

September 9, 2005

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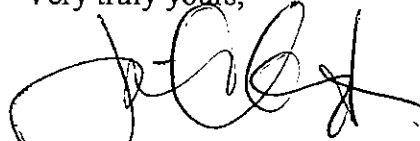
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Oregon Public Utility Commission  
550 Capitol Street NE #215  
PO Box 2148  
Salem, OR 97308-2148

Re: UX 29 - Direct Testimony of Dr. Richard Cabe on Behalf of TRACER

Dear Sir or Madam:

Enclosed for filing in the above-named docket is the original and five copies of Direct Testimony of Dr. Richard Cabe on behalf of TRACER. Please contact me with any questions.

Very truly yours,



Jessica A. Gorham

Enclosure

cc: UX 29 Service List  
Richard Cabe

**CERTIFICATE OF SERVICE  
UX 29**

I hereby certify that a true and correct copy of **DIRECT TESTIMONY OF RICHARD CABE, PH.D, ON BEHALF OF TRACER** was served via U.S. Mail on the following parties on September 09, 2005:

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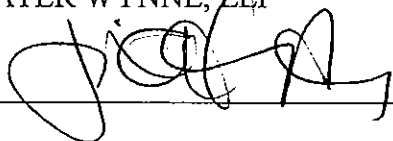
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**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

In the Matter of

QWEST CORPORATION

Petition to Exempt from Regulation Qwest's  
Switched Business Services

Docket No. UX 29

**DIRECT TESTIMONY OF RICHARD CABE, Ph.D  
ON BEHALF OF TRACER**

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1 **I. INTRODUCTION AND SUMMARY**

2 **A. Introduction of Witness**

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

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

5 **Q. PLEASE BRIEFLY DESCRIBE YOUR PROFESSIONAL BACKGROUND.**

6 A. I am an economist in private practice, specializing in economic analysis of regulatory  
7 matters in the telecommunications industry. I have presented testimony in matters  
8 concerning competition in the telecommunications industry to the public utility  
9 commissions of Alabama, Alaska, Arizona, Colorado, Florida, Georgia, Iowa, Kentucky,  
10 Louisiana, Mississippi, Missouri, Nevada, New Mexico, North Carolina, Oregon, South  
11 Carolina, Tennessee, Texas, Utah, and Washington, and to the Federal Communications  
12 Commission. Until May 1999, I was employed as Associate Professor of Economics and  
13 International Business at New Mexico State University. In that position, I taught  
14 graduate and undergraduate economics courses and arranged the telecommunications  
15 curriculum for conferences sponsored by the Center for Public Utilities. Over my last  
16 several years at the university, I offered graduate courses in Industrial Organization,  
17 Microeconomic Theory, Antitrust and Monopoly Power, Game Theory, Public Utilities  
18 Regulation, and Managerial Economics for MBA students. My experience with  
19 telecommunications regulation began in January 1985 when I was employed by the  
20 Washington Utilities and Transportation Commission. During my employment at the  
21 Washington Commission, I served as a staff member to the Federal-State Joint Board in  
22 CC Docket No. 86-297. When I left the Commission staff to complete my doctoral  
23 degree, my title was Telecommunications Regulatory Flexibility Manager. My  
24 consulting clients since I left the Washington Commission have included aspiring new  
25 entrants into the local telecommunications market, state commissions, and consumer  
26 advocates. My resume is attached as TRACER/101, Cabe/1-10.

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

2 A. This testimony was prepared on behalf of the Telecommunications Ratepayers  
3 Association for Cost-based and Equitable Rates (“TRACER”). TRACER is a consortium  
4 of Oregon businesses and educational institutions that advocate on behalf of the interests  
5 of large telecommunications customers.

6 **B. Summary of Conclusions**

7 **Q. PLEASE SUMMARIZE QWEST’S PETITION.**

8 A. Qwest proposes that the Public Utility Commission of Oregon (OPUC or the  
9 Commission) deregulate all of Qwest’s switched business services (including both  
10 circuit-switched and packet switched business services) throughout its entire serving  
11 territory.

12 **Q. WHAT IS THE GENERAL NATURE OF THE EVIDENCE QWEST PRESENTS  
13 IN SUPPORT OF ITS PETITION?**

14 A. Qwest describes competitors’ facilities and competitive offerings in this broadly defined  
15 market and calculates Qwest’s market share for the entire state and various geographic  
16 subdivisions.

17 **Q. IS QWEST’S EVIDENCE PERSUASIVE FOR THE FINDINGS THE  
18 COMMISSION MUST MAKE?**

19 A. No, for several reasons. *First*, Qwest’s definition of the relevant market is flawed to the  
20 point of not being useful. Adopting Qwest’s definition accepts the proposition that a  
21 small, geographically restricted provider of a niche product in a remote part of the state  
22 is, or could quickly become, an available substitute for any business customer, large or  
23 small, in any other part of the State. This is clearly not the case. *Second*, Qwest would  
24 have the Commission consider providers that rely entirely on Qwest facilities as  
25 “competitors,” when such providers are more properly regarded as marketing agents or  
26 distributors of Qwest’s product, rather than as competitive alternative providers. *Third*,

1 Qwest's evidence amounts to a snapshot in time that captures the competitive activity  
2 that developed in an environment that no longer exists. The FCC's initial implementation  
3 of the Telecommunications Act of 1996 (the Act) and the enthusiastic capital markets of  
4 the late 1990s fostered very substantial efforts to enter local exchange  
5 telecommunications markets. Recent events have signaled an end to the environment of  
6 favorable access to unbundled network elements (UNEs) that supported development of  
7 local exchange competition since the earliest implementation of the Act. These  
8 remaining beachheads of competition, developed in a different environment, comprise the  
9 bulk of the competition Qwest now points to as the source of market discipline the  
10 Commission should rely on to replace the constraint of regulation. The prospect of  
11 competition eventually replacing the need for regulation still holds some promise, but the  
12 bulk of Qwest's evidence of competition harks back to an era that is past, and it remains  
13 to be seen what will survive of the competition that developed under the former regime of  
14 access to UNEs at TELRIC based prices. *Finally*, even accepting Qwest's approach to  
15 analysis of competition, the evidence offered cannot justify a grant of the relief Qwest  
16 seeks: upward pricing flexibility that is not needed to respond to competition, and  
17 freedom from reporting requirements that could support an investigation into unfair  
18 competitive practices.

19 **C What Qwest is requesting**

20 **Q. IN BROAD TERMS, WHAT IS QWEST REQUESTING IN THIS**  
21 **PROCEEDING?**

22 **A.** It appears that the main exemptions from regulation Qwest seeks in this proceeding are  
23 (1) the authority to raise prices without the Commission's review, and (2) the waiver of  
24 certain filing requirements.  
25  
26

1 **Q. DOES QWEST ALREADY HAVE SUBSTANTIAL FLEXIBILITY TO REDUCE**  
2 **PRICES?**

3 A. Yes. In 1999, Qwest elected to be subject to regulation under ORS 759.400 *et seq.* In so  
4 doing, Qwest was relieved of traditional rate of return regulation and was granted very  
5 substantial pricing flexibility. Specifically, instead of having its prices set in rate cases  
6 based upon the cost of service, Qwest now operates under a scheme of price caps and  
7 price floors. Prices for Qwest's regulated retail services are capped at levels that were  
8 adopted by the Commission in UM 125.<sup>1</sup> Price floors are set at "the sum of the total  
9 long-run incremental cost of providing the service for the nonessential functions of the  
10 service, and the price that is charged to other carriers for the essential functions."<sup>2</sup>  
11 Qwest's complete flexibility to set prices between the statutory price floors and caps is  
12 subject only to its obligation to provide notice to the Commission within 30 days  
13 following the effective date of the price change.<sup>3</sup> Thus, Qwest currently has all the  
14 flexibility it needs to lower prices on its switched business services any time it wishes,  
15 subject only to trivial notice requirements. Consequently, it appears that what Qwest  
16 seeks in this docket is the ability to raise prices above the current price caps.

17 **Q. IS UPWARD PRICE FLEXIBILITY A NORMAL REQUIREMENT FOR**  
18 **RESPONDING TO COMPETITION?**

19 A. No. Normally responding to competition involves price reductions, not price increases.  
20  
21  
22

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23 <sup>1</sup> See Order No 01-810.

24 <sup>2</sup> ORS 579.410(4); See also ORS 759.410(3), which provides: The price a telecommunications utility that elects to  
25 be subject to this section and ORS 759.405 may charge for basic telephone service shall be established by the Public  
26 Utility Commission under ORS 759.425. Subject to ORS 759.415, the regular tariff rate of intrastate switched access  
and retail telecommunications services regulated by the commission, other than basic telephone service, in effect on  
the date the carrier elects to be subject to this section and ORS 759.405 shall be the maximum price the  
telecommunications carrier may charge for that service. Prices for regulated retail services that were introduced  
after the statute was passed are subject only to price floors. ORS 759.410(5).

<sup>3</sup> *Id.*



1                   **II.     THE STANDARD FOR THE COMMISSION’S DECISION**

2           **A.     The Statute Calls for an Evaluation of the Extent of Competition**

3 **Q.     WHAT TESTS DOES THE STATUTE REQUIRE THE COMMISSION TO**  
4 **APPLY IN DECIDING QWEST’S PETITION?**

5 A.     Qwest petitions the Commission for deregulation under both ORS 759.030(2) and (3),  
6 each of which requires attention to the factors of 759.030(4):

7           (a) The extent to which services are available from alternative providers  
8 in the relevant market.

9           (b) The extent to which the services of alternative providers are  
10 functionally equivalent or substitutable at comparable rates, terms and  
11 conditions.

12           (c) Existing economic or regulatory barriers to entry.

13           (d) Any other factors deemed relevant by the Commission.

14 As an economist reading these factors, it appears that the statute calls for a conventional  
15 examination of the extent – or effectiveness – of competition. A correct application of  
16 these factors, consistent with the economic analysis of competition, will serve as a  
17 reliable guide for the Commission to accomplish the purposes set out for it by the  
18 Legislature. Failure to apply the factors correctly could lead the Commission to rely on  
19 vague assertions about the rigors of competition, while actual customers remain  
20 unprotected from the exercise of market power by a dominant firm.

21 **Q.     DOES QWEST CORRECTLY APPLY THESE FACTORS?**

22 A.     No. For example, the statute refers to “relevant market,” and the importance of defining  
23 a relevant market is well understood in the conventional analysis of competition.  
24 Defining a market too broadly, as I will show Qwest has done, points to competitors  
25 whose offerings are not, in fact, available to the consumers that the Commission is  
26 charged with protecting. The equivalence or substitutability of services must be shown

1 by the success of alternative providers in selling their offerings, yet Qwest fails to present  
2 evidence of the extent to which some forms of competition, Voice over Internet Protocol  
3 (VoIP) in particular, are being adopted by customers. The strongest evidence of the  
4 absence of barriers to entry is a pattern of entry consistent with the absence of barriers;  
5 the pattern of entry in this case actually suggests the presence of barriers to entry.

6 **Q. ISN'T IT CLEAR THAT THERE IS SOME LEVEL OF PRICE AND SERVICE**  
7 **COMPETITION FOR QWEST'S PETITION SERVICES?**

8 A. Yes, but that is not really the issue. Arguably, some level of competition exists for every  
9 product and service offered by any company. This conclusion requires no formal  
10 examination of the statutory factors mentioned above, and indeed, if the Legislature had  
11 intended the deregulation of every service for which there is some level of competition it  
12 would not have required a finding by this expert agency after notice and investigation or  
13 hearing and consideration of those factors. The point of the formal analysis of  
14 competition is to test whether "competition," vaguely defined, is sufficient to discipline a  
15 particular company's ability to exercise market power. Qwest apparently agrees that the  
16 Commission must evaluate the "sufficiency" of competition: "As described above, ORS  
17 759.030(4) delineates the criteria the Commission must consider when determining  
18 *whether sufficient competition exists* and/or whether the public interest no longer requires  
19 regulation."<sup>4</sup> In further recognition of the fact that the existence of competition is not a  
20 "black or white" question, the statute grants the Commission authority (under ORS  
21 759.030(2)) to impose reasonable conditions to match the extent of deregulation to the  
22 extent of competition.

23  
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26  

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<sup>4</sup> Qwest/1, Brigham/10, lines 4-7 (emphasis added).

1 **B. Determinations of Sufficiency of Competition and Conditions Imposed**  
2 **Should be Guided by the Commission's Broad Public Interest Responsibility**

3 **Q. WHAT CONSIDERATIONS SHOULD GUIDE THE COMMISSION'S**  
4 **DELIBERATIONS REGARDING THE SUFFICIENCY OF PRICE OR SERVICE**  
5 **COMPETITION AND CONDITIONS, IF ANY, TO BE IMPOSED?**

6 A. The Commission's broad charge from the Legislature in matters such as this is set out in  
7 ORS 756.040(1):

8 The commission shall make use of the jurisdiction and powers of the  
9 office to protect such customers, and the public generally, from unjust and  
unreasonable exactions and practices and to obtain for them adequate  
service at fair and reasonable rates.

10 Grant of a petition under 759.030, with or without conditions, would be consistent  
11 with the Commission's responsibilities under ORS 756.040(1) *only if* the Commission  
12 finds a level of competition sufficient to prevent the "unjust and unreasonable exactions  
13 and practices." Such a finding requires a careful analysis of the ability of various facets  
14 of competition to provide discipline that could suffice to replace regulation as a means to  
15 accomplish the purposes of ORS 756.040(1). My testimony points to several  
16 shortcomings of Qwest's evidence, taken as an attempt to demonstrate the sufficiency of  
17 competition, to prevent the "unreasonable exactions and practices" the Legislature has  
18 charged this Commission to prevent.

19 **Q. ARE THERE ADDITIONAL FACTORS THE COMMISSION SHOULD**  
20 **CONSIDER?**

21 A. Yes. After considering the nature of the exemption from regulation requested in Qwest's  
22 petition and the evidence presented in support, I recommend that the Commission  
23 consider the likely costs and benefits of a mistaken decision in this case as an additional  
24 factor under ORS 759.030(4), and in accord with its broad responsibility to "protect such  
25 customers, and the public generally."<sup>5</sup> Such a consideration of the consequences of  
26

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<sup>5</sup> ORS 756.040(1).

1 possible errors in decision-making is a standard component of formal decision theory,  
2 and, I believe, a crucial consideration for reaching the right decision in the present case.  
3 Insofar as the evidence presented leaves any uncertainty as to the extent to which  
4 competition is capable of replacing regulation, this approach offers insights that should  
5 inform the Commission's decision.

### 6 III. QWEST'S EVIDENCE OF COMPETITION

#### 7 **Q. WHAT IS THE GENERAL CHARACTER OF THE EVIDENCE QWEST** 8 **OFFERS IN SUPPORT OF ITS PETITION?**

9 A. Qwest refers to several sorts of market participants as evidence of competition: (1)  
10 services provided by others relying entirely on Qwest facilities (resale or QPP providers);  
11 (2) UNE-L providers that rely on Qwest loop facilities but provide their own switching;  
12 (3) full facilities based providers using their own loop and switching facilities; (4)  
13 wireless providers; and (5) VoIP providers. That said, the vast majority of Qwest's  
14 *concrete* evidence of existing competition refers to competitors that rely on Qwest  
15 facilities – mostly “competitors” that rely *entirely* on Qwest's facilities, that is QPP,  
16 UNE-P, or resale.

#### 17 **Q. QWEST OFFERS VARIOUS MARKET SHARE CALCULATIONS. DO YOU** 18 **RECOMMEND THAT THE COMMISSION RELY HEAVILY ON SUCH** 19 **CALCULATIONS?**

20 A. No. Qwest's calculations are not helpful for several reasons. As I will explain in detail  
21 below, Qwest completely neglects the essential first steps of defining meaningful product  
22 and geographic markets, and includes QPP providers, which are clearly not competitors,  
23 but retailers of Qwest's products. Qwest proposes a product market definition that  
24 includes packet switched services divorced from “lines,” yet offers market share  
25 measures based on “lines.” Further, Qwest's presentation gives only the percent of lines  
26 served by Qwest and the percent of lines served by all others, lumping together other

1 market participants in a way that obscures information on the size distribution of other  
2 market participants. Staff's presentation is much more informative, distinguishing among  
3 products in a useful way, and reporting not only Qwest's market share, but also four firm  
4 concentration ratios (CR4s) and values of the Herfindahl Hirschman Index (HHI).<sup>6</sup>

5 **Q. PLEASE DESCRIBE THE CR4 AND THE HHI.**

6 A. The four firm concentration ratio is simply the percentage of the market served by the  
7 largest four firms in the market.<sup>7</sup> Where data are available, concentration ratios are  
8 sometimes reported for 2 firms, 4 firms, 8 firms, etc., to provide a descriptive sense of the  
9 size distribution of firms. The HHI is a single index that attempts to capture market  
10 concentration over the whole range of possible distributions of firm size.<sup>8</sup> Values of the  
11 HHI range from near 0 in the case of many market participants each holding a tiny  
12 market share, to 10,000 in the case of a perfect monopoly. Such concentration ratios  
13 have been used for many decades, and the HHI has received prominence through its use  
14 by the U.S. Department of Justice and Federal Trade Commission to establish thresholds  
15 set out in the Horizontal Merger Guidelines (HMG).<sup>9</sup>

16 There is no threshold value of the HHI that will determine whether competition  
17 rises to the statutory standard for deregulation, and I don't recommend that the  
18 Commission adopt one. However, indicia of concentration, including the HHI can serve  
19 an important descriptive function. In order to provide context for staff's HHI

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20 <sup>6</sup> Staff's aggregations of market participants are much more useful than those reported by Qwest, but I hesitate to  
21 refer to them as "markets" for fear of creating confusion with the concept of "relevant market." For example,  
22 "balance of state" is unlikely to fit any reasonable geographic definition of relevant market. I believe these  
23 aggregations are useful nevertheless, and far superior to Qwest's market definition, which refuses to make product  
24 market distinctions between simple single line dial tone service and high capacity packet switched ATM service.

25 <sup>7</sup> It is not uncommon to calculate indicia of concentration such as the CR4 and the HHI for aggregations of market  
26 participants that do not comprise a "relevant market." Thus, while it may be useful to discuss indicia of  
concentration for aggregations of market participants defined geographically as "balance of state," a reference to  
such an aggregation as a market should not be taken as defining a relevant market, in the sense required for analysis  
of competition.

<sup>8</sup> Staff's memorandum conveying the UX 29 survey results includes a definition and illustration of the working of  
the HHI. See *Memorandum to UX 29 Parties from Steve Chriss*, Docket No. UX 29, July 27, 2005.

<sup>9</sup> *Horizontal Merger Guidelines*, U.S. Department of Justice and the Federal Trade Commission, Issued April 2,  
1992, Revised April 8, 1997.

1 calculations, I recommend that the Commission refer to the ranges of HHI values  
2 indicated in the HMG. The HMG defines the range of HHI values below 1000 as  
3 “unconcentrated,” from 1000 to 1800 as “moderately concentrated,” and above 1800 as  
4 “highly concentrated.”<sup>10</sup> The Department of Justice and Federal Trade Commission use  
5 these designations to determine the extent of further analysis to undertake in the case of a  
6 proposed merger, and to establish presumptions as to whether a proposed merger is likely  
7 to “create or enhance market power.”<sup>11</sup>

8 **Q. WHAT CONCENTRATION RESULTS DID STAFF REPORT FROM ITS**  
9 **SURVEY?**

10 A. Staff’s reported results from the UX 29 survey found HHI values ranging from perfect  
11 10,000 down to a low of 3,250. Thus, every analysis performed by Staff yielded HHI  
12 values that the HMG would regard as highly concentrated.

13 **Q. WHAT CONCLUSIONS SHOULD THE COMMISSION DRAW FROM STAFF’S**  
14 **ANALYSIS SHOWING THAT THE MARKET REMAINS HIGHLY**  
15 **CONCENTRATED?**

16 A. The HMG uses calculated values of the HHI to determine the extent of further analysis  
17 necessary to conclude whether the merger under consideration is likely to create or  
18 enhance market power or facilitate its exercise, and that concern is greater the higher the  
19 calculated value of HHI. Just as a merger may afford a firm new possibilities for the  
20 exercise of market power, so deregulation may give Qwest freedom to exercise market  
21 power that it couldn’t under the minimal form of regulation now applicable to Qwest in  
22 Oregon. I recommend that the Commission view this evidence of very high  
23 concentration as creating a presumption that competition is *not* sufficient to restrain  
24 Qwest’s ability to exercise market power. Thus, Qwest should be held to a very high  
25 standard and should be required to show that despite very high concentration,

26 <sup>10</sup> HMG §1.51, General Standards.

<sup>11</sup> *Id.*

1 competition is now sufficient to replace ongoing regulation before the Commission  
2 contemplates granting Qwest's petition.

3 **Q. QWEST COMPLAINS THAT SOME CLECS DID NOT RESPOND TO THE**  
4 **QUESTIONNAIRE ON WHICH THE SURVEY RESULTS WERE BASED.**  
5 **SHOULD THE COMMISSION ASSUME THAT THE RESULTS OF STAFF'S**  
6 **ANALYSIS MIGHT BE MATERIALLY DIFFERENT HAD ALL OF THE CLECS**  
7 **RESPONDED TO STAFF'S QUESTIONNAIRE?**

8 A. No. To resolve this question, I performed a simple calculation.<sup>12</sup> Specifically, I assumed  
9 for the sake of a calculation that each of Staff's aggregations of market participants might  
10 contain a very important CLEC that failed to respond. I further assumed that the non-  
11 responding CLEC was as large as a combination of *all* the CLECs that did respond. That  
12 is, I assumed that adding the non-responding CLEC would double the lumped-together  
13 CLEC market share, increase the size of the market, and consequently reduce Qwest's  
14 market share. Under these assumptions I asked whether addition of the non-responding  
15 CLEC and recalculation of the HHI would bring the lowest calculated HHI value (3,250)  
16 down into the HMG's range of moderately concentrated markets (HHI between 1,000  
17 and 1,800). The answer is no. The recalculated HHI is well into the highly concentrated  
18 range.<sup>13</sup>

---

23 <sup>12</sup> Qwest's assumption, discussed below, that *all* UNE loops provided to CLECs are used for business switched  
24 services appears to be the source of some of the discrepancy between Qwest's data and that gathered by Staff.  
25 Requesting information from CLECs by service, Staff's approach avoids this error, and may be more accurate than  
26 Qwest's data, despite the lack of a 100% response rate.

<sup>13</sup> The calculation cannot produce a complete result without knowing the distribution of CLEC firm sizes, which was  
not disclosed with the survey results. To answer my question it was sufficient to establish a lower bound for the  
new HHI of 2,143, based only on the contributions to HHI from Qwest and the hypothetical non-responding CLEC;  
the actual HHI under these assumptions would be even higher.

1 **Q. DO YOU RECOMMEND THAT THE COMMISSION FOCUS SOLELY ON THE**  
2 **VARIOUS INDICIA OF MARKET STRUCTURE – THE DOMINANT FIRM’S**  
3 **MARKET SHARE, CR4, HHI – AS IT CONSIDERS QWEST’S PETITION?**

4 A. No. As we have learned more about the rich variety of possible interactions among firms  
5 in an industry, the economics profession has come to rely less exclusively on indicia of  
6 market structure to support conclusions in an analysis of the effectiveness of competition.  
7 While indicia of market structure provide relevant information, the rich context of  
8 corroborating or countervailing factors should also be considered. The most authoritative  
9 concise review of such factors is provided in the HMG, §§ 1.52, 2 – 5. Some of the  
10 factors discussed are not relevant the present analysis because they are peculiar to  
11 mergers, but others apply equally to the new freedom from regulatory constraint the  
12 Qwest seeks in this proceeding. For example, while greater concentration suggests  
13 greater likelihood of exercise of market power, ‘changing market conditions’ described in  
14 §1.52 of the HMG, and discussed at length below, can lead to measured concentration  
15 understating or overstating the likelihood of the exercise of market power. I show below  
16 that this factor is crucial for the Commission to apply in evaluating the evidence at hand.  
17 Section 3 discusses the market discipline that can be provided by the prospect of new  
18 firms entering or existing firms expanding, in the case where entry requires firms to incur  
19 sunk costs. This type of analysis could be particularly relevant to the analysis of  
20 competition in the present case. Thus the HMG relies on the HHI to establish  
21 presumptions or thresholds, never to compel a conclusion. According to the HMG, and  
22 strong consensus in the economics profession, the higher concentration is in a properly  
23 defined relevant market, the stronger is the presumption that the market is likely to be  
24 subject to the exercise of market power. I concur with that consensus, and urge the  
25 Commission to adopt it as well. However, the Commission should assume that the  
26 presumption *could* be overcome by evidence to the contrary.



1 **Q. HAS QWEST PROVIDED SUCH EVIDENCE TO THE CONTRARY?**

2 A, Qwest has failed to provide such evidence, In fact, the most compelling evidence  
3 suggests that the various market share analyses actually *understate* the likelihood of the  
4 exercise of market power. As I will discuss in more detail later in my testimony, this is  
5 true because observed concentration is the result of market entry over the years since  
6 implementation of the Act, and the current environment for entry is less attractive.

7 **A. Market Definition**

8 **Q. IS MARKET DEFINITION AN IMPORTANT PART OF AN ANALYSIS OF THE**  
9 **EXTENT OF COMPETITION?**

10 A. Yes. The concept of “relevant market” is used explicitly in the statute that prescribes the  
11 factors the Commission must consider in this case.<sup>14</sup> The purpose of the market  
12 definition exercise in any analysis of competition is to identify market participants that  
13 actually compete with the subject firm in a way that can provide substantial competitive  
14 discipline. Providers that offer products in geographically distant markets or offer  
15 products that are not close enough substitutes for the product at issue will not provide  
16 competitive discipline for the product under consideration.

17 **Q. DOES QWEST DISCUSS MARKET DEFINITION FOR EITHER PRODUCT**  
18 **MARKET OR GEOGRAPHIC MARKET?**

19 A. Yes. Qwest provides a brief discussion of market definition and, on the basis of factors  
20 that are not of primary concern in a conventional definition of relevant market for  
21 analysis of competition, proposes the broadest conceivable market for the present  
22 petition: all switched business services in the entire Qwest serving territory in Oregon.

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<sup>14</sup> ORS 759.030(4).

1 **Q. IS THE EXTENT OF COMPETITION OVERSTATED BY RELIANCE ON A**  
2 **DEFINITION OF THE RELEVANT MARKET THAT IS BROADER THAN**  
3 **NECESSARY?**

4 A. Yes. Defining a market too broadly will include more competitors than are actually  
5 poised to make an effective competitive response to a Qwest price increase. In effect,  
6 one begins by defining the relevant market, then proceeds to analysis of the extent of  
7 competition on the assumption that every provider in the relevant market as defined is in  
8 a position to provide competitive discipline to a price increase initiated by any other firm  
9 in the market.

10 **Q. IS THERE A GENERALLY-ACCEPTED DEFINITION OF “RELEVANT**  
11 **MARKET?”**

12 A. Yes. The HMG states that:

13 A market is defined as a product or group of products and a geographic  
14 area in which it is produced or sold such that a hypothetical profit-  
15 maximizing firm, not subject to price regulation, that was the only present  
16 and future producer or seller of those products in that area likely would  
17 impose at least a “small but significant and nontransitory” increase in  
18 price, assuming the terms of sale of all other products are held constant. *A*  
19 *relevant market is a group of products and a geographic area that is no*  
20 *bigger than necessary to satisfy this test.*<sup>15</sup>

21 This definition may be difficult to understand on first reading, but it makes perfect  
22 sense, and shows clearly why Qwest’s proposed definition is inappropriate. A market  
23 can be defined so narrowly that monopolizing it is meaningless, or so broadly that it is  
24 certain to include many market participants, and monopolizing it is inconceivable.  
25 Neither approach is useful. The aim of this widely accepted approach is to define the  
26 product and geographic components of a market so that a monopoly over this market is  
significant (would make a price increase profitable), but is not so broad as to mask  
smaller “markets” that could support the exercise of market power. Paraphrasing, a

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<sup>15</sup> HMG, § 1.0 (emphasis added).

1 relevant market is defined as the smallest product/geographic combination that, if  
2 monopolized, would make a price increase profitable. A market defined so that there are  
3 available substitutes outside the market that would discipline a monopolist's price  
4 increase in the market is defined too narrowly. A market that is defined to include  
5 products or locations that do not serve as close enough substitutes for each other,  
6 disciplining potential price increases within the market as defined, is defined too broadly.

7 The HMG approach “begin[s] with each product (narrowly defined) produced or  
8 sold by each merging firm” for the product dimension and “the location of each merging  
9 firm (or each plant of a multiplant firm)” for the geographic dimension.<sup>16</sup> This initial  
10 tentative market definition is expanded by asking whether consumers regard other  
11 products or locations as close enough substitutes that a price increase in the narrowly  
12 defined tentative market definition would be met by consumers switching to other  
13 products or locations.

14 The notion of “close enough” substitutes is given precision by asking whether a  
15 “small but significant and nontransitory” price increase in the narrow tentative market  
16 definition would be met by a strong enough substitution response by consumers to make  
17 the price increase unprofitable, if it were implemented by a hypothetical monopoly  
18 provider controlling all of the products and locations in the tentative narrow market  
19 definition. The tentative market definition is too narrow if it fails to incorporate  
20 substitutes that consumers regard as “close enough,” as measured by consumers  
21 switching to a substitute in response to a price increase. If a tentative market definition is  
22 found to be too narrow, the definition is expanded to incorporate the next best products or  
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24  
25 <sup>16</sup> HMG, § 1.11 (*Product Market Definition General Standards*), 1.21 (*Geographic Market Definition General*  
26 *Standards*). The reference to “merging firms” reflects the fact that the HMG is interested in analyzing the extent of  
competition before and after a hypothetical merger. In the case before the Commission, there is no change in market  
structure before a merger. The Commission’s task involves evaluating the extent of competition in the existing  
market structure, without a hypothetical change.

1 locations that consumers regard as “close enough” substitutes, but stops as soon as the  
2 market definition is sufficiently expansive to meet the price increase test cited above.

3 **Q. HOW DOES THIS APPLY TO MARKET DEFINITION FOR ANALYSIS OF**  
4 **QWEST’S PETITION?**

5 A. Application of this procedure to the questions at hand shows that Qwest has failed to  
6 propose a relevant market that makes sense for analysis of competition, and particularly  
7 in the context of ORS 759.030(4)(a).

8 **Q. HOW SHOULD APPLICATION OF THE CONVENTIONAL MARKET**  
9 **DEFINITION PROCEDURE BE APPLIED TO SERVICES IN QWEST’S**  
10 **PETITION?**

11 A. Defining a relevant market requires consideration of both products and locations; I’ll  
12 discuss the product market first. For illustrative purposes, I will start with one of the  
13 products in Qwest’s petition, narrowly defined-- the basic business dial tone line product  
14 – and the exercise should be repeated for each petition service.<sup>17</sup> In order to determine  
15 whether basic business dial tone service is—by itself—a properly defined relevant  
16 market, I would ask whether a hypothetical company that has succeeded in monopolizing  
17 this service, with no regulation, would find it profitable to impose at least a small price  
18 increase. If the answer is no, then it is no because the hypothetical company has not  
19 cornered the market for close substitutes for basic business service. If this is true, then  
20 the analysis proceeds to include close substitutes for basic business service in the  
21 tentative market definition, and then asks the same question about that broadened  
22 tentative market.

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23  
24 <sup>17</sup> The statute’s prescribed task of defining a relevant market applies to ‘services.’ The fact that Qwest has chosen to  
25 lump several services into one petition says absolutely nothing about the appropriate relevant market for any of  
26 those services. Defining a relevant market for each service under consideration may, and in this case certainly  
should, result in different relevant markets for each service. These relevant markets, defined for the purpose of  
analyzing the extent of competition for each service, may overlap, recognizing that the different services serve as  
substitutes for each other in differing degrees, and this creates no analytical problem for the Commission’s task of  
evaluating the extent of competition for each service.

1 **Q. HAS QWEST UNDERTAKEN THIS ANALYSIS WITH RESPECT TO EACH OF**  
2 **THE SERVICES FOR WHICH IT IS SEEKING DEREGULATION?**

3 A. No. Instead, Qwest just proposes that all petition services belong in the same relevant  
4 market, without conducting the conventional market definition analysis for *any* of its  
5 petition services. In order to support its market definition Qwest *might* have argued, and  
6 the Commission *might* be convinced, that, because the hypothetical monopolist of basic  
7 business service had not cornered the market for PBX trunks, or Centrex service,  
8 customers desiring business dial tone service would substitute away from basic business  
9 lines to avoid the small price increase. While Qwest has offered no study to address this  
10 question, this analysis of substitution possibilities is precisely how definition of a relevant  
11 market *should* proceed.

12 **Q. DO YOU HAVE AN OPINION AS TO WHETHER THE RELEVANT PRODUCT**  
13 **MARKET FOR BASIC BUSINESS LINES SHOULD INCLUDE CENTREX AND**  
14 **PBX SERVICES?**

15 A. I have not reached a definite conclusion on that question, and I don't need to reach that  
16 question in order to see that Qwest's definition of the relevant product market is fatally  
17 flawed.

18 **Q. WHY DO YOU SAY THAT QWEST'S PRODUCT MARKET DEFINITION FOR**  
19 **BASIC BUSINESS LINES IS FATALLY FLAWED?**

20 A. If the Commission is convinced that the substitution possibilities between basic business  
21 lines, PBX trunks and Centrex service would prevent a monopolist for basic business  
22 lines from imposing a small price increase, then the tentative definition of basic business  
23 lines as a relevant market is too narrow, and it should be expanded to include the closest  
24 substitutes, in this case, PBX trunks and Centrex service.<sup>18</sup> While Qwest has not

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25 <sup>18</sup> I believe that the prospect of basic business line customers buying PBXs and leasing PBX trunks to avoid the  
26 price increase is unlikely to deter a hypothetical monopolist from raising prices for basic business lines. A better  
argument, discussed below, for including Centrex and PBX in the relevant market for basic business lines, is the  
prospect that independent suppliers of Centrex and PBX trunks, having overcome the problems of securing a 'last

1 presented the analysis, it is plausible for Qwest to suggest that the exercise of market  
2 power over business lines requires a business lines monopolist to also corner the market  
3 for PBX trunks and Centrex service in order to profitably impose a price increase.  
4 However, it is not plausible to suggest that, beyond controlling the market for PBX trunks  
5 and Centrex service, a hypothetical monopolist would also have to control the supply of  
6 ISDN PRI service and packet switched ATM and Frame Relay services in order to  
7 impose a small price increase without worrying about basic business line consumers  
8 switching to substitute products. Yet, some such analysis would have to underlie  
9 Qwest's proposed relevant market in order for it to be correct.

10 It is inappropriate for Qwest to lump together this wide range of services, as if  
11 each was an adequate substitute for the others. This fact is highlighted by the  
12 incommensurable units used to measure the different services. That is, the natural  
13 measure of units in service for basic business lines is straightforward: access lines. PBX  
14 trunks are not 'lines' at all. Although PBX trunks can be measured in voice grade  
15 equivalents, like basic business lines, the fact that they are trunks connecting to PBX  
16 equipment at the customer's premises affords concentration possibilities not easily  
17 available on basic business lines. Centrex 'lines' may be more similar to basic business  
18 lines than PBX trunks, but Centrex service was designed to compete with the  
19 combination of a customer premises PBX and PBX trunks to the ILEC central office.<sup>19</sup>  
20 Thus, the problem of finding common units of analysis might be overcome regarding  
21 basic business lines, PBX trunks and Centrex lines, but the incommensurability of units  
22

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23 mile' loop connection to customers, would expand their offerings to include basic business service in response to a  
24 monopolist's price increase. This form of competitive response is limited, as discussed below, by the fact that  
25 Qwest is the only firm that has solved the local loop problem in a geographically ubiquitous and cost effective way.

26 <sup>19</sup> Recall that ILECs historically controlled the customer premises equipment that could be connected to the ILEC  
network, and prohibited third parties from connecting their 'foreign attachments' (such as PBXs, rubber cups for  
telephone mouthpieces, or plastic covers on telephone directories) to the ILEC network. When the FCC took up the  
task registering third party devices and PBX 'competition' commenced, Centrex was devised as a competitive  
response to customer-owned PBXs.

1 of service overwhelms analysis when it comes to packet switched services like Frame  
2 Relay and ATM.

3 Qwest takes pains to point out that the connection between the ATM or Frame  
4 Relay customer and the Qwest central office is not part of the service included in the  
5 petition.<sup>20</sup> If such connections were included in the petition, one could side-step the  
6 problem of commensurability by converting the bandwidth of the connections to voice  
7 grade equivalents – though I would argue that such a conversion would be close to  
8 entirely meaningless. Instead, Qwest’s petition seeks deregulation for packet switching  
9 services devoid of connections from end user to Qwest central office, but proposes that  
10 these are to be analyzed as part of the same product market as basic business lines.  
11 Qwest thereby presents the Commission with the task of adding apples and oranges. The  
12 result will simply not make sense.

13 **Q. WHAT DO YOU CONCLUDE WITH REGARD TO THE PRODUCT**  
14 **DIMENSION OF QWEST’S PROPOSED RELEVANT MARKET?**

15 A. The analysis Qwest offers is inconsistent with conventional analysis to define a relevant  
16 market for the purpose of analysis of competition, and the proposed relevant market  
17 makes no sense. Such a broad definition of relevant product market is well understood to  
18 minimize the influence of any particular firm by bringing into the analysis the providers  
19 of services that are not truly in a position to impose market discipline.

20 **Q. IS THE LOCATION OR GEOGRAPHIC COMPONENT OF MARKET**  
21 **DEFINITION DETERMINED IN A SIMILAR MANNER?**

22 A. Yes. In the case of telecommunications markets, the geographic component of the  
23 market is not very susceptible to substitution among existing products. As a basic  
24 business line user, I am not going to be interested in a competitors’ product if it is not  
25 offered at my premises. No amount of price reduction will get me to go to my neighbor’s  
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<sup>20</sup> Qwest/1, Brigham/11-12.

1 premises to use the phone. So, substitution on the demand side does not justify  
2 expanding the geographic component of market definition beyond the individual  
3 customer's premises.

4 Expanding the market definition beyond an individual customer's location may be  
5 justified by the implication that an alternative provider that can reach my neighbor's  
6 premises may also be able to deliver service to my premises. This is known as supply  
7 substitution, and is explicitly taken into account in the exercise of defining a relevant  
8 market. In the case of markets for switched business services, this effect may justify  
9 expanding geographic markets to include whole Qwest wire centers, but it certainly  
10 doesn't justify defining the geographic component of a market to include all of Qwest's  
11 Oregon serving territory, as Qwest proposes.

12 **Q. HOW DOES CONVENTIONAL MARKET DEFINITION ANALYSIS CONSIDER**  
13 **THE POSSIBILITY OF SUPPLIERS OF DIFFERENT PRODUCTS (OR THE**  
14 **SAME PRODUCT AT DIFFERENT LOCATIONS) SHIFTING RESOURCES TO**  
15 **PROVIDE SUBSTITUTES FOR A PRODUCT/LOCATION UNDER**  
16 **EXAMINATION?**

17 A. The phenomenon of supply substitution is well recognized, and the conventional  
18 approach of the HMG makes the very important distinction between suppliers that can  
19 provide an acceptable substitute at an acceptable location *without incurring sunk costs*  
20 and those that cannot:

21 Participants include firms currently producing or selling the market's  
22 products in the market's geographic area. In addition, participants may  
23 include other firms depending on their likely supply responses to a "small  
24 but significant and nontransitory" price increase. A firm is viewed as a  
25 participant if, in response to a "small but significant and nontransitory"  
26 price increase, it likely would enter *rapidly* into production or sale of a  
market product in the market's area, *without incurring significant sunk costs* of entry and exit. Firms likely to make any of these supply responses are considered to be "uncommitted" entrants because their supply response would create new production or sale in the relevant



1 market and because that production or sale could be quickly terminated  
2 without significant loss.<sup>21</sup>

3 Thus, a firm should be counted as a market participant and included in  
4 calculations of market share or HHI if it is providing a product in the right location that  
5 serves as a good enough substitute for the product being considered, or if the firm could  
6 shift productive resources to providing such a substitute in the right location “rapidly”  
7 and “without incurring significant sunk costs.” In the footnote omitted from the quote  
8 above, the HMG clarifies the appropriate treatment of a firm that will probably enter the  
9 market in response to a small price increase, but will have to incur sunk costs, such as  
10 establishing a new collocation, to provide a substitute product in the right location:

11 Probable supply responses that require the entrant to incur significant sunk  
12 costs of entry and exit are not part of market measurement, but are  
13 included in the analysis of the significance of entry. See Section 3.  
14 Entrants that must commit substantial sunk costs are regarded as  
“committed” entrants because those sunk costs make entry irreversible in  
the short term without foregoing that investment; thus the likelihood of  
their entry must be evaluated with regard to their long-term profitability.<sup>22</sup>

15 **Q. WHAT ANALYSIS DOES QWEST OFFER IN SUPPORT OF ITS PROPOSAL**  
16 **FOR A VERY BROAD GEOGRAPHIC MARKET DEFINITION?**

17 A. Qwest offers less than two pages of discussion in support of its very broad geographic  
18 market definition.<sup>23</sup> The substance of the argument seems to be that companies are  
19 marketing service throughout Qwest’s serving territory: “For example, AT&T, MCI and  
20 McLeod market business services to customers in all of Qwest’s Oregon wire centers, for  
21 the most part offering the same rates in different wire centers.”  
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26 <sup>21</sup> HMG, § 1.0 (footnote omitted) (emphasis added).

<sup>22</sup> *Id.* at n.7.

<sup>23</sup> Qwest/1, Bingham/15-16.

1 **Q. WHAT DO YOU CONCLUDE ABOUT QWEST’S DEFINITION OF THE**  
2 **GEOGRAPHIC MARKET?**

3 A. It is incorrect for Qwest to define the geographic market to include its entire Oregon  
4 serving territory. For this definition to be correct would require that every provider in  
5 Qwest’s service territory be able to offer its service in every other part of Qwest’s serving  
6 territory “rapidly” and “without incurring significant sunk costs.” This is clearly not true.  
7 If Qwest believes that it is probable that, for example, a facilities based provider offering  
8 service in downtown Portland would incur the sunk costs necessary to respond to a small  
9 price increase in La Pine, it can make that argument. Instead, Qwest has implicitly  
10 assumed that this response is not only probable, but will occur “rapidly” and “without  
11 incurring significant sunk costs.” Similarly, by proposing a very broad definition of  
12 relevant market, Qwest implicitly assumes that a provider with limited capabilities, say  
13 Automotive Experts Group, d/b/a Bend Data Center, will not only respond to a small  
14 price increase in downtown Portland, but will do so “rapidly” and “without incurring  
15 significant sunk costs.” This approach to market definition is simply not useful in the  
16 Commission’s task of evaluating the extent of competition.

17 **B. Barriers to Entry**

18 **Q. PLEASE DEFINE BARRIER TO ENTRY.**

19 A. There is no concise, generally accepted definition of ‘barrier to entry.’ A reasonable list  
20 of sources of barriers to entry examined in the economics literature is contained in  
21 Paragraph 75 of the FCC’s Triennial Review Order:

22 *Many Factors Can Act as Barriers to Entry.* Depending on the  
23 circumstances, barriers to entry can come from a variety of factors such as  
24 sunk costs, scale economies, scope economies, absolute cost advantages,  
25 capital requirements, first-mover advantages, strategic behavior by the  
26 incumbent, product differentiation, long-term contracts, and network  
externalities. Despite the different definitions that have been proposed,  
economists, since the advent of economic game theory, have developed a  
better understanding of the factors that impede entry. There is general  
agreement in the economics literature on the critical importance of sunk  
costs, absolute cost advantages, and, in the right circumstances, scale

1 economies, in determining the likelihood of entry. In their analysis of  
2 entry, the HMG consider economic barriers to entry, focusing in particular  
3 on sunk costs and minimum viable scale (in addition to other factors).<sup>24</sup>

4 This list mentions the role of sunk costs three times for good reason. If entering a  
5 market requires a firm to incur costs that will not be recoverable in the event that entry is  
6 unsuccessful, and if the success of entry is subject to some uncertainty, as is usually the  
7 case, then the existence of a barrier to entry is not a matter of controversy. The size of  
8 the barrier to entry is a matter of degree, depending on the amount of the cost that  
9 becomes sunk on entry.

10 **Q. ARE THERE SUNK COSTS THAT MUST BE INCURRED BY QWEST'S**  
11 **COMPETITORS IN ORDER TO OFFER SERVICES THAT ARE THE SUBJECT**  
12 **OF THIS PETITION OR TO EXPAND THE GEOGRAPHIC SCOPE OF**  
13 **EXISTING OFFERINGS?**

14 A. Yes. A new entrant must incur several kinds of cost that will be sunk if the new entrant  
15 were forced to abandon the market, or even if the entrant were to lose the business of a  
16 specific customer. The nature of the cost depends on the nature of the firm's manner of  
17 providing service.<sup>25</sup> A provider that relies entirely on Qwest facilities – using resale,  
18 UNE-P (while it lasts), or QPP – must acquire operations support systems (OSS), train  
19 personnel, and advertise in order to enter a market. If such a provider is forced to  
20 abandon the market, it may recoup *some* of these costs by selling the operation to another

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21 <sup>24</sup> *In the matter of Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of*  
22 *Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the*  
23 *Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications*  
24 *Capability*, CC Docket Nos. 01-338, 96-98, 98-147, *Report and Order and Order on Remand and Further Notice of*  
25 *Proposed Rulemaking* at ¶ 75, FCC Order 03-36, August 21, 2003 (“TRO”) (footnotes omitted), *vacated and*  
26 *remanded in part, affirmed in part, United States Telecom. Ass’n. v. FCC*, 359 F.3d 554 (D.C. Cir. 2004). The FCC  
undertook its review of the economics literature on barriers to entry to inform its application of a statutory  
“impairment” standard. Importantly, this Commission is not to be guided by “impairment,” but has specific  
statutory direction to examine “barriers to entry.” See ORS 759.030(4)(c)

<sup>25</sup> Interestingly the amount of sunk cost of entry, and consequently the size of the barrier to entry, varies directly  
with the degree of competitive discipline an entrant brings to the market. An entrant that relies entirely on Qwest  
facilities incurs relatively small sunk costs and provides very little competitive discipline. A full facilities based  
entrant provides substantial competitive discipline within the footprint of its facilities, but must incur huge sunk  
costs to enter the market.

1 similar provider, which would probably place greatest value on the customer  
2 relationships in place at the time exit from the market is forced. Such a provider is well  
3 positioned to expand into a different geographic market, but must incur (at least) the cost  
4 of advertising in the new market, most of which would not be recoverable if forced to  
5 exit the market. A UNE-L provider must incur all of these costs, as well as the cost of  
6 collocation at a wire center to gain access to ILEC loops serving target customers. The  
7 very substantial cost of collocation and non-recurring costs of establishing transport  
8 between the collocation and switch will almost certainly be sunk if entry fails, and similar  
9 costs must be incurred again to expand into a new geographic territory, naturally defined  
10 as an ILEC wire center. A UNE-L provider must also cover the capital costs of a switch,  
11 but these costs are largely recoverable (not sunk) because of the possibility of reusing the  
12 switch in a different market or selling it on the secondary market. The cost of installing  
13 and configuring such a switch would be sunk. A full facilities-based carrier incurs the  
14 cost of all network facilities, including loops, and a large portion of these costs will be  
15 sunk. Indeed, the cost of wireline loop facilities is specific to a location. If the full  
16 facilities-based provider loses the customer at that location, the cost of building the loop  
17 facilities to serve that customer is lost.

18 **Q. ARE CUSTOMER-SPECIFIC SUNK COSTS PARTICULARLY IMPORTANT IN**  
19 **MARKETS FOR BUSINESS SERVICES?**

20 A. Customer-specific sunk costs can be very important, especially in the case of large,  
21 complex business or government customers. Such customers have typically developed  
22 sophisticated telecommunications systems in small increments over many years. Insofar  
23 as such extremely complex systems are configured to work with the services and  
24 equipment of the ILEC, a new entrant will have to overcome the cost of reconfiguring or  
25 replacing customer-owned equipment and replicating the myriad parameters of a complex  
26 array of services and facilities. The mere preparation of a credible proposal for such a

1 conversion can be a substantial customer-specific cost that will be entirely sunk if entry  
2 fails.

3 **Q. ARE THERE OTHER FORMS OF BARRIERS TO ENTRY?**

4 A. As the list above suggests, there are many forms of barrier to entry. One barrier to entry  
5 that is peculiar to full facilities-based carriers is the problem of access to multi-tenant  
6 buildings. UNE-L providers avoid this barrier by leasing a Qwest loop all the way to the  
7 customer's premises within the multi-tenant building—thus relying on Qwest's superior  
8 access to the interior of the building. The Act addresses CLEC disadvantages in access to  
9 public rights of way, but privileged access to multi-tenant buildings is an advantage of  
10 incumbency that still acts as a barrier to entry by full facilities-based carriers. I  
11 understand that in Oregon, there are no laws that require building owners to allow CLECs  
12 access to the buildings' tenants in order to offer those tenants alternatives to the  
13 incumbent's services.

14 **C. OPP Providers are Retailers, Not Competitors**

15 **Q. QWEST'S PETITION REFERS TO COMPETITION FROM PROVIDERS THAT**  
16 **RELY ENTIRELY ON QWEST FACILITIES TO SERVE CUSTOMERS. IS**  
17 **THIS COMPELLING EVIDENCE FOR A FINDING UNDER ORS 759.030?**

18 A. No. There are three arrangements under which a CLEC can offer retail service to  
19 customers and have the service be provided entirely over Qwest facilities: resale, as  
20 prescribed in the Act; UNE-P, formerly allowed under FCC rules and now being phased  
21 out; and QPP, a voluntary commercial contract equivalent of UNE-P. Resale has never  
22 been used in large volumes, and that is reflected in Qwest's reported number of lines.  
23 UNE-P was a large and growing form of entry until the FCC rescinded its requirement  
24 that ILECs offer this form of access to UNEs. Most UNE-P customers in Qwest territory  
25 have now been converted to QPP arrangements, and now comprise more than a third of  
26 the lines Qwest points to as evidence of competition.

1 **Q. WHY DO YOU BELIEVE THAT QPP PROVIDERS ARE NOT PROPERLY**  
2 **REGARDED AS COMPETITORS, PROVIDING COMPETITIVE DISCIPLINE**  
3 **THAT COULD REPLACE THE NEED FOR REGULATION?**

4 A. The relationship between Qwest and a QPP provider is analogous to the relationship  
5 between a manufacturer and a retailer of the manufacturer's products—not the  
6 relationship among competing manufacturers. QPP providers comprise a *distribution*  
7 *channel* for Qwest's products, and Qwest controls that distribution channel just as any  
8 manufacturer controls the distribution channels through which it sells its products—  
9 through commercial contracts. Qwest will decide how to use this distribution channel  
10 and will give effect to that decision through terms of QPP contracts, or it will decide to  
11 cut off the distribution channel entirely by declining to enter into new QPP contracts  
12 when current contracts expire on July 31, 2008.

13 **Q. IS IT COMMON FOR MANUFACTURERS TO USE MULTIPLE**  
14 **DISTRIBUTION CHANNELS FOR THEIR PRODUCTS?**

15 A. Yes. Manufacturers commonly sell their own products at retail and also distribute them  
16 through other unaffiliated retailers. Products offered through other retailers may be  
17 branded by the retailer or by the manufacturer. For decades, since the FCC's equipment  
18 registration program made alternative providers' customer premise equipment feasible,  
19 so-called "interconnect companies" have sold customer premises equipment to businesses  
20 and ordered services for the end user customer from the ILEC. In that case,  
21 telecommunications services were branded by the ILEC, but perceived by the customer  
22 as part of a package provided by the interconnect company.<sup>26</sup> QPP providers brand

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23 <sup>26</sup> It is useful to examine the relationships among distribution channels and competitors in the example of an  
24 interconnect company providing a customer with a PBX and associated ILEC services when the FCC first opened  
25 the market for competition in customer premises equipment. Importantly, the ILEC faced no competition for PBX  
26 trunks being ordered and configured by the interconnect company. The new competition being fostered by the  
FCC's equipment registration program was between the Bell System equipment manufacturer, Western Electric, and  
third party manufacturers of PBXs. The ILEC was in the distribution channel for its manufacturing affiliate,  
Western Electric. The interconnect company was in the distribution channel for a third party PBX manufacturer and  
was also in the distribution channel for the ILEC's services.

1 services in their own names, but place orders on the customer's behalf. In no case should  
2 the presence of unaffiliated retailers be regarded as competition for the underlying  
3 supplier.

4 **Q. AREN'T THE TERMS OF QPP CONTRACTS NEGOTIATED BETWEEN**  
5 **QWEST AND THE MANY QPP PROVIDERS?**

6 A. The terms of QPP contracts are negotiated in the sense that both parties to each contract  
7 have agreed to the terms. That said, the bargaining power is all in Qwest's hands, and the  
8 contracts I have reviewed suggest that Qwest simply dictates the terms and the CLECs  
9 face a "take-it-or-leave-it" negotiation on all important terms. In particular, the rates  
10 come from a standard "rate sheet," and the scheduled ramping up of rates over the  
11 remaining duration of the contract appear to follow the same pattern. All of the contracts  
12 that I have seen, including the earliest and the latest posted on Qwest's web site, expire  
13 on the same day: July 31, 2008.

14 **Q. DO YOU REGARD IT AS ODD THAT ALL THE CONTRACTS EXPIRE ON**  
15 **THE SAME DAY, RATHER THAN HAVING INDIVIDUALLY NEGOTIATED**  
16 **DURATIONS AND EXPIRING ON DATES STAGGERED OVER THE NEXT**  
17 **SEVERAL YEARS?**

18 A. No, not at all. Qwest's decision<sup>27</sup> to have all the contracts expire on the same day allows  
19 Qwest the flexibility to completely restructure the QPP distribution channel and have all  
20 changes take effect on the same day. There are a variety of structures that suppliers use  
21 for distribution channels, such as exclusive geographic territories for chosen marketing  
22 agents, or division of a geographic territory among several agents according to the type of  
23 customer that each agent takes as a specialization. The economics of the "vertical  
24 boundaries of the firm" suggests that the nature of this combination of in-house  
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26 <sup>27</sup> I think it is safe to say that Qwest decided to have all contracts expire on the same day, rather than supposing that independent negotiations with many different firms at different times resulted in the coincidence of all contracts expiring on the same day.

1 marketing and external contractual relationships is very complex and depends crucially  
2 on idiosyncratic characteristics of the products and their markets. I'm not a lawyer, but I  
3 understand that the courts have preserved a great deal of flexibility for companies in the  
4 structuring of contractual relationships with distributors. Having all contracts expire on  
5 the same day would also allow Qwest the greatest flexibility to manage a transition if it  
6 should decide not to use the QPP distribution channel at all in the future.

7 **Q. DO THE QPP CONTRACTS CONTEMPLATE THE POSSIBILITY THAT THE**  
8 **ARRANGEMENT MIGHT BE RESTRICTED OR UNAVAILABLE IN THE**  
9 **FUTURE?**

10 A. Yes. For example, the most recent contract mentioned in Exhibit Qwest/7, Brigham/1,  
11 that of Ionex Communications North, at Service Exhibit 1, ¶ 3.3, contemplates an  
12 adjustment "should QPP not be available as of October 1, 2005 in the same areas where  
13 QPP was available on the effective date of this agreement."

14 **Q. QPP PROVIDERS RELY ON LOOPS PURCHASED AT UNE RATES**  
15 **APPROVED BY THE STATE COMMISSION. DOES THIS PROVIDE SOME**  
16 **MEASURE OF EXTERNAL CONTROL OVER QPP PRICING?**

17 A. No. Referring again to the recent Ionex contract, the QPP contract essentially takes UNE  
18 loop pricing out of state commission hands. Service Exhibit 1, ¶ 3.2, provides as follows:

19 To the extent that the monthly recurring rate for the loop element in a  
20 particular state is modified on or after the Effective Date, the QPP port  
21 rate for that state in the Rate Sheet will be adjusted (either up or down) so  
22 that the total rate applicable to the QPP service and loop combination in  
23 that state (after giving effect to the QPP Port Rate Increases as adjusted for  
24 any applicable discount pursuant to Section 3.3 of this Service Exhibit)  
25 remains constant.

26 Thus, the Commission could decide to cut the UNE loop rate in half and QPP  
providers would see no change except that the UNE loop portion of Qwest's bill would  
be smaller and the QPP port portion of the bill would be larger by exactly the same



1 amount. The cost of providing service that must be passed on to retail customers – the  
2 total bill from Qwest – would change *not at all*.<sup>28</sup>

3 **D. Resale Provides Very Limited Competitive Discipline**

4 **Q. YOU STATED THAT QPP PROVIDERS SHOULD BE REGARDED AS**  
5 **DISTRIBUTORS, NOT COMPETITORS. SHOULD PROVIDERS RELYING ON**  
6 **RESALE AT COMMISSION-DETERMINED WHOLESALE DISCOUNTS BE**  
7 **REGARDED AS COMPETITORS?**

8 A. Yes, but of a very limited nature. In the case of resale, the “competitor” provides  
9 retailing components of the service, such as customer support, billing and collection,  
10 advertising, etc., and the Act prescribes a wholesale discount that removes *Qwest’s* costs  
11 of these functions from Qwest’s retail rates. Thus, a resale competitor can compete with  
12 Qwest only if it can provide retailing functions better than Qwest can—either by  
13 performing retailing functions at lower cost and passing on cost savings to consumers or  
14 by providing retailing functions of a better quality and attracting customers on that basis  
15 without a reduction below Qwest’s price. This is essentially the same type of relationship  
16 that Qwest has with QPP providers, but the Commission exercises greater control over  
17 the character of the relationship. Importantly, Qwest cannot discontinue the relationship  
18 with resellers or dictate prices in the way that it can with QPP providers, but the  
19 wholesale price of Qwest service to resellers follows automatically if Qwest chooses to  
20 change any retail price.

21 **Q. CAN RESALE COMPETITORS PROVIDE COMPETITIVE DISCIPLINE OVER**  
22 **QWEST’S PRICING IN THE ABSENCE OF REGULATION?**

23 A. No, as suggested above, resale competitors, at best, can discipline the efficiency of  
24 Qwest’s retailing functions. This is not a trivial matter, but it will certainly not provide

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25 <sup>28</sup> By this term in the QPP contract Qwest protects the QPP distribution channel from UNE loop rate increases,  
26 perhaps resulting from implementation of changes to the TELRIC method contemplated in the FCC’s TELRIC  
NPRM, but allows such increases to fall on Qwest’s UNE-L competitors, which are properly regarded as  
competitors.

1 competitive discipline over the bulk of Qwest's costs. Further, the volume of resale  
2 competition has never been large, and such a small volume of competition, operating  
3 with a margin determined by the wholesale discount, with competitors needing to incur  
4 costs to provide their own retailing functions, is very unlikely to provide any substantial  
5 competitive discipline.

6 **E. Today's Snapshot of UNE-L Competition Overstates the Extent of**  
7 **Competition**

8 **Q. IS THE UNE-L COMPETITION THAT WE SEE TODAY A RESULT OF**  
9 **COMPETITIVE ENTRY INDUCED BY THE CURRENT REGULATORY AND**  
10 **FINANCIAL ENVIRONMENT?**

11 A. No. In order to assess the extent of competitive discipline indicated by a current snapshot  
12 of UNE-L competition, the Commission must consider the fact that the competitive entry  
13 described by that snapshot occurred over the years from the earliest implementation of  
14 the Act, during which capital markets have been much more enthusiastic and the  
15 regulatory environment of access to UNEs has been much more favorable to CLEC entry.

16 **Q. IS THIS CONTENTION BORNE OUT IN QWEST'S CLAIMS REGARDING**  
17 **UNE-L COMPETITION?**

18 A. Yes. For example, Mr. Brigham claims a substantial increase of UNE-L lines in service  
19 over the period December 2002 through May 2005.<sup>29</sup> Examination of the detail

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20 <sup>29</sup> Qwest/1, Brigham/23, lines 15-17. Any discussion of Qwest's petition on its own terms is compromised by the  
21 previously mentioned incommensurable units of service of the widely different services Qwest includes in its  
22 petition and proposed definition of the relevant market. In this instance, Qwest points to a count of loops provided  
23 to UNE-L providers, and later uses this count of loops to calculate market shares, without clarifying how it treats the  
24 packet switching services that it asks the Commission to somehow consider separately from the loops required to provide  
25 packet switched services. Of Qwest's count of UNE loops sold to CLECs, some are certainly being used to provide  
26 more like Qwest's Frame Relay or ATM service than it is like a basic business line or a PBX trunk. It isn't clear  
how Qwest counts its ATM or Frame Relay services for the purposes of calculating market shares, but the same  
treatment should probably be applied to UNE-L providers of DSL services. Then, if the DSL service offered by  
UNE-L CLECs is within Qwest's proposed relevant market (which it must be, given Qwest's treatment of loops sold  
to CLECs known to provide DSL services) a question should be raised regarding Qwest's treatment of its own DSL  
lines, including its ADSL provided through line sharing, as well as the line-shared ADSL provided by CLECs  
through optional commercial arrangements that should be regarded very much like QPP. I believe that these

1 underlying that growth shows that all but a miniscule percentage occurred in wire centers  
2 that already had UNE-L lines in service at the beginning of the period.<sup>30</sup> That is, while  
3 UNE-L CLECs continue to expand in the areas in which they have already established  
4 service, they are not expanding the areas they serve.

5 **Q. IS THIS CONSISTENT WITH YOUR DISCUSSION ABOVE CONCERNING**  
6 **SUNK COST AS A BARRIER TO ENTRY?**

7 A. Yes. A UNE-L CLEC perceives the sunk cost of establishing a collocation, as well as the  
8 sunk cost portion of establishing transport from the collocation to its switch, as a barrier  
9 to entry into the geographic market defined by that wire center. Once the CLEC has  
10 established a collocation in a particular wire center, adding additional lines involves the  
11 customer-specific sunk cost of non-recurring charges for the UNE loop installation, but  
12 adding lines *lowers* the average cost of serving customers in that area by spreading fixed  
13 costs over more customers. Thus, in the terms of the HMG, as discussed above, a UNE-L  
14 CLEC is an “uncommitted entrant” within a wire center in which it has a collocation; it is  
15 able - “rapidly” and “without incurring significant sunk costs” - to offer service to at least  
16 some of the customers in a wire center in which it has already incurred the sunk cost of  
17 establishing a collocation.

18 **Q. DOES THE ADDITION OF LINES MEAN THAT CLECS ARE OPERATING**  
19 **PROFITABLY?**

20 A. Not at all. The CLEC adding lines in existing collocations may be operating at a  
21 financial loss because establishing the collocation was more expensive than expected, or  
22 because it hasn’t succeeded in enrolling a sufficient number of customers in the area for  
23 economies of scale to bring its average cost down to the price it has to charge in order to  
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25 questions are reasonable ones that have no answers, because Qwest’s proposed relevant market doesn’t make sense.  
26 Staff’s UX-29 Survey Results avoid these issues by using much more reasonable product market definitions.

<sup>30</sup> Qwest Response to Tracer Data Request 1, dated August 30, 2005. (attached as Exhibit TRACER/102, Cabe/1-  
27     ).

1 attract customers.<sup>31</sup> While data on the profitability of privately held CLECs is not easily  
2 available, we do have data on several publicly-held CLECs that is instructive. McLeod,  
3 for instance, is a publicly-held CLEC that pursued a UNE-L strategy aggressively when it  
4 could raise capital, reporting at the end of the second quarter of 2005 that 74% of its lines  
5 were served through UNE-L.<sup>32</sup> McLeod's revenue is falling; the company reported a  
6 \$268 million loss in the second quarter, it has ceased making principal and interest  
7 payments on existing credit facilities, and is attempting a capital restructuring that will  
8 not provide any recovery for the company's current preferred or common stockholders.<sup>33</sup>  
9 Eschelon is another company pursuing a UNE-L strategy, and financial information on  
10 the company recently became available when Eschelon issued an initial public offering of  
11 stock. The registration statement with the Securities and Exchange Commission for that  
12 IPO stated that the company has "experienced operating losses in each of the last 5 years"  
13 and expects "to continue to have losses for the foreseeable future."<sup>34</sup>

14 **Q. ARE YOU AWARE THAT PART OF THE PROCEEDS OF ESCHELON'S**  
15 **INITIAL PUBLIC OFFERING OF STOCK IS INTENDED FOR FINANCING AN**  
16 **EXPANSION OF ITS COLLOCATIONS?**

17 A. Yes, I am. The registration statement states that the majority of the proceeds will go to  
18 retiring debt and paying fees and expenses associated with the offering, but that  
19 "approximately \$10.9 million will be used for general corporate purposes, including the  
20 expansion of our collocation network."<sup>35</sup> It is not clear whether the expansion

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21 <sup>31</sup> Again, it is important to recognize that the cost of establishing a collocation is a sunk cost, and this explains the  
22 apparent paradox of a company expanding operations while operating at a financial loss. A CLEC's additional cost  
23 of serving another customer in a wire center with an established collocation includes *no part of the capital cost of*  
24 *establishing the collocation*. The capital cost of establishing the collocation has been sunk and could not be  
25 recovered by exiting the market, as defined by the geographic area served by that wire center. The financial results  
26 of operation will normally include some amount for the capital cost of establishing the collocation, although the  
capital value of the collocation will eventually be adjusted downward when it becomes clear that, as an asset, it is  
not worth what was paid to acquire it.

<sup>32</sup> McLeod USA press release reporting second quarter 2005 results, August 9, 2005.

<sup>33</sup> *Id.*

<sup>34</sup> Amendment No. 6 to Form S-1, Eschelon Telecom, Inc., filed with SEC August 4, 2005, at page 10.

<sup>35</sup> *Id.* at 22

1 contemplated is to build new collocations or to expand the capabilities of existing  
2 collocations. If new collocations are contemplated, it's not clear whether they will be  
3 built in additional wire centers in currently-served states or in downtown metropolitan  
4 areas of states not yet served. The statement doesn't state that the entire \$10.9 million  
5 will be available for expanding the collocation network, and there will certainly be  
6 competing uses for the unspecified portion of those funds that may be available for new  
7 capital investment in collocations. For example:

8 We have estimated our increased costs due to the Triennial Review  
9 Remand Order to be approximately \$2.7 million in 2005. This includes  
10 the increased cost of transitional unbundled network elements, and the  
11 need to replace unbundled network elements no longer available through  
12 special access orders or through other suppliers. We estimate our  
13 increased costs due to the Triennial Review Remand Order for 2006 to be  
14 approximately \$3.1 million. Our estimates are based upon assumptions  
15 concerning market demand for our products and our ability to secure  
16 alternative suppliers of facilities in certain areas.<sup>36</sup>

17 Thus, the statement expresses hope that some of the proceeds may find their way  
18 into new investment rather than refinancing old debt, but this is far from a secure  
19 proposition, and additional costs due to the Triennial Review Remand Order in 2005 and  
20 2006 alone will amount to more than half of the proceeds that might become available for  
21 "general corporate purposes."

22 **Q. WHAT FACTORS HAVE CHANGED IN CLECS' EVALUATION OF ENTRY**  
23 **PROSPECTS USING THE UNE-L STRATEGY?**

24 A. The FCC has taken a number of steps away from the UNE policies put in place in August  
25 1996 that supported the development of the UNE-based competition that is now in place.  
26 Qwest points to that UNE-based competition in its petition as a force sufficient to replace  
the need for regulation, yet the regulatory environment under which that competition  
developed no longer exists. Federal policy that formerly supported UNE-based

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<sup>36</sup> *Id.* at 68

1 competition through requirements of access to UNEs has shifted in favor of intermodal  
2 competition, as suggested in Paragraph 2 of the FCC's Triennial Review Remand Order:

3 In our *Triennial Review Order*, we recognized the marketplace realities of  
4 robust broadband competition and increasing competition from intermodal  
5 sources, and thus eliminated most unbundling requirements for broadband  
6 architectures serving the mass market. Our efforts there made it easier for  
7 companies to invest in equipment and deploy the high-speed services that  
8 consumers desire. The *Triennial Review Order* had the effect of limiting  
9 unbundled access to next-generation loops serving the mass market. In  
10 this Order, the Commission takes additional steps to encourage the  
11 innovation and investment that come from facilities-based competition.  
12 By using our section 251 unbundling authority in a more targeted manner,  
13 this Order imposes unbundling obligations only in those situations where  
14 we find that carriers genuinely are impaired without access to particular  
15 network elements and where unbundling does not frustrate sustainable,  
16 facilities-based competition. This approach satisfies the guidance of  
17 courts to weigh the costs of unbundling, and ensures that our rules provide  
18 the right incentives for both incumbent and competitive LECs to invest  
19 rationally in the telecommunications market in the way that best allows for  
20 innovation and sustainable competition.<sup>37</sup>

13 **Q. HAS THIS CHANGE IN REGULATORY TREATMENT INFLUENCED CLEC**  
14 **ENTRY STRATEGIES?**

15 A. Yes. For example, AT&T's most recent Annual Report to the Securities and Exchange  
16 Commission on form 10-K states the following:

17 In light of the FCC's decision not to appeal the D.C. Circuit's decision and  
18 other anticipated changes in federal policy, we announced on July 22,  
19 2004 that we would *cease active marketing* of both local and long  
20 distance services to mass market customers and focus our business on the  
21 sale of telecommunications and related services to enterprise business  
22 customers.<sup>38</sup>

21 On July 22, 2004 we announced that as a result of recent changes in  
22 regulatory policy governing local telephone services, we would be shifting  
23 our focus away from traditional consumer services, and we would no  
24 longer be investing to actively acquire new mass market local and stand-  
25 alone long distance customers. However, we continue to provide local  
26 and stand-alone long distance services to our existing mass market

<sup>37</sup> *In the matter of Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-338, *Order on Remand* at ¶ 2, FCC Order 04-290, February 4, 2005 ("TRRO").

<sup>38</sup> AT&T Corp. Form 10-K for year ended 12/31/2004, at page 10, emphasis supplied.

1 customers and continue to accept orders from existing and new  
2 customers.<sup>39</sup>

3 We had entered the local voice business for residential customers, large  
4 business customers, and small to medium sized customers in a significant  
5 number of states by the middle of 2004, when we announced we would no  
6 longer be investing to acquire new mass market local customers. Our  
7 ability to remain in our current local mass market voice markets has been  
8 materially and adversely affected by the recent judicial and regulatory  
9 developments.<sup>40</sup>

10 Thus, on a forward-looking basis, the Commission should not count on AT&T to  
11 provide competitive discipline for switched business services, except in the enterprise  
12 market. Qwest's characterization of competition from AT&T is clearly overstated, and  
13 reliance on current market shares without regard to 'changing market conditions' would  
14 be a grave error. Another substantial competitor referred to by Qwest, MCI, summarizes  
15 recent changes in the entry environment in discussing its decision to adopt a \$3.3 billion  
16 reduction in the carrying value of certain assets:

17 The industry is in a state of transition where traditional business lines are  
18 facing significant overcapacity in the marketplace, pricing pressures,  
19 changes in product mix, and customers' continued efforts to reconfigure  
20 and consolidate their networks in order to achieve lower overall costs and  
21 improved efficiencies. Concurrently, the industry is migrating to more  
22 advanced network technologies and primarily focused around IP based  
23 platforms, and customers are requiring more advanced network services  
24 including network monitoring, traffic analysis, and comprehensive  
25 security solutions. The industry has also seen a general migration of  
26 customers from dial-up services to broadband and various wireless  
services. Additionally, our regulatory climate deteriorated due to a  
decision by the D.C. Circuit that invalidated the FCC's February 2003  
Triennial Review Order local competition rules, which set prices that  
incumbent providers could charge competitive providers such as the  
Company for UNE-P, an essential component of our Mass Market local  
phone service. Although several petitions were filed at the Supreme Court  
seeking review of the D. C. Circuit's decision, the Solicitor General and  
the FCC declined to seek such review, and the Supreme Court  
subsequently denied the petitions. As of the date of our impairment test,  
the FCC had adopted interim unbundling rules(effective September 13,  
2004) to maintain certain ILEC unbundling obligations under  
interconnection agreements as they existed prior to the D.C. Circuit's  
mandate. As a result, our costs for providing this service were expected to

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<sup>39</sup> *Id.* at page 7

<sup>40</sup> *Id.* at page 2

1 increase significantly in 2005. Some of our competitors announced their  
2 intentions to exit from this market, and the cost increases may force us to  
3 reduce efforts to acquire new customers and withdraw from certain  
4 markets. We therefore anticipated that revenues from that segment would  
5 continue to decline.<sup>41</sup>

6 At the time that annual reports to the SEC were prepared MCI was more  
7 circumspect than AT&T in describing the unfavorable changes in the environment for  
8 entry into the local exchange business and its associated steps away from those markets.  
9 Nevertheless, it should be clear that MCI is unlikely to provide a substantial source of  
10 competitive discipline, and the market share it acquired in the years between 1996 and  
11 2004 must be regarded in the light of 'changing market conditions.' I understand that  
12 MCI, like AT&T, has now ceased active marketing in the mass market, emphasizing  
13 instead its investments in the enterprise market, and Qwest's characterization of the  
14 market discipline it can expect from MCI greatly overstates the case.

15 **Q. YOUR QUOTE FROM MCI'S REPORT TO THE SEC MENTIONS A BROAD  
16 INDUSTRY TRANSITION AND IP PLATFORMS, IN PARTICULAR. IS THIS  
17 RELEVANT TO THE COMMISSION'S DELIBERATIONS IN THIS CASE?**

18 A. Yes. The fact that the industry is in transition makes this a particularly poor time for the  
19 Commission to rely heavily on market share information based on historical patterns of  
20 entry that don't include the impact of the transition. I believe that the increasing interest  
21 in IP platforms will eventually have effects that are very healthy for competition, but this  
22 transition is just getting under way, and cannot form the basis for the Commission's  
23 conclusions in this proceeding.

24 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING RECENT  
25 CHANGES IN FEDERAL POLICY.**

26 A. Whether the recent change in federal policy ultimately proves well-founded, the  
intermodal competition the FCC relies on is less compelling in the case of business

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<sup>41</sup> MCI, Inc. Form 10-K for year ended 12/31/2004, at page 36



1 services; cable companies do not typically serve businesses, and wireless is less suitable  
2 as a substitute for wireline business services. In addition to this shift in philosophy  
3 regarding access to UNEs, the FCC's proposal<sup>42</sup> for changing the TELRIC pricing  
4 framework in ways that could substantially increase UNE rates makes UNE-based  
5 competition much less attractive today than it was in the 8 years or so during which the  
6 current level of competition developed. In effect, Qwest points to the moving vehicle of  
7 competition but neglects to point out that the vehicle is entering a sharp curve that will  
8 result in a substantial change of direction.

9 **F. Full Facilities-Based Competition Has Only Appeared in Very Dense Areas**

10 **Q. ARE FULL FACILITIES-BASED PROVIDERS PRESENT IN MUCH OF**  
11 **QWEST'S SERVING AREA?**

12 A. No. According to Commission Staff's UX 29 Survey Results, full facilities-based  
13 competition is restricted almost exclusively to the Portland area.

14 **Q. IS IT EASY FOR FULL FACILITIES-BASED PROVIDERS TO EXTEND**  
15 **SERVICE TO OTHER AREAS?**

16 A. No. Generally, full facilities-based providers serving business customers are operating  
17 networks that were built by Competitive Access Providers (CAPs), as early as 20 years  
18 ago, and have been gradually extended to buildings or industrial parks with very high  
19 density of business telecommunications demand. The much more widely dispersed full  
20 facilities-based offerings of cable companies provide video entertainment, broadband  
21 internet access and telephony. These providers may become substantial competitors for  
22 the ILECs at some time in the future, but so far they haven't generally started offering  
23 service to business customers, preferring to offer a bundle of services including  
24 entertainment to residential customers.

25  
26 <sup>42</sup> *In the Matter of the 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, September 15, 2003.

1 **Q. BEYOND THE SUNK COST OF BUILDING FACILITIES, ARE THERE OTHER**  
2 **BARRIERS TO FULL FACILITIES-BASED CARRIERS EXPANDING**  
3 **SERVICE?**

4 A. I understand from my discussions with various CLEC representatives that access to  
5 buildings is a major issue for them. In Oregon, building owners have no obligation to  
6 allow CLECs access to their property to allow the CLECs to reach the tenants. It is a  
7 common complaint among CLECs hoping to provide their own loop facilities that they  
8 are frequently forced to pay exorbitant “rents” for access to businesses located in large  
9 office buildings. In some cases, the “rents” demanded render provisioning the building  
10 occupants uneconomic.

11 **Q. DOES FULL FACILITIES-BASED COMPETITION JUSTIFY GRANTING**  
12 **QWEST’S PETITION?**

13 A. No. If Qwest had made a targeted proposal that was somehow restricted to areas in  
14 which full facilities-based providers are operating and UNE-L collocations are  
15 established, possibly also restricted to services in sufficient volumes to be attractive  
16 markets to full facilities-based providers, then the Commission would face a different  
17 question. For the full range of switched business services over the entire Qwest Oregon  
18 serving territory, full facilities-based competition does not impose much competitive  
19 discipline.

20 **Q. WOULDN’T QWEST FEAR LOSING LARGE, IMPORTANT CUSTOMERS TO**  
21 **FULL FACILITIES-BASED COMPETITORS IF IT ATTEMPTED TO RAISE**  
22 **PRICES, EVEN THOUGH FULL FACILITIES-BASED COMPETITORS**  
23 **OPERATE IN RESTRICTED GEOGRAPHIC AREAS?**

24 A. No. Price discrimination is a longstanding and well-developed practice in the  
25 telecommunications industry.<sup>43</sup> It would be straightforward for Qwest to raise prices in

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26 <sup>43</sup> Not all competitive situations lend themselves to price discrimination, but telecommunications services are very nearly a perfect environment for implementation of price discrimination, both in geographic and product

1 ways that do not compete directly with full facilities-based providers, either by restricting  
2 the geographic application of the price increase or by simply not imposing such price  
3 increases on customers that might be attractive to full facilities-based providers. Qwest  
4 commonly serves such large customers through special contracts rather than normal  
5 tariff/price list practices, and deregulation would eliminate the requirement of filing  
6 special contracts, exacerbating the difficulty of identifying instances of undue  
7 discrimination.

8 **G. Wireless Isn't a Reasonable Substitute for Most Wireline Business Services**

9 **Q. DOES QWEST RECOGNIZE THAT WIRELESS SERVICE IS NOT AN**  
10 **ACCEPTABLE SUBSTITUTE FOR MOST BUSINESSES' WIRELINE**  
11 **SERVICE?**

12 A. Yes. Mr. Brigham recognizes that "all customers do not see wireless as a perfect or  
13 viable substitute."<sup>44</sup> Indeed, Mr. Brigham's testimony refers to a study finding that only  
14 25% of Colorado business customers would consider replacing wireline service with  
15 wireless in response to a \$25 increase (approximately double) in the price of wireline  
16 service.<sup>45</sup>

17 **Q. MR. BRIGHAM SUGGESTS THAT THIS SUBSTITUTION POSSIBILITY**  
18 **COULD PREVENT QWEST FROM RAISING WIRELINE RATES. IS THIS**  
19 **LIKELY?**

20 A. No. First, information related to a price increase on the order of \$25 is not very helpful  
21 for the analysis at hand. Further, Qwest doesn't generally set a single rate for any  
22 particular service, but rather offers packages, promotions, discounts, etc. Mr. Brigham

23 dimensions. This is not necessarily a bad thing, but it must be taken into account in the conduct of an analysis of the  
24 extent to which competition can discipline a dominant firm, especially when barriers to entry vary in the same  
25 dimensions that enable price discrimination. The HMG, for example, calls for a more restricted definition of the  
26 relevant market in a situation in which price discrimination is possible. See HMG, §1.12 (*Product Market*  
*Definition in the Presence of Price Discrimination*), 1.22 (*Geographic Market Definition in the Presence of Price*  
*Discrimination*).

<sup>44</sup> Qwest/1, Brigham/66, lines 7, 8.

<sup>45</sup> *Id.* at 63, lines 10-12.

1 suggests that “on-the-go” businesses like landscapers or real estate agents are most at risk  
2 to a wireless alternative. So, if a deregulated Qwest would like to target a price increase  
3 to the majority of customers who don’t regard wireless as an adequate substitute, one  
4 solution is to fashion a plan that appeals only to “on-the-go” businesses, perhaps  
5 including wireless in a bundle. Such a plan can be priced so that “on-the-go” businesses  
6 have an alternative to the price increase other than substituting entirely away from Qwest,  
7 and customers who don’t regard wireless as an adequate substitute will not find the “on-  
8 the-go” plan attractive. This form of price discrimination greatly reduces the impact of  
9 an identifiable group in disciplining price increases. Economists have studied such plans  
10 under the rubric of “self-selecting tariffs,” and the marketing profession has elevated the  
11 design of such plans to a high art.

12 **Q. DO YOU AGREE THAT WIRELESS IS BEGINNING TO HAVE AN IMPACT IN**  
13 **SOME BUSINESS SERVICE MARKETS?**

14 A. Yes. Wireless service has improved a great deal in both quality and geographic coverage,  
15 and may be a reasonable substitute for a restricted set of business services or customers.  
16 Qwest has offered no proposal to restrict its petition for deregulation to this group. Given  
17 Qwest’s very broad proposal, I recommend that the Commission rely on the conclusions  
18 of the Wireless Survey cited by Qwest: there is a very substantial set of switched business  
19 service customers that would not consider a switch to wireless even in response to a very  
20 large price increase for Qwest’s services.

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1           **H.     VoIP is Promising, but Still Limited in Significance**

2   **Q.     AS A COMPETITIVE FORCE IN THE MARKET FOR SWITCHED BUSINESS**  
3   **SERVICES, ARE THERE IMPORTANT LIMITATIONS ON THE**  
4   **SIGNIFICANCE OF VOIP?**

5   A.    Yes.  VoIP telephony requires broadband internet access, and the current interest of  
6   providers in offering VoIP is driven, in part, by the current regulatory treatment of long  
7   distance calls originating from a VoIP customer.

8   **Q.     WHY IS IT SIGNIFICANT THAT VOIP CUSTOMERS MUST HAVE A**  
9   **BROADBAND INTERNET CONNECTION?**

10  A.    VoIP is a different sort of competitive object than we are accustomed to analyzing in the  
11  telecommunications industry.  VoIP is functionally similar to basic telephone service, but  
12  does not require the end user to have a connection to the local telephone network through  
13  a traditional local telephone provider operating a circuit switched network.  VoIP is an  
14  application that requires the end user to have a broadband connection to the internet, but  
15  not to the local telephone network.  The VoIP application can be provided by any one of  
16  a very large number of potential entrants, who apparently face very low barriers to entry.  
17  I am confident that the prospect of any firm exercising market power in provision of the  
18  VoIP application is so small that no regulation of this application is appropriate.  But  
19  VoIP can serve as an acceptable alternative to (some of) Qwest's petition services only  
20  for those end users that have sufficiently fast broadband internet connections, regard their  
21  internet connections as reliable enough to replace a traditional circuit-switched  
22  connection to the local telephone network, and are willing to accept that their VoIP  
23  connection will not be as reliable during an electrical power outage as a traditional  
24  connection to the local exchange company with power supported by backup generating  
25  capacity.

26

1 **Q. WHY IS THE TREATMENT OF ORIGINATING ACCESS CHARGES FOR**  
2 **VOIP CALLS SIGNIFICANT.**

3 A. Current price comparisons between VoIP and ordinary local telephone service must  
4 consider the current regulatory treatment of originating access charges applied to VoIP  
5 calls. At present, originating VoIP calls are not subject to access charges, and this fact  
6 substantially lowers the cost of providing long distance service to a VoIP customer. This  
7 advantage of VoIP may prove ephemeral, as the FCC is currently engaged in a long  
8 awaited overhaul of intercarrier compensation regimes, including access charges. If this  
9 advantage were removed, as it very well may be, I believe that VoIP would continue to  
10 be an attractive technology for the provision of local telephone services, but the urgency  
11 – and competitive impetus – for marketing VoIP would fall dramatically. While VoIP is  
12 a technology that will probably continue to grow, removing its access charge advantage  
13 will take much of the wind out of the sails that have driven its recent growth.

14 **Q. DID QWEST OFFER ANY EVIDENCE AS TO THE CURRENT PENETRATION**  
15 **OR GROWTH RATE OF VOIP?**

16 A. No. Qwest offered no survey of customers or similar evidence that might have suggested  
17 the extent to which VoIP providers have been able to overcome customer resistance to  
18 the new technology. Because Qwest is a VoIP provider, it certainly has some experience  
19 with this issue. There may be important differences among business switched service  
20 customers, along the lines of number of lines in service or other criteria, that would  
21 inform the Commission's deliberations regarding the acceptability of VoIP as a substitute  
22 for the petition services, but Qwest did not provide any such evidence. In the absence of  
23 such evidence, and given that some part of the current attention devoted to VoIP is due to  
24 access charge regulations likely to be reformed soon, I recommend that the Commission  
25 not attach great weight to the general information about VoIP services provided in Mr.  
26 Brigham's testimony.



1 **Q. PLEASE DISCUSS THE IMPLICATIONS FOR QWEST'S MARKET SHARE**  
2 **CALCULATIONS OF TREATING QPP AND UNE-P PROVIDERS PROPERLY**  
3 **AS QWEST RETAILERS RATHER THAN COMPETITORS.**

4 A. While Qwest prefers the statewide geographic market definition, Exhibit Qwest/8,  
5 Brigham/1 offers market share calculations for Qwest's Oregon wire centers, rate centers,  
6 and regions. Qwest's calculations can be corrected to include QPP and UNE-P access  
7 lines by subtracting those lines from the reported CLEC total and adding them to the  
8 Qwest total, recognizing that QPP and UNE-P providers are simply marketing Qwest  
9 service branded in their own names, and provide a distribution channel that Qwest may  
10 use, or discontinue, at its pleasure. This corrects the most obvious and possibly largest  
11 source of understatement of Qwest's market share and results in an increase of Qwest  
12 market shares in all areas.

13 **Q. WHAT OTHER PROBLEMS DO YOU NOTE WITH QWEST'S**  
14 **CALCULATIONS?**

15 A. Qwest's proposed product market is so expansive as to include ATM and Frame Relay  
16 packet switched services, which do not include access to the network, yet Qwest's  
17 calculations are based entirely on access lines. How ATM and Frame Relay could be  
18 included in the calculations is not clear. Qwest's calculations assume that all UNE loops  
19 leased to CLECs are used to provide switched business services. While I expect that the  
20 number of UNE loops used to provide residential services is relatively small, leading to  
21 only a small understatement of Qwest's market share, I believe that the assumption that  
22 all UNE loops are used to provide *switched* services is a substantial error. CLECs are  
23 known to provide private line services with UNE loops, and such access lines would not  
24 belong in a market share calculation, even using Qwest's proposed definition of the  
25 relevant market. Probably of much greater importance is CLECs' use of UNE loops to  
26 provide packet switched services such as DSL-based internet access. Such services are



1 much more like ATM and Frame Relay services than they are like switched voice  
2 services. Indeed, frame relay service is sometimes used as a way to provide broadband  
3 internet access.

4 **Q. HOW SHOULD QWEST'S CALCULATIONS BE CORRECTED TO REMOVE**  
5 **THIS ERROR?**

6 A. Because CLECs' use of UNE loops to provide internet access is a packet switched  
7 service akin to Frame Relay or ATM services, it should be treated as Qwest's ATM and  
8 Frame Relay services are treated in the calculations. I suspect that Qwest intended its  
9 calculations to apply to switched voice services – not to the relevant market it proposed –  
10 and simply made no attempt to include Frame Relay or ATM services in the calculations.  
11 If so, then UNE loops used by CLECs to provide internet access or other packet switched  
12 services should be removed from the calculations, and the Commission should be aware  
13 that these indicia of market concentration do not apply to any relevant market, even the  
14 extremely broad one proposed by Qwest. If Qwest intends for its market share  
15 calculations to characterize the entire relevant market it proposed, including packet  
16 switched services, then it must confront several problems related to the incommensurable  
17 units of service associated with the various services involved, and it must certainly  
18 include its own DSL service in the calculations.

19 **Q. YOU SUGGESTED THAT EVALUATING THE CONSEQUENCES OF**  
20 **POSSIBLE ERRONEOUS DECISIONS COULD PROVIDE A USEFUL**  
21 **FRAMEWORK FOR THE COMMISSION'S DELIBERATIONS IN THIS**  
22 **PROCEEDING. PLEASE EXPLAIN.**

23 A. If the Commission knows with certainty whether price or service competition is sufficient  
24 to replace regulation, the decision would be clear: deregulate if competition is sufficient,  
25 otherwise deny Qwest's petition and wait to see how competition develops.  
26 Unfortunately, in the absence of perfect knowledge of the state of competition, it is

1 possible that the Commission could deny the petition in error, when in fact competition is  
2 sufficient to justify deregulation; and it is possible that the Commission could grant the  
3 petition in error, when in fact competition is not sufficient to justify deregulation.  
4 Attention to the consequences of these possible errors may serve to illuminate the  
5 Commission's deliberation on this decision.

6 Consider first the possibility of denying the petition in error—failing to deregulate  
7 Qwest's switched business services when competition actually suffices to replace  
8 regulation. The major consequences of that mistaken decision would be the following:  
9 First, when events make it sufficiently clear that competition is indeed sufficient to justify  
10 deregulation, the Commission would have to reconsider its decision, either in the context  
11 of a new petition from Qwest or another party, or on its own motion. Second, in the  
12 interim before events remove existing doubt as to the sufficiency of competition, Qwest  
13 will need to seek the Commission's approval for rate increases that are not allowed under  
14 Qwest's present pricing flexibility, in the event that Qwest sees the need for such price  
15 increases. Finally, if the Commission fails to find sufficient competition to justify  
16 deregulation when competition actually is sufficient, Qwest will be required to make  
17 certain filings before the Commission, such as maintaining tariffs and price lists and  
18 filing special contracts, beyond the time when Qwest's dominance in its markets justifies  
19 such filings.

20 In the alternative, if the Commission were to grant Qwest's petition for  
21 deregulation before competition is actually sufficient to justify deregulation, the major  
22 consequences would be the following. First, Qwest would not need to seek Commission  
23 approval for price increases, and under the assumption in this alternative, competition  
24 would not be sufficient to prevent Qwest from profitably increasing some prices. Such  
25 price increases would probably be made selectively, perhaps by redefining services,  
26 imposing special charges, etc., and would probably apply to customers with less access to

1 competitors rather than to those customers with good competitive alternatives. The  
2 ability to discriminate among customers for price increases and decreases would allow  
3 Qwest to increase some prices to some customers in order to finance very aggressive  
4 price competition where it chooses to do so. Next, Qwest would be free from the need to  
5 file special contracts or maintain tariffs or price lists, and the incentive and ability to  
6 engage in undue price discrimination and anticompetitive practices will not be disciplined  
7 by competition. Thus, in the event that the Commission deregulates Qwest's switched  
8 business services before competition is sufficient to replace the discipline of competition,  
9 deregulation will remove precisely the information necessary to investigate the unduly  
10 discriminatory price increases and anticompetitive behavior that are likely to follow.

11 This examination of costs and benefits flowing from its decision calls attention to  
12 the very different consequences of the two possible errors that the Commission could  
13 make. If the Commission proceeds cautiously and maintains Qwest's present form of  
14 regulation, which allows substantial price flexibility, requiring a high degree of  
15 confidence that competition is sufficient to replace Qwest's remaining regulatory  
16 requirements, the adverse consequences are relatively minor, even if the decision to  
17 deregulate is not made at the very earliest possible moment. Certainly, when compared  
18 to the alternative, maintaining these remaining regulatory requirements beyond the very  
19 earliest point at which competition may rise to the level of constraining Qwest's behavior  
20 is not a matter of very great consequence. On the other hand, removing the remaining  
21 regulatory requirements prematurely may allow an exercise of market power that causes  
22 substantial harm to customers and also harms the development of competition that will  
23 ultimately justify deregulation.  
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1 **Q. DO YOU BELIEVE THAT THE UNCERTAINTIES PRESENTLY ASSOCIATED**  
2 **WITH THE SUFFICIENCY OF COMPETITION WILL BE RESOLVED SOON?**

3 A. It is impossible to know how future events will develop. There is, however, a date in the  
4 not-too-distant future that offers something of a milepost. A very large portion of the  
5 “competition” that Qwest points to as evidence takes the form of companies marketing  
6 Qwest service under a QPP contract. QPP contracts involve prices rising gradually until  
7 all QPP contracts expire on July 31, 2008. As that date approaches I expect that it will  
8 become clear whether Qwest is (a) negotiating contracts with competitors that are capable  
9 of providing service in their own right—thus capable of negotiating terms that suit their  
10 individual interests, (b) dictating terms to marketing agents who perform a useful  
11 function – possibly handling retailing functions better than Qwest can – but are not  
12 competitors capable of providing discipline that would justify the deregulation Qwest  
13 seeks in its petition, or (c) removing access to QPP altogether. While Qwest’s allegation  
14 of competitive discipline coming from QPP providers is not, by any means, the only  
15 matter of concern that arises in evaluating the evidence presented in support of this  
16 petition, it suggests a date certain when it might be appropriate to reconsider the state of  
17 evidence regarding the extent of competition over a geographic area defined as broadly as  
18 the entirety of Qwest’s serving territory.

19 **VI. CONCLUSION**

20 **Q. WHAT IS YOUR RECOMMENDATION FOR THE COMMISSION?**

21 A. I recommend that the Commission deny the petition.

22 **Q. DO YOU BELIEVE THAT A SIMILAR PETITION FROM QWEST WILL**  
23 **MERIT APPROVAL SOMETIME IN THE FUTURE?**

24 A. I hope so. I believe that there is great value in the enterprise of fostering competition in  
25 the hope that it will replace regulation as an effective constraint on the exercise of market  
26 power. Almost 20 years ago, as a member of the Washington Commission Staff, I

1 recommended deregulation of AT&T (at the time, AT&T was exclusively a long distance  
2 provider) after consideration of statutory factors very much like those in Oregon's statute.  
3 The most compelling evidence motivating that recommendation was not a snapshot of  
4 market shares at the time of AT&T's application, but the underlying capacity of the  
5 market to support developing competition, and a clearly discernable trend in market  
6 shares corroborating my understanding of the consequences of divestiture and the  
7 implementation of equal access requirements. In that case, the underlying circumstances  
8 of the market had been changed dramatically by the divestiture of the Bell System and  
9 the successful implementation of long distance equal access requirements. The market's  
10 response to those underlying changes was clearly discernable in a strong and steady  
11 change in market structure: AT&T's market share was clearly declining in a substantial  
12 way.

13 In the present case, while some competition is certainly present, the underlying  
14 market fundamentals (primarily conditions determining CLECs' access to Qwest UNEs)  
15 have recently changed in ways that cast serious doubt on the future prospects for the  
16 competition that now exists. Over the years from enactment of the Act in 1996 until  
17 2004, new forms of competition in local exchange markets became possible based on  
18 UNEs, and some actual competition developed in response to these new possibilities.  
19 During 2004, the FCC's implementation of the 1996 Act changed course, emphasizing  
20 "inter-modal competition" rather than competition based on UNEs. I hope the FCC is  
21 right in placing its bets on intermodal competition, but it is not yet manifest for business  
22 services, and Qwest has not produced compelling evidence in that area. Qwest  
23 acknowledges that cable companies are not serving business customers in a large way,  
24 and wireless, while important, is not a very close substitute for wireline switched  
25 business services.  
26

1 Qwest's evidence depends largely on UNE-based providers (including those in  
2 the QPP distribution channel) offering services that customers can use to replace Qwest's  
3 services that are the subject of this petition. Thus, even if you give credence to Qwest's  
4 reported market share calculations (and I believe those calculations seriously overstate  
5 the extent of competition), the market structure described by those calculations was built  
6 on, and depends on, underlying market fundamentals in the form of access to UNEs, that  
7 no longer exist.

8 **Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?**

9 A. Yes

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**AREAS OF INTEREST**

Telecommunications industry  
Microeconomics of technological change  
Markets for real property

**EXPERT TESTIMONY AND REPORTS:**

Before the Public Service Commission of the State of Missouri, Case No. TO-2005-0166: Level 3 Communications, LLC's Petition for Arbitration Pursuant to Section 252(b) of the Communications Act of 1934, as amended by the Telecommunications Act of 1996, to establish an Interconnection Agreement with the Southwestern Bell Telephone Company, L.P. d/b/a SBC Missouri; Prefiled Direct Testimony on behalf of Level 3 Communications December 13, 2004; Prefiled Rebuttal Testimony February 7, 2005

Before the Regulatory Commission of Alaska, Docket No. U-97-82, U-97-143, U-97-144: In the Matter of the Petition GCI Communications Corp. for Termination of the Rural Exemption and Arbitration; Prefiled Direct Testimony on behalf of GCI filed February 26, 2004; Prefiled Rebuttal Testimony filed April 5, 2004

Before the New Mexico Public Regulation Commission, Case No. 03-00403-UT: In the Matter of Implementation of a Batch Cut Process, and Case No. 03-00404-UT: In the Matter of Impairment in Access to Local Circuit Switching for Mass Market Customers; Direct Testimony filed February 16, 2004; on Behalf of Worldcom, Inc. (MCI)

Before the Public Utilities Commission of the State of Colorado, Docket No. 03I-478T: Regarding the Unbundling Obligations of Incumbent Local Exchange Carriers Pursuant to the Triennial Review Order; Direct Testimony filed January 26, 2004; on Behalf of Worldcom, Inc. (MCI)

Before the Arizona Corporation Commission, Docket No. T-00000A-03-0369; In the Matter of ILEC Unbundling Obligations as a Result of the Federal Triennial Review Order; Direct Testimony filed January 9, 2004; on Behalf of Worldcom, Inc. (MCI)

Before the Washington Utilities and Transportation Commission, Docket Number UT-033044: 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; Direct Testimony filed December 22, 2003; Rebuttal Testimony filed February 2, 2004; on Behalf of Worldcom, Inc. (MCI)

Before the Regulatory Commission of Alaska, Docket U-01-83, 85, 87: In the Matter of the Investigation of the Local Exchange Revenue-Requirement, Depreciation, Cost-of-Service, and Rate Design Studies filed by ACS OF FAIRBANKS, INC. d/b/a ALASKA COMMUNICATIONS SYSTEMS, ACS LOCAL SERVICES, AND ACS, et al.; Direct Testimony on behalf of GCI Communications Corp. filed 3 November, 2003



Before the Regulatory Commission of Alaska, Docket U-96-89: In the Matter of the Petition by GCI Communications Corp. d/b/a General Communication, Inc., and d/b/a GCI for Arbitration under Section 252 of the Telecommunications Act of 1996 with the Municipality of Anchorage d/b/a Anchorage Telephone Utility a/k/a ATU Telecommunications for the Purpose of Instituting Local Exchange Competition; Direct Testimony on behalf of GCI Communications Corp., filed August 29, 2003; Rebuttal Testimony filed September 29, 2003; Surrebuttal Testimony filed October 13, 2003; hearing testimony 11 November, 2003

Before the Washington Utilities and Transportation Commission, Docket Number UT-031191: Petition to Remove Conditions on Competitive Classification and Waive Additional Requirements; Declaration of Richard Cabe, Ph.D. on behalf of AT&T Communications of the Pacific Northwest, Inc., 22 July, 2003

In the United States District Court For the Eastern District of Texas, Marshall Division, T-Netix, Inc. v. Worldcom, Inc. and Global Tel\*Link Corporation (Civil Action No. 2-01CV189 DF); Deposition of Richard Cabe in Dallas, Texas, 3 April, 2003, regarding damages from patent infringement

Before the Federal Communications Commission, CC Docket No. 96-128: In the Matter of Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996, Declaration of Richard Cabe, Ph.D. on behalf of T-NETIX, Inc.; Dated 22 May, 2002 (filed 24 May, 2002); Further Declaration of Richard Cabe, Ph.D. Dated 21 June, 2002 (filed 24 June, 2002)

Before the Minnesota Public Utilities Commission, PUC Docket No. P-421/C1-01-1375: In the Matter of the Commission's Review and Investigation of Qwest's Unbundled Network Element (UNE) Prices; Reply Testimony filed March 18, 2002, Surreply Testimony filed May 9, 2002 on behalf of Covad Communications Company; hearing testimony May 21, 2002

Before the Washington Utilities and Transportation Commission, Docket No. UT-003013: In the Matter of the Continued Costing and Pricing of Unbundled Network Elements and Transport and Termination; Supplemental Response Testimony filed February 14, 2002, Second Supplemental Response Testimony filed March 25, 2002 on behalf of Covad Communications Company; hearing testimony May 9, 2002

Before the Federal Communications Commission, CC Docket No. 01-277: In the Matter of Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Georgia and Louisiana; Declaration of Sherry Lichtenberg, Rene Desrosiers, Karen Kinard and Richard Cabe, on behalf of WorldCom, Inc.; Filed 22 October, 2001; Reply Declaration filed 13 November, 2001

Before the Public Utilities Commission of Nevada, Docket No. 00-7031: In re petition for review and approval of the draft application of SBC COMMUNICATIONS, INC., NEVADA BELL TELEPHONE COMPANY and SOUTHWESTERN BELL COMMUNICATIONS SERVICES, INC., d/b/a Nevada Bell Long Distance, for provision of in-region interLATA services in Nevada; Prepared Testimony of Richard Cabe, filed 6 August, 2001, on behalf of Commission Staff

Before the Mississippi Public Service Commission, Docket No. 2000-UA-999; Direct and Rebuttal Testimony filed April 16, 2001, on behalf of WorldCom, Inc.; hearing testimony 21 June, 2001

Before the Washington Utilities and Transportation Commission, Docket No. UT-003013 Part B: In the Matter of the Continued Costing and Pricing of Unbundled Elements, Transport and Termination and Resale; Response testimony filed 23 October, 2000, Supplemental Response testimony filed 20 December, 2000, on behalf of Rhythms Links Inc. and Covad Communications Company

Before the New Mexico Public Regulation Commission, Case No. 3317: In the Matter of the Investigation into the Rates and Charges of Institutional Operator Service Providers; Direct Testimony filed 21 August, 2000 on behalf of Gateway Technologies, Inc.; Rebuttal Testimony filed 31 October, 2000; Further Direct Testimony filed 10 August, 2001; Further Rebuttal Testimony filed 31 August, 2001; Supplemental Rebuttal Testimony filed 13 September, 2001; Hearing testimony 1 October, 2001

Before the Washington Utilities and Transportation Commission, Docket No. UT-003013 Part A: In the Matter of the Continued Costing and Pricing of Unbundled Elements, Transport and Termination and Resale; Direct testimony filed 19 May, 2000, Response testimony filed 21 July, 2000, Rebuttal testimony filed 4 August, 2000, on behalf of Rhythms Links Inc. and Covad Communications Company; hearing testimony 25 August, 2000

Before the Washington Utilities and Transportation Commission, Docket No. UT-960369: In the Matter of the Pricing Proceeding For Interconnection, Unbundled Elements, Transport and Termination and Resale; Direct testimony on behalf of MCI Worldcom filed 15 December, 1999; rebuttal testimony filed 7 February; hearing testimony 28 February, 2000

Before the New Mexico Public Regulatory Commission, Utility Case No. 3111, In the Matter of the Implementation of a State Universal Service Fund, Hearing testimony December 1, 1999 on behalf of MCI Worldcom

Before the Tennessee Regulatory Authority: "Public Policy considerations for Regulation of the InterLATA Telecommunications Market in Tennessee", Statement of Richard Cabe on behalf of MCI Worldcom in the Tennessee Regulatory Authority's consideration of amendments to the IXC Rule; filed September 14, 1999

Before the Iowa Utilities Board, Docket No. INU-99-3: In the Matter of Petition for Determination of Effective Competition, for Waiver of Accounting Plan Requirement and for Expedited Consideration; Direct Testimony filed September 10, 1999; Hearing testimony October 12, 1999

Before the Public Utilities Commission of the State of Colorado, Docket No. 99A-161T: In the Matter of the Application of U S West Communications, Inc. to Reduce Business Basic Exchange and Long Distance Revenues upon Receipt of the Colorado High Cost Support Mechanism in Accordance with Decision No. C99-222; Direct Testimony filed August 6, 1999

State of Florida Division of Administrative Hearings DOAH Case No. 98-2445RP: Telephonic Deposition of Dr. Richard Cabe in the matter of Florida Competitive Carriers Association, Inc.; Telecommunications Resellers Association, Inc.; AT&T Communications of the Southern States, Inc.; MCI Telecommunications Corporation; and Sprint Communications Company Limited Partnership, Petitioners, v. Florida Public Service Commission, Respondent. August 14, 1998 on behalf of Florida Competitive Carriers Association.

Before the Mississippi Public Service Commission, Docket No. 97-AD-544: Generic Proceeding to Establish Permanent Prices for BellSouth Interconnection and Unbundled Network Elements; Direct Testimony filed January 28, 1998; Rebuttal testimony filed March 13, 1998; Hearing testimony March 31, 1998; On behalf of AT&T Communications of the South Central States, Inc.

Before the North Carolina Utilities Commission, Docket No. P-100, Sub 133d: Review of Cost Studies, Methodologies, and Cost-Based Rates for Unbundled Network Elements; Direct testimony filed December 15, 1997; Rebuttal testimony filed March 9, 1998; Hearing testimony March 25, 1998; On behalf of AT&T Communications of the Southern States, Inc. and MCI Telecommunications Corporation

Before the South Carolina Public Service Commission, Docket No. 97-374-C: Proceeding to Review BellSouth Telecommunications, Inc.'s Cost for Unbundled Network Elements and Interconnection Arrangements; Direct Filed November 17, 1997; Hearing Testimony December 16, 1997; On Behalf of AT&T Communications of the Southern States, Inc.

Before the Public Utilities Commission of the State of Colorado, Docket No. 97M-063T; On Behalf of AT&T Communications of the Mountain States, Inc. and MCI Telecommunications Corporations; In the Matter of the Administration of the Colorado High Cost Fund and the Development of a Cost Model; Direct Testimony filed in the name of William Lehr; Hearing Testimony 1 December, 1997

Before the North Carolina Utilities Commission, Docket No. P-55, SUB 1022; Hearing Testimony September 30, 1997; In RE: Notification of Intention to File a Section 271 Petition for In-Region InterLATA Authority with the FCC Pursuant to the Telecommunications Act of 1996; Filed September 3, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the Southern States

Before the Alabama Public Service Commission, Docket No. 26029, Review of Cost Studies; Filed August 29, 1997; Hearing Testimony September 24, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the South Central States

Before the Georgia Public Service Commission, Docket No. 7061-U, Review of Cost Studies, Methodologies, and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services; Direct filed April 30, 1997; Rebuttal and Supplemental filed August 29, 1997; Surrebuttal filed September 8, 1997; Hearing Testimony September 18, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the South Central States

Before the Louisiana Public Service Commission, Docket No. 22022/22093; In RE: Review and Consideration of BellSouth Telecommunications, Inc.'s TSLRIC and LRIC Cost Studies; Filed August 25, 1997; Hearing Testimony 12 September, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the South Central States

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Before the Florida Public Service Commission, In The Matter of the Petition of MCI Telecommunications Corporation for Arbitration with United Telephone Company of Florida and Central Telephone Company of Florida concerning interconnection rates, terms and conditions pursuant to the Federal Telecommunications Act of 1996, Docket No. 961230-TP; Direct filed October 11, 1996; Rebuttal filed November 19, 1996; Hearing Testimony December 19, 1996; on behalf of MCI Telecommunications Corporation

Before the Arizona Corporation Commission, In The Matter of The Petition Of MCImetro Access Transmission Services, Inc. For Arbitration Of Interconnection Rates, Terms, And Conditions Pursuant to 47 U.S.C. § 252(b) Of The Telecommunications Act Of 1996, Docket No: U-3175-96-479; October 18, 1996; on behalf of MCImetro Access Transmission Services, Inc.

Before the Public Utility Commission of Texas, In The Matter of The Petition Of MCImetro Access Transmission Services, Inc. For Arbitration Of Interconnection Rates, Terms, And Conditions Pursuant to 47 U.S.C. § 252(b) Of The Telecommunications Act Of 1996, Docket Nos. 16300, 16355, October 14, 1996; on behalf of MCImetro Access Transmission Services, Inc.

Before the Public Utilities Commission of the State of Oregon, In The Matter of The Petition Of MCImetro Access Transmission Services, Inc. For Arbitration Of Interconnection Rates, Terms, And Conditions Pursuant to 47 U.S.C. § 252(b) Of The Telecommunications Act Of 1996, ARB 9, October 11, 1996; on behalf of MCImetro Access Transmission Services, Inc.

Before the Utah Public Service Commission, In the Matter of the Petition for Arbitration, Consolidation and Request for Agency Action of MCI Metro Access Transmission Services, Inc. Pursuant to 47 U.S.C. Section 252, Docket No. 96-095-01; Direct testimony filed 8 November 1996; Rebuttal testimony filed 22 November, 1996

Before the Iowa Utilities Board, In Re MCI Metro Access Transmission Services, Inc., Petitioning Party, and U S West Communications, Inc., Responding Party, Docket No. ARB-96-2, September 6, 1996; on behalf of MCI metro.

“Before the Public Utilities Commission of Oregon:UM 351, In the matter of the Investigation into the Cost of Providing Telecommunications Services, Electric Lightwave, Inc.’s Response to Issues 1, 3, and 4, filed 30 August, 1993”

Before the Washington Utilities and Transportation Commission, In the Matter of the Complaint of GTE Northwest Incorporated against Pacific Northwest Bell Telephone Company with respect to Interexchange Traffic Utilizing Extended Area Service Facilities, Docket No. U-88-1719-F; on behalf of U.S. MetroLink Company; Cross Examination December 1989

Affidavit of Richard Cabe, in Support of Motion of U.S. MetroLink Company for Suspension and Hearing in the matter of U. S. West Communications Tariff Filing 2056T before the Washington Utilities and Transportation Commission, September 1989

Implementation of the Colorado Telecommunications Act of 1987: An Evaluation”, Report Prepared on behalf of the Colorado Public Utilities Commission, with Vinson Snowberger, June 30, 1988

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**PUBLICATIONS:**

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"Issues, Indicators, and Baselines: The Benefits and Hazards of Using a Natural Resource Accounting System in the RCA Analytical Process", with Jason Shogren and Stanley R. Johnson, in *Evaluating Our Nation's Natural Resources*, edited by T. Robertson, B. English, R. Alexander, and P. Rosenberry, University of Tennessee Agricultural Experiment Station, 1996

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"Network Differentiation and the Prospects for Competition in Local Telecommunications", in *Sixth Annual Current Issues Challenging the Regulatory Process*, The Center for Public Utilities, New Mexico State University, 1990

"Prospects for Competition in the Local Exchange Telecommunications Industry", in *Telecommunications Regulation in Washington State*, Washington Utilities and Transportation Commission, January 29, 1989

"Rate of Return Regulation of Multiproduct Firms," Doctoral Dissertation, University of Wyoming, Department of Economics, 1988

Annual Report to the Legislature on the Status of the Washington Telecommunications Industry, principal author for the Washington Utilities and Transportation Commission, January, 1987

“Normative Economics and the Acid Rain Problem” with L.S. Eubanks, in T.D. Crocker, ed., Perspectives on the Economics of Acid Deposition, 1983, Ann Arbor Michigan: Ann Arbor Science Press.

“Intertemporal and Intergenerational Pareto Efficiency: An Extended Theorem,” Journal of Environmental Economics & Management 9, p 355-360, December 1982.

“Investment Criteria for Projects with Intergenerational Effects,” Masters Thesis, Pennsylvania State University, Department of Economics, 1982.

## **EMPLOYMENT**

### **Teaching:**

Associate professor, Department of Economics and International Business, New Mexico State University; 1994 - 1999, Tenure Granted 1995, Assistant professor 1990 to 1994: Antitrust Policy and Monopoly Power; Graduate Microeconomic Theory; Mathematical Economics; Industrial Organization; Seminar in Regulatory Economics; Economics of Risk, Uncertainty and Information; Game Theory; Advanced Seminar in Industrial Organization; Econometrics; Managerial Economics; Introduction to Economics; Microeconomic Principles

Assistant professor, Department of Economics, West Virginia University, 1983-1984: Graduate Environmental Economics; Principles of Economics.

Lecturer, Department of Economics, University of Wyoming, 1982–1983: Money & Banking; Intermediate Microeconomics.

Teaching assistant, Department of Economics, University of Wyoming; Fall, 1980.

Teaching assistant, Department of Economics and Department of Mathematics, Pennsylvania State University, five quarters in academic years 1978-1979 and 1979-1980.

### **Public Policy:**

Economic Consultant, 1988. Performed economic analysis concerning regulation of the telecommunications industry under contract to the Colorado Public Utilities Commission and the Washington Utilities and Transportation Commission.

Associate, RCG/Hagler, Bailly, Inc. 1987-1988. Assignments included litigation support in Bell Operating Company requests for lessened regulation and a study of the effect on property values of proximity to a major defense facility containing hazardous waste sites.

Telecommunications Regulatory Flexibility Manager, Washington Utilities and Transportation Commission, 1985-1987. Duties included conduct of investigations and preparation of recommendations, primarily with regard to the telecommunications industry; preparing evidence, assisting in cross examination and presenting expert testimony; and serving as a member of the Federal - State Joint Board Staff, FCC Docket 86-297, concerned with revising jurisdictional separations of telecommunications company costs and revenues.

**Research:**

Post-Doctoral Research Associate, Center for Agricultural and Rural Development, Department of Economics, Iowa State University, September 1988 to August 1990. Participate in policy-oriented economic research and serve as liason to the Economic Research Service, USDA.

Research Associate, Department of Economics, University of Wyoming, spring 1981 through summer 1982. Theoretical modelling, data construction, and analysis on health effects of air pollution and application of economic methods to ecosystem modelling. Under the direction of Thomas Crocker.

Research assistant, Department of Economics, University of Wyoming, summer 1980. Data construction and analysis on health effects of air pollution. Under the direction of Ralph d'Arge.

Research assistant, Department of Economics, Pennsylvania State University, summer and fall 1979. Theoretical and empirical work with Assymetric Quadratic Gorman Polar forms (flexible functional forms with explicit analytical solutions for the dual cost or expenditure function). Under the direction of Jonathon Dickinson.

**Other Employment:**

One year, Administrative Research Assistant, Aroostook County Action Program, Presque Isle, Maine.

Four years, U.S. Coast Guard, Electronics Technician.

**PERSONAL**

Born July 16, 1950; Pulaski County, Arkansas

Married, one child

Second language: Spanish