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IDAHO PUBLIC
UTILITIES COMMISSION

ORIGINAL

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF 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,
AND THE APPLICABLE STATE LAWS FOR
RATE, TERMS, AND CONDITIONS OF
INTERCONNECTION WITH QWEST
CORPORATION

Case No. QWE-T-05-11

BEFORE THE IDAHO UTILITIES COMMISSION

DIRECT TESTIMONY OF TIMOTHY J GATES

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INTRODUCTION

1
2 Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS
3 ADDRESS.

4 A. My name is Timothy J Gates. My business address is QSI Consulting, 819
5 Huntington Drive, Highlands Ranch, Colorado 80126.

6 Q. WHAT IS QSI CONSULTING, INC. AND WHAT IS YOUR POSITION
7 WITH THE FIRM?

8 A. QSI Consulting, Inc. ("QSI") is a consulting firm specializing in traditional
9 and non-traditional utility industries, econometric analysis and computer
10 aided modeling. I currently serve as Senior Vice President.

11 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
12 WORK EXPERIENCE.

13 A. I received a Bachelor of Science degree from Oregon State University and a
14 Master of Management degree in Finance and Quantitative Methods from
15 Willamette University's Atkinson Graduate School of Management. Since I
16 received my Masters, I have taken additional graduate-level courses in
17 statistics and econometrics. I have also attended numerous courses and
18 seminars specific to the telecommunications industry, including both the
19 NARUC Annual and NARUC Advanced Regulatory Studies Programs.
20 Prior to joining QSI, I was a Senior Executive Staff Member at MCI. I was
21 employed by MCI and/or MCI/WorldCom for 15 years in various public
22 policy positions. While at MCI I managed various functions, including
23 tariffing, economic and financial analysis, competitive analysis, witness
24 training and MCI's use of external consultants. Prior to joining MCI, I was
25 employed as a Telephone Rate Analyst in the Engineering Division at the
26 Texas Public Utility Commission and earlier as an Economic Analyst at the
27 Oregon Public Utility Commission. I also worked at the Bonneville Power

1 Administration (United States Department of Energy) as a Financial Analyst
2 doing total electric use forecasts while I attended graduate school. Prior to
3 doing my graduate work, I worked for ten years as a reforestation forester in
4 the Pacific Northwest for multinational and government organizations.
5 Exhibit 101, attached hereto to this testimony, is a summary of my work
6 experience and education.

7 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS COMMISSION?**

8 **A.** Yes. I have submitted testimony or comments in no less than four (4)
9 docketed proceedings before the Commission in the last eighteen (18) years,
10 most of which pertain to opening Idaho telecommunications markets to
11 competition. I have also testified more than 200 times in 43 other states and
12 filed comments with the FCC on various public policy issues ranging from
13 costing, pricing, local entry and universal service to strategic planning, merger
14 and network issues. As noted above, a list of proceedings in which I have
15 filed testimony or provided comments is attached hereto as Exhibit 101.

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

17 **A.** This testimony was prepared on behalf of Level 3 Communications, LLC.
18 (“Level 3”), a certificated competitive local exchange carrier (“CLEC”) in
19 Idaho.

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 **A.** The purpose of my testimony is to address certain issues identified in the
22 Level 3 Petition for Arbitration (“Petition”).¹ Specifically, I will address:
23 **Issue 1: Interconnection Architecture; Issue 2: Separate Trunk Groups; Issue**
24 **3: Internet Service Provider (“ISP”) Bound Traffic, Relative Use Formula**

¹ See, Petition of Level 3 Communications, LLC for Arbitration of an Interconnection Agreement with Qwest Corporation, pursuant to Section 252(B) of the Telecommunications Act of 1996; filed on May 13, 2005 (“Petition”).

1 (“RUF”), and Virtual NXX (“VNXX”); and **Issue 4: Voice Over Internet**
2 Protocol (“VoIP”). Some of these disputes are primarily engineering issues,
3 but I will be addressing them from an economic perspective.

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

5 A. My testimony is organized by issue. The various discussions of the Tier 1
6 issues can be found on the following pages:

7 **Issue 1** Interconnection Architecture Page 9

8 **Issue 2** Separate Trunk Groups Page 25

9 **Issue 3** ISP-Bound Traffic, VNXX and RUF Page 31

10 **Issue 4** VoIP Page 52

11 **Q. WHAT KEY ECONOMIC PRINCIPLES APPLY TO THE ISSUES IN**
12 **THIS ARBITRATION?**

13 A. All of my recommendations in this matter are based on a few simple but
14 important economic principles:

15 • *First*, neither party to an interconnection agreement should be
16 able to impose unnecessary costs on the other. Obviously the process of
17 interconnection itself entails certain costs, some of which fairly and properly
18 fall on each party. But neither party should be able to insist on
19 interconnection arrangements that are costly to the other party *for no good*
20 *reason*. As a society, we want interconnection arrangements to be as efficient
21 as possible; requiring needless expense is inconsistent with that goal.

22 • *Second*, interconnection arrangements should reflect the most
23 efficient technical means for handling any particular situation, even if that
24 that is not the technical arrangement currently in place for one of the parties.
25 If a party can prevent an efficient arrangement simply because that party has
26 not taken the time or effort to become efficient itself, the interconnection
27 agreement will, in this respect, become a government-sanctioned transfer of

1 wealth from the more efficient party to the less efficient party. A similar
2 transfer of wealth will occur if the incumbent is allowed to force inefficiencies
3 on the party with which it interconnects. Such inefficiencies do not make any
4 economic sense and are not in the public interest.

5 • *Third*, it needs to be very clear that the incumbent's way of
6 doing things is not necessarily the most efficient way of doing things. From
7 an economic perspective the purpose of the 1996 Act is to enable and facilitate
8 competition in traditionally monopolized telecommunications markets by
9 removing economic and operational impediments.² Further, with the rapid
10 pace of technological advances in transport and switching technologies, no
11 rational provider would adopt the traditional technologies and methods of
12 operation of the incumbent. Facilitating and enabling competition, therefore,
13 necessarily requires analyzing interconnection and intercarrier compensation
14 issues from a forward-looking perspective in which the technology that is
15 most efficient from a long-run economic cost perspective that may not
16 include the technology currently in use by the incumbent. It follows that
17 "because the incumbent does it that way" is not only *not* a good argument in
18 favor of a particular resolution of an issue — in many cases it might be a *good*
19 reason to reach the opposite conclusion.

20 • *Fourth* and finally, a recognition of the critical role that
21 technological advance has played in contributing to economic welfare in the
22 field of telecommunications justifies a preference for the result that favors,
23 and enables, new technology. There is no dispute that communications
24 technology is a decreasing cost industry. From an economic perspective,

² In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; FIRST REPORT AND ORDER; CC Docket No. 96-98; Released August 8, 1996; at ¶3. Hereinafter referred to as the FCC's "*Local Competition Order*."

1 anyone who has a large sunk investment in a particular technical approach
2 will rationally do whatever he can to prevent new technologies from making
3 his technology obsolete. But this private interest in protecting existing
4 investment from the forces of competition is directly contrary to the public
5 interest in innovation and the deployment of new, more efficient
6 technologies. From an economic perspective it is not only appropriate but
7 necessary for decisions regarding interconnection disputes to take this factor
8 into account.

9 Summary of Recommendations

10 Q. WITH THOSE PRINCIPLES IN MIND, PLEASE SUMMARIZE YOUR
11 RECOMMENDATIONS ON THE KEY ISSUES SEPARATING QWEST
12 AND LEVEL 3 IN THIS ARBITRATION.

13 A. Issue 1 relates to interconnection architecture. Level 3 wants the agreement
14 to clearly state that it is entitled to interconnect with Qwest at a single point
15 of interconnection ("POI") in each LATA; to state that all types of traffic will
16 be exchanged by means of that physical POI; and that each party will bear the
17 costs of its facilities and arrangements on its side of the POI, including all
18 costs of getting its own traffic to the POI. This is the correct result from an
19 economic viewpoint.

20 Qwest's network architecture reflects a mix of technology and
21 economic decisions that Qwest has made over many decades. That
22 architecture does not remotely reflect what an efficient firm would construct
23 today. It follows that Qwest should not be able to force Level 3 to spend
24 money to duplicate or mirror Qwest's architecture — which is essentially
25 what a multiple-POI requirement does. Rather, each carrier should be
26 responsible for its own network, with the hand-off of traffic between the
27 networks occurring at a single, efficient point. Of course, this does not

1 preclude the parties from voluntarily agreeing to establish whatever
2 additional POIs they may choose in particular cases. It does, however,
3 prevent Qwest from imposing transport and other responsibilities onto Level
4 3 that arise from Qwest's legacy network architecture.

5 Issue 2 relates to the use of trunk groups that carry different "types" of
6 traffic on a combined basis to and from the POI. Level 3 wants all traffic
7 exchanged between Qwest and Level 3 switches within a LATA to be carried
8 on a single trunk group between its network and the POI. Qwest wants Level
9 3 to separate the traffic and route it over different trunk groups based on
10 whether the traffic falls into arbitrary categories. There is no sound economic
11 basis for Qwest's proposal. As Mr. Ducloo testifies, from a technical
12 perspective, taking a large volume of traffic and breaking it up into a set of
13 smaller trunk groups degrades trunking efficiency, so that a higher total
14 number of trunks — and therefore trunk ports on switches — is needed. In
15 economic terms, this results in a pure deadweight loss — *i.e.* costs are imposed
16 with no corresponding economic or societal benefit.

17 Qwest says that it needs traffic on separate trunk groups in order to properly
18 apply different billing rates to the different types of traffic, but that is simply
19 not true. All that is required is to measure the total volume of traffic on a
20 trunk group, and then apply factors (based on a periodic analysis of the
21 traffic) indicating what proportion of the traffic is subject to reciprocal
22 compensation, what proportion is subject to access charges, etc. These
23 jurisdictional factors have been used for decades.

24 Issue 3 relates generally to whether ISP-bound traffic should be
25 subject to the FCC-mandated rate of \$0.0007 per minute even when the ISP's
26 equipment is not in the Qwest-determined originating local calling area of the
27 end user dialing up the ISP. Level 3 maintains that this low rate should apply

1 because the FCC has preempted the states as to intercarrier compensation for
2 this traffic; Qwest apparently takes the view that if the ISP's equipment is not
3 in the originating local calling area, not only should Qwest not pay Level 3 the
4 \$0.0007, but Level 3 should actually pay Qwest originating access charges.
5 Qwest also wants to impose its own network costs on Level 3. Qwest's
6 position is simply wrong. When Qwest delivers an ISP-bound call originated
7 by its customer to Level 3's POI for termination, Qwest's costs are not
8 affected in the slightest by the location of the ISP's equipment. Moreover,
9 Qwest's position would impose a penalty on Level 3 for working with ISP
10 customers to efficiently configure their equipment in a manner to minimize
11 both their and Level 3's costs, or, put another way, would create an incentive
12 on Level 3 and its ISP customers to configure their equipment inefficiently
13 simply in order to avoid regulatorily-imposed payments to Qwest. From an
14 economic perspective, Qwest's position is totally irrational and
15 discriminatory and should be rejected.

16 **Issue 4** relates to the application of the \$0.0007 rate to IP-enabled
17 voice traffic, generally referred to as Voice over Internet Protocol or "VoIP", as
18 well as purely "ISP-bound" traffic. This type of traffic should not be burdened
19 with "access charges." Further, there is no technical or economic reason to
20 treat VoIP differently from other ISP-bound traffic. Qwest wants to either
21 exclude this type of traffic entirely from interconnection or impose special,
22 higher charges for terminating that traffic. Here again, Qwest's position
23 makes no economic sense. Qwest does not incur any costs for terminating
24 this VoIP traffic that differ from its costs in terminating traffic that Qwest
25 would acknowledge is subject to the lower rate. From an economic
26 viewpoint, it appears that Qwest is trying to ensure that growth of this new
27 technology is inhibited by means of making it more costly than necessary to

1 actually complete such calls. This is contrary to the public interest and to the
2 efficient development and operation of the market. Unless there is some
3 compelling legal or policy reason that *requires* the application of higher
4 charges to this traffic — and I am certainly not aware of any — it makes sense
5 to have the lower rate apply. I discuss each of these issues in more detail
6 below.

7 Finally, I note that Issue 5 in this matter is largely “legal” in nature, relating to
8 the incorporation of certain terms by reference into the parties’
9 interconnection agreement. I do not address that issue in this direct
10 testimony.

11 Issue 1 -- Interconnection Architecture.

12 Q. PLEASE SUMMARIZE THE POSITIONS OF LEVEL 3 AND QWEST
13 WITH REGARD TO INTERCONNECTION ARCHITECTURE.

14 A. Level 3 wants to exercise its right to establish a single POI for each LATA for
15 the exchange of all types of traffic with Qwest, with each party responsible
16 for the facilities on its side of the POI.³ Moreover, the only charges from one
17 party to the other for terminating traffic delivered to the POI would be the
18 applicable per-minute charges (reciprocal compensation or access). Qwest
19 seeks to require the establishment of multiple POIs in some circumstances
20 and to improperly impose onto Level 3 the cost of establishing and
21 maintaining trunking arrangements put in place for Qwest’s own
22 convenience.

³ As will be discussed later in this testimony, a POI is the point at which two networks interconnect for the exchange of traffic.

1 Q. PLEASE PROVIDE A GENERAL OVERVIEW OF THE ECONOMIC
2 RATIONALE FOR INTERCONNECTION PURSUANT TO THE ACT.

3 A. Interconnection of networks is essential for the provision of
4 telecommunications services. If two networks are not interconnected, their
5 subscribers cannot call each other, which reduces the value of both networks.
6 However, the economic effect of denial of interconnection is not the same for
7 each network. If a large network denies interconnection to a smaller one, the
8 impact on the large network may well be very small (since few of its
9 customers will want or need to contact customers of the other network),
10 while the denial of interconnection will be devastating to the smaller
11 network, since its few subscribers would not be able to call anyone other
12 than others on the same network. Where the dominant network became
13 dominant as a result of government policy (as is the case with the ILECs), it
14 would be wrong to ignore the potential that smaller networks might be
15 harmed as a result of denial of interconnection, or by inefficient
16 interconnection, when government policy (the Telecom Act of 1996) now
17 recognizes the importance of promoting competition.

18 Q. DID CONGRESS RECOGNIZE THE IMPORTANCE OF INTERCONNECTION
19 TO THE DEVELOPMENT OF COMPETITION?

20 A. Yes. Congress recognized the importance of interconnection by requiring
21 all telecommunications providers to interconnect, directly or indirectly, in
22 Section 251(a)(1) of the Act. But Congress also recognized that the ILECs
23 were and would remain the overwhelmingly largest networks and the
24 dominant carriers in any given area for the foreseeable future (and, nearly 10
25 years after the passage of the Act, this remains true). This situation gives the
26 ILECs powerful economic leverage over CLECs: the ILEC will be strongly
27 motivated to use its control over access to its large base of subscribers either

1 to out-and-out destroy its competitors (by not allowing interconnection at
2 all) or hamper their growth by only permitting interconnection on expensive
3 or inefficient terms. So, Congress — quite rationally from an economic
4 standpoint — imposed special interconnection duties on ILECs.

5 Q. WHAT WERE THOSE SPECIAL INTERCONNECTION DUTIES
6 IMPOSED ON ILECS?

7 A. In Section 251(c)(2) of the Act, ILECs are required to permit a “requesting
8 telecommunications carrier” to physically interconnect its network with that
9 of the ILEC for the exchange of traffic. This limits the ability of the ILEC to
10 exploit its market power — arising from its control of access to the
11 overwhelming majority of subscribers in an area — to the detriment of
12 competitors and consumers who would benefit from a choice in providers.

13 The FCC implemented this basic interconnection requirement with its specific rules to ma
14 Specifically, at ¶ 995 of the *Local Competition Order*, the FCC said:

15 [I]f a company provides both telecommunications and information
16 services, it must be classified as a telecommunications carrier for
17 purposes of section 251 ... [T]elecommunications carriers that
18 have interconnected or gained access under sections 251(a)(1),
19 251(c)(2), or 251(c)(3), ***may offer information services through***
20 ***the same arrangement, so long as they are offering***
21 ***telecommunications services through the same arrangement as***
22 ***well.*** Under a contrary conclusion, a competitor would be
23 precluded from offering information services in competition with
24 the incumbent LEC under the same arrangement, thus increasing
25 the transaction cost for the competitor. We find this to be
26 contrary to the pro-competitive spirit of the 1996 Act. By rejecting
27 this outcome we provide competitors the opportunity to compete
28 effectively with the incumbent by offering a full range of services
29 to end users without having to provide some services inefficiently
30 through distinct facilities or agreements.⁴
31

⁴ See *Local Competition Order* at ¶ 995 (emphasis added).

1 A. In order for Level 3 and Qwest to exchange traffic between their
2 respective customers, they must physically interconnect their
3 networks. Per the FCC's rules, "interconnection" refers to the
4 physical linking of two networks for the mutual exchange of traffic
5 between customers subscribed to the respective networks.⁶ A POI is
6 simply the place where the two networks interconnect. It is also
7 normally viewed as the financial and physical demarcation point that
8 defines where one party's financial and operational obligations end
9 and the other party's begin.

10 **Q. WHO SHOULD BEAR THE COSTS OF INTERCONNECTION?**

11 A. Basically, each provider should bear its portion of the cost. Each carrier's
12 subscribers benefit from the ability to make calls to and/or receive calls from
13 the other carrier's subscribers. Of course, each carrier is really only able to
14 control the costs and activities on its own network, not on the other party's
15 network. Therefore, it is sensible to require that each carrier be responsible
16 for the costs of its own network, on its side of the POI. This is precisely what
17 the FCC has required in Rule 51.703(b). This rule says that each carrier is
18 fully responsible for the costs incurred in getting traffic from its network to
19 the POI.⁷

20 **Q. WHAT ARE THE ECONOMIC BENEFITS OF USING A SINGLE POI
21 PER LATA?**

22 A. The key benefit of a single POI architecture is that it allows the carrier
23 delivering traffic to aggregate that traffic onto a large, efficient transmission
24 facility to the other carrier, while at the same time it allows the carrier

⁶ See *Local Competition Order* at ¶ 176.

⁷ 51.703(b) states, "A LEC may not assess charges on any other telecommunications carrier for telecommunications traffic that originates on the LEC's network."

1 receiving the traffic to route that incoming traffic in whatever manner is most
2 efficient based on its own traffic and network. Now, obviously, a large
3 established carrier would benefit by being able to require its dependent
4 competitor to deliver traffic to each and every switch in the established
5 carrier's network, but from an overall societal point of view that would be
6 terribly inefficient.

7 **Q. HOW WOULD THE DOMINANT PROVIDER BENEFIT BY**
8 **REQUIRING A CLEC TO DELIVER TRAFFIC TO EVERY SWITCH?**

9 A. The most obvious benefit would be increasing the cost of the potential
10 competitor and thereby disadvantaging that CLEC with respect to its
11 entrance to, and operation in, the market. The FCC recognized the ILEC
12 incentive to disadvantage CLECs. Specifically, the FCC noted:

13
14 Given the incumbent LEC will be providing interconnection to
15 its competitors pursuant to the purpose of the 1996 Act, the
16 LEC has the incentive to discriminate against its competitors
17 by providing them less favorable terms and conditions of
18 interconnection than it provides itself.⁸

19 Requiring multiple POIs disadvantages the CLECs by increasing their
20 costs. If the ILEC had the same customer and traffic characteristics as the
21 CLEC it would also operate with a single POI. As such, requiring multiple
22 POIs for CLECs when they are not justified is both anticompetitive and
23 discriminatory, not to mention inefficient from both an economic and
24 engineering perspective.

25 **Q. YOU SAID THAT QWEST'S PROPOSAL WOULD INCREASE LEVEL**
26 **3'S COSTS. IS THAT COMMON IN ARBITRATIONS?**

⁸ See *Local Competition Order* at ¶ 218.

1 A. Yes, unfortunately such proposals are common. It is not in the best interest of
2 Qwest to make it easy or cheap for Level 3 to interconnect. In fact, former
3 Chairman Powell recognized the ILEC incentives when he stated, “At times,
4 as I have observed, it is tempting to play the regulatory “game” in the way the
5 incumbents often do. Begging for regulatory protection. Seeking regulatory
6 favoritism that raises the costs of your competitors.”⁹

7 Q. WHY WOULD IT BE INEFFICIENT TO REQUIRE A COMPETITOR
8 TO INTERCONNECT AT MANY DIFFERENT POINTS ON THE ILEC’S
9 NETWORK?

10 A. In economic terms, the location of the ILEC’s switches reflects a series of
11 choices made over a period of decades about the placement of multiple
12 switches as compared to the use of transport from a smaller number of
13 switches to reach subscribers. In the past when switching was relatively
14 cheap and transmission was relatively expensive, it made sense to have lots of
15 dispersed switches, with relatively short transport links between switches
16 and to subscribers. Today, however – although the costs of both switching
17 and transport have declined over time – switching is relatively expensive and
18 transmission is relatively cheap, and it makes economic sense to have a small
19 number of switches and relatively long transmission links to customers. So,
20 even if it was perfectly efficient and rational for an ILEC to deploy a particular
21 set of switches at various locations in the past, that does not remotely mean
22 that it would be efficient and rational for a CLEC to duplicate those choices
23 today, given the technologies available today and the particular geographic
24 distribution of the CLEC’s customers.

⁹ Prepared Remarks of Michael K. Powell, Before the Association of Local Telecommunications Services; “Local Competition...CLECs in the Midst of an Explosion.” Convention, Las Vegas, Nevada; December 2, 1998.

1 Q. DOES THE ACT RECOGNIZE THESE DIFFERENCES BETWEEN
2 ILECS AND CLECS?

3 A. Yes. The 1996 Act recognizes this by giving the CLEC, not the ILEC, the
4 choice of where to interconnect as long as it is technically feasible. Section
5 251(c)(2) of the Act says that the CLEC can choose to exchange traffic at “any
6 technically feasible point” within the ILEC’s network. The criterion is
7 technical feasibility, not the economic impact – albeit minimal – on the ILEC
8 of having to carry its traffic to or from the technically feasible point selected.

9 Q. PLEASE EXPLAIN WHY IT MAKES SENSE FOR THE CLEC TO HAVE
10 THE DISCRETION TO SELECT POIS AND NOT THE ILEC.

11 A. It makes perfect economic sense, in light of the principles discussed above, to
12 give the choice of where to locate a POI or POIs to the CLEC and not the
13 incumbent.¹⁰ As noted above, the incumbent built out its network over many
14 years in response to a wide variety of then existing economic, technological
15 and demographic conditions. It would be irrational to assume that a
16 competitor would find it economic to re-create anything like the same
17 network today, even to serve the same customer base — and of course no
18 competitor will have the kind of ubiquitous customer base as the ILEC. It
19 follows that, where it is economically reasonable for the CLEC to establish
20 multiple POIs at multiple points on the ILEC’s network, it will do so. In fact,
21 Level 3 has a history of working closely with the ILECs in the establishment
22 of additional POIs where traffic warrants such additional facilities. But
23 where it does not choose to establish multiple POIs, that is solid evidence
24 that there is no economic reason to require it to do so. To the contrary,

¹⁰ Indeed, footnote 464 of the *Local Competition Order* states, “Of course, requesting carriers have the right to select points of interconnection at which to exchange traffic with an incumbent LEC under section 251(c)(2).” Many orders since the *Local Competition Order* have supported the CLEC right to have only one POI per LATA.

1 forcing the CLEC to take account of the ILEC's network architecture choices
2 — beyond requiring the POI to be “within” the ILEC's network — essentially
3 forces the legacy network design choices and the inefficiencies of the ILEC
4 onto the CLEC.

5 **Q. AS YOU UNDERSTAND THE FCC'S RULES, DO ILECS SUCH AS**
6 **QWEST HAVE THE RIGHT TO SELECT POIS?**

7 A. No. As just noted, that right is limited to CLECs and does not extend to
8 ILECs. The FCC explained that this is so because the ILEC “has the incentive
9 to discriminate against its competitors by providing them less favorable terms
10 and conditions of interconnection than it provides itself.”¹¹ Eventually, of
11 course, the hope is that CLEC networks become sufficiently robust such that
12 the erstwhile dominant ILEC literally cannot afford to treat CLECs badly:
13 “competition eventually will eliminate the ability of an incumbent local
14 exchange carrier to use its control of bottleneck local facilities to impede free
15 market competition.”¹²

16 **Q. ARE YOU SAYING THAT A CLEC, SUCH AS LEVEL 3, WILL ALWAYS**
17 **ESTABLISH A SINGLE POI IN A LATA?**

18 A. No. The specifics will vary from case to case, but depending on the traffic mix
19 and where the CLEC already has facilities, it may well make sense for the
20 CLEC to establish more than one POI in a LATA. The point, however, is that
21 the choice has to be with the CLEC, not the ILEC. This is because the ILEC
22 will always want to force the CLEC to interconnect at points that are
23 favorable to the ILEC and its legacy network. From my economic perspective,
24 it is clear that the FCC was correct when it recognized the ILEC incentives

¹¹ See *Local Competition Order* at ¶ 218.

¹² Id. at ¶ 4.

1 and abilities at paragraph 10 of the *Local Competition Order* wherein it states in
2 pertinent part:

3
4 Because an incumbent LEC currently serves virtually all
5 subscribers in its local serving area, an incumbent LEC has
6 little economic incentive to assist new entrants in their efforts
7 to secure a greater share of that market. An incumbent LEC
8 also has the ability to act on its incentive to discourage entry
9 and robust competition by not interconnecting its network
10 with the new entrant's or by insisting on supracompetitive
11 prices or other unreasonable conditions for terminating calls
12 from the entrant's customers to the incumbent LEC's
13 subscribers.

14 **Q. HAS LEVEL 3 ESTABLISHED MORE THAN ONE POI PER LATA IN**
15 **CERTAIN AREAS?**

16 **A.** Yes. In the past, Level 3 has negotiated interconnection agreements that
17 provide for additional POIs if demand or other circumstances merited such an
18 investment. However, establishing additional POIs should be based on the
19 need for such additional POIs, and on traffic patterns, not on Qwest's
20 attempts to force inefficient costs onto Level 3. Moreover, just because Level
21 3 may have multiple POIs in certain LATAs does not mean that Level 3 should
22 be forced to add POIs in every LATA at Qwest's discretion. To the contrary,
23 from an economic perspective, the fact that in some cases Level 3 has
24 voluntarily established multiple POIs, but in other cases has not, simply
25 confirms that it is not efficient to require Level 3 to mirror Qwest's network
26 architecture. Rather, this fact demonstrates, on the basis of actual market
27 behavior, that Level 3 needs flexibility to establish one or more POIs where it
28 is efficient to do so. Qwest's proposal would not give Level 3 that flexibility.

29 The Commission should be extremely wary of establishing any
30 obligations in an interconnection agreement that would require Level 3 to
31 deploy significant amounts of capital in situations where Level 3 would not

1 independently find doing so in its interest. Since the implosion of the
2 competitive telecommunications industry in 2000, it has become increasingly
3 difficult for CLECs to attract capital; investors are understandably wary of
4 this sector. SBC has asserted in testimony filed in other state arbitrations
5 that more than 200 CLECs have ceased operations in SBC territory since
6 2000. I have no reason to think that the numbers would be any different for
7 Qwest's territory. Forcing CLECs to build or lease facilities, where margins
8 are slim or nonexistent, simply to require the CLEC to duplicate the ILEC's
9 legacy network, would only worsen CLEC prospects for attracting capital.
10 Such a result would be inefficient from both an economic and operational
11 standpoint and has consequently been regularly rejected by regulators as not
12 in the public interest. The likely result of such a requirement would not be
13 more CLEC investment; it would be fewer CLECs entering the market
14 because the regulatorily-imposed capital requirements do not justify the
15 investment.

16 **Q. BUT REGARDLESS OF THE FCC RULES AND ECONOMIC**
17 **PRINCIPLES DISCUSSED ABOVE, ISN'T IT UNFAIR TO QWEST TO**
18 **GIVE LEVEL 3 THE CHOICE OF WHERE AND WHETHER TO**
19 **ESTABLISH POIs?**

20 **A.** Not at all. As discussed elsewhere in my testimony, the ILEC is entitled to be
21 paid for the work it does in terminating traffic it receives from the CLEC at a
22 single POI or multiple POIs, just as the CLEC is entitled to compensation for
23 terminating traffic its receives from the ILEC. Although this point is
24 sometimes obscured by the FCC's \$0.0007 rate for ISP-bound traffic, the
25 FCC's rules for reciprocal compensation provide for a higher level of payment
26 if traffic has to be routed through an ILEC tandem switch to get to the

1 appropriate end office than if the traffic does not have to go through the
2 tandem switch.¹³

3 It is not “unfair” to Qwest to have to bear certain costs arising from its
4 status as an incumbent; or, rather, if it is “unfair,” that “unfairness” is simply a
5 means to compensate for the fact that it was “unfair” to the public and to
6 potential competitors to allow Qwest to operate in a monopoly environment
7 for many decades prior to the enactment of the 1996 Act. A policy decision to
8 promote competition, such as that embodied in the 1996 Act, necessarily and
9 inevitably means that certain advantages that would otherwise accrue to the
10 incumbent are being taken away.

11 Obviously an ILEC such as Qwest does not benefit from
12 accommodating Level 3 in its efforts to attract customers, and would like to
13 charge Level 3 as much as possible for whatever it is called upon to do. That
14 is simply rational behavior by a monopolist trying to hold on to its monopoly
15 position. The reason interconnection agreements are subject to statutory
16 standards as to their content, and regulatory oversight via the arbitration
17 process, is precisely to allow regulators such as this Commission to *prevent*

¹³ Under the FCC’s rules for compensation for ISP-bound calling, an ILEC may choose to avoid paying reciprocal compensation rates for calls its customers make to ISPs by opting into the FCC’s special regime for such traffic. Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Inter-Carrier Compensation for ISP-Bound Traffic, *Order on Remand and Report and Order*, 16 FCC Rcd 9151 (2001) at ¶¶ 89-93. If the ILEC does so it only has to pay \$0.0007 per minute for calls its customers make to ISPs. But if the ILEC chooses to protect itself economically by electing to only *pay* \$0.0007 per minute for ISP-bound traffic, it is obliged to accept all traffic from the competitor network for termination at the same \$0.0007 rate, whether that traffic is delivered at a tandem, at an end office, or elsewhere. So it is probably true that Qwest would not get any higher payment from Level 3 for traffic Level 3 delivers at the tandem (or elsewhere) as compared to at the end office. But that is only because *Qwest* has chosen to protect itself from having to pay full reciprocal compensation rates for ISP-bound traffic by opting into the FCC’s regime. From this perspective, giving up additional tandem-based compensation for inbound traffic is part of the price Qwest has chosen to pay in exchange for paying less for outbound ISP-bound traffic.

1 the ILEC from refusing to reasonably accommodate CLECs and to charge
2 CLECs too much for what the ILEC has to do.

3 In this regard, a useful model to consider is what would happen if
4 there were three competing carriers in an area, each serving one third of the
5 customer base, with each carrier's customers equally valuable to the others.
6 In this competitive situation, if any one of the carriers remained unconnected,
7 it would suffer terribly in the marketplace, and so each carrier would be
8 highly motivated to establish efficient interconnection with the others, at
9 some convenient point to all three. None of them would be in a position to
10 dictate to the others where interconnection would occur, and none of them
11 would be in a position to demand that the others pay for its own costs of
12 running its network. Obviously we do not have anything like this kind of
13 competitive situation today, but this hypothetical model provides a good
14 reference point for what makes sense in establishing interconnection
15 arrangements under the 1996 Act.

16 Whenever Qwest makes a demand for multiple POIs, or for Level 3 to
17 have to pay for the privilege of terminating traffic originated by Qwest's
18 customers, or for Level 3 to split its traffic among different trunk groups
19 based on Qwest's preferred categorization when one trunk group would be
20 more efficient, it is reasonable to ask whether one of our three hypothetical
21 equally-sized competitive carriers could ever hope to get its two competitors
22 to agree to such a thing. If not, then it's a pretty good bet that Qwest isn't
23 being reasonable but, instead, is trying to abuse its position as the dominant
24 provider of services.

1 Q. PLEASE SUMMARIZE YOUR TESTIMONY REGARDING
2 ESTABLISHING A SINGLE POI.

3 A. Competitors using new technology should not be limited by the historic
4 decisions of Qwest network planners who established switch locations and
5 local calling areas decades ago based upon the more limited technology
6 available to them. Those decisions, even if justifiable and supportable then,
7 would certainly be different today given the changes in technology. As such,
8 forcing competitors to conform to the ILEC's legacy network topology would
9 be inconsistent with the goals of the *Local Competition Order* and the Act.
10 Rather, the promotion of efficient markets dictates that a competitor such as
11 Level 3 only be required to interconnect in a specific area where its own
12 assessment of traffic volumes, customer demand, and available technology
13 justify investment in facilities needed to reach that area. Level 3 should not be
14 required to extend its facilities to POIs unilaterally identified by Qwest;
15 instead, Qwest is obligated to provide interconnection for Level 3 facilities at
16 POIs which Level 3 properly determines best serve its network architecture
17 and business plans. This concept actually allows Qwest to continue to design
18 a network around its own needs, while allowing Level 3 to do the same thing.

19 Q. HOW SHOULD THE COMMISSION DECIDE THIS ISSUE?

20 A. The Commission should adopt Level 3's position which permits the flexibility
21 of a single POI per LATA and reject Qwest's proposed language.

22 Q. WHAT TYPES OF TRAFFIC SHOULD BE EXCHANGED OVER THE
23 PHYSICAL INTERCONNECTION FACILITIES ESTABLISHED AT ANY
24 GIVEN POI?

25 A. Any and all traffic should be exchanged over the physical facilities at a given
26 POI. It is economically irrational to require the establishment of different

1 physical facilities for different “types” of traffic when one facility will handle
2 the traffic efficiently.

3 Q. IS THIS CONCLUSION LIMITED TO WHETHER THE TRAFFIC
4 FALLS INTO THE REGULATORY CATEGORY OF
5 “TELECOMMUNICATIONS” OR NOT?

6 A. No. Once a POI has been established, Qwest should be required to use that
7 POI (and should be required to permit Level 3 to use that POI) for the
8 exchange of all types of traffic, whether they are classified as
9 “telecommunications services,” “information services,” “local services,” “access
10 services,” “251(b)(5) traffic,” or anything else. Assuming that transmitting a
11 particular type of traffic over a given physical facility is technically feasible, it
12 makes no economic sense to require the establishment of additional,
13 duplicative facilities based on the regulatory classification of the traffic. As I
14 noted above, the FCC recognized as much at the very inception of
15 competition under the 1996 Act: once a physical interconnection arrangement
16 has been established for any type of traffic for which such an arrangement is
17 properly called for under the Act, the competitor is permitted to use that
18 same physical arrangement to deliver other types of traffic as well, even
19 including traffic for which interconnection might *not* be legally required.¹⁴
20 The express policy behind this requirement is to prevent ILECs from forcing
21 competitors to establish duplicative physical facilities for which there is no
22 independent technical or economic need.

14 See *Local Competition Order* at ¶ 995.

1 the regulatory classification of the traffic. This makes no economic sense, and
2 Qwest's position should be rejected.

3 Adding insult to injury, not only does Qwest want Level 3 to
4 artificially divide traffic into different trunk groups based on economically
5 irrelevant (for these purposes) regulatory classifications, Qwest wants to
6 *charge* Level 3 for establishing these separate trunk groups. Qwest is entirely
7 responsible for the cost of getting its traffic to Level 3; and, while Level 3 is
8 entirely responsible for paying Qwest intercarrier compensation for
9 terminating Level 3-originated traffic, that compensation is set on a per-
10 minute basis and does not entail Qwest charging Level 3 for setting up trunks
11 at all.

12 **Q. HOW WOULD LEVEL 3 BE DISADVANTAGED BY THE LANGUAGE**
13 **PROPOSED BY QWEST?**

14 **A.** As Mr. DuCloo explains at page 22 of his testimony, under Qwest's proposal,
15 Level 3 will have to spend more on switch programming, trunk
16 administration, trunk ports on switches, digital cross-connect systems, and
17 fiber optic terminals; and at some point will have to spend more on switches
18 themselves. There is no operational or economic justification for imposing
19 these costs on CLECs. Their only purpose would be to disadvantage CLECs
20 vis-a-vis Qwest. In fact, Qwest's proposal would increase its own costs as
21 well. I urge the Commission to reject Qwest's proposal.

22 **Q. ARE THERE OPERATIONAL PROBLEMS ASSOCIATED WITH LEVEL**
23 **3 USING TRUNKS TO CARRY BOTH LOCAL AND TOLL TRAFFIC?**

24 **A.** No. As Mr. DuCloo explains, there are no technical or operational problems
25 associated with Level 3's proposal to combine different "types" of traffic on a
26 single trunk group that would be avoided by separate trunks. Requiring

1 separate trunk groups, as suggested by Qwest, results in a deadweight
2 economic loss to society, as I noted earlier.

3 **Q. IS THERE ANY JUSTIFICATION FOR REQUIRING SEPARATE**
4 **TRUNKS FOR DIFFERENT TYPES OF TRAFFIC?**

5 A. No. Qwest says that traffic subject to different billing rates should be put
6 onto separate trunks in order to keep the billing straight, but that makes no
7 sense from an economic perspective either.

8 **Q. WHY NOT?**

9 A. There is a simple, inexpensive way to keep the billing straight that does not
10 entail the significant network inefficiencies of separate trunking. All that is
11 needed is for the parties to periodically sample the traffic going between them
12 and develop factors for how much is subject to reciprocal compensation, how
13 much to access charges, etc. Then all that is required is to keep track of the
14 total minutes exchanged in a given month, apply the factors, and determine
15 the appropriate bill. Mr. DuCloo addresses this in his testimony as well.

16 **Q. HAVE THESE FACTORS BEEN USED IN THE PAST FOR BILLING**
17 **PURPOSES?**

18 A. Yes. These billing factors have been used for decades with great success.

19 **Q. HAVE OTHER REGULATORS ACCEPTED THE FACT THAT BILLING**
20 **CAN BE ACCOMPLISHED USING FACTORS RATHER THAN**
21 **INEFFICIENT SEPARATE TRUNKS?**

22 A. Yes. The use of factors to allocate traffic on a particular facility or trunk into
23 different billing categories has a long history in the telecommunications
24 business going back at least as far as the early 1980s, when "other common
25 carriers" used business lines to connect to the network to provide their
26 competing long distance services. Eventually they became known as "Feature
27 Group A" lines, and the industry agreed to certain assumptions regarding

1 total traffic on such lines and on how much of the traffic was interstate versus
2 intrastate.

3 Since the passage of the 96 Act, commissions have approved the use of
4 jurisdictional factors that allows the efficient use of interconnection trunks.
5 For instance, the Michigan Public Service Commission found in a
6 Sprint/Ameritech arbitration proceeding that:

7
8 It appears to the Commission that economic entry into the
9 market requires that Sprint be permitted to use its existing
10 trunks for *all* traffic whenever feasible.¹⁵ (emphasis added) In
11 Texas, the Commission there ordered Verizon to allow Sprint
12 to carry local, intrastate intraLATA and intrastate interLATA
13 traffic on the same trunks.¹⁶ Other states, such as Indiana,
14 have required the use of PLUs (percentage local usage) or
15 other allocators (e.g., PIUs – percent interstate usage) to
16 reflect the jurisdiction of traffic on such trunks for billing
17 purposes.¹⁷

18 Q. OTHER THAN BILLING, IS THERE ANY OTHER ARGUMENT FOR
19 QWEST TO REQUIRE SEPARATE TRUNKING ARRANGEMENTS
20 FOR DIFFERENT TYPES OF TRAFFIC?

21 A. No, in fact, Qwest would be disadvantaging itself by requiring CLECs to
22 separate traffic of different types onto multiple trunk groups rather than
23 carrying all traffic on a single trunk group. To put it simply, not only is it
24 most efficient for Level 3 to carry all traffic on a single trunk group, it is

¹⁵ In the Matter of the Application of Sprint Communications Company, L.P. for Arbitration to Establish an Interconnection Agreement with Ameritech Michigan, MPSC Case No. U-11203, Order Approving Arbitration Agreement with Modifications, Jan 15, 1997.

¹⁶ Texas Public Utility Commission; *In the Matter of the Petition of Sprint for Arbitration with Verizon*; Docket No. 24306; Final Order Modifying Arbitration Award and Approving Interconnection Agreement; dated February 17, 2004.

¹⁷ Indiana Utility Regulatory Commission; *In the Matter of AT&T Petition for Arbitration with Indiana Bell Telephone Company*; Cause No. 40571-INT-03; November 20, 2000. Further, in its Revised Response to Level 3 Request No. 22 in the Illinois arbitration, SBC Illinois stated, "SBC Illinois uses a PLU methodology to distinguish local versus intraLATA toll in cases where the CLEC does not provide calling party number (CPN) information."

1 efficient from Qwest's perspective as well. *Both* parties would have to pay
2 extra for trunk ports, switch capacity, etc., if traffic is artificially forced onto
3 separate trunk groups.

4 Q. WHY WOULD QWEST INSIST ON CONTRACT LANGUAGE THAT
5 WOULD BE DISADVANTAGEOUS TO ITSELF?

6 A. I cannot answer for Qwest, but it would appear that Qwest is willing to
7 absorb costs in the short term in order to disadvantage or drive its
8 competitors from the marketplace.¹⁸ This is, of course, totally contrary to the
9 public interest in the development of efficient competitive
10 telecommunications networks, but might well be rational from the
11 perspective of Qwest's private interest. This is particularly true if, as Mr.
12 DuCloo notes, Qwest has excess capacity of trunk ports on its switches. If
13 Qwest has already invested in an excessive number of trunk ports (perhaps
14 due to overly aggressive estimates of growth of traffic on its network), then it
15 will, in effect, have trunk ports "lying around" unused. This would create a
16 situation in which the short-run cost to Qwest of requiring inefficient
17 trunking is relatively small, while the cost to Level 3 of using inefficient
18 trunking would be large. Qwest could therefore engage in the classic
19 monopolist's strategy of increasing competitors' costs at very little cost to
20 itself by seeking and obtaining a regulatory obligation on competitors to use
21 inefficient trunking. This is entirely rational behavior from Qwest's
22 perspective of trying to maximize shareholder wealth through protection of
23 its monopoly, but of course it makes no sense at all from the perspective of
24 the public interest.

¹⁸ Given the fragile nature of the competitive telecommunications industry, it would take very little to eliminate facilities-based competition. As such, any decision that disadvantages competitors as compared to Qwest will further diminish the chances for effective competition.

1 Q. WHAT ARE YOUR RECOMMENDATIONS REGARDING THIS ISSUE?

2 A. I recommend that the Commission adopt Level 3's position and allow it to
3 carry different types of traffic on one trunk group. Qwest's proposed
4 language would result in the inefficient use of the network, additional costs
5 to all carriers, and give an unfair competitive advantage to Qwest.

6 Issue 3 – VNXX, ISP-Bound Traffic and RUF

7 Q. PLEASE INTRODUCE THESE ISSUES.

8 A. The ISP-bound traffic and virtual NXX issues are very much intertwined. By
9 way of background, ISPs providing dial-up service receive local calls from
10 their customers in order to allow those customers to access the Internet. ISPs
11 do not market and do not expect to receive long distance calls from customers
12 seeking to connect to the Internet because long distance calls have
13 traditionally had per-minute charges associated with them.¹⁹ Thus, making
14 long-distance calls to ISPs is uneconomical for end users. For the ISP, this
15 means that it is important for end users to be able to reach the ISP by means
16 of a local call.

17 It is, however, terribly inefficient for an ISP to establish a physical
18 presence in each and every ILEC-established local calling area where the ISP
19 might have customers or where it might want to attract customers.

20 Therefore, it is quite common — I would go so far as to call it the standard
21 operating arrangement in the industry — for ISPs to obtain telephone
22 numbers from CLECs or ILECs that are “local” to areas where they have
23 customers. Because the CLECs or ILECs are providing local numbers for the
24 ISPs, where they have no local presence, the service is referred to as virtual

¹⁹ Of course it is technically possible for a person to use a long-distance call to connect to his or her ISP. The point of this testimony is that experience has shown that consumers are not willing to pay long-distance charges to access the Internet.

1 NXX or VNXX service, and is in essence identical to the FX service offered by
2 Qwest, at least from a end user customer perspective.

3 VNXX for ISP-Bound Traffic

4 Q. DOES THE ISP HAVE FACILITIES IN EACH OF THE LOCAL CALLING
5 AREAS WHERE THEY HAVE LOCAL NUMBERS?

6 A. Not usually. As noted above, it would be very expensive for the ISPs to put
7 their own facilities in the many thousands of local calling areas around the
8 country. Instead, they purchase local services from carriers like Qwest and
9 Level 3 in those areas where they have or desire customers.

10 Q. DOES LEVEL 3 PROVIDE SUCH A SERVICE TO ISPS? AND, IF SO,
11 WHAT IS IT CALLED?

12 A. Yes. Level 3 sells its direct inward dial (“DID”) service to ISPs where it is a
13 certificated CLEC. This service arrangement is usually referred to as “virtual
14 NXX,” or “VNXX” service. It is just another name for the functionality that
15 has been provided for decades by ILECs under the name “foreign exchange,”
16 or “FX” service. Mr. DuCloo describes FX service in his testimony.

17 Q. DOES QWEST PROVIDE FX SERVICE IN IDAHO?

18 A. Yes. In response to Level 3 Request No. 021, Qwest indicated that it does
19 offer FX service in Idaho. Qwest also provided its Idaho tariff for FX service.
20 (See Exhibit 102)

21 Q. PLEASE EXPLAIN THE MARKET FOR VNXX SERVICE.

22 A. Where ISPs, such as Earthlink or AOL, want to offer dial-up Internet access,
23 they contact an ILEC or CLEC to purchase local service. In Level 3’s
24 situation, the ISP subscribes to Level 3’s DID service and is assigned local
25 numbers from the Level 3 switch in the exchanges where dial-up service is
26 being offered and where Level 3 offers service. The ISPs advise their
27 customers of the numbers that the ISPs have been assigned, who then

1 program the numbers into their computers for accessing the Internet. The
2 customers' computers then dial these local numbers; the calls are routed from
3 the ILEC to Level 3 in exactly the same manner as other local calls; and Level
4 3 delivers the calls to the ISP being called.

5 **Q. PLEASE EXPLAIN HOW THE VNXX CALLS ARE ROUTED IN THE**
6 **NETWORK.**

7 **A.** Actually, "VNXX" calls are routed in exactly the same way as non-VNXX
8 local calls. There is nothing special about these calls.

9 **Q. PLEASE EXPLAIN.**

10 **A.** Assume that Level 3 has a single POI in a LATA located at a Qwest tandem in
11 Boise. Assume further that Level 3 serves all of its ISPs who have customers
12 in that LATA from a single switch that Level 3 uses to serve the entire LATA.
13 Now assume that a customer of one of those ISPs, who takes telephone
14 exchange service from Qwest, uses his or her computer's modem to connect
15 to the ISP. In that case, Qwest's switch will receive the number as dialed by
16 its customer, recognize it as a Level 3 number, and direct the call to a trunk
17 group that connects to Level 3's POI. Level 3 then accepts the traffic and
18 routes it to its switch and then on to its ISP customer. This is the same
19 manner in which all local calls are routed.

20 **Q. IF THIS CALL HANDLING IS THE SAME AS ALL LOCAL CALLS**
21 **THEN WHAT IS THE DISPUTE BETWEEN QWEST AND LEVEL 3?**

22 **A.** *If* the Qwest customer making the call happens to be in the same Qwest retail
23 originating local calling area as the ISP's equipment, then Qwest would say
24 that the call is "local" and there is no dispute. On the other hand, if the ISP's
25 gear is in a different Qwest retail local calling area, Qwest says that the call is
26 a "VNXX" call and is not local.

1 Q. DOES THE LOCATION OF THE ISP EQUIPMENT IMPACT THE
2 JURISDICTION OF THE CALL, THE HANDLING OF THE CALL, OR
3 THE COST OF GETTING THE CALL TO THE POI?

4 A. No. Qwest's responsibilities, and costs, are absolutely identical regardless of
5 the location of the ISP equipment. In each case, a locally dialed call is routed
6 to the POI for termination. All that Qwest does is determine that the dialed
7 telephone number is a Level 3 number and ship the call off to Level 3 on an
8 appropriate trunk group. And, what Level 3 does is the same in both cases: it
9 recognizes the incoming traffic as bound for one of its customers and sends
10 the traffic on to that customer. The only difference is whether the ISP's gear
11 receiving the call is at the end of a short circuit (close to Level 3's switch, and
12 thus often not in the calling party's retail local calling area) or a longer circuit
13 (away from Level 3's switch, and thus, possibly, in the calling party's retail
14 local calling area). Regardless of the distance, it is Level 3's responsibility to
15 complete the call. In other words, it is Level 3 and not Qwest that is
16 providing the Level 3 ISP customer with the FX-like functionality. It makes
17 no economic sense whatsoever to make any distinction in Qwest's financial
18 obligations depending on whether Level 3 uses a long or short circuit to
19 connect its customers to its switch.

20 As the discussion above (I hope) illustrates, from an economic
21 perspective, Qwest's proposal is completely arbitrary and irrational. There is
22 simply no sound economic basis upon which to distinguish these two
23 situations.

24 Q. IS THE ROUTING OF VNXX CALLS DIFFERENT IN ANY WAY FROM
25 THE ROUTING OF ANY OTHER LOCAL CALL?

26 A. No. As described above, and by Mr. DuCloo, it is exactly the same.

1 Q. DO THE PHYSICAL END POINTS OF THE CALLS HAVE ANY
2 IMPACT ON QWEST'S RESPONSIBILITIES OR COSTS?

3 A. No. In response to Level 3 Request No. 020, Qwest stated in pertinent part,
4 "The costs Qwest incurs do not vary based upon the physical location of the
5 Level 3 customer." (See Exhibit 103)

6 Q. IS QWEST'S PROPOSAL CONSISTENT WITH THE HISTORICAL
7 HANDLING OF LOCALLY-DIALED CALLS?

8 A. No. As Mr. DuCloo explains, Qwest is actually trying to invent a new way to
9 classify calls that has no operational or historical basis in the telephone
10 network. Qwest's proposal is to rate and distinguish traffic based on the
11 actual physical location of customers as opposed to the numbers the
12 customers are assigned. This flies in the face of the way calls have been rated
13 since the establishment of the PSTN. What's really going on here is that it is
14 more efficient for a new competitor like Level 3 to offer FX-like services to
15 ISPs than it is for Qwest to do so, leading to ISPs "voting with their feet" and
16 moving their business to competitors like Level 3. Qwest is essentially trying
17 to recoup its losses in the marketplace, and to punish its competitors, for
18 being willing and able to offer a more efficient serving arrangement to the
19 ISPs.

20 Q. DID QWEST AGREE IN DISCOVERY THAT CALLS ARE NOT RATED
21 BASED ON THE ACTUAL PHYSICAL LOCATION OF CUSTOMERS?

22 A. Yes. In response to Level 3 Request No. 021A, Qwest said that, "The
23 telephone numbers that Qwest uses for call routing purposes are assigned to
24 its end users based on NPA-NXXs associated with specific LCAs in the state."
25 (See Exhibit 104) This is consistent with Level 3's position in this proceeding.
26 Qwest also noted correctly that "...switches do not route calls based on
27 specific addresses stored within the switches...." (Id.) Indeed, neither

1 Qwest's tariffs nor its switches contain customer specific location
2 information that would be required to implement Qwest's proposal in this
3 proceeding.

4 Q. ARE THERE NEGATIVE CONSEQUENCES ASSOCIATED WITH
5 QWEST'S PROPOSAL TO TREAT VNXX CALLS AS SOMETHING
6 OTHER THAN LOCAL CALLS?

7 A. Yes. Qwest's proposal would impose substantial additional costs on ISPs. If
8 Level 3 is required to pay access charges for calls it receives to its ISP
9 customers who use VNXX services (or is denied intercarrier compensation for
10 such calls), Level 3's cost of doing business will increase and it may have to
11 raise its rates to its ISP customers. In order to deal with those rate increases,
12 the ISP customers will either have to deploy otherwise unnecessary and
13 inefficient facilities so that their equipment actually is in the calling parties'
14 local calling areas (thereby relieving Level 3 of some of the economic burdens
15 caused by Qwest's proposal), or keep the efficient equipment arrangement
16 but be subject to the higher costs. Either way, the ISPs may have to raise
17 rates to their customers, and, particularly for some areas, may simply decline
18 to provide dial-up access, in order to minimize costs. This is plainly contrary
19 to the public interest.

20 Moreover, Qwest's proposal to not pay reciprocal compensation on
21 calls to customers who are not "physically located" in the same local
22 exchange, or require toll treatment for such calls, would give Qwest yet
23 another competitive advantage over CLECs. Qwest's proposal would
24 improperly benefit its own affiliated ISPs, increase the cost of Internet access
25 and reduce competition to the detriment of consumers and the economy.²⁰

²⁰ Qwest has yet to answer Level 3 Request No. 004. In other states, however, such as Colorado, Qwest has two affiliates offering Internet access services: Qwest Communications

1 Qwest's proposal would put in jeopardy any competition for ISP dial-up
2 services, thereby depriving consumers of choice in what has become an
3 indispensable information, education and economic tool, especially for those
4 still significant portions of customers who cannot yet afford the costs of
5 dedicated broadband connections to the Internet.

6 **Q. ARE THERE ANY ADDITIONAL NEGATIVE CONSEQUENCES**
7 **ASSOCIATED WITH QWEST'S PROPOSAL?**

8 A. Yes. In developing its multi-billion dollar nationwide network, Level 3 did
9 not simply duplicate the network of Qwest and other ILECs. Instead, Level 3
10 has deployed a softswitch technology-based network which is much less
11 capital intensive, and much more location insensitive than traditional ILEC
12 networks. Using this advanced technology, Level 3's network is designed to
13 operate most efficiently by serving large regions of the country on an
14 integrated basis. It is indifferent to ILEC legacy central office boundaries. By
15 taking advantage of such technology shifts, competitors such as Level 3 can
16 participate in the natural progression of market development, perhaps even
17 "pulling even" with ILECs who, by virtue of the presence of their existing
18 networks have incredible inherent market advantages. Qwest's proposal
19 would therefore at least partially negate efficiencies Level 3 designed into its
20 network — which efficiencies Level 3 continues to invest in, as demonstrated
21 by its recent decision to upgrade its network with optical equipment capable

Corporation and Qwest Enterprise America, Inc. I would expect those affiliates offer services in Idaho as well.

1 of carrying up to 400 gigabits per second over a single fiber strand. These
2 efficiencies are of no use to anyone, however, if Qwest is permitted to burden
3 Level 3 with such arbitrary and unwarranted interconnection and
4 compensation provisions.

5 **Q. DOES LEVEL 3'S SERVICE PROVIDE THE SAME FUNCTIONALITY**
6 **FOR CONSUMERS AS THE FX AND FX-TYPE SERVICES PROVIDED**
7 **BY QWEST AND OTHER ILECS?**

8 A. Yes. As Mr. DuCloo explains, functionally Level 3's VNXX service is identical
9 to, and competes with, traditional ILEC FX services. In trying to obtain a
10 regulatory ruling that would make VNXX service uneconomic for the major
11 class of consumers who use that service (ISPs), Qwest is trying to enlist the
12 regulators in an effort to stamp out this type of competition. This
13 Commission should reject that invitation.

14 **Q. DOES QWEST OFFER ISPS A SERVICE SIMILAR TO VNXX SERVICE?**

15 A. Yes. In addition to standard offerings such as FX, Qwest offers its "Wholesale
16 Dial" service. According to its online literature, Qwest's service "provides a
17 secure, reliable, cost-effective dial-up network infrastructure solution for
18 ISPs. The service provides the ISPs' end users with seamless dial-up
19 functionality that remains transparent." One of the benefits touted by Qwest
20 is the availability of "local access telephone numbers."²¹ So, as you can see,
21 this is yet another example of services provided to ISPs for the purpose of
22 providing local dial-up access for consumers in areas where the ISPs may or
23 may not have a physical presence.

24 **Q. YOU NOTED EARLIER THAT QWEST WANTS TO IMPOSE ACCESS**
25 **CHARGES ON LEVEL 3 IN CONNECTION WITH CALLS THAT**

²¹ See "Qwest Wholesale Dial" in its Product Catalog. <http://www.qwest.com/pcat>

1 QWEST CUSTOMERS MAKE TO ISPS SERVED VIA VNXX NUMBERS.
2 IS THERE ANY ECONOMIC RATIONALE FOR DOING SO?

3 A. No. FX/VNXX service is a “local” service to which access charges do not
4 apply. Instead, the VNXX calls are ISP-bound calls that terminate (from
5 Qwest’s perspective) at the POI. Neither Qwest nor Level 3 imposes any sort
6 of toll charge in connection with calls to VNXX numbers. As a result, there is
7 no economic basis on which any sort of “access charge” could be imposed.

8 Q. DOES QWEST APPLY ACCESS CHARGES TO ITS FX OR FX-TYPE
9 SERVICES?

10 A. No. A quick review of the relevant tariffs shows that access charges are not
11 applied to any portion of the ILEC FX service. Further, in response to Level 3
12 Request No. 1-029, Qwest indicated that, calls to and from end users in the
13 local calling area where the FX customer purchases an FX connection are
14 treated as local. (See Exhibit 105) As such, Qwest does not apply access
15 charges to its FX service.

16 Q. WHAT WOULD BE THE ECONOMIC EFFECT OF ADOPTING
17 QWEST’S PROPOSAL?

18 A. It would simply eliminate an efficient and technologically advanced means of
19 providing dial-up Internet access to customers throughout the State of Idaho.
20 This would obviously be counter to the public interest.

21 Q. IS DIAL-UP ACCESS TO THE INTERNET IMPORTANT TO THE
22 STATE OF IDAHO?

23 A. Yes. Dial-up for Internet access is the universal service equivalent of a
24 primary line for voice service. In other words, not all people can afford
25 broadband access to the Internet, but most people have a single line with
26 which they can access the Internet over a dial-up connection. Dial-up access
27 is especially important where broadband connections are not yet available.

1 Rural residents report less broadband availability than their
2 counterparts in suburban or urban areas of the United States. In fact, a Pew
3 Internet & American Life Project study found that rural residents were two
4 to five times more likely to not have broadband availability than urban and
5 suburban residents.²² Pew research associate Peter Bell also noted:

6
7 While gaps in income and age appear to be partly responsible,
8 the difficulty of getting Internet access remains a big barrier
9 for many rural users. Major Internet service providers
10 accounted for about 40 percent of use among rural residents,
11 whose most frequent reason for choosing an ISP was that it
12 was the only one available to them. In contrast, online users in
13 metropolitan areas usually chose from a range of providers by
14 seeking the best deal.²³

15 Although dial-up Internet access is critical in rural areas, as a
16 percentage of the total, it is decreasing. While DSL and cable broadband
17 connections showed large increases, from 2001 to 2003 dial-up Internet access
18 actually decreased by 12.7 percent. The same study showed that in rural areas
19 74.7 percent of the Internet connections were dial-up connections.²⁴

20 **Q. IS DIAL-UP STILL AN IMPORTANT SOURCE OF INTERNET ACCESS**
21 **IN IDAHO?**

22 **A.** Yes. Although broadband is growing dramatically and dial-up is becoming a
23 smaller proportion of the total

²² See Pew Internet & American Life Project; Rural Areas and the Internet; "Rural American's Internet Use Has Grown, But They Continue to Lag Behind Others"; February 17, 2004.

²³ See, Today's Seniors Network.com; "Rural use of Internet continue to lag, Costs, access remain barriers, new data shows."; June 7, 2005.

²⁴ See, "A Nation Online: Entering the Broadband Age"; U.S. Department of Commerce, Economics and Statistics Administration, National Telecommunications and Information Administration; September, 2004, at 5, 13.

1 Q. DESPITE THE DOWNWARD TREND IN DIAL-UP ACCESS, DO YOU
2 THINK IT WILL REMAIN AN IMPORTANT TYPE OF INTERNET
3 ACCESS?

4 A. Yes. As I mentioned above, dial-up is critical to rural consumers where
5 broadband is not always available and competitive alternatives are limited.

6 Garry Betty, Earthlink's chief executive stated,
7

8 Despite compelling reasons to switch to broadband, dial-up
9 lines will always have a place in American homes. Customers
10 in rural areas where broadband is not available will continue
11 to log on via a dial-up connection; other people may prefer the
12 simplicity of dial-up.²⁵

13 For those citizens of Idaho that can't either afford or don't have
14 available to them broadband connectivity, dial-up internet provides access to
15 one of - if not the - cornerstone of economic and community vitality. The
16 ability to apply for jobs, get weather reports, crop price forecasts on a real
17 time basis, participate in educational endeavors, gain community information
18 on safety and health, and communicate via e-mail to friends and businesses,
19 form the very fabric of commerce in the world we live in. Non-participation
20 or lack of access, simply stated, sentences portions of our society to second
21 class status. Without vigorous competition to ensure low cost dial-up
22 Internet access, both the citizens of Idaho and the State itself will suffer
23 irreparable harm as a significant segment of the population is unable to
24 compete economically, advance educationally and establish community ties.

25 Q. IT IS SOMETIMES SUGGESTED BY ILECS THAT INDUSTRY
26 NUMBERING GUIDELINES PROHIBIT THE ASSIGNMENT OF
27 NUMBERS FOR FX OR SIMILAR SERVICES. IS THAT TRUE?

²⁵ See, The New York Times, "Dial-up Internet Going the Way of Rotary Phones"; June 21, 2005.

1 A. No. In fact Section 2.14 of the Numbering Guidelines specifically identifies
2 FX services as being eligible for number assignment:
3

4 2.14 It is assumed from a wireline perspective that CO
5 Codes/blocks allocated to a wireline service provider are to be
6 utilized to provide service to a customer's premise physically
7 located in the same rate center that the CO codes/blocks are
8 assigned. Exceptions exist, for example tariffed services
9 such as with the exception of foreign exchange service.²⁶
10 (emphasis added)

11 If it were improper or a violation of the guidelines to use virtual NXX
12 codes then all ILECs currently providing FX and FX-type services would be
13 in violation today.

14 Q. WHAT ARE NXX NUMBER BLOCKS?

15 A. NXX number blocks are groups of numbers assigned to carriers for
16 distribution to customers. The blocks contain 10,000 numbers, or where
17 number pooling is in place, blocks of 1,000 numbers. The NXX codes are the
18 fourth through sixth digits of a ten-digit telephone number. For instance, the
19 NXX code for my telephone number (303-424-4433) is 424. These codes are
20 used as rate center identifiers for rating and routing of calls.

21 Q. MUST A CARRIER BE LOCAL NUMBER PORTABILITY ("LNP")
22 CAPABLE TO PARTICIPATE IN NUMBER POOLING?

23 A. Yes. Level 3 is LNP capable and able to participate in number pooling.
24 Further, Level 3 normally utilizes only numbers in the 4,000 block within a
25 10,000 block. By not contaminating the numbers in the other thousand
26 blocks, should jeopardy occur and pooling be imposed, Level 3 could return
27 numbers to the administrator.

²⁶ Alliance for Telecommunications Industry Solutions; Sponsor of Industry Numbering Committee; Central Code (NXX) Assignment Guidelines; Released May 28, 2004.; hereinafter referred to as "Numbering Guidelines".

1 Q. HOW ARE CARRIERS ASSIGNED AN NXX CODE?

2 A. Carriers who meet the criteria for the assignment of central office codes, like
3 Level 3 and Qwest, request and are assigned blocks of telephone numbers by
4 the numbering administrator.²⁷ The numbers are loaded into Level 3's switch
5 and referenced in the Local Exchange Routing Guide ("LERG") for routing by
6 other carriers. Level 3 then assigns numbers from within those blocks to its
7 customers as requested.

8 Q. HOW IS THE RATING OF CALLS IMPACTED BY THE NUMBERS
9 ASSIGNED TO CUSTOMERS?

10 A. Standard industry practice and procedure provides that each NXX code is
11 associated with a particular rate center within a local calling area. A single
12 rate center may have more than one NXX code, but each code is assigned to
13 one and only one rate center. This uniquely identifies the end office switch
14 serving the NXX code, so that each carrier that is routing a call knows which
15 end office switch to send the call to.

16 Q. IS IT UNCOMMON FOR NXX CODES TO BE ASSIGNED TO
17 CUSTOMERS WHO ARE NOT PHYSICALLY LOCATED IN THE
18 LOCAL CALLING AREA WHERE THE NXX IS "HOMED" OR
19 ASSIGNED?

20 A. No. It is also not uncommon for the "routing" point for an NXX code to differ
21 from the "rating" point for the same code. In other words, although an NXX
22 may be rated or homed to a specific end office switch, the routing information
23 in the LERG may specify that calls to that NXX code be routed to a different
24 wire center, for instance, a tandem.

²⁷ See Numbering Guidelines, Section 4.0.

1 Q. IS IT IMPROPER OR AGAINST ANY RULES FOR CLECS TO PROVIDE
2 NUMBERS TO THEIR CUSTOMERS?

3 A. No, not at all. In fact, as noted above, carriers must request numbers in order
4 to provide service in a particular exchange. Based on my review of Level 3's
5 practices, Level 3 utilizes and abides by the Numbering Guidelines.²⁸ In fact,
6 Level 3 has developed its own LNP solution and has established stringent
7 guidelines that result in very efficient use of numbering resources.

8 Q. PLEASE SUMMARIZE YOUR TESTIMONY ON VNXX TRAFFIC.

9 A. VNXX traffic is a competitive response to ILEC FX service and is the primary
10 service used by ISPs to provide local dialing for their customers. Calls to
11 VNXX numbers are local calls in every sense of the phrase and do not impose
12 any additional costs or responsibilities on Qwest. The CLEC assignment of
13 numbers in exchanges where they serve is completely consistent with the
14 industry numbering guidelines. Qwest's proposal to impose access charges
15 on these calls should be rejected.

16 Relative Use Factor

17 Q. PLEASE DESCRIBE THE DISPUTE BETWEEN THE PARTIES
18 REGARDING THE "RELATIVE USE FACTOR," OR "RUF."

19 A. Prior to recent FCC rulings, it was commonplace for some CLECs to call on
20 the ILEC to establish a transmission facility (often called an "entrance
21 facility") running from some point on the ILEC's network to the CLEC's
22 switch location. In its original ruling regarding interconnection under the
23 1996 Act,²⁹ the FCC addressed the question of rates applicable to
24 "transmission facilities that are dedicated to the transmission of traffic
25 *between* two networks" (emphasis added), and ruled that the cost should be

²⁸ The Numbering Guidelines require compliance as a condition of receiving numbers.

²⁹ See *Local Competition Order* at ¶ 1062.

1 the two networks will *meet* at a particular *point*, with no inter-network
2 facilities, per se, at all. Each party will be responsible for the costs of its own
3 facilities up to the POI, which will constitute a “meet point” as the FCC used
4 that term.

5 **Q. WHAT IS LEVEL 3’S CONCERN WITH THE RUF?**

6 A. Level 3 is concerned that Qwest is trying to use the “RUF” concept to avoid
7 the economic logic of establishing a meet-point POI. Level 3 is concerned,
8 specifically, that even with a single POI, Qwest will try to assign some of the
9 costs of its own network on its side of the POI to Level 3, based in some way
10 on the amounts of traffic that Qwest sends Level 3 and vice versa. That is
11 unreasonable in and of itself.

12 **Q. ASSUMING THERE WAS A REASON TO MAKE A RUF**
13 **CALCULATION, DOES QWEST PUT FORTH A CORRECT**
14 **ALGORITHM?**

15 A. No. Qwest gets it wrong on the calculation, by seeking to unfairly and
16 unreasonably exclude the substantial volumes of ISP-bound traffic it sends to
17 Level 3 from calculating the “relative use” of the facilities it uses to deliver
18 that traffic. As described below, there is no basis for excluding ISP-bound
19 traffic from any RUF calculation that might be appropriate in light of the way
20 Level 3 and Qwest actually interconnect.

21 **Q. WHY IS THIS A CONTENTIOUS ISSUE?**

22 A. It is contentious because of the traffic flows. A significant amount of the
23 traffic exchanged between Qwest and Level 3 will be calls originated by
24 Qwest customers for termination to Level 3 customers. The Level 3
25 customers tend to be ISPs. The one-way nature of this type of traffic means
26 that Qwest would pay for the vast majority of the interconnection facilities
27 assuming such a calculation were to be made.

1 Q. IS THAT UNFAIR?

2 A. No. To the contrary, it is completely consistent with the economic rule of
3 cost-causation and the accounting concept of matching. It is the Qwest
4 customers who are originating the calls to the Level 3 customers. As such,
5 Qwest is originating the traffic and causing the use and consequent costs of
6 the network facilities. As such, the cost causer – Qwest – should pay for the
7 costs. Further, Qwest customers are paying local rates to make those calls.
8 As such, Qwest has both the revenues and the costs associated with the calls.
9 To foist those costs on Level 3 while only Qwest enjoys the revenues would
10 violate the matching principle. It would be unfair and inequitable for Qwest
11 to impose those costs on Level 3.

12 Perhaps an example would help clarify the situation. In some cities,
13 people must pay tolls to travel on roads. The tolls supposedly pay for the cost
14 of the roads. Now suppose a new amusement park is opened and traffic on
15 the toll roads to that amusement park is significant. Forcing the amusement
16 park to pay the tolls associated with the peoples' choice to visit the
17 amusement park would be unfair. After all, the people decided to visit the
18 amusement park and they decided to drive to the facility. It was their
19 decision to go and as such, they are the cost-causers with respect to the tolls.

20 Forcing Level 3 to pay for the Qwest facilities when Qwest originates
21 the vast majority if not all of the calls, would be like charging the amusement
22 park for the cost of getting the people to the park. Qwest customers
23 purchase Qwest local service and decide to make the calls and it is Qwest's
24 obligation – under the reciprocal compensation rules – to pay Level 3 for the
25 cost of terminating those calls. Rule 51.703(b) specifically states that "a LEC

1 may not assess charges on any other telecommunications carrier for local
2 telecommunications traffic that originates on the LEC's network."³²

3 Note in this regard that one of the effects of consumer demand for
4 dial-up Internet access was to lead consumers to purchase additional
5 telephone lines into their homes in order to allow the consumers to use dial-
6 up Internet access while also engaging in voice telephone conversations on
7 the other line. These second lines have almost exclusively been provided by
8 the ILEC. As time goes on, of course, more and more people are switching
9 from dial-up to broadband Internet access, which will simultaneously (from
10 Qwest's perspective) lower second line revenues, increase DSL revenues, and
11 lower intercarrier compensation payments for ISP-bound traffic. But looking
12 only at the dial-up segment, Qwest has received and will continue to receive
13 substantial additional revenues, in the form of second line revenues, in
14 connection with its customers' calls to ISPs. Given this, any claim that Qwest
15 has been or is being economically harmed by delivering ISP-bound calls
16 without receiving access charges, or any claim that Qwest cannot afford to
17 pay intercarrier compensation with respect to such calls, must therefore be
18 viewed with great skepticism.

19 **Q. IS QWEST'S POSITION CONSISTENT WITH 47 C.F.R. § 51.703(B)?**

20 **A.** No. This rule is very straightforward and simple in its reading. Qwest may
21 not assess charges on any other telecommunications carrier for
22 telecommunications traffic that originates on its network. Qwest's position
23 is just the opposite. Qwest wants to exclude the ISP-bound traffic, even
24 though it is originated by its own customers, from the relative use calculation.

³² 47 C.F.R., §51,703(b).

1 There is simply no support for that position and it is clearly contrary to the
2 existing rules and the economic principles of cost causation.

3 Q. IS THERE ANY OTHER REASON TO EXCLUDE ISP-BOUND TRAFFIC
4 FROM THE RELATIVE USE CALCULATION?

5 A. No. Again, it is clear that RUF calculations are not appropriate in a POI
6 situation. But if for some reason the Commission were to decide to apply the
7 RUF, ISP traffic must be included in the calculation. Simply because the calls
8 are directed to an ISP does not change the fact that these are locally dialed
9 telecommunications calls that traverse the circuit switched network in
10 exactly the same fashion as any other local call. The effect of Qwest's
11 mathematical manipulation of the formula is to transfer to Level 3 a large
12 portion of the costs of delivering Qwest-originated traffic. There is simply no
13 economic, engineering or public policy reason to exclude the traffic from the
14 calculation.

15 Q. PLEASE SUMMARIZE YOUR POSITION ON THE RELATIVE USE
16 CALCULATION.

17 A. There is no need to apply a RUF calculation on each side of the POI since
18 each party is responsible for getting its traffic to the POI. Nevertheless, if a
19 RUF calculation is made it must include the ISP-bound traffic. The traffic is
20 telecommunications traffic originated by Qwest customers and, as such, is the
21 responsibility of Qwest.

22 Issue 4 – VoIP

23 Q. PLEASE INTRODUCE THIS ISSUE AND THE DISPUTE BETWEEN
24 LEVEL 3 AND QWEST.

25 A. IP-Enabled services, such as IP-enabled voice traffic -- the most common form
26 of which is referred to as voice over Internet protocol or VoIP -- are becoming
27 more common as they offer significant efficiencies from both an economic and

1 network operations perspective. Qwest and Level 3 disagree on the proper
2 regulatory treatment of these services. To the extent that this Commission
3 has regulatory authority over any aspect of these services, Level 3 urges the
4 Commission take a “hands-off” approach to regulation. As described below,
5 VoIP constitutes a form of “enhanced” or “information” service, like Internet
6 access, so that under existing FCC rules it would not be appropriate for such
7 services to be subject to access charges in any event. But putting aside that
8 point, from an economic perspective it would be a mistake to subject VoIP
9 services to traditional access charges, whether or not it would be permissible
10 to do so from a legal or regulatory perspective. In contrast, Qwest encourages
11 the Commission to treat these services like traditional long distance calls, and
12 impose access charges on this traffic, unless the VoIP provider’s point of
13 presence is in the same local calling area as the called party.

14 **Q. WHAT IS VOICE OVER INTERNET PROTOCOL OR “VOIP”**
15 **TRAFFIC?**

16 **A.** Mr. DuCloo discusses this in more detail. Briefly, VoIP services involve using
17 the same network that carries Internet traffic to carry packetized voice
18 communications. Because voice data packets can be dispersed among other
19 types of Internet traffic, such as e-mail messages, web pages, Instant
20 Messaging conversations, music downloads from iTunes or similar services,
21 etc., VoIP doesn’t use as much bandwidth as in a circuit-switched network.
22 This makes phone calls essentially as cheap to transmit as e-mail.³³ Indeed,
23 VoIP is a good example of the convergence of computers, telephones and
24 television into a single and more efficient integrated information
25 environment.

³³ See Comments of VON Coalition in CC Docket No. 01-92, WC Dockets No. 02-361, 03-211, 03-266, 04-36; filed August 19, 2004, at page 2.

1 Q. PLEASE DESCRIBE THE FUNDAMENTAL DIFFERENCES BETWEEN
2 VOIP CALLS AND TYPICAL PSTN CALLS.

3 A. In the simplest of terms, VoIP is an information service application that uses
4 the Internet backbone and discrete data packets to deliver real-time voice
5 communications. Rather than voice information being transmitted across the
6 traditional circuits of the PSTN, VoIP uses the Internet Protocol, and the
7 Internet backbone, or some other private IP network. In addition to this
8 difference in transmission, VoIP calling, being IP-enabled, facilitates the
9 introduction and integration all sorts of potential capabilities not present
10 with PSTN circuit switched calls.³⁴ From a regulatory perspective the IP-
11 based capabilities distinguish VoIP – an information service – from basic
12 circuit-switched telecommunications services.

13 Q. IS QWEST OFFERING VOIP SERVICES TODAY?

14 A. Yes. On December 8, 2004, Qwest announced that its VoIP service (Qwest
15 OneFlex™) is available to business customers nationwide. In that same press
16 release Qwest noted that it offers a range of VoIP solutions including
17 OneFlex™ Integrated Access, OneFlex™ Hosted VoIP and IP Centrex
18 Prime.³⁵

19 Q. HAS QWEST ADMITTED IN DISCOVERY THAT ITS ONEFLEX™
20 SERVICE PROVIDES UP TO FIVE VIRTUAL NUMBERS THAT
21 ALLOW PEOPLE TO CALL THE SUBSCRIBER ON A LOCAL INSTEAD
22 OF A TOLL BASIS?

³⁴ For instance, when you have a missed call on Vonage service, you get an email detailing the call information (time, calling number, etc.). The features and capabilities of VoIP services are many and expanding.

³⁵ See Qwest Press Release entitled, "Qwest Launches Expanded Nationwide VoIP Service for Businesses." Released December 8, 2004.

1 A. Yes. I have attached Qwest's Response to Level 3 Request No. 1-063SI, in
2 which Qwest admits that Qwest Communications Corporation ("QCC")
3 does offer OneFlex™ with virtual numbers. (See Exhibit 106)

4 Q. IS THERE ANY ECONOMIC JUSTIFICATION FOR TREATING LEVEL
5 3'S SERVICES FOR ESPs THAT PROVIDE VOIP APPLICATIONS LIKE
6 TYPICAL TELEPHONE SERVICES?

7 A. No. As noted by the FCC in its IP-Enabled Services NPRM, "Dial-up, or
8 narrowband, Internet access utilizes the same PSTN infrastructure that
9 telephone subscribers use to place traditional circuit-switched voice calls."³⁶
10 Broadband VoIP services do not impose any additional costs on the ILECs or
11 their network either. As such, treating these services as if they were
12 traditional long distance telecommunications services, and imposing their
13 associated access charges, would allow ILECs to over-recover their network
14 costs. At the same time, imposing these high call origination and termination
15 rates on this new technology would suppress the use of the new services and,
16 effectively, tax a new, efficient competitor for the benefit of the legacy,
17 incumbent operator. Such a result would not only constitute a windfall for
18 ILECs, but it would impede the natural efficiency of the market by
19 unnecessarily burdening the development of new services. There is simply no
20 economic justification for treating IP-Enabled services as if they were
21 traditional services.

22 Q. IS THERE PRECEDENT IN THE TELEPHONE INDUSTRY FOR
23 ADOPTING POLICIES THAT INSULATE NASCENT, INNOVATIVE
24 TECHNOLOGIES FROM BEARING AN UNDUE PORTION OF THE
25 COSTS OF THE LEGACY NETWORK?

³⁶ See FCC Notice of Proposed Rulemaking; WC Docket No. 04-36; Released March 10, 2004, FN 32.

1 exemption directly applies to VoIP; but whether it literally applies or not, the
2 *policy* behind it applies with full force here. VoIP is a nascent technology.
3 There are many different forms of these services. Different entities are
4 pursuing different technical and business strategies with respect to it. While
5 we should not ask legacy network operators like Qwest to provide explicit
6 subsidies to these new services, neither should we ask the new services to
7 provide subsidies to legacy network operators like Qwest. It follows, from an
8 economic perspective, that VoIP services should be permitted to interconnect
9 with the legacy network at low, cost-based rates (either Section 251(b)(5)
10 reciprocal compensation rates or the FCC-established \$0.0007 rate), rather
11 than requiring those services to pay subsidy-laden access charges.³⁸

12 Still another example is the FCC's treatment of interconnection
13 between landline LECs and wireless carriers. The FCC has long sought to
14 encourage the growth of wireless services, free from the traditional
15 constraints of the legacy network. In the *Local Competition Order* the FCC
16 advanced this goal by establishing extremely broad geographic regions within
17 which traffic exchanged between landline and wireless carriers would be
18 viewed as "local" and thus not subject to access charges.³⁹ As a result of this
19 ruling, a call from a wireless customer in western Wisconsin to a landline
20 customer in North Dakota (or vice versa) is "local," as is a call from southern
21 Idaho to southeastern South Dakota (or vice versa). Even though these calls
22 would be treated as "long distance" calls within the traditional landline
23 network, the wireless carrier only has to pay the low reciprocal compensation

³⁸ Even though interstate access rates have been declining over time, they are still well above what an economist would view as a cost-based rate. To be cost-based from an economic perspective requires that a rate be in line with forward-looking incremental cost. Intercarrier compensation rates developed in connection with Section 251(b)(5) and ISP-bound calling reflect this approach; traditional access rates do not.

³⁹ *Local Competition Order* at ¶ 1036. See also 47 C.F.R. § 51.701(b)(2).

1 rate when it is the originating carrier, and the wireless carrier gets paid that
2 rate — as opposed to paying originating access charges — when it is the
3 terminating carrier. This decision to exempt large amounts of “long distance”
4 wireless traffic from traditional access charges is, from an economic
5 perspective, an explicit policy decision by the FCC — and one of which I
6 completely approve — to exempt this relatively new, growing technology
7 from having to pay subsidies to support the legacy network.

8 Just as sound regulatory policy exempted ESPs and wireless carriers
9 from having to support the legacy network by paying access charges, so too
10 sound regulatory policy supports exempting VoIP services from them as well.
11 Again, this is true from an economic perspective independent of whether, as a
12 legal or regulatory matter, the so-called “ESP Exemption” literally applies to
13 VoIP traffic.

14 **Q. HAS THE FCC STATED ANY POSITIONS REGARDING THE**
15 **ECONOMIC IMPACT OF REGULATING VOIP?**

16 A. Yes. Former FCC Chairman Powell maintained this support for leaving IP-
17 Enabled services unregulated at the FCC Forum on Voice over Internet
18 Protocol in Washington, where he was quoted as saying, “As one who
19 believes unflinchingly in maintaining an Internet free from government
20 regulation, I believe that IP-based services such as VoIP should evolve in a
21 regulation-free zone.” Then Chairman Powell went on to caution regulators
22 with respect to IP-Enabled services’ regulation, saying “No regulator, either
23 federal or state, should tread into this area without an absolutely compelling
24 justification for doing so.”⁴⁰ Chairman Powell’s statements were part of a

⁴⁰ Opening Remarks of FCC Chairman Michael K. Powell at the FCC Forum on Voice over Internet Protocol (VoIP) December 1, 2003 – Washington, D.C.

1 daylong forum to address business, technical, service feature and policy
2 issues. Consistent with those statements, Chairman Powell stated,
3

4 The burden should be placed squarely on government to
5 demonstrate why regulation is needed, rather than on
6 innovators to explain why it is not.”⁴¹

7 **Q. CAN YOU DISCUSS FURTHER WHY THE “HANDS-OFF”**
8 **APPROACH BY THE FCC HAS BEEN SO SUCCESSFUL?**

9 A. Yes. By refraining from regulating technology, the FCC has eliminated the
10 uncertainty that regulation sometimes imposes on the industry. This has
11 allowed the capital markets and industry players to develop business plans
12 and to invest capital to meet consumer demand.

13 It is very difficult for companies to develop products and technology
14 when faced with a patchwork of regulatory requirements. The balkanization
15 of the regulatory landscape increases not only the costs of compliance – if
16 what constitutes compliance can even be determined – but also embeds an
17 unacceptable level of inefficiency resulting from an inability to achieve
18 economies of scale – economies of scale that the ILECs have enjoyed
19 throughout their life cycle by virtue of their monopoly hold on the market. In
20 other words, there should be one unified regulatory approach to VoIP services
21 and technology, not a 50-state patchwork of regulation.

22 **Q. ARE YOU SUGGESTING THAT THE STATES SHOULD SIMPLY**
23 **FOLLOW THE LEAD OF THE FCC?**

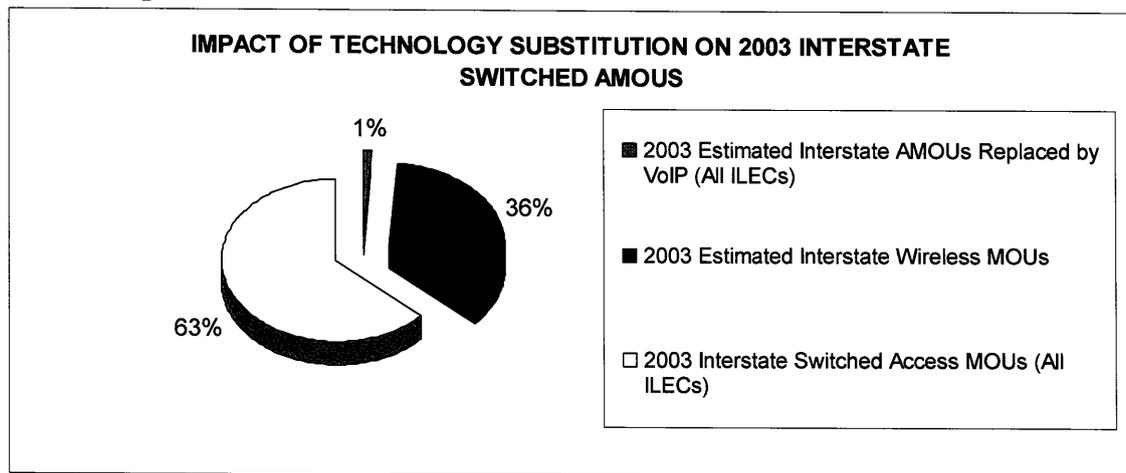
24 A. No. But the Federal approach has been very successful, so the states should
25 seriously consider what benefits would derive from imposing multiple and
26 perhaps wildly varying regulatory paradigms of their own. The Commission

⁴¹ See, US News & World Report, “Courting Calls – Telecom and Cable Firms Scramble to Offer Internet Calls”; by Mary Kathleen Flynn; Feb 2, 2004.

1 should maintain Idaho's current policy of not applying access charges on IP-
2 Enabled traffic until the FCC completes its investigations in the NPRMs
3 (*Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92 and
4 *IP-Enabled Services*, WC Docket No. 04-36). The information gathered in the
5 FCC proceedings will be useful in the evolving policy debate at the state level.

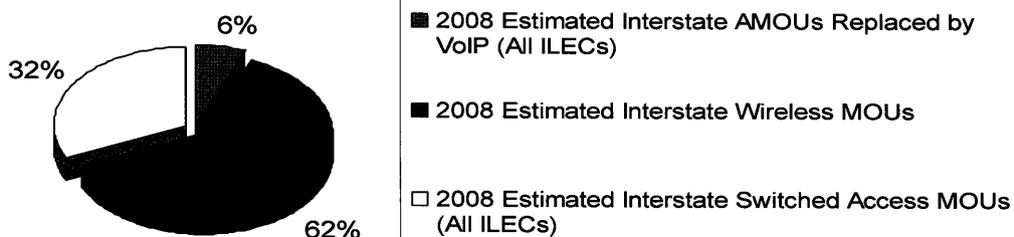
6 **Q. IS IP-ENABLED OR VOIP TRAFFIC A SIGNIFICANT PART OF THE**
7 **TOTAL TRAFFIC IN THE UNITED STATES?**

8 **A.** No, but it is a growing percentage. In the two charts below, a comparison of
9 various technologies is provided for 2003 and for 2008.⁴² The first chart
10 shows VoIP minutes were about one percent of total switched minutes of use
11 in 2003. In the second chart, we see projected 2008 VoIP minutes to be about
12 six percent of the total.



⁴² These charts and their underlying data were taken from publicly available research sources and compiled for use in FCC Docket Nos. 04-36, 03-266.

IMPACT OF TECHNOLOGY SUBSTITUTION ON 2008 ESTIMATED INTERSTATE SWITCHED AMOUs



1
2 At the same time, we see dramatic increases in the projected amount of
3 wireless minutes of use. So, while VoIP is getting significant attention today,
4 the volumes and revenues associated with that traffic are not yet significant.
5 Further, to the extent substitution is occurring in the market, the majority of
6 that substitution is occurring because of wireless and not VoIP.

7 **Q. WON'T ILECS BE HARMED BY NOT RECEIVING ACCESS CHARGES**
8 **ON IP-ENABLED TRAFFIC, EVEN IF THAT TRAFFIC IS A SMALL**
9 **PERCENTAGE OF THE TOTAL?**

10 **A.** No. First of all, as discussed above, the traffic to date is *de minimis*. Second,
11 Qwest is being fully compensated for the traffic, albeit at a lower rate.

12 **Q. IF QWEST AND THE OTHER RBOCS WERE CORRECT ABOUT THE**
13 **IMPACT ON REVENUES AND EARNINGS, WOULD THAT JUSTIFY**
14 **REGULATION OF IP-ENABLED SERVICES?**

15 **A.** No. Neither the ILECs' dire predictions of reduced local revenue (as market
16 share shifts to VoIP providers), nor their dire predictions of all long distance
17 traffic moving to VoIP to avoid access charges, even if they were correct,
18 would justify common carrier regulation of IP-Enabled services. Moreover, as
19 Verizon's Chief Executive Officer Seidenberg has stated: "Our view is to let

1 cannibalization occur.”⁴³ Seidenberg has said that while VoIP probably
2 would reduce Verizon’s local phone market share from 90% to 60%, Verizon
3 plans to participate in VoIP both as a backbone provider and as an ISP,
4 “meaning more revenue per customer.”⁴⁴

5 **Q. HAS QWEST SUPPORTED THE FEDERAL “HANDS OFF” APPROACH**
6 **TO IP-ENABLED SERVICES?**

7 A. Yes. Qwest has supported the FCC’s position against regulation of voice
8 communications over the Internet. In an article dated December 5, 2003,
9 Qwest’s CEO said, “...it would be inconsistent for the commission to regulate
10 what’s known as “voice over Internet protocol” (VoIP) service when similar
11 services, such as telephone via cable connection and wireless phones, are not
12 regulated.” He went on to note that Qwest was launching its VoIP service in
13 Minnesota and that VoIP could be more profitable to the company than
14 traditional phone service, because it does not have the added costs of
15 regulation.⁴⁵

16 **Q. HAVE ILECS ARGUED IN THE PAST THAT, IN THE ABSENCE OF**
17 **ACCESS CHARGE REVENUES, RATEPAYERS WOULD BE**
18 **NEGATIVELY IMPACTED?**

19 A. Yes. The faulty premise of the previous RBOC argument has been that the
20 impact of VoIP would negatively impact RBOC margins, resulting in the need
21 for RBOCs to increase local rates. Today, however, as discussed above, the
22 RBOCs are rapidly deploying VoIP services and embracing the new
23 technology. Indeed, the RBOCs are supporting the FCC decision to not
24 regulate these services, in part because of their offerings. In fact, on Qwest’s

⁴³ Communications Daily, (June 20, 2001).

⁴⁴ *Id.*

⁴⁵ “Qwest Chief Backs Up FCC on Voice Over Internet”; Denver Post, Dec 5, 2003.

1 website it boasts about its IP network and its ability to provide “mission
2 critical applications” such as VoIP:
3

4 For years, Qwest’s state-of-the-art IP network has been
5 transferring voice and data across the globe for businesses of
6 all sizes. The Qwest network has the capacity and advanced
7 capabilities to support today’s mission critical applications
8 such as Voice over IP (VoIP), as well as bandwidth-intensive
9 business applications such as Enterprise Resource Planning,
10 Customer Relationship Management, and other business-to-
11 business functions.⁴⁶

12 AT&T has rolled out an aggressive VoIP initiative. Time Warner Cable has
13 said that it is teaming with MCI and Sprint to offer VoIP services nationally.
14 As such, this is not just a niche market, but one that all providers – ILECs,
15 CLECs, cable providers, etc. – are rushing to participate in. As a U. S. News
16 and World Report article concluded, “The bottom line: Consumers and
17 businesses stand to benefit from lower prices and a wide range of
18 sophisticated features.”⁴⁷

19 **Q. WHY WOULD QWEST SEEK TO IMPOSE ACCESS CHARGES ON**
20 **VOIP TRAFFIC WHEN IT IS DEPLOYING THE SERVICE?**

21 **A.** Qwest is attempting to maintain its sinecure access revenue as a prop as it
22 migrates itself to the IP platforms – the end result being a continuation of its
23 predominant market position and the lack of competition.

24 **Q. ASSUMING VOIP IS SUBSTITUTING FOR OTHER SERVICES, ARE**
25 **THERE OFFSETS TO THE SUBSTITUTION OCCURRING IN THE**
26 **INDUSTRY?**

27 **A.** Yes. Over the last few years, RBOCs have been the beneficiaries of gaining,
28 for the first time, access to markets and associated revenues that have

⁴⁶ See <http://www.qwest.com/about/qwest/network/index.html>.

⁴⁷ See, US News & World Report, “Courting Calls – Telecom and Cable Firms Scramble to Offer Internet Calls”; by Mary Kathleen Flynn; Feb 2, 2004.

1 experienced tremendous growth. For example, Qwest announced last year
2 that it had achieved one million DSL subscribers. This growth in DSL is
3 directly related to the growing popularity of the Internet and related services,
4 including VoIP. Specifically Qwest stated:

5
6 As a direct result of strategic DSL investments and initiatives,
7 Qwest Communications International Inc. (NYSE: Q)
8 announced today that it has achieved one million DSL
9 subscribers. This represents an important milestone for the
10 company and highlights the fact that Qwest's four consecutive
11 quarters of double-digit subscriber growth is outpacing the
12 current industry average.⁴⁸

13 Qwest's consumer data and Internet revenues were up nearly 50 percent in
14 2004. Qwest also ended 2004 with 4.6 million long-distance lines, more than
15 double the 2.2 million lines a year earlier. These significant gains, combined
16 with reduction in the access line losses, shows that Qwest is not being
17 harmed by the introduction of IP-Enabled services.

18 **Q. PLEASE EXPLAIN WHAT YOU MEAN BY "REDUCTION IN ACCESS**
19 **LINE LOSSES."**

20 **A.** Prior to the passage of the 96 Act and the introduction of competition in the
21 local market, ILECs had essentially 100 percent of the access lines. As CLECs
22 entered to the local market, ILECs saw a reduction in the total number of
23 access lines. Generally, the number of access lines lost increased over time.
24 Since the demise of UNE-P, however, and the continuing consolidation in the
25 CLEC market, the loss in access lines has decreased. In its fourth quarter
26 2004 financial reports, Qwest stated,

27
28 The company continues to make significant inroads in
29 stemming competitive loss from facilities-based competitors.
30 Resold lines declined 28,000 sequentially as changes in the

⁴⁸ See Qwest Press Release entitled, "Qwest Achieves One Million DSL Subscriber Milestone", released December 13, 2004.

1 regulatory environment have reduced competition from UNE
2 resellers.⁴⁹

3 In that same document Qwest also noted under **Operational Highlights**,

4
5 “Major drivers of Qwest’s revenue included operational progress in
6 key growth areas, as well as improvement in access line losses.” So the
7 “reduction in access line loss” is an indication that Qwest is taking
8 back lines or losing fewer lines than in the past.

9 **Q. IS THERE ANY REASON WHY VOIP AND OTHER IP-ENABLED**
10 **OFFERINGS SHOULD NOT BE GIVEN THE FREEDOM TO DEVELOP?**

11 A. No. The Internet, VoIP applications, wireless, fixed wireless and other
12 developing technologies only increase the value of local phone service. Today
13 we are seeing significant investments in newer technologies (3G wireless, IP
14 networks, IP CPE, PDAs, cable plant upgrades, automation and robotics, etc.)
15 instead of continuing investment in the traditional circuit switched
16 network.⁵⁰ These new investments and technologies are resulting in more
17 efficient provisioning of service, new features and mobility, and flexibility in
18 managing services and features. In fact, IP-Enabled services, with their
19 integrated voice and data features, will make business and personal use of
20 communications much more efficient. This new trend is adding value to the
21 economy and consumers (residential and business alike) are enjoying new
22 services and flexibility.

23 **Q. WHY ARE VOIP, WIRELESS AND OTHER TECHNOLOGIES SO**
24 **INTRIGUING TO CONSUMERS?**

25 A. There are several reasons why consumers are attracted to these new offerings.
26 These new services offer flexibility that a fixed wireline cannot offer and, as

⁴⁹ See Qwest News Release, “Qwest Improves in Key Growth Areas and Sees Margin Expansion in Fourth Quarter 2004.”

⁵⁰ I am not suggesting that investment in the traditional PSTN has stopped. Investments continue to be made, including maintenance on existing plant in service; the new investments, however, are focusing on new technologies.

1 such, provide an important complement to wireline services. Wireless and
2 VoIP services are portable so you can in effect take your service with you. In
3 certain environments this is a significant benefit to consumers. Efficiency,
4 which always entails a cost advantage, is also a consumer issue. Further,
5 companies will enjoy savings and efficiencies through virtual call centers,
6 reduced commuting costs as employees work more efficiently from home and
7 the obvious savings that competition will bring.

8 **Q. HAVE SOME STATES RECOGNIZED THE POTENTIAL EFFICIENCIES**
9 **AND SAVINGS THAT VOIP MIGHT PROVIDE?**

10 A. Yes. A California Performance Review noted that “Moving to VoIP could
11 reduce the state’s phone bill by between \$20 million and \$75 million a year.”⁵¹
12 An article on the review also referred to findings that “VoIP technology has
13 competitive features that would benefit the state. Internet-based phone
14 calling has built-in benefits such as integrated caller ID, flexibility and
15 network management tools that provide real-time monitoring of
16 bandwidth.”⁵²

17 **Q. PLEASE SUMMARIZE YOUR TESTIMONY REGARDING THE**
18 **REGULATION OF IP-ENABLED SERVICES.**

19 A. The Commission should adopt the same “hands off” policy that has been so
20 successful in encouraging the development of Internet and other IP-based
21 applications, including VoIP. Concurrently, the Commission should reaffirm
22 its commitment to competitors, especially competitors that serve the VoIP

⁵¹ “The ultimate goal of the California Performance Review is to restructure, reorganize and reform state government to make it more responsive to the needs of its citizens and business community. Only by demonstrating through concrete action the responsiveness of state government can the public’s trust and confidence be regained.” <http://cpr.ca.gov/about/#cpr>. The entire report can be found on the Internet at <http://www.report.cpr.ca.gov/>. The quotation in the text above is from the fourth volume of that report, at SO15, Voice Over Internet Protocol Statewide Network Infrastructure.

⁵² See, “California Urged to Use Open Source, VoIP”, c|net News.Com; August 13, 2004.

1 application community, that non-discriminatory, cost based, pro-competitive
2 access to the network infrastructure of the ILECs will be vigorously
3 promoted and enforced. Unless there is some specific need to regulate such
4 offerings, they should be allowed to thrive or fail based on the market
5 dynamics they face and create.

6 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

7 A. Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that on the 12th day of August, 2005, I caused to be served, via the method(s) indicated below, true and correct copies of the foregoing document, upon:

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