest customers seeking to discontinue service, if they will continue to take Qwest's service. This type of price reduction would result in a revenue decrease associated with a decrease in churn, or a direct relationship between revenue and churn.

Beyond price competition, if carriers follow Mr. Notebaert's advice and vie to be regarded as providing the best customer service, they may not "slash" price quite so far, but rather may increase spending to inform customers of their superior service. This will result in an increase in customer acquisition costs, and, insofar as any of the competitors are successful in attracting new customers, churn will rise. In short, competition can take a very wide variety of forms among companies providing services such as modern telecommunications services. I do not know what forms competition in the unprecedented UNE-L environment will take, and I am very confident that no one else knows. Not being able to anticipate exactly the nature of rivalrous behavior that might arise, I cannot anticipate the consequences of that behavior for other variables. Mr. Copeland's "consistency among inputs" only makes sense when there is a well understood relationship among variables, and that is not the case for the variables he mentions.

E. Other Uncertain Inputs

Q. WHAT OTHER INPUTS TO THE CLECs' POTENTIAL DEPLOYMENT DECISION ARE SUBJECT TO UNCERTAINTY?

A. In any business case analysis that relies on returns generated as far as 25 years into the future, essentially all inputs should be regarded as uncertain. I suspect, for example, that the circuit switching equipment specified in the model will be obsolete in 25 years, and all technical and cost inputs for such equipment specified today will be incorrect, or irrelevant. This does not, of course, imply that the model is conservative by assuming constant costs, while technology is likely to improve and reduce costs; competition will force prices to fall as well.

1. Inputs Under Regulatory Control

Q. WHAT INFLUENCE DOES THE REGULATORY PROCESS HAVE ON CLECs' EVALUATION OF A BUSINESS CASE?

A. Many inputs to a business case analysis are determined in the regulatory process. This proceeding will determine an input that is crucial to the business case of UNE-P CLECs that invested in an entry strategy that relies on the availability of UNE-P. Investors contemplating UNE-P entry made assumptions about the continued availability of UNE-P entry before choosing to invest, and those assumptions may or may not be borne out after the courts, the FCC, and this Commission resolve all the many outstanding questions. Improvements in efficiency or reductions in cost of Qwest's hot cut process that may result from this proceeding will have a crucial effect on the feasibility of entry under a UNE-L strategy.

The fact of this uncertainty cannot be in doubt. The important question for the Commission's consideration of the feasibility of potential entry is how CLECs will evaluate that uncertainty. The following section discusses uncertainty regarding the UNE loop rate.

2. Example of UNE Loop Rate

Q. THE UNE LOOP RATE IS NOT AT ISSUE IN THIS PROCEEDING. HOW IS IT RELEVANT TO A POTENTIAL DEPLOYMENT ANALYSIS?

A. As the FCC noted in the *Triennial Review Order*, "no party seriously contends that competitors should be required to self-deploy voice-grade loops."[51] The price paid to the ILEC for UNE loops is a critical input to the business case for UNE-P or UNE-L entry, but, if possible, it is more critical for a UNE-L strategy. The correct UNE loop rate for a business case analysis is the rate that the CLEC expects to prevail over the life of the investment – 25 years in Qwest's potential deployment model. If the CLEC evaluating the potential for UNE-L deployment believes that UNE loop rates will fall, then, other things being equal, the business case for UNE-L entry looks more attractive. If the CLEC has reason to believe that the UNE loop rate may rise, then the business case will be less attractive. With the FCC's

[51] *Triennial Review Order* ¶ 439.

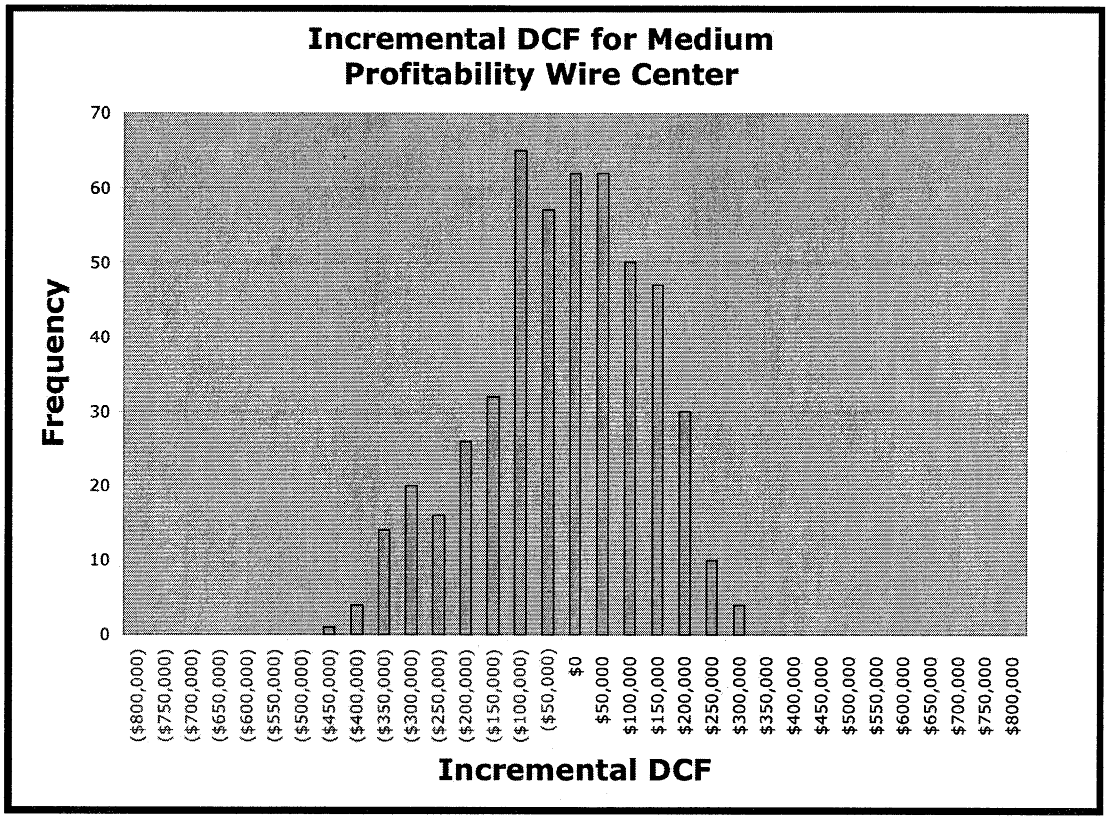
TELRIC NPRM proceeding in progress, a CLEC considering the economic feasibility of incurring very substantial sunk costs under a UNE-L entry strategy will certainly consider the possibility that UNE loop rates might rise sometime over the next 25 years.[52]

Q. HOW COULD THE UNE LOOP RATE BE MORE CRITICAL TO THE UNE-L ENTRANT THAN UNDER UNE-P?

A. UNE loops are a necessary input under either entry strategy, and enter into the calculation in exactly the same way for either entry strategy. Nevertheless, *uncertainty* about future UNE loop rates is more important to a CLEC evaluating the potential for deployment of facilities for a UNE-L strategy. As the FCC noted: "Sunk costs, particularly when combined with scale economies, can pose a formidable barrier to entry. Sunk costs increase risk as well as an entrant's cost of failure, which in turn can increase the cost of capital and discourage entry."[53] Because sunk costs and scale economies are much larger factors under the UNE-L strategy, the effect of uncertainty regarding such an important input price is magnified in importance for potential UNE-L entrants. The following two charts repeat the earlier analysis of uncertainty in the outcome of Qwest's business case analysis for the wire center labeled "medium profitability," but does so under the assumption that loop rates will rise by 20 percent.

[52] Due diligence for an investment project as large as UNE-L entry would probably require the CLEC considering potential deployment to read the TELRIC NPRM and form an opinion about it's possible implications for UNE loop rates, and, importantly, for the relative certainty that can be attached to the stability of existing rates. *See* In the Matter of Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, WC Docket No. 03-173, *Notice of Proposed Rulemaking*, FCC 03-224, Released September 15, 2003.

[53] *Triennial Review Order* ¶ 88.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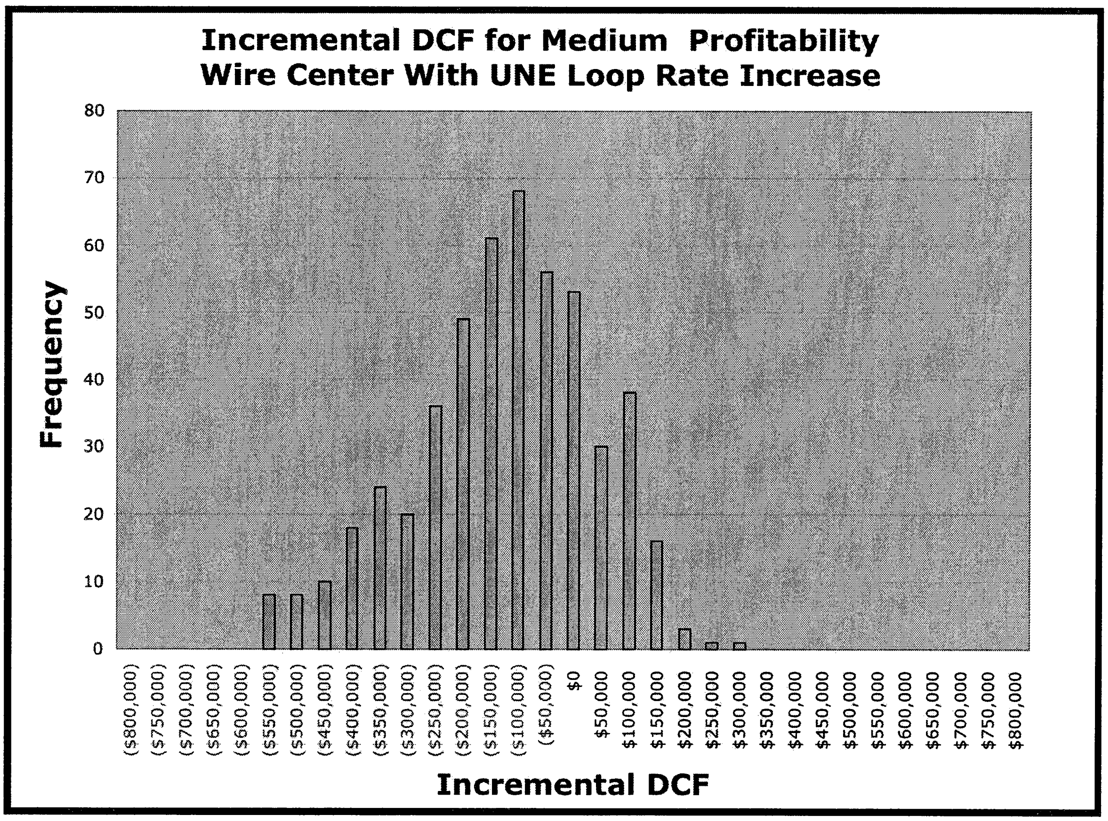
Incremental DCF for Medium Profitability Wire Center With UNE Loop Rate Increase
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VI. CONCLUSION

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. After examining the evidence presented by Qwest I cannot conclude that CLECs are not impaired without access to the local switching UNE, either in the MSAs proposed by Qwest as the proper market definition, or in wire centers, which I believe is the correct market definition. Qwest's trigger analysis fails at the level of the MSA market definition, primarily by seeking to count CLECs with very limited geographic coverage of the market. Examined at the level of wire centers, where I initially presume that CLECs accomplish complete geographic coverage of the wire center serving area by virtue of collocation in the wire center, Qwest's trigger analysis fails, primarily by proposing to count CLECs that do not serve residential customers.

Qwest's potential deployment analysis fails under a MSA market definition because Qwest's own potential deployment model does not show a positive business case for a large number of wire centers. The implication is that, even under the prediction of Qwest's own model, customers in these wire centers will not see offers of UNE-L service to replace existing UNE-P providers if the Commission were to make a finding of no impairment. The argument that CLECs will choose to enter wire centers where they do not expect to recover their costs is simply not credible.

I have considered the evidence offered in favor of using MSAs to define markets, and find that this approach is unsupported by the observed geographic pattern of UNE-L entry, or by any other rationale, and will not yield useful information for the decisions at hand. In particular, expanding markets beyond wire centers, but within the State, is neither necessary nor sufficient to allow a modeled CLEC to take advantage of economies of scale. As I noted in my direct testimony, defining markets at the wire center level is the most accurate approach within the bounds of practicality, and expanding beyond the wire center introduces inaccuracy as well as practical difficulties.

Finally, I conclude that Qwest's potential deployment model does not provide an adequate basis for the Commission to determine that a market is suitable for "multiple, competitive supply," even though actual deployment is insufficient to satisfy the requirements of the trigger analysis. The *Triennial Review Order* requires that "[i]n judging whether entry is economic, states must also consider how sunk costs and competitive risks affect the likelihood of entry."[54] The model is not designed to take account of sunk costs. I derive some illustrative charts from the model's results with some input values that allow for the possibility of uncertainty regarding future conditions, but the model itself is not designed to evaluate the "formidable" barrier to entry that can arise in cases where there are important sunk costs.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

[54] *Id.* ¶ 517.

Docket No. 030851-TP
BellSouth Telecommunications Inc.'s Second Set of Interrogatories to Allegiance Telecom of Florida, Inc.

Question

95. Describe the criteria you consider to enter a specific market offering qualified services. In your response please detail how, and the extent to which, you rely on both business customers and residential customers to meet the financial criteria. Also identify the criteria used to select the customers that are marketed to or contacted in your marketing campaigns.

Answer

Allegiance deployed a switch in Miami as part of its strategy to become a national local service provider. The geographic location of the switch was based on several factors including minimizing backhaul costs from collocation sites, space availability and where Allegiance could get access to CAPs.

The single most important criterion for Allegiance in determining where to build a collocation is the number of lines served by the individual wire center. Given the costs of collocation construction, equipment, power, and the like, a CLEC must be reasonably confident it can acquire enough customers in a wire center to cover those costs and earn a profit in order to proceed with construction of the collocation. Allegiance generally has not built collocations in wire centers with fewer than 9,000 - 10,000 business lines.

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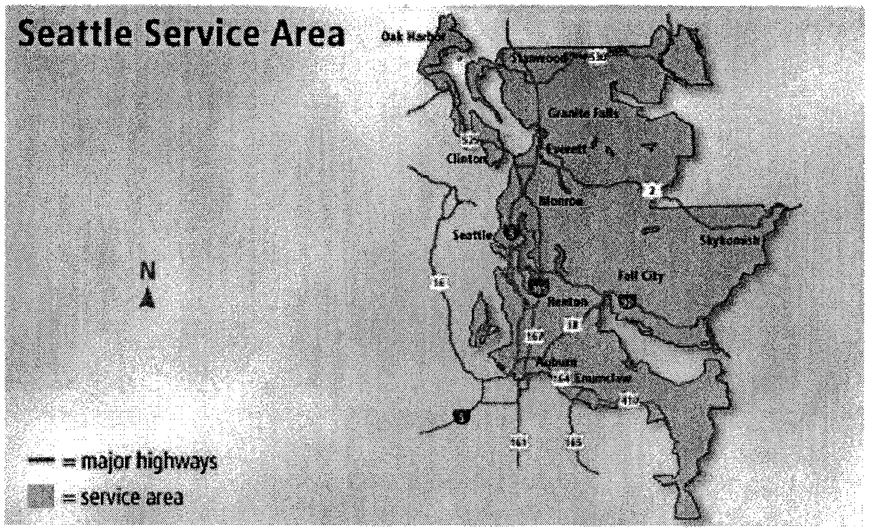
Service Territories

Below are some of the areas where our products and services are available.



Auburn	Halls Lake
Bellevue	Kirkland
Bellingham	Oak Harbor
Burien	Renton
Everett	Seattle

Note: Some products and services are not available in all locations.

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THE WALL STREET JOURNAL. ONLINE

January 19, 2004

BOSS TALK

Now Comes the Hard Part

Having Rescued Qwest, Notebaert Sees Bells' Future Depending on Service, Internet

By ALMAR LATOUR
Staff Reporter of THE WALL STREET JOURNAL

MORE ON QWEST

• Vonage, TI Plan a Web-Phone Deal[1]
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• **Portals:** Can Web Calling Rescue Telecoms?[2]
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• Qwest Discloses Restated Results[3]
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Just 18 months ago, **Qwest Communications International** Inc. was on the verge of bankruptcy. Mired in an accounting scandal and laden with debt, the Denver-based local and long-distance carrier saw its shares drop from a high of $66 in 2000 to just over $1 in 2002. Qwest offered wireless service in only part of the country. And the company had a terrible reputation with customers.

Today, Qwest's prospects are looking up. It slashed $8.5 billion off its debt and teamed up with **Sprint** Corp. to offer wireless service nationwide -- instead of only in its home region of 14 Central and Western states. The telecom company is getting into the video business by striking marketing deals with satellite-TV companies EchoStar Communications and DirecTV. Recently, Qwest even made a $390 million bid for the assets of Allegiance Telecom, under bankruptcy-court protection.

Much of the credit for these changes goes to Richard C. Notebaert, who took the helm in June 2002 after Qwest's board ousted Joseph P. Nacchio. Unlike the flashy, fast-talking Mr. Nacchio, who wore Italian suits, Mr. Notebaert, who is 56 years old, more resembles a clean-cut Boy Scout. He favors clothes bearing the Qwest logo -- down to his pajamas. A no-nonsense manager, the chairman and chief executive officer has pushed to improve the company's accounting practices. He shuns consultants to help foster change.

Richard C. Notebaert

A lifelong telecom veteran, Mr. Notebaert concedes he has much work left to do. Investigations from the Securities and Exchange Commission and the Department of Justice are still pending. Qwest's debt, at more than $17 billion, remains high. And just as Mr. Notebaert is getting Qwest's financials back on track, such regional phone companies are facing unprecedented challenges to their decades-long monopoly of local phone service.

In a recent interview Mr. Notebaert didn't mince words, saying he will embrace low-cost calls that use Internet technology and throwing water on plans to build fiber lines to every U.S. home. Excerpts follow:

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WSJ: Qwest, like many companies in the telecom industry and beyond, has faced scandal and near-bankruptcy. How do you reinvigorate the work force, and regain credibility with regulators and investors?

Mr. Notebaert: First, refuse to look back. On occasion, I say, 'I didn't come to Qwest with a rearview mirror, but I've got a big windshield.' If you want to dwell on the past don't take me with you. Play the hand you're dealt. Second, create transparency and be accessible. Everyone knows they can send me an e-mail and get a response within 24 hours.

Competition in the telecom industry is increasing rapidly, as new technologies allow new players to aggressively enter the market. Where does that leave the large regional phone companies?

At this point, the Bells' phone-line monopolies are gone. It's history. It's over. Phone service has become a commodity because I can get dial tone in Denver or Atlanta or New York or Los Angeles from seven to 10 different companies, without any problem. I can get five or six wireless companies. I can get the [local] telephone company, the incumbent local exchange carrier. Or I can get it from a small company or a large company like MCI or Sprint. Or I can get telephony over the Internet as an information service. Now, if you are going to compete, you have to compete with a commodity mind-set.

How will large phone companies have to adjust to life as a commodity business?

If you accept that we're a commodity -- and not everyone does -- then you realize that most commodities in the early stages operate within a deflationary pricing model. That means, in order to differentiate yourself, you have to have outstanding service. ... I am not talking about a customer's phone line being up or down. I am talking about when a customer calls in with a question or a problem, they'll have to have a great experience. Our customer-service people will stay on the phone with customers. They'll be a customer's advocate. They tell you, oh, you can get a better price if you do this or that. ... You also have to price your service as a commodity.

With thousands of employees and big networks, how can you change your cost structure?

Traditionally, Bells have been geared to offering voice service, and we piggybacked data service on top of voice service. If you have to have a low cost structure and a superb commodity pricing with a deflationary pricing model, you have to really be efficient. You need an architecture that's optimized for data or information services -- and lay voice on top of it. So, that means you switch your network to voice over Internet protocol. We've started offering an Internet-based voice service in Minnesota and we'll expand that.

You have raised eyebrows by pushing the growth of Internet-based phone calls. Do you see phone companies offering Internet-based telephony nationwide?

It seems to me it is a no-brainer, because we've got the

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equipment deployed. We've got the gateways and the switches. ... We can do it at little additional cost. For the moment, though, we are focused on getting the service off the ground in Minnesota. It is not the technology, but the delivery of the service that is the issue. It is the operations and support systems that have to be totally deep enough, so that customer-service experience is not at risk.

LIFELINE

5 Ways to Save the Regional Phone Companies, says Richard Notebaert

- Put the customer at the center of the universe.
- Accept that you're a commodity. Slash your prices.
- Drastically cut your costs.
- Use what you've got. Don't build costly new infrastructure.
- Embrace low-cost new technologies – don't fight them.

When a new CEO arrives at a company that has gone through a roller coaster of events, how does he or she spread a new gospel?

You hire a bunch of apostles and they bring in a bunch of disciples and then folks that don't want to sign up can go to a different religion. Just like Jack Welch did [at General Electric]. We didn't bring in any consultants, no motivational speakers, no grief counselors. It was an organic movement.

Do you have any advice for other CEOs in the same situations?

Three things that I think make people successful: Passion for what you do, global communication, and passing the newspaper test -- anything I do is on the front page of the newspapers, and if I'm embarrassed, I fail the test.

How do you emphasize the importance of ethics to a work force of thousands?

Every talk I give I talk about ethics. ... I like to say there is a right way to do things. It is like cheating with a golf score. I have never understood that. Why would you cheat on your golf score? You are just going to lose the next match because your handicap is too low. And if you shoot the other way everybody is going to think you are a sandbagger and not play with you. By the way, my golf game stinks since I got here.

Verizon Communications Inc. and BellSouth Corp. have announced that they want to roll out costly fiber technology, which will eventually allow them to offer video to customers via their own networks. Are you a believer in connecting fiber to homes on a large scale?

You have to look at the economics of fiber to the home and ask yourself if other technologies such as wireless data transmission don't redefine the economic model for that huge capital investment in fiber. I question if, in our country, we will run fiber to every home. I think the economics of fiber aren't there.

How does one go into Boulder, Colo., or apartment buildings in New York City that have been there for so long, rip everything out and put in new wires? That won't be easy. It is hard for us to look at the economic model and invest in fiber to the home.

So if not through fiber, how else can phone companies compete with cable companies, which offer phone service through cable lines along with hundreds of TV channels and broadband?

There are lower-cost alternatives to fiber. There is going to be commercial availability of 802.16 [a wireless technology that can transmit large quantity of data at broadband speed in a limited

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area] probably by late next year. We're looking at that as an alternative.

Do phone companies really have to offer video to customers?

We have to offer video, but we can't build and own everything. We can strike partnerships -- a wholesale arrangement with a satellite group. As long as our wholesale arrangement with the satellite company provides us enough margin to cover costs, make a little profit and have a price point that is exceedingly competitive, this is a good thing. And look at what it does for the shareholder: I don't have to deploy billions of dollars.

So I look at it and say, do we have to own every piece of infrastructure? No, but we got to have the customer relationship so we can create a good service experience so people will say I want to do business with you. I can buy a wrench at a half a dozen outlets. Why do I go to one versus another? Same wrench. Place is close. The difference is: I like the store. I like Home Depot. I like going to Home Depot. Service makes the difference.

Marketing and wholesale partnerships have a mixed track record, at best. How can companies make sure that these partnerships are meaningful?

That's why you have a contract. ... Partnerships today have a different dynamic than five years ago. Customers don't care what the infrastructure behind a service looks like. They just want the service to work. To avoid misunderstandings in a partnership you have to go very deep into details. For example, maybe you get a wholesale price of X. Three months from now, that price is too high. You have to have the flexibility to review that and then benchmark it against some standard.

Write to Almar Latour at almar.latour@wsj.com[4]

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Updated January 19, 2004

REDACTED

FIXED UTILITIES
NEW APPLICATIONS AND ADVICE LETTERS

LIST PREPARED January 23, 2003
BY: Sandy Potter

DATE FILED	ITEM – DESCRIPTION	PROPOSED AGENDA	STAFF ASSIGNED
1-20-04	**Promotional Letter No. 122.** Qwest Corporation. During a promotional period from February 4, 2004 through April 30, 2004, new residence and business customers that currently subscribe to service from another telecommunications provider may be offered either a waiver of the current nonrecurring charge(s), up to two months credit of the current monthly rate(s), or both, on selected services, as determined by the Company. Proposed effective date 2-4-04.	1-28-04	Roxi Nielsen
1-20-04	**Advice Letter No. 81.** McLeodUSA Telecommunications Services, Inc. Filing to introduce Group Billing; reduce On-Line Preferred Package rates for business customers; introduce Individual Feature Options; and update Integrated Access-Trunk and Integrates Access-Line product descriptions. Proposed effective date 2-21-04.	2-11-04	Jamie Jack Roxi Nielsen
1-20-04	**Docket No. 04A-033G.** Aquila, Inc. d/b/a Aquila Networks-PNG. Application for a Certificate of Public Convenience and Necessity to provide Natural Gas Public Utility Services in the Town of Ellicott, El Paso County Colorado, and within the surrounding area. Notice period expires 2-20-04. In accordance with 4 CCR 723-1, Rule 70, application will automatically be deemed complete on 3-8-04 unless Commission action is taken in the alternative. If application if automatically deemed complete on 3-8-04, Staff intervention due no later than 3-18-04.	3-3-04	Billy Kwan
1-20-04	**Promotional Letter No. 17.** McLeodUSA Telecommunications Services, Inc. **The Great Switched Long Distance Rate Promotion** for business customers. This promotion will begin February 5, 2004 and end April 30, 2004. Proposed effective date 2-5-04.	2-4-04	Jerry Enright
1-20-04	**Promotional Letter No. 18.** McLeodUSA Telecommunications Services, Inc. **The Great Dedicated Long Distance Rate Promotion** for business customers. This promotion will begin February 5, 2004 and end April 30, 2004. Proposed effective date 2-5-04.	2-4-04	Jerry Enright
1-20-04	**Promotional Letter No. 19.** McLeodUSA Telecommunications Services, Inc. **Premium Package Promotion** for business customers. This promotion will begin February 5, 2004 and end April 30, 2004. Proposed effective date 2-5-04.	2-4-04	Jerry Enright

1-20-04	**Transmittal Letter No. 253.** Sprint Communications Company. Filing to make miscellaneous text changes. Proposed effective date 2-4-04.	1-28-04	Roxi Nielsen
1-20-04	**Docket No. 04A-034T.** Allegiance Telecom of Colorado, Inc. and Qwest Corporation and Qwest Communications Corporation. Application for approval of the transfer of assets of Allegiance Telecom of Colorado, Inc. and request for waivers pursuant to C.R.S. 40-5-105; Rule 25-8; 4 CCR 723-25-8; and Rule 70. Notice period expires 2-23-04. In accordance with 4 CCR 723-1, Rule 70, application will automatically be deemed complete on 3-9-04 unless Commission action is taken in the alternative. If application if automatically deemed complete on 3-9-04, Staff intervention due no later than *3-19-04.	3-3-04	Bill Steele John Trogonoski
1-20-04	**Advice Letter No. 1.** ACN Communications Services, Inc. Filing to implement initial Local Exchange Services and Emerging Competitive tariff pursuant to Decision No. C03-0718, in Docket No. 03A-237T. Proposed effective date 2-21-04.	2-11-04	Roxi Nielsen Walter Gaines Ellie Freidman
1-21-04	**Promotional Letter No. 123.** Qwest Corporation. During a promotional period from February 5, 2004, through May 4, 2004, business and residential customers who request to have one or more products disconnected, and after having been informed of the products benefits, may be offered a 50% discount on monthly recurring charge for two months in the form of a credit(s) to their next bills, if they agree to retain the product(s). This promotion applies to both business and residential customers. Proposed effective date 2-5-04.	2-4-04	John Trogonoski
1-21-04	**Advice Letter No. 23.** Time Warner Telecom of Colorado, LLC. Filing to introduce Low Income Telephone Assistance Fund, rates for PBX Analog Trunk IBL/VersiPak Customers and revise the rates for PBX Digital Trunk and PRI Services. Proposed effective date 2-7-04.	2-4-04	Jamie Jack Roxi Nielsen
1-21-04	**Promotional Letter No. 69.** Sprint Communications Company. Filing to change the end date for the **$100 Voucher Promotion** originally submitted in Promotional Letter No. 63 from April 3, 2004 to February 28, 2004. Proposed effective date 2-5-04.	2-4-04	Roxi Nielsen
1-21-04	**Promotional Letter No. 70.** Sprint Communications Company. Filing to change the end date for the **$50 Voucher Promotion** originally submitted in Promotional Letter No. 64 from April 3, 2004 to February 28, 2004. Proposed effective date 2-5-04.	2-4-04	Roxi Nielsen
1-21-04	**Advice Letter No. 63.** Phillips County Telephone Company. Filing in compliance with Decision No. R03-1466, implementing new access rates. Proposed effective date 1-22-04.	Compliance	

1-21-04	**Docket No. 04A-038G.** Public Service Company. Application for an order approving its Refund Plan, authorizing it to credit the cost of gas for suppliers 'refunds received, and further distribution of said refunds. Notice period expires 2-23-04. In accordance with 4 CCR 723-1, Rule 70, application will automatically be deemed complete on 3-9-04 unless Commission action is taken in the alternative. If application if automatically deemed complete on 3-9-04, Staff intervention due no later than 3-19-04.	3-3-04	Billy Kwan
1-21-04	**Docket No. 00T-423.** Qwest Corporation and Z-Tel Communications, Inc. Report of Adoption of Interconnection Agreement. Commission decision must be rendered by 4-20-04.	2-11-04	John Epley
1-21-04	**Docket No. 04T-041.** Qwest Corporation and Rocky Mountain Telecom, Inc. Report of Adoption of Interconnection Agreement. Commission decision must be rendered by 4-20-04.	2-11-04	John Epley
1-22-04	**Amended Advice Letter No. 4.** Xspedius Management Co. Switched Services, LLC. Filing to make corrections to page 159.01 submitted in the original filing. Proposed effective date 2-17-04.	2-4-04	Karl Kunzie
1-22-04	**Advice Letter No. 2.** Consolidated Communications Services, Inc. Filing to introduce Rate Plans 2 and 3, and make text and rate changes to the Non-subscriber Service Charge. Proposed effective 2-22-04.	2-11-04	Jerry Enright
1-23-04	**Docket No. 04M-009T.** Qwest Corporation. Customer Specific Contract # 035.	2-4-04	Roxi Nielsen
1-23-04	**Amended Promotional Letter No. 122.** Qwest Corporation. Filing to clarify the language of the original promotion. This promotion will begin 2-4-04 and end April 30, 2004. Proposed effective date 2-4-04.	1-28-04	Roxi Nielsen
1`-23-04	**Advice Letter No. 41.** Sprint Communications Company. Filing to remove the rates and regulations associated with the Local Number Portability. Proposed effective date 2-9-04.	2-4-04	Roxi Nielsen
1-23-04	**Docket No. 04J-043T.** Touch America, Inc. Notice of intent to discontinue telecommunications services where no customers are affected.		Jerry Enright

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Compliance Filings not appear on the agenda.