STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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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 Rates, Terms, and Conditions of Interconnection with Michigan Bell Telephone Company d/b/a SBC Michigan.	)	Case No. U-14152

Direct Testimony of

William P. Hunt, III

On Behalf of

Level 3 Communications, LLC

June 1, 2004

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is William P. Hunt, III. I am Vice President of Public Policy for Level 3 Communications, LLC ("Level 3"). My business address is 1025 Eldorado Boulevard, Broomfield, CO, 80021.

Q. **PLEASE DESCRIBE YOUR RESPOSIBILITIES FOR LEVEL 3.**

A. As Vice President of Public Policy, I am responsible for developing, implementing and coordinating Level 3's regulatory policy and governmental affairs in North America and Europe. I am also responsible for ensuring the company's regulatory compliance with state and federal regulations, and managing the company's interconnection services.

Q. **PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.**

A. I received a Bachelor of Journalism from the University of Missouri in 1984. I received my Juris Doctor from Western New England College School of Law in 1991. I joined Level 3 as Regulatory Counsel in February 1999 and was promoted to Vice President in January, 2000. In 2002, I was promoted to Vice President of Public Policy when Level 3's regulatory operations in Europe, North America and Asia were combined.

Prior to joining Level 3, I spent almost five years at MCI Communications ("MCI"). I joined MCI's Office of General Counsel in 1994 as a commercial litigator. In March of 1996, I joined MCI's state regulatory group in Denver, Colorado, where I was responsible for securing state certifications in the western United States, supporting arbitrations under the Communications Act of 1934, as amended ("Act"), and prosecuting complaints against US West Communications, Inc. ("US West") in Washington and Minnesota.

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

A. Yes. Additionally, since coming to Level 3, I have testified in arbitration proceedings before the California Public Utilities Commission, the Illinois Commerce Commission, the Michigan Public Service Commission, the Texas Public Utilities Commission, the Colorado Public Utilities Commission, the Arizona Corporation Commission, the North Carolina Utilities Commission, the Minnesota Public Utilities Commission, the New Mexico Public Regulation Commission, the Wisconsin Public Service Commission, and the Washington Utilities and Transportation Commission, and I have submitted pre-filed testimony before the Oregon Public Utilities Commission. I have also testified before the Colorado Public Utilities Commission with respect to Level 3's Declaration of Intent to Expand its service territory to include those areas served by CenturyTel.

II. PURPOSE OF DIRECT TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide background information on Level 3 and to explain why adopting Level 3's positions in this arbitration proceeding would be consistent with the law, sound public policy and would further the public interest. Following Level 3's Petition for Arbitration ("Petition"), I will divide my testimony into three different tiers. The most substantive, critical business issues that Level 3 must have in order to conduct is business and compete in the market I categorize as "Tier I Issues." The second category of issues, which must also be resolved in order for the agreement to be consistent with applicable law, commercially reasonable and certain in effect, I categorize as "Tier II Issues." Finally, I will address a number of secondary issues that must nevertheless also be reconciled so that the Agreement is clear, consistent, commercially reasonable and susceptible to being operationally implemented. These issues I categorize as "Tier III Issues." I believe that there is not a significant amount of disagreement between the parties on the Tier III issues. However, some of the Tier III issues reflect changes made as a result of Tier I impacts. Nevertheless, it is my hope that the Parties will be able to resolve most of these Tier III issues through continued negotiations prior to hearing. In order to preserve Level 3's rights, however, I will provide a brief summary of these issues and

Specifically, I will address the following Tier I Issues: **Issue 1** – whether it is appropriate to force Level 3 to have more than one Points of Interconnection ("POI") in a LATA; **Issue 2** – whether Level 3 may use local interconnection trunks for all

types of traffic; **Issue 3** – whether SBC should be required to Transit Traffic, or to exchange traffic to other carriers; **Issue 4** – whether the definition of a "Local Call" is based on industry standards and conventions (using the NPA-NXX of the calling and calling parties) or whether is should be based on an unknown Geographic location of the end users; **Issue 5** – whether SBC is required to provide certain Unbundled Network Elements to Level 3.

The remaining Tier I issues relate to the financial arrangements between SBC and Level 3: **Issue 6** – whether SBC may create operational and economic barriers to restrict Level 3's ability to use its existing network facilities to route its traffic via Internet Enabling Facilities (which traffic includes Voice over Internet Protocol ("VoIP") traffic); Issue **7** – whether SBC can impose the access charge regime on information services traffic.

In addition to the above-noted Tier I Issues, I will also provide testimony on the following Tier II Issues: **Issue 10**[1] – liability for hazardous substances and environmental hazards; **Issue 11** – nonpayment & procedures for disconnection; and **Issue 12** – deposits; **Issues 13 & 15**[2] – assurance of payment on a state-by-state basis or across the SBC 13-state region and Level 3's right to dispute; **Issue 16** – the necessity and appropriateness for a Performance Matrix & Out of Exchange Appendix to be included; **Issue 17** – whether the Interconnection Agreement must include terms in the Out of Exchange Appendix that limits SBC's obligation to

[1] Issues 8 and 9 were held in reserve and intentionally left blank..

[2] Issue 14 was held in reserve and intentionally left blank.

provide UNE, collocation and interconnection services only pursuant to SBC's interpretation of federal law?**; Issue 18 –** issues related to the Physical Collocation Appendix; **Issue 19 –** Virtual Collocation Appendix ; and **Issue 20 –** issues with the Coordinated Hot Cuts Appendix.

Finally, I will address Tier III Issues within the General Terms & Conditions; Intercarrier Compensation; Recording; Clearinghouse; Emergency Services; UNE; Directory Assistance Listing and SS7 Appendices.

In addition to my testimony, Mr. Gates and Mr. Wilson will be providing additional testimony on behalf of Level 3. Mr. Gates will focus on economic issues and Mr. Wilson will address network architecture and technical issues.

Q. DO YOU HAVE RECOMMENDATIONS THAT YOU WOULD LIKE THE COMMISSION TO ADOPT?

A. Yes. I will provide my recommendations by issue.

Issue 1 – Single Point of Interconnection: Consistent with the Act, applicable FCC rules, and sound public policy, Level 3 asks the Commission to rule that Level 3 has the right to interconnect with SBC at a single POI in each LATA for the exchange of traffic between the companies. Level 3 is also asking the Commission to rule that SBC may not dictate where Level 3 must pick up SBC's traffic. Rather, in accord with federal law as interpreted by the FCC and several federal Circuit Courts of Appeal, Level 3 requests that the Commission affirm that each party is operationally and financially responsible for delivering its traffic to the single POI per LATA at a location selected by Level 3 and that each party recover their ongoing costs of

maintaining these interconnection points from their respective end user customers. While Level 3 is willing to and has added POIs, it has done so according to reasonable engineering standards as traffic volume grows and other business and operational factors.

Issue 2 – Use of Local Interconnection trunks: Level 3 asks the Commission to allow Level 3 to utilize already built interconnection facilities to exchange all types of traffic and forego SBC's unreasonable and unfounded demand that Level 3 build out a duplicative and unnecessary trunking network to exchange forms of traffic the parties for years have successfully exchanged over existing facilities.

Issue 3 – Transit Traffic: Level 3 asks the Commission to maintain the status quo. SBC has been providing transit traffic service to Level 3 across the entire SBC territory since the parties have been interconnected; this is the prevailing industry practice that has arisen since the passage of the Act and SBC has offered no sound public policy reason to change that practice. SBC's proposal would result in secret transit agreements outside any regulatory control.

Issue 4 – Definition of local call & relevance of the geographic location of an end user for the purposes of rating traffic: Level 3 recommends that the Commission adopt the definition found the parties existing interconnection agreement, which conforms to industry-accepted practices of billing and rating a call based on the NPA-NXX codes of the calling and called party, which, interestingly, is also exactly how SBC bills its traffic. As a matter of fact, to the best of Level 3's knowledge, SBC never has rated a call based upon the physical location of the end user.

Issues 5 – Does SBC have to comply with its obligation to provide certain Unbundled Network Elements to Level 3? Level 3 has a statutory right to obtain unbundled network elements from SBC pursuant to, *inter alia*, applicable FCC Rules, 47 U.S.C. §§ 251, 271, this Commission's rules and state law. Level 3 requests that the Commission affirm that SBC has an obligation to make network elements available to Level 3 according to the terms and conditions of the interconnection agreement, including already agreed upon change of law provisions. Thus, SBC should not be permitted to unilaterally withdraw provision of UNEs upon notice according to SBC's sole and unfettered determination that UNEs are no longer required.

Issue 6 – Whether SBC may prohibit Level 3 from fully utilizing local interconnection facilities to terminate Internet-enabled traffic. Level 3 needs the Commission to make it clear that Level 3 is able to interconnect its network with SBC's network and exchange calls between these networks via Internet enabled signals and the trunking architecture that Level 3 has traditionally been lawfully able to require of an ILEC.

Issue 7 – Appropriate and Traditional Compensation for the exchange of IP enabled services. Level 3 asks the Commission to adopt contract language that requires Level 3 and SBC to exchange IP enabled traffic at cost-based terminating compensation rates. This result is forward-looking, establishes operating certainty for the parties, encourages the development of nascent services such as VoIP, and creates a level playing field. The Commission's ultimate goal should be to move all

intercarrier compensation to cost-based rates that do not vary based on, or provide advantages to, a particular service or type of service provider. No single competitor should be entitled to a revenue stream merely because it has historically relied on those revenues for purposes that may promote the public good but also increase its profit margin.

Tier II and III Issues: In the interests of economy, I make my recommendations on the remaining Tier II and Tier III issues in the context of my testimony.

III. JURISDICTION

Q. DOES THE COMMISSION HAVE JURISDICTION TO DETERMINE THE INTERCONNECTION ARRANGEMENTS BETWEEN SBC AND LEVEL 3?

A. Yes. In short, the Act, the FCC's rules and orders implementing the Act, and reviewing court decisions affirm that state public utility commissions have jurisdiction consistent with federal law over all interconnection arrangements among all telecommunications carriers. Moreover, Sections 251 and 252 of the Act are unique in the partnership they establish between State commissions and the FCC. The FCC sets broad interconnection policies, but delegates the application of these policies, and resolution of the details, to state commissions.

Q. IN ADDITION TO ISSUES THAT ARE CLEARLY WITHIN THE JURISDICTION OF THIS COMMISSION, ARE THERE ISSUES IN DISPUTE BETWEEN LEVEL 3 AND SBC THAT ARE BETTER SUITED FOR FCC DETERMINATION?

A. The Petition definitely raises federal questions that may be better suited for FCC determination. For example, the FCC has pending dockets on VoIP and intercarrier compensation in general, the FCC has confirmed that CLECs are entitled to a single POI per LATA, and the FCC has preempted state action on compensation issues relating to ISP-bound traffic. That said the issues raised in the Petition must be addressed by the Commission to ensure that this arbitration results in a comprehensive agreement that allows Level 3 an equal playing field upon which to compete without imposition of one-sided and unfair restraints. Accordingly, Level 3 requests that the Commission make findings consistent with those entered by the FCC on applicable federal questions raised by the Petition.

IV. BACKGROUND ON LEVEL 3's OPERATIONS

Q. BEFORE YOU ADDRESS THE ISSUES IN DISPUTE, CAN YOU PLEASE DESCRIBE THE OPERATIONS OF LEVEL 3?

A. Yes. Level 3 is a communications services company with an international network completely optimized, end-to-end, for Internet Protocol ("IP") technology.[3] Level 3's all-IP network contains no circuit switches. Instead, its network is designed with softswitch architecture. Level 3's proprietary softswitch – the Viper® – provides customers with a full array of advance telecommunications services including high capacity data and Internet access services, dial up modem services, and a continually evolving platform of advance communications and messaging services integrating VoIP seamlessly with the latest telecommunications technologies including IP-PBX, IP over wireless and DOCSIS (which permits IP over cable). Because Level 3 is one of the only facilities based networks optimized for IP, its customers include the largest carriers in the world, such as RBOCs, wireless carriers, cable television systems, CLECs and RLECs throughout the U.S. and the world. As both Mr. Gates and Mr. Wilson will describe in more detail, Level 3 realizes tremendous efficiencies based upon its softswitch architecture and all IP network. These include the ability to distribute only what network intelligence is needed at any one location. This also means that Level 3 can aggregate core switching and network intelligence functions,

[3] Level 3 is a facilities-based competitive local exchange carrier ("CLEC") licensed to provide basic local exchange service throughout the State of Michigan in those zones and exchange areas in which Verizon North Incorporated and SBC Michigan are the incumbent local exchange carriers ("ILEC") pursuant to the Commission's Order Approving Application issued on May 11, 1998 in MPSC Case No. U-11640.

such as SS7 or billing, at fewer locations, resulting in lower costs. Despite what appears to be the fact that Level 3 pushes less intelligence to the edge of its network, the very nature of Level 3's network greater intelligence to reside at the far perimeters of the network: the end user customer's premises equipment.

Level 3 offers services primarily to other carriers, enhanced services providers, ISPs, and VoIP service providers, including its subsidiary, Level 3 Enhanced Services ("Level 3 ES").[4] Level 3 ES' system has non-proprietary interfaces intended to encourage the development of innovative new services and applications by software and hardware developers, Level 3's bandwidth customers, and other service providers.

Level 3 is also the nation's third largest provider of Internet backbone services, provides approximately sixty percent (60%) of the nation's dialup Internet access services, and also provides IP transport, private lines, collocation, dark fiber and wavelengths to carrier customers nationwide and overseas. Our diverse customer set includes nine out of ten of the world's largest telecommunications carriers, three out of five of the largest cable providers in the United States, and wireless carriers serving more than 158 million subscribers.

[4] Following Level 3's acquisition of Telverse Communications, Inc., Telverse changed its name to "Level 3 Enhanced Services, L.L.C.".

Q. WHAT REGULATED SERVICES DOES LEVEL 3 PROVIDE WITHIN THE STATE OF MICHIGAN?

A. Level 3 offers direct inward dial ("DID") telecommunications services in Michigan. The DID service provides Level 3's ISP end user customers with the ability to connect to the Public Switched Telephone Network ("PSTN") in order to receive inbound calls from other users of the PSTN. This service will take a local call placed on the PSTN and terminate it to an ISP.

Q. DOES LEVEL 3 ALSO PROVIDE VOICE SERVICE?

A. Yes. While Level 3's initial telecommunications offerings have focused on providing local DID service to ISPs and some wholesale long distance services, Level 3 recently broadened our service offerings to include next-generation voice services.

Q. CAN YOU PLEASE DESCRIBE LEVEL 3'S CURRENT VOICE OFFERINGS?

A. Yes. First, I should explain that consistent with its CLEC license, Level 3 offers two-way local connectivity to the PSTN that supports voice and data communications capabilities. In effect, Level 3 has expanded its' DID capabilities to include outward dialing capabilities so that it may offer a two-way, voice-capable product. This two-way service provides Level 3's customers receiving IP-based services from Level 3, or other forms of services from other carriers, with the ability to connect to the PSTN in order to communicate with other end users connected to the PSTN.

Rather than offer this two-way service directly to business or residential customers, however, Level 3 offers its IP enabled services not only to traditional

ILEC and CLECs, but also to cable providers and application or enhanced service providers. Our customers include our subsidiary, Level 3 ES, traditional Internet service providers, subsidiaries of the ILECs, including an SBC affiliate, and cable companies. These Level 3 customers, in turn, offer communications services directly to end users. I'll address this further in my discussion and recommendation on Issue 4.

Q. BEFORE ADDRESSING SPECIFICALLY THE ISSUES YOU HAVE LISTED ABOVE, CAN YOU PROVIDE THE COMMISSION WITH LEVEL 3's OVERALL OBJECTIVES IN THIS ARBITRATION?

A. Yes. Level 3 is not seeking any special treatment from the Commission, or from SBC. Level 3 has invested billions of dollars across the United States in order to provide service to customers, and such investment benefits the industry and society in general. In order for Level 3 to continue to provide these benefits, and to continue to expand its operations, it is important for Level 3 (or any other business for that matter) to have the ability to operate in an environment that is predictable. While any business must adapt and adjust to varying levels of business risk, it is critical that there exists at least some level of business certainty in order to justify significant investments. Level 3 has built out a network for which the costs were to be recovered by providing services to its customers. The issues raised in Level 3's Petition, which the Commission must decide in this proceeding, revolve around the ability for Level 3 to remain economically viable by recovering those costs based upon the operational certainty as currently in place. In short, Level 3 is not asking this Commission for

any favors in order to keep its business afloat; rather, Level 3 is asking this Commission to refrain from changing regulatory policies – after investment decision have been made – that would jeopardize Level 3's ability to recover its costs.[5]

V. RESOLUTION OF SPECIFIC ARBITRATION ISSUES: TIER I ISSUES

A. ISSUE 1 - SINGLE POINT OF INTERCONNECTION[6]

Q. PLEASE DESCRIBE WHAT IS AT DISPUTE IN THIS ISSUE.

A. Under the Act and FCC rules, Level 3 is entitled to select a single Point of Interconnection ("POI") with SBC in each Local Access and Transport Area ("LATA") for the exchange of both parties' traffic. In addition, both parties are financially responsible for delivering their originating traffic to the POI selected by Level 3. SBC seeks to avoid these requirements of federal law and impose costs on Level 3. SBC seeks to force Level 3 to establish multiple POIs per LATA or, if Level 3 refuses, to require Level 3 to bear financial responsibility for the delivery of SBC's originating traffic from each local calling area to the POI.

[5] This is not to suggest that Level 3 has a right to recovery of costs or to profitability in general. Unlike SBC, Level 3 has not had the benefit of captive customers or rate of return regulation to establish its business. Nevertheless, it would be wrong and inefficient to subject Level 3 and other CLECs to undue uncertainty in planning its business and carrying out its business plan.

[6] *See* Tier I, Issue 1 in Petition; Network Interconnection Methods, Sections 2.1, 2.2, 2.3, 2.5.7, 4.1, and 4.2. Interconnection Trunking Requirements, Sections 4.1, 4.2, 5.2.1-5.2.9, 5.3.2, 5.3.3.1, and 5.3.4.2 (subject to confirmation for dispute), 5.7.3, and 5.7.4. Intercarrier Compensation, Sections 3.1 and 3.5.

Q. WHAT IS A POINT OF INTERCONNECTION ("POI")?

A. The POI is a demarcation between the networks of two LECs where the exchange of traffic takes place.

Q. WHY DOES LEVEL 3 REQUIRE A SINGLE POI PER LATA?

A. The location and number of POIs has both financial and operational impacts, because each carrier needs to install transmission facilities and equipment to deliver its originating traffic to each POI, and to receive terminating traffic. Of course, SBC already has a ubiquitous network throughout many areas of the Michigan and can use its existing facilities for originating and terminating traffic. On the other hand, Level 3 as a relatively new provider must construct (or lease or acquire) new facilities for access to each POI. Therefore, this issue has significant competitive cost and implementation implications.

Q. WHAT IS THE LEGAL BASIS FOR LEVEL 3'S SINGLE POI POSITION?

A. The Act and FCC rules establish "rules of the road" governing LECs' interconnection responsibilities. The first rule is that a CLEC may select a single POI per LATA where the parties will exchange traffic. The second rule is that each LEC is responsible for delivering its originating traffic to the POI and paying the other LEC reciprocal compensation for terminating such traffic. Together, these two rules establish that each LEC must deliver its traffic to the POI selected by the CLEC and each LEC recovers the costs of delivering that traffic from its end users, not its competitor. Thus, the threshold question that must be addressed is where the

exchange of traffic takes place. Under federal law, Level 3 has the right to select that point of exchange.

Q. WHAT PROVISIONS OF THE ACT AND FCC RULES ARE YOU REFERRING TO?

A. Under 47 U.S.C. § 251(c)(2)(B),[7] an ILEC must provide interconnection at any technically feasible point within its network selected by a CLEC. This means that the CLEC has the right to interconnect at a single POI per LATA.[8] Congress placed the requirement to provide technically feasible POIs in Section 251(c)(2), which applies only to ILECs. Only Section 251(c)(2) designates who may pick POIs.

Also, FCC Rule 51.703(b) requires that a LEC may not assess charges on any other telecommunications carrier for telecommunications traffic that originates on the LEC network.[9] The Fourth Circuit Court of Appeals interpreted this rule in the

[7] Under Section 251(c)(2)(B), ILECs have the "duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network ... at any technically feasible point within the carrier's network." 47 USC § 251(c)(2).

[8] *See, e.g., Application by SBC Communications, Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Service, Inc. d/b/a Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide in-Region, InterLATA Services in Texas*, CC Docket No. 00-65, Memorandum Opinion and Order, FCC 00-238, ¶ 78 (rel. June 30, 2000) ("*Texas SBC 271 Proceeding*"); *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, Notice of Proposed Rulemaking, FCC 01-132, ¶¶ 72, 112 (rel. April 27, 2001) ("*Intercarrier Compensation NPRM*").

[9] *See*, 47 C.F.R. § 51.703(b) ("[a] LEC may not assess charges on any other telecommunications carrier for telecommunications traffic that originates on the LEC's network.").

MCIMetro[10] decision issued just a few months ago. In *MCIMetro*, the Court reviewed an arbitration decision from the North Carolina Utilities Commission. The Commission found that MCIMetro was responsible for paying the cost of transporting a BellSouth customer-originated call to the POI when MCIMetro designated a POI outside the local calling area of the BellSouth customer. Reversing the Commission's decision, the Court held as follows:

> In sum, we are left with an unambiguous rule, the legality of which is unchallenged, that prohibits the charge that BellSouth seeks to impose. Rule 703(b) is unequivocal in prohibiting LECs from levying charges for traffic originating on their own networks, and, by its own terms, admits of no exceptions.[11]

Q. HAS THE FCC SPECIFICALLY STATED THAT ONLY ONE POI PER LATA IS ALL THAT IS REQUIRED?

A. Yes. In SBC's Texas 271 proceeding the FCC stated in pertinent part,

> Section 251, and our implementing rules, require an incumbent LEC to allow a competitive LEC to interconnect at any technically feasible point. *This means that a competitive LEC has the option to interconnect at only one technically feasible point in each LATA.*"[12] (emphasis added)

[10] *MCIMetro Access Transmission Services, Inc v BellSouth Telecommunications, Inc* 352 F3d 872 (4th Cir 2003) ("*MCIMetro*").

[11] *Id* at 881.

[12] *Texas SBC 271 Proceeding* at ¶ 78.

There have been numerous state orders that have agreed with and applied the FCC's "single POI per LATA" standard.[13]

Q. ARE YOU AWARE OF A RECENT FCC WIRELINE COMPETITION BUREAU ARBITRATION ORDER ADDRESSING INTERCONNECTION ISSUES?

A. Yes. In a decision released on July 17, 2002, the FCC's Wireline Competition Bureau ("Wireline Bureau") assumed jurisdiction to arbitrate interconnection disputes between Verizon and three CLECs that the Virginia State Commission decided not to hear: AT&T, Cox Communications and MCI WorldCom. As such, the Wireline Bureau had to interpret and apply Sections 251 and 252 of the Act and the FCC's implementing regulations to the positions of the parties, just as this Commission must do.

Q. DID THE WIRELINE BUREAU ADDRESS INTERCONNECTION ISSUES SIMILAR TO THOSE THAT THE PARTIES ARE ARBITRATING IN THIS PROCEEDING?

A. Yes, it did. The Wireline Bureau reviewed Verizon's VGRIPs proposal—which is substantially similar to SBC's proposal at issue here—and proposals by the three CLECs involved in the arbitration. The Wireline Bureau described those proposals,

[13] *See, e.g.*, Arbitration Order, *Re AT&T Communications of Illinois, Inc.*, 2003 WL 22518548 (Ill.C.C. Docket No. 03-0239 (2003)) Issues 5, 6, & 7; Opinion and Order, *In the Matter of the Petition of Level 3 Communications, LLC, for Arbitration Pursuant to Section 252 of the Federal Telecommunications Act of 1996 to Establish an Interconnection Agreement with Ameritech Michigan*, Case No. U-12460, p. 33, 35 (2000); Arbitration Award, *Re Sprint Communications L.P.*, Case No. 96-1011-TP-ARB, 1997 WL 2722473, (Ohio PUC) (1997).

and ultimately rejected Verizon's VGRIPs proposal. The FCC Bureau stated its rationale for rejecting Verizon's proposal as follows:

> Under ILEC's proposed language, the competitive LEC's financial responsibility for the further transport of ILEC's traffic to the competitive LEC's point of interconnection and onto the competitive LEC's network would begin at the ILEC-designated competitive LEC IP, rather than the point of interconnection. By contrast, under the petitioners' proposals, each party would bear the cost of delivering its originating traffic to the point of interconnection designated by the competitive LEC. The petitioners' proposals, therefore, are more consistent with the Commission's rules for Section 251(b)(5) traffic, which prohibit any LEC from charging any other carrier for traffic originating on that LEC's network; they are also more consistent with the right of competitive LECs to interconnect at any technically feasible point.[14]

Based on this description, I believe that the FCC Bureau considered a CLEC proposal similar to the one that Level 3 has offered in this proceeding.

Q. HAS THE FCC EVER CLARIFIED AN INTERCONNECTING LEC's OBLIGATION TO CARRY TRAFFIC THEIR CUSTOMER ORIGINATES TO THE POI?

A. Yes. As the FCC has affirmed, "[u]nder our current rules, the originating telecommunications carrier bears the costs of transporting traffic to its point of interconnection with the terminating carrier."[15] The FCC has explained the basis of requiring each LEC to bear this cost:

> In essence, the originating carrier holds itself out as being capable of transmitting a telephone call to any end user, and *is*

[14] *FCC Arbitration Order* at ¶ 53.

[15] *Intercarrier Compensation NPRM* at ¶ 70.

> *responsible for paying the cost of delivering the call to the network of the co-carrier* who will then terminate the call. Under the Commission's regulations, *the cost of the facilities used to deliver this traffic is the originating carrier's responsibility*, because these facilities are part of the originating carrier's network. *The originating carrier recovers the costs of these facilities through the rates it charges its own customers for making calls*. This regime represents "rules of the road" under which all carriers operate, and which make it possible for one company's customer to call any other customer even if that customer is served by another telephone company.[16]

SBC's obligation to deliver its originating traffic to Level 3's POI is not conditioned on Level 3 establishing the additional POIs. SBC is trying to require through its contract proposals what it cannot achieve before the FCC, in federal court or before state regulators. As such, Level 3 believes SBC's transport penalty proposal is inconsistent with FCC rules.

Q. WHY DOES LEVEL 3 BELIEVE A SINGLE POI PER LATA IS GOOD PUBLIC POLICY?

A. First, requiring only a single POI per LATA establishes reasonable baseline operating parameters for the parties.[17] SBC instead proposes that Level 3 absorb SBC's costs

[16] *TSR Wireless, LLC, et al. v. U S West Communications, Inc.*, 15 FCC Rcd. 11,166, ¶ 34 (Rel. June 21, 2000).

[17] In the past, Level 3 has negotiated contract provisions that provide for additional POIs when certain traffic thresholds were reached. However, it is inherently difficult to predict if and when those traffic volumes will trigger additional POIs and thus additional capital expenses for Level 3. Establishing additional POIs before those thresholds are approached would force Level 3 to operate in a manner in which it utilizes capacity inefficiently. Such an inefficient approach would also force Level 3 to make capital investments when customer demand does not justify those investments. Taken together, these requirements, which are advocated by SBC, would by virtue of their inherent inefficiencies, force Level 3 to operate in a manner that is not consistent with an efficient competitor.

of backhaul on SBC's already constructed network. Thus, SBC affects a double penalty – first by forcing upon Level 3 costs that Level 3 has not caused (it is SBC's customers who are calling Level 3 customers) and second by the fact that SBC reaps profits far beyond its actual costs because it is charging Level 3 for facilities already paid for in SBC's local rate base.

Second, a single POI per LATA is also good regulatory policy because it is forward-looking. It recognizes that distance, and thus local calling area boundaries, are regulatory anachronisms that do not reflect current market realities.

Third, now that every RBOC has received Section 271 approval, LATA boundaries have become relics of our regulatory past. This is evidenced by the widespread adoption of flat-rated bundles of unlimited local and long distance service sold by wireless and wireline carriers alike. For example, SBC provides unlimited nationwide calling in Michigan for $48.95 per month.[18] Retaining interconnection architectures that are based on these historical regulatory constructs discourages upgrading network design to a more efficient model because doing so blunts ILEC incentives to compete based upon new, cheaper and better service offerings. Rather, retaining these archaic constructs perpetuates the economic incentives driving ILECs, as SBC, to preserve the artificial distinctions around which their networks were built. Rather than requiring incumbents to upgrade to current network designs, a single POI per local calling area, or even per LATA, requires new entrants to invest in outdated network architectures. In short, requiring a POI in each local calling area

[18] *See*, SBC Website, <http://www.sbc.com>.

disproportionately gives the advantage to SBC while simultaneously imposes an equally asymmetrical disadvantage upon Level 3 – absorbing the costs of SBC's legacy circuit switched network, which costs impair the economic advantages Level 3 could otherwise pass along to end user customers throughout Michigan, SBC's operating territory, and ultimately, nationwide.

Q. ARE THERE PUBLIC POLICY REASONS TO REFUSE SBC's REQUEST THAT LEVEL 3 BUILD FACILITIES, OR PAY FOR FACILITIES, TO PICK UP ILEC TRAFFIC IN EACH LOCAL CALLING AREA?

A. Yes. If SBC is allowed to identify POIs for originating traffic and require CLECs to build or buy facilities to reach those POIs, ILECs would be able to disadvantage CLECs and impose additional and unwarranted costs on new entrants, impeding the development of competition. Indeed, if ILECs were allowed such discretion, they may force CLECs to essentially duplicate the incumbent's network. By way of illustration, if the railroads forced automobiles to run on steel wheels, we'd never have seen the economic expansion or enjoy freedoms of driving cars powered by internal combustion engines running on radial tires to places of our choosing. Duplication of the ILEC network is exactly opposite of the Act's objective of opening local markets to competition and promoting innovation in networks and services.

Q. DID CONGRESS RECOGNIZE THAT ILECs WOULD HAVE TO MODIFY THEIR NETWORKS IN OPENING UP LOCAL EXCHANGE MARKETS TO COMPETITION?

A. Yes. In crafting ILECs' interconnection obligations, Congress chose to require ILECs to provide interconnection at any technically "feasible" point. As the FCC found:

> use of the term "feasible" implies that interconnecting or providing access to a LEC network element may be feasible at a particular point even if such interconnection or access requires a novel use of, or some modification to, incumbent LEC equipment. This interpretation is consistent with the fact that incumbent LEC networks were not designed to accommodate third-party interconnection or use of network elements at all or even most points within the network. If incumbent LECs were not required, at least to some extent, to adapt their facilities to interconnection or use by other carriers, the purposes of sections 251(c)(2) and 251(c)(3) would often be frustrated. For example, Congress intended to obligate the incumbent to accommodate the new entrant's network architecture by requiring the incumbent to provide interconnection "for the facilities and equipment" of the new entrant. Consistent with that intent, the incumbent must accept the novel use of, and modification to, its network facilities to accommodate the interconnector or to provide access to unbundled elements.[19]

By choosing the word "feasible," Congress indicated that ILECs would have to consider new uses of, and modifications to, their networks in order to provide interconnection to CLECs. It should also be noted again that the FCC barred a

[19] *In The Matter Of Implementation Of The Local Competition Provisions In The Telecommunications Act Of 1996, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, First Report and Order, 11 FCC Rcd. 15,499, ¶ 202 (rel. August 8, 1996).

consideration of cost in determining technical feasibility. Taken together, this means that an ILEC, SBC in this proceeding, should not be allowed to use its own network inefficiencies as an excuse to prevent a CLEC, Level 3, from selecting a technically feasible interconnection point.

Q. HOW DID THE FCC RECOGNIZE THAT ILECs WOULD HAVE TO MODIFY THEIR NETWORKS IN OPENING UP LOCAL EXCHANGE MARKETS TO COMPETITION?

A. In the FCC's Local Competition proceeding, the United States Telephone Association ("USTA") argued that the Act only requires ILECs to provide interconnection to their networks as they are "configured presently."[20] The FCC rejected USTA's interpretation of the Act, finding that:

> the obligations imposed by sections 251(c)(2) and 251(c)(3) include modifications to incumbent LEC facilities to the extent necessary to accommodate interconnection or access to network elements.[21]

In many instances, the Act and the FCC's rules show that neither Congress nor the FCC want to constrain the ability of a CLEC to innovate and deploy services, technologies, and network architectures that differ from historical services, technologies, and network architectures deployed by ILECs. For example, Congress provided two alternative definitions of "telephone exchange service:"

> The term "telephone exchange service" means (A) service within a telephone exchange, or within a connected system of

[20] *Id* at ¶ 195.

[21] *Id* at ¶ 198.

> telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (B) comparable service provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service.[22]

Examples such as these shows that Congress and the FCC anticipated differences between incumbent and competitive networks and crafted rules to ensure that CLECs would not be required to mimic ILECs. If SBC is permitted to require Level 3 to establish a POI in each local calling area, the Commission would be undermining Congressional and FCC intent to promote competition and innovation in network design.

Q. PLEASE SUMMARIZE LEVEL 3'S POSITION ON THIS ISSUE.

A. Consistent with the Act, applicable FCC rules, and sound public policy, Level 3 has the right to interconnect with an SBC at a single POI in each LATA for the exchange of traffic between the companies, and SBC may not dictate where Level 3 must pick up SBC's traffic. Similarly, each Party is operationally and financially responsible for delivering its traffic to the POI selected by the Level 3 and recovering those costs from its end users, not its competitor. While it may be appropriate to establish additional POIs as traffic volumes grow, local network planners should evaluate traffic patterns and other factors on a case-by-case basis to determine where and when additional POIs should be established. This result promotes operating certainty, is

[22] 47 USC § 153(47) (emphasis added).

forward-looking, and sets ground rules that favor competition, rather than a particular competitor.

B. ISSUE 2 – USE OF LOCAL INTERCONNECTIONTRUNKS FOR ALL TRAFFIC

Q. PLEASE DESCRIBE THE DISPUTE ON THIS ISSUE.

A. The language proposed by SBC requires that Level 3 build out two distinct networks – one set of trunks for IntraLATA traffic and a second for InterLATA traffic.

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Level 3 requests that the Commission allow Level 3 to maximize the use of its current interconnection facilities for the exchange of all types of traffic. Level 3 has constructed and paid for extensive co-carrier facilities with SBC that today carry all types of traffic. Level 3's position is consistent with Section 251(c)(2)(B) of the Act, which requires SBC to provided interconnection "at any technically feasible point within the carrier's network."

Q. YOU MENTION THAT YOU WOULD LIKE THE COMMISSION TO ALLOW LEVEL 3 TO UTILIZE ITS CURRENT NETWORK CONFIGURATION. CAN YOU EXPAND ON THAT?

A. Yes. Like other facilities-based carriers, Level 3 provides all types of traffic to and from its customers; that is, Level 3 originates and terminates a mix of traffic for its customers – ISP-bound traffic, interLATA and intraLATA toll, and local traffic. Level 3 has built out its current network relying on trunks that carry such mix of

traffic, adjusting the size and capacity of its trunking arrangements with SBC depending on the amount of traffic exchanged between the parties.

Q. ARE YOU FAMILIAR WITH SBC's NETWORK CONFIGURATION?

A. While I'm not a network engineer, I do know that for years the FCC has allowed ILECs such as SBC to establish and use its network facilities to carry multi-jurisdictional traffic; that is, SBC has been allowed to mix local, interstate and intrastate traffic over the same trunk groups. This has been true even though historically there have been different rates of compensation paid depending on whether calls are deemed interstate or intrastate (and if intrastate, whether local or toll). Level 3 should have the same ability to combine the same mix of traffic on the same multi-jurisdictional trunk groups – and pay SBC the appropriate compensation based on the jurisdictional nature of the traffic.[23]

Q. IS COMPENSATION AN ISSUE IN THIS DISPUTE?

A. No. Level 3 and SBC pay each other the appropriate compensation based on the type of traffic exchanged and on the measurement of the traffic exchanged.

Q. WHAT IS THE NET EFFECT OF SBC'S PROPOSAL THAT LEVEL 3 BUILT OUT TWO DISTINCT NETWORKS?

A. SBC's proposal is an attempt to impose an anticompetitive price squeeze on Level 3 by forcing Level 3 to create duplicative, redundant, and completely inefficient

[23] *See e.g., In the Matter of Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in Alabama, Kentucky, Mississippi, North Carolina and South Carolina*, WC Docket No. 02-150, 17 F.C.C.R. 17,595, 17 FCC Rcd. 17,595, Memorandum Opinion and Order, FCC 02-260, ¶¶ 225-226 (rel. Sept. 18, 2002).

network configuration. A network configuration that SBC itself does not use in its network. SBC's proposal imposes unnecessary costs on Level 3, costs that will impact Level 3's ability to compete in the marketplace.

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?

A. Level 3 asks the Commission to reject SBC's anticompetitive attempts to impose unnecessary costs on Level 3 and allow Level 3 to utilize its current network configuration with SBC to exchange a mix of traffic over the same multi-jurisdictional trunk groups.

C. ISSUE 3 - TRANSIT TRAFFIC[24]

Q. PLEASE DESCRIBE THE DISPUTE ON THIS ISSUE.

A. Currently, if a Level 3 customer attempts to complete a call that would terminate to a customer of another carrier – for example, an Interexchange carrier or another competitive local exchange carrier – SBC transits that traffic between Level 3 and such carriers; that is, transit traffic permits calls to be seamlessly interconnected among carriers. Level 3's existing interconnection agreement provides that SBC will interconnect, for a "transit" fee, Level 3's traffic to other carriers. During the parties' negotiations that led to the filing of this petition for arbitration, however, SBC has refused to exchange transit traffic to Level 3 under the terms of an interconnection agreement. The Commission must compel SBC to provide terms and conditions by

[24] *See* Tier I, Issue 3 in Petition; Interconnection Trunking Requirements, Sections 1.3, 3.2, 3.4, 4.3, 4.3.1 – 4.3.4, and 12.3; Intercarrier Compensation, Section 4.6; Out of Exchange, 6.1, 6.2, and 6.3.

which it will interconnect and transit calls from Level 3 to other carriers. Level 3 is simply asking the Commission to maintain the status quo.

Q. WHAT IS THE LEGAL BASIS FOR LEVEL 3'S POSITION?

A. Section 251(a)(1) of the Telecommunications Act of 1996 requires all carriers to connect directly or indirectly with other carriers. Section 252(c)(2) requires ILECs to provide for the facilities and equipment of any requesting carrier, interconnection with the ILEC's network. This section gives the requesting carrier the right to choose where the interconnection will take place. The ILEC, in turn, must provide the facilities and equipment for interconnection at that point. Transit traffic provides a simple and economical method of interconnection for carriers that exchange minimal amounts of traffic. Without transit traffic such carriers would be required to build redundant and little-used networks. The legal obligation to provide transit service gives meaning to the requirement of indirect interconnection in Section 251(a)(1) of the Act.

Q. CAN YOU THINK OF ANY TECHNICAL REASON WHY SBC CANNOT PROVIDE TRANSIT SERVICE?

A. Not to my knowledge, especially since SBC is currently providing Level 3 with transit traffic via the parties existing interconnection and has done so since the advent of the 1996 Act.

Q. WHAT IS THE PREVAILING INDUSTRY PRACTICE REGARDING TRANSIT TRAFFIC.

A. The prevailing industry practice that has arisen since the passage of the Act has been for incumbent LECs such as SBC to provide transit traffic, particularly given the relative low volumes that are typically exchanged in this manner. Again, Level 3 is simply asking the commission to maintain the status quo, what the parties have been doing since Level 3 first interconnected with SBC. SBC's proposal, on the other hand, is that transit traffic is not regulated at all, not by this Commission or the FCC. The end result of SBC's proposal is that CLECs such as Level 3 will be forced to sign secret agreements, all with potentially different terms and conditions, and such agreements would never see the light of day. Such practices benefit only one Party – SBC. SBC's proposal is an open invitation to allow it to discriminate between carriers.

Q. IS THE ISSUE A MATTER OF COMPENSATION?

A. Again, no. The parties have been exchanging transiting traffic across the entire SBC territory without issue, and it has only become an issue during the current negotiating sessions, in which SBC has insisted that it no longer would be providing this service.

Q. WHAT IS LEVEL 3'S RECOMMENDATION ON THIS ISSUE?

A. The Commission must maintain the status quo and approve provisions that allow for transit traffic, the practice currently in place between the Parties.

D. ISSUE 4 – DEFINITION OF LOCAL CALL & RELEVANCE OF THE GEOGRAPHIC LOCATION OF AN END USER FOR THE PURPOSES OF RATING TRAFFIC[25]

Q. WHAT IS AT DISPUTE IN RESPECT TO THE DEFINTION OF A "LOCAL CALL"?

A. The Act and FCC decisions require that the jurisdiction of traffic be determined by the origination and termination points of the call. The standard industry practice has been for ILECs such as SBC to rate and bill end user customers based on the NXX codes of the calling and called party. If the call is rated as local, SBC bills its customer as a local call. SBC, however, would have this Commission ignore industry practice and have a different definition of "local call" applied to traffic exchanged between the parties. SBC proposes to do this to assess non-cost based access charges to calls that are in fact routed as a local call. SBC's proposal must be rejected.

Q. WHAT ARE NXX CODES?

A. NXX codes are the fourth through sixth digits of a ten-digit telephone number. For example, in the main telephone number for the Commission, 517-241-6180, the NXX code is "241."

[25] *See* Tier I, Issue 7 in Petition; Intercarrier Compensation, Sections 3.1, 3.6, 3.7, 4.7-4.7.2.1, 5.1, 5.1.1-5.1.2.2.1, 7.1, 7.2, 12.1-12.6, 12.9, 13.1, 14.1, 15.1, 15.2, 15.3, 15.4, 16.1, and 17.1.

Q. HOW DO CARRIERS ASSIGN NPA-NXX CODES (TELEPHONE NUMBERS) TO CUSTOMERS?

A. Carriers, like Level 3 and SBC, request and are assigned blocks of telephone numbers by the numbering administrator. The carriers then assign numbers to their customers as requested.

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

A. Standard industry procedure provides that each NXX code is assigned with, or "homed" to, a particular rate center within a local calling area.[26] A single rate center may have more than one NXX code, but each code is assigned to one and only one rate center. This uniquely identifies the end office switching serving the NXX code, so that each carrier that is routing a call know which end office switch to sent the call to. Thus, calls are rated and routed based on the NXX code of the calling and called numbers and not on the physical location of either the calling or called party. Level 3's definition conforms to this use of NXX codes.

Q. DOES LEVEL 3 HAVE ANY OTHER CONCERNS WITH SBC's PROPOSAL?

A. Yes. SBC seeks to exclude all Internet Protocol based traffic from the definition of local traffic. The FCC has directed that all traffic bound for an ISP is subject to a

[26] A rate center is a geographic location with specific vertical and horizontal coordinates used for determining mileage, for rating local or toll calls.

limited reciprocal compensation mechanism. The FCC did not indicate that all Internet Protocol traffic is subject to a limited reciprocal compensation mechanism.

Q. WHAT IS YOUR RECOMMENDATION ON THIS ISSUE?

A. Level 3 recommends that the Commission adopt Level 3's proposed definition, which is found in the parties existing interconnection agreement and which conforms to the industry practice of billing and rating a call based on the NXX codes of the calling and called party. Level 3 also requests that ISP-bound traffic be rated and routed based on the FCC's determination, which exempts such traffic from SBC's access charges.

E. ISSUE 5 - OBLIGATION TO PROVIDE UNBUNDLED NETWORK ELEMENTS[27]

Q. PLEASE EXPLAIN THE ISSUE IN DISPUTE.

A. Level 3 seeks to be able to use UNEs as provided for by Section 251 of the Act and appropriate state law. SBC, on the other hand, has proposed language that allows it to unilaterally assert that it no longer has to provide access to UNEs or UNE combinations, regardless of state or federal law.

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Level 3 has a statutory right to obtain UNEs from SBC pursuant to Section 251 of the Act. Independent of the Act, SBC must also provide UNEs pursuant to applicable state law. SBC must not be allowed to ignore the hard work that the Commission has

[27] See Unbundled Network Elements, 3.3.1, 2.3, 2.10 and subsections, 2.12 and subsections, and 2.15 and subsections.

put into unbundling since the passage of the Act. Should a change in law occur that SBC feels allows it to cease providing a particular UNE, SBC must be bound by the terms of the agreement and come to Level 3 with SBC's position regarding the change in law. Should the Parties not agree as to the effect of a particular court, FCC or Commission decision, the Parties may avail themselves of the dispute resolution sections of the agreement and, if necessary, bring such dispute to the Commission for determination. SBC, however, wants the authority to self-determine what its obligations are under the agreement.

Q. IS THERE ANYTHING ELSE IN DISPUTE?

A. There is a second issue. SBC's proposal arbitrarily limits Level 3's use of UNEs to the provision of "qualifying services." As Mr. Wilson notes in his testimony, end user customers use their connections to the PSTN for multiple uses. And as discussed in my discussion of Issue 2 above, the Parties exchange all types of traffic over the same trunk groups. SBC's proposed language would give SBC the discretion to unilaterally determine when Level 3 is providing a "qualifying service" and to convert Level 3's UNEs to non-cost based retail offerings, assuming that any are available. Level 3 must be allowed to provide a complete host of services to its ISP and ESP customers, including VoIP providers, without having to worry about SBC attempts to arbitrarily and unilaterally deciding that it will no longer provide UNE services to Level 3. As I note in my discussion of Issue 6, ESPs and ISPs have been using local facilities to gain access to the PSTN for over 20 years. SBC must not be allowed to force such customers onto SBC's non-cost based toll services.

Q. WHAT IS LEVEL'S RECOMMENDATION ON THIS ISSUE?

A. Level 3 asks the Commission to order SBC to provide UNEs pursuant to Section 251 of the Act, and independent state law. Level 3 also requests that the Commission order that SBC may not unilaterally determine that it will no longer make UNEs – SBC must comply with the agreement's Change in Law provisions before it is allowed to make any changes to UNE provisioning under the agreement.

F. ISSUE 6 – WHETHER SBC MAY PROHIBIT LEVEL 3 FROM UTILIZING LOCAL FACILITIES TO TERMINATE INTERNET ENABLED TRAFFIC[28]

Q. PLEASE EXPLAIN LEVEL 3's POSITION ON THIS ISSUE.

A. Level 3's position is that IP enabled services are information services and should continue to be subject to cost-based intercarrier compensation; that is, Level 3 is asking the commission to maintain the status quo. SBC, on the other hand, seeks to impose access charges on IP enabled services if a call originates in one LATA and terminates in another.

Q. PLEASE SUMMARIZE THE LEGAL BASIS FOR LEVEL 3's POSITION.

A. The legal basis for Level 3's position is that ESPs are exempted from paying access charges and entitled to purchase local services to connect to the PSTN. Because Voice over IP ("VoIP") services and other IP enabled services are enhanced services, VoIP providers may purchase local services to access the PSTN. As such, VoIP providers should be treated as end user customers, just like any other business, and

[28] *See* Interconnection Trunking Requirements Appendix, Section 13.1; Intercarrier Compensation, Sections 3.1, 4.2, 4.5, 4.7-4.7.2.1, 7.1, 7.2, 16.1, and 17.1.

calls to and from these VoIP customers should be treated as local calls for purposes of intercarrier compensation.

By clarifying that VoIP Traffic and other IP enabled services are subject to local intercarrier compensation rates, the Commission will provide the operating certainty that is necessary to allow Level 3, as a certificated carrier, to compete in the nascent VoIP market and ensure that VoIP providers have a choice of service providers to connect to the PSTN. This operating certainty in turn will create more competitive choices for the end user customers that VoIP providers seek to serve. Especially in the case of residential consumers, VoIP providers may offer the first true competitive alternative to the ILEC's monopoly service.

Setting intercarrier compensation for VoIP Traffic at cost-based local rates is forward-looking in that it brings us one step closer to the goal of moving intercarrier compensation for all types of traffic to a single, cost-based rate. Just as the ESP exemption permitted the nascent Internet to grow into the ubiquitous Internet that it is today, so too will local compensation for VoIP traffic permit this nascent service to grow.

Q. WHAT IS VOICE OVER INTERNET PROTOCOL?

A. The term VoIP comprises a number of different applications and service combinations. In general, VoIP uses the Internet protocol to transmit voice as packetized data over IP networks in real time. Although Mr. Wilson discusses this in some detail, let me give you a simple example of a VoIP call flow. First, the media stream is originated by an IP phone or by a piece of customer premises equipment

(computer or IP conversion device) and delivered to the caller's VoIP provider. This can occur on any IP-network, whether wireline or wireless, cable or DSL. The IP network determines whether the media stream will terminate on- or off-net, which can include the PSTN. If the media stream terminates on the PSTN, the VoIP provider converts the IP protocol to Time Division Multiplexing (TDM). Next, the VoIP provider passes the communication to a common carrier that is interconnected to the PSTN, and that carrier delivers the communication to the carrier that serves the called party.

Q. IF VoIP SERVICES ARE NEW, WHY ARE VoIP PROVIDERS CLAIMING THAT THE FCC HAS ALREADY DETERMINED THESE SERVICES ARE UNREGULATED?

A. Although VoIP services are in a nascent stage of development, the unregulated status of information services may be traced more than 20 years to the FCC's basic and enhanced regulatory decisions in the *Computer Proceedings* in which the FCC decided to allow enhanced services to flourish unregulated and unfettered by Title II of the Act.[29] Since the 1996 Act, the FCC's basic and enhanced regulatory dichotomy has evolved into an analysis of whether a service is a regulated telecommunications service or an unregulated information service. Consistent with

[29] *Amendment of Section 64.702 of the Commission's Rules and Regulations* (*Computer II*), Tentative Decision and Further Notice of Inquiry and Rulemaking, 72 FCC 2d 358 (1979) (*Tentative Decision)*, 77 FCC 2d 384 (1980) (*Final Decision*), *recon*., 84 FCC 2d 50 (1980) (*Reconsideration Order*), *further recon*., 88 FCC 2d 512 (1981) (*Further Reconsideration Order*), *affirmed sub nom. Computer and Communications Industry Ass'n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, 461 U.S. 938 (1983).

Congress' directive, the FCC generally takes a "hands-off" approach to the Internet and other interactive computer services.

Q. WHY IS IT IMPORTANT TO TAKE A HANDS-OFF APPROACH TO NASCENT SERVICES SUCH AS VOIP?

A. If left free to respond to customer demand and expectations, VoIP could become the proverbial "killer application" that stimulates much-anticipated broadband deployment. IP-enabled services allow providers and consumers to combine voice, data, video, and other applications more seamlessly than is possible on the PSTN. Forcing one kind of IP-enabled service – voice – into a regulatory category separate from other IP-enabled services will only frustrate this goal and deny consumers the choices they are seeking in a more competitive communications and information services marketplace.

On the other hand, imposing legacy common carrier regulations on nascent services could stifle their development. For example, should the Commission act prematurely and subject VoIP traffic to access charges, providers of VoIP and its related infrastructure will, at a minimum, be reluctant to invest in Michigan and may bypass the market altogether. As California PUC Commissioner Kennedy wrote, "[s]omeday these new technologies will be mature enough to carry their share of the social contract expected of other indispensable utilities. But until then, regulators should just keep their hands off."[30]

[30] Kennedy, "Let Internet phone service evolve without rules," *supra.*

he Commission must remain cognizant of the risks associated with subjecting a nascent technology like VoIP to regulations developed for the purpose of restraining monopoly power. This is especially true in the context of economic regulation, such as imposing above-cost access charges on new services for the avowed purpose of maintaining universal service and whether these nascent services have the potential of eliminating, or at least mitigating, the concerns that have made the USF necessary in the first place. The Commission should consider whether Michigan consumers will be able to share in the benefits of nascent services if historical inefficient subsidy mechanisms dominate intercarrier compensation and deter investments in innovative services. The success of VoIP to date has been the result of the hands off approach taken by the FCC and most state commissions – and a change in the business climate at this point could be devastating.

Q. WHY DO YOU CHARACTERIZE IT AS AN "AVOWED" PURPOSE?

A. In adopting the *CALLS Order* compromise, the FCC recognized the difficulty of determining the costs, implicit subsidies, and profit components of access charges.[31] The ILECs typically threaten that they will be forced to raise end user customer rates and the sufficiency of universal service will be threatened if their access charge revenue streams diminish. Their unwarranted concern suggests that ILECs are using access charges to subsidize their provision of service to their local end users. In fact, SBC admitted as much when it told the FCC that "[s]witched access charges,

[31] *See Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Low-Volume Long-Distance User, Federal-State Joint Board on Universal Service*, 15 FCC Rcd 12962, ¶¶ 26, 201 (2000) ("*CALLS Order*").

particularly intrastate switched access, continue to support affordable universal service rates throughout the country."[32] Section 254(e) of the Communications Act of 1934, as amended, however, provides that universal service support "should be explicit."[33]

Q. PLEASE EXPLAIN WHY THIS SECTION OF THE ACT IS IMPORTANT.

A. It appears that the ILECs are either doing exactly what Section 254(e) prohibits – using access charge revenues as an implicit subsidy to provide universal service support to their customers — or, alternatively, utilizing access charge revenue to enhance their profitability. If this is true, the Commission should take immediate action to extract any implicit subsidies from access charges, not force VoIP Traffic to sustain such illegal subsidies by moving from cost-based local retail and termination services to above-cost access services. In sum, ILECs continually fail to provide convincing evidence that their current streams of access charge revenues are necessary to maintain affordable local rates, and even if those revenues are supporting local rates, under Section 254(e) of the Act, they may no longer do so.

[32] Letter from David Hostetter, Executive Director-Federal Regulatory, SBC Communications, Inc., to Marlene H. Dortch, Secretary, FCC, Presentation at 4 (WC Docket No. 02-361, Dec. 3, 2003).

[33] 47 USC § 254(e).

Q. HOW DO YOU RESPOND TO CLAIMS THAT RECIPROCAL COMPENSATION FOR VoIP TRAFFIC WILL DECREASE ILEC ACCESS REVENUES?

A. Any temporary shortfall in an ILEC's current revenue stream does not automatically result in public detriment. ILEC must first show that it will suffer economic loss. Then it must show that the economic loss is caused by VoIP. And finally, it must show that any such economic loss impairs its ability to serve the public. Email and wireless services have already reduced traditional wireline long distance calling, and thus ILEC access revenue. CLECs' increased market share has also reduced ILEC access revenue. Finally, reforms at the federal and state levels have generally reduced ILEC access revenue. In fact, JP Morgan estimates that total switched access revenue for the industry fell from $14.3 billion in 1999 to an estimated $8.5 billion in 2003.[34] While the Interstate Access Support created in the *CALLS Order* essentially restores $650 million of lost access revenue to ILECs annually in an explicit subsidy, recent history shows that ILECs can and are continuing to serve the public notwithstanding substantial decreases in access revenue. Finally, ILECs themselves recognize the value of IP enabled services and are in fact moving their networks to IP-based architectures.

[34] JP Morgan, North American Equity Research, US Telecommunications, The Art of War, November 7, 2003 ("*JP Morgan*"), at 11.

Q. WHAT IF SBC CAN SHOW A DIRECT CORRELATION BETWEEN VoIP AND REDUCED ACCESS REVENUES AND ALSO SHOW THAT THE REDUCTION IMPAIRS ITS ABILITY TO SERVE THE PUBLIC?

A. First, in the rapidly changing telecommunications marketplace, it seems practical for commissions to evaluate not only ILEC revenue streams from access, but to include other new sources of revenue that are available to ILECs. Mr. Gates, in his testimony, addresses these new streams of revenue to which ILECs have gained access in the past few years. If it is determined that (after a comprehensive investigation of ILEC revenues) ILECs' financial situation have become such that universal service is in jeopardy, then it is time for policy makers to finish the task set out in the 1996 Act and make all universal service subsidies explicit. Neither the ILECs' dire predictions of reduced local revenue (as market share shifts to VoIP services), nor their dire predictions of all long distance traffic moving to these services to avoid access charges, justifies the imposition of what is essentially a dying common carrier economic regulation on these services. The ultimate policy goal is to make all universal service support explicit and to move all intercarrier compensation to cost-based rates or bill and keep. Where the parties dispute which of three current wireline compensation mechanisms (local, ISP-bound, access) applies to traffic (*e.g.* VoIP), the Commission should adopt the lowest rate. Applying the lowest rate in this incremental manner will slowly reduce carriers' dependency on above-cost charges.

Q. YOU STATED EARLIER THAT ILEC CONCERNS ABOUT DIMINISHING ACCESS REVENUES WERE UNWARRANTED. BUT ISN'T THE ENTIRE PSTN GOING TO MOVE TO VOIP TO ESCAPE ACCESS CHARGES?

A. While Level 3 hopes that the PSTN eventually migrates to an all-IP network, we are a long, long way from an all-IP PSTN. VoIP is not the exception that will swallow the rule. Five years after the *Report to Congress*, VoIP is still a nascent service with minimal market share. According to Frost & Sullivan, a market research firm, only about 100,000 residential subscribers use Internet telephone service in North America.[35] JP Morgan estimates that in 2003, RBOCs had 70.5 million consumer access lines versus 100,000 consumer IP based lines.[36] And while it expects IP based lines to grow, it still projects that RBOCs will retain the lion's share of consumer access lines – 48.6 million RBOC lines versus 8.6 million IP-based lines.[37] In the business market, JP Morgan predicts that the threats to RBOCs access lines will be primarily from CLECs, not wireless substitution and IP.[38] As Mr. Gates testifies, the movement of business customers to VoIP does not have a significant impact on ILECs' switched access revenues because most of these business customers are already bypassing switched access anyway. In any event, analysts estimate that VoIP

[35] Verne Kopytoff, "Internet phones in spotlight, Companies face more scrutiny by U.S., state agencies," San Francisco Chronicle (Nov. 14, 2003).

[36] *JP Morgan* at 26.

[37] *Id.*

[38] *Id.*

comprises merely 1-5% of the domestic interexchange market.[39] In short, market statistics do not support ILEC claims of drastic access charge revenue reductions due to an industry movement to VoIP.

While SBC, Qwest, and Sprint have all announced their intention to move to IP networks, Sprint estimates that it will take 12 to 13 years to move its eight-million-line local network to IP, and this is after Sprint first announced plans to switch to IP two years ago.[40] As Verizon spokesman Eric Rabe acknowledged, "a transition [to VoIP] is coming, but [] will take a long, long time."[41]

Moreover, as Verizon's Chief Executive Officer Seidenberg has stated: "Our view is to let cannibalization occur."[42] Seidenberg has said that while VoIP probably would reduce Verizon's local phone market share from 90% to 60%, Verizon plans to participate in VoIP both as a backbone provider and as an ISP, "meaning more revenue per customer."[43] ILECs can and are competing in the market for VoIP services. SBC IP Communications ("SBCIP") is providing VoIP services to enterprise customers both within and outside of SBC's monopoly telephone

[39] Probe Research, Inc., Voice over Packet Markets, 2 CISS Bulletin 11-16, at 4 (2001).

[40] Shawn Young, "Sprint Converts Local Network to 'Packet Switched' Technology," The Wall Street Journal (May 27, 2003).

[41] Paul Davidson, *Calling via Internet has suddenly arrived*, USA Today (July 6, 2003)(Available at <Hhttp://www.usatoday.com/money/industries/technology/2003-07-06-netphone_x.htmH>.

[42] Communications Daily (June 20, 2001).

[43] *Id.*

markets.[44] Qwest has announced plans to enter the residential VoIP market in Minnesota, where it is an ILEC, and has confirmed that it already offers VoIP to enterprise customers.[45]

Q. EVEN IF ONLY A SMALL AMOUNT OF TRAFFIC MOVES TO VOIP, DOESN'T THAT MEAN ILECS CANNOT RECOVER THEIR COSTS FOR THE PERCENTAGE OF TRAFFIC THAT HAS MOVED TO VOIP?

A. No. Any ILEC claims that the "sky-is-falling" because of "lost" access charges fail to consider that VoIP providers compensate ILECs for the use of their local networks either by paying local end user service rates or by paying cost-based termination charges for reciprocal compensation. Not satisfied with this compensation, ILECs consistently attempt to force VoIP providers to move from existing services to non-cost-based access services in an effort to maintain (or increase) their access charge revenue stream. The fact that ILECs have historically enjoyed an access charge revenue stream does not mean that they are entitled to receive those revenues in perpetuity regardless of advances in technology and consumer desires. Accordingly, consistent with the theme that the opponents of a nascent service bear the burden of proving common carrier regulation is necessary, the Commission should reject any such unsubstantiated claims by the SBC unless and until (1) it provides sound, objective information that links a continued VoIP access charge exemption with the

[44] Michael Bazeley, "SBC offers businesses new VoIP service," Mercury News (Nov. 21, 2003).

[45] "Notebaert Announces Qwest Will Offer VoIP to Consumers," Communications Daily, 5 (Nov. 5, 2003).

material demise of access charges; and (2) the Commission determines by means of a generic proceeding that sound public policy requires the continuation of access charge subsidies to the incumbent carriers.

I was encouraged by the recent SBC VoIP presentation which advocated "fair compensation" for PSTN carriers that carry VoIP traffic.[46] I had hoped this signaled that the ILECs were coming to the realization that it would be counterproductive to subject new services, such as VoIP, to an above-cost intercarrier compensation mechanism whose days are numbered. Unfortunately, SBC continues to cry "wolf" in this arbitration.

Q. DO YOU BELIEVE THAT COST IS THE SBC's MAIN CONCERN WITH RESPECT TO THE INTERCARRIER COMPENSATION ISSUES?

A. It should be, but SBC would rather make this about revenue. Instead of showing that its costs would increase to exchange VoIP and FX-like local traffic with Level 3 on a local traffic basis, SBC argues about foregone revenues. SBC is attempting to classify these calls as something other than local to justify a different cost recovery mechanism even though the costs of delivering this traffic to Level 3 do not differ at all. If accepted, SBC would over-recover its costs, impede competition and increase costs for consumers.

[46] Bruce R. Bryd, SBC Operations, Inc., "Voice Over Internet Protocol (VoIP): Federal Law & Regulations; and The RBOC Perspective" (presented at ASCENT Conference, Nov. 20, 2003).

Q. HAS LEVEL 3 HAD THE BENEFIT OF MONOPOLY RATE PAYERS OR A REVENUE REQUIREMENT SINCE ITS INCEPTION?

A. No. During the past few years Level 3 has spent about $13 Billion on the deployment of its network without any support from monopoly ratepayers. All of Level 3's customers were the result of its own marketing efforts, network deployment, and network management. Perhaps more importantly, if Level 3 fails in its market strategy in Michigan, Level 3's stockholders, and not consumers, will bear the burden of that failure. As such, consumers and the State have only an upside associated with Level 3's provision of IP-based services to VoIP and other nascent service providers. All Level 3 is asking is to be allowed to offer a service that permits its customers to connect to the PSTN. Let's let the consumers decide whether these ESPs are providing benefits and not preclude consumer choice by preventing competitive entry.

Q. WHAT IMPACT COULD THE IMPOSITION OF TRADITIONAL ACCESS CHARGES HAVE ON THE DEPLOYMENT OF NASCENT IP-BASED SERVICES?

A. Applying regulations designed for circuit-switched communications could distort pricing incentives for IP enabled services. Today's access charges are assessed on a per-minute basis. The relative higher usage of the Internet in the United States has been attributed to the prevalence of flat-rate local telephone service pricing. Flat-rate pricing for Internet access is a by-product of the exemption from per-minute access charges for providers of enhanced services. Even traditional telecommunications

services are moving away from mou-based pricing and offering bundles of, or unlimited, minutes at a flat rate. This is another example of the market moving too fast for regulations to keep up. Where even traditional telecom services have recognized that per mou pricing is a regulatory anachronism, the Commission should not impose it on a nascent industry such as VoIP. Maintaining mou-based access rates, in a market that is moving away from mou-based pricing, artificially sustains access revenues. Since SBC still control the vast majority of all access lines, it also provides SBC a market advantage over its competitors.

Q. ARE THERE OTHER EXAMPLES OF WHY THE COMMISSION SHOULD NOT ADOPT RULES THAT FAVOR A PARTICULAR COMPETITOR.

A. Yes. If the Commission adopts SBC's position on intercarrier compensation for VoIP traffic, it would permit SBC to impose originating access charges on Level 3 that SBC is prohibited from imposing on ESPs. In other words, when both the calling party and the called ESP are SBC customers, SBC follows the "local model" which assumes that SBC recovers the costs of delivering that traffic from its end user over the SBC network to the called party through SBC's local service rates. But if that same ESP switches its service to Level 3, and that same SBC end user wants to dial that ESP, SBC proposes to follow the "access model" and charge Level 3 for SBC's origination costs. By imposing costs on Level 3 that SBC may not impose on the SBC ESP customers, SBC gains a competitive and economic advantage in providing local access services to ESPs.

SBC appears to believe that because another carrier (Level 3) is inserted between SBC and the ESP, SBC may ignore the FCC's ESP exemption. SBC is wrong. This is an artificial distinction that penalizes Level 3 and chills competitive progress in the state. This shows that SBC is seeking to gain an unfair advantage against its direct competitor – Level 3. If SBC's proposal is adopted, Level 3 will be hard pressed to compete in the ESP customer market.

Q. HOW DOES LEVEL 3's CONTRACT PROPOSAL ENSURE THAT IT'S VoIP CUSTOMERS QUALIFY FOR THE ESP EXEMPTION?

A. We base our proposal on an FCC definition. In 1998, the FCC developed a tentative definition of phone-to-phone VoIP telephony that *may* qualify as a telecommunications service. This five-year old 1998 telecommunications services test ("1998 Test") has already been surpassed by changes in technology. Although the FCC is in the process of developing better, forward-looking guidelines for the industry, the 1998 Test remains the standard in the interim.

The FCC included four criteria in its 1998 Test:

(1) the provider "holds itself out as providing voice telephony or facsimile transmission service";

(2) the provider "does not require the customer to use C[ustomer] P[remise] E[quipment] different from that CPE necessary to place an ordinary touch-tone call (or facsimile transmission) over the public switched telephone network";

(3) the customer may "call telephone numbers assigned in accordance with the North American Numbering Plan and associated international agreements";

(4) the provider "transmits customer information without net change in form or content."[47]

It is important to note that a provider must meet all four criteria in order to satisfy the 1998 Test – and the resulting VoIP service may be considered a telecommunications service and not an information service. Importantly, a service must meet all four prongs of the test to be considered a telecommunications service.

Q. YOU SAID THAT THE FCC'S DEFINITION WAS TENTATIVE. PLEASE EXPLAIN.

A. In its *Report*, the FCC refused to make any definitive regulatory determinations concerning any class of VoIP services due, in part, to a lack of details in the record regarding specific types of VoIP services.[48] This determination was consistent with the FCC's historical approach of evaluating on a case-by-case basis whether a particular service is an information service or a telecommunications service. In reaching this decision, the FCC recognized that regulatory distinctions based on technological differences in VoIP services could quickly be "overcome by changes in technology."[49] Likewise, the FCC acknowledged that definitive regulatory classifications for VoIP services were not appropriate due to the "emerging" and "dynamic" nature of the market.[50]

[47] *Id* at ¶ 88.

[48] *Report to Congress* at ¶ 90.

[49] *Id.*

[50] *Id.*

Importantly, although the FCC stated in its *Report* that any "phone-to-phone" VoIP services that are found to be "telecommunications services" *may* be subject to Title II regulations, nowhere did the FCC state that under those circumstances, such services *must* be subject to the same regulations as local exchange carriers and/or IXCs.[51] Rather, the FCC acknowledged the "difficult" and "contested" issues involved with imposing the circuit-switched regulatory regime on VoIP services.

Q. DOES LEVEL 3 USE THE 1998 TEST IN ITS CONTRACT LANGUAGE?

A. Yes. Level 3's proposed contract language defines "VoIP Traffic" as traffic that *fails* two prongs of the 1998 Test. As I noted, failing even one prong means a service does not qualify as what the FCC has tentatively determined might be a telecommunications service. Nevertheless, for the purposes of this agreement, Level 3 proposes a somewhat stricter definition:

> "VoIP Traffic" – means voice traffic that either originates from or terminates to a Party's customer in an Internet Protocol ("IP") format. Such calls must undergo, on an end-to-end basis, a net protocol conversion (*i.e.*, TDM-to-IP in the case of terminating IP traffic or IP-to-TDM in the case of originating IP traffic) in order to be considered VoIP traffic. Further, such calls must either originate or terminate to the IP enabled Equipment of an end user. Subject to the Parties' Reservation of Rights with respect to such traffic, VoIP Traffic shall be considered as a separate and distinct category of traffic from Reciprocal Compensation Traffic, Switched Access/Toll Traffic, and ISP-Bound Traffic under this Agreement for purposes of intercarrier compensation.

[51] *Report to Congress* at ¶ 91.

Q. HOW DO YOU RESPOND TO CRITICS THAT SAY VoIP IS NO DIFFERENT FROM PLAIN OLD TELEPHONE SERVICE?

A. In contrast to plain old telephone service ("POTS"), voice service provided on an IP network is not a "pure transmission" service; it is an application or media stream that runs on the IP network, just as e-mail, streaming audio, streaming video and web browsing are applications that run on the IP network. Because it is data provided in IP form, VoIP applications can be combined with other IP-based applications. Thus, VoIP can incorporate features that permit customer interaction with stored data, use of computer processing, or have the "capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing or making available information."[52] Examples of applications combining transmission with stored data or use of computer processing include playing announcements and tones, performing speech recognition, presence monitoring, click access, VIP list creation, unified messaging, conferencing, number translation, find-me, and forwarding services.

Q. ARE THERE ANY OTHER DIFFERENCES YOU SEE BETWEEN VoIP AND POTs?

A. Yes. IP technology blurs traditional distinctions between local and long-distance by making geographic end-points irrelevant and, sometimes, impossible to determine.

[52] 47 USC § 152(20) (defining "information service").

As the Director of Technology Policy for Verizon Communications has acknowledged, "[i]t's hard to determine jurisdictionally where [an] IP end-point is."[53]

Q. HOW DO YOU RESPOND TO ILEC CLAIMS THAT VOIP PROVIDERS HOLD THEMSELVES OUT AS PROVIDERS OF POTS?

A. In their attempt to justify imposing legacy common carrier regulations on information services, ILECs make much of VoIP providers' marketing efforts. As Chairman Powell recently noted, "nobody will let good competition go unpunished."[54] ILECs generally cite to various web pages and press releases, asserting that a VoIP provider has "admitted" to providing traditional telephone service because it advertised its' services as a replacement for traditional telephone service. The Commission should reject this attempt to bootstrap VoIP providers into common carrier regulation. In order to gain market share, new entrants must convince customers to leave their current service provider and try something new. Providers of new technologies must walk a fine line between distinguishing their product and assuring customers that their product provides some of the same features customers expect from traditional common carrier telephone services.

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[53] Glenn Bischoff & Vice Vittore, *States Push to Regulate Voice as Voice*, TELEPHONY, Sept. 22, 2003, at 8-9 (quoting David Young, Director of Technology Policy, Verizon Communications).

[54] Kudlow & Cramer Interview. Interview: Interview: Michael Powell, FCC chairman, on Internet telephony, broadcast indecency rules and possible Comcast-Disney merger. Airdate February 12, 2004.

Q. CAN YOU GIVE AN EXAMPLE?

A. Yes. Consumers need to know that their VoIP service still functions with regular telephone numbers. Therefore, VoIP providers map North American Numbering Plan ("NANP") numbers to IP addresses. If they did not do this, customers would not use the new service as it would be an island unto itself of limited usefulness to the general public. Providers of nascent VoIP services are not seeking to limit their market to hobbyists schooled in the jargon of computers and the Internet. They are trying to market their product to the public and, for the first time, provide residential consumers the competitive benefits promised by the 1996 Act. The Commission should not punish new technologies for aspiring to this goal by using their marketing efforts as a basis for subjecting their information services to common carrier regulation. While holding oneself out as providing voice telephony is one prong of the 1998 Test, it is only one of four required prongs. Any service that fails even one of the four prongs is not what the FCC has tentatively determined may be a telecommunications service.

Q. HAS THE FCC CLASSIFIED ANY VOIP SERVICES AS TELECOMMUNICATIONS SERVICES SINCE THE *REPORT TO CONGRESS*?

A. Yes, in the AT&T petition for declaratory ruling via which AT&T requested that its phone-to-phone telephony services were exempt from access charges.[55] The FCC, however, was clear to note that its order was limited to the type of service offered by AT&T – an interexchange service that: "(1) uses ordinary customer premises equipment (CPE) with no enhanced functionality; (2) originates and terminates on the public switched telephone network (PSTN); and (3) undergoes no net protocol conversion and provides no enhanced functionality to end users due to the provider's use of IP technology."[56] This is not the type of service that is in dispute in this proceeding. As already noted above, the proposed contract language fails two of the prongs of the test set out in the *Report to Congress*. And as I've also testified, Level 3 is not providing VoIP service directly to Michigan consumer. Instead, Level 3 seeks language in its agreement with SBC that will allow Level 3 to compete in the ESP/VoIP marketplace.

[55] *AT&T Petition for Declaratory Ruling That AT&T's Phone-to-Phone IP Telephony Services Are Exempt from Access Charges*, WC Docket No. 02-361, Order (rel. April 21, 2004).

[56] *Id* at ¶ 1.

Q. ARE YOU AWARE OF ANY OTHER DECISIONS WHERE THE FCC CLASSIFIED A VOIP SERVICE AS A TELECOMMUNICATIONS SERVICE?

A. No. Since the release of the *Report to Congress,* and with the exception of the AT&T decision, the FCC has declined on several occasions to change its deregulatory approach toward VoIP services. In one instance, US WEST petitioned the FCC for a declaratory ruling that local exchange carriers could impose access charges on VoIP service providers that met the 1998 Test. The FCC however, has not ruled on that petition (or even sought comment on it), which has been pending for almost five years.[57] In another instance, when the instructions to a new consolidated telecommunications reporting worksheet appeared to indicate that VoIP providers were required to contribute to various federal funds, the FCC refused to accept an assertion by one ILEC that VoIP providers were required to contribute, and deleted all language that appeared to change the FCC's existing regulatory treatment of VoIP services.[58] Additionally, despite pressure to the contrary, the FCC is steadfast in its international advocacy position that VoIP should remain unregulated due to the

[57] *Petition of U S WEST, Inc. for Declaratory Ruling Affirming Carrier's Carrier Charges on IP Telephony* (filed Apr. 5, 1999) ("*U S West Petition*").

[58] *1998 Biennial Regulatory Review – Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms*, Report and Order, 14 FCC Rcd 16602, ¶ 22 (1999).

"significant downward pressure" VoIP services place on international settlement rates and consumer prices.[59]

In fact, the FCC just recently reaffirmed its historically "hands-off" approach with regard to VoIP, treating it like any other unregulated information service. In its *Pulver Order*, the FCC, and Chairman Powell in particular, stated,

> Our ruling formalizes the Commission's policy of "non-regulation" of the Internet and, in so doing, preserves the Internet as a free and open platform for innovation. Just as important, today's ruling removes barriers to investment and deployment of Internet applications and services by and ensuring that Internet applications remain insulated from unnecessary and harmful economic regulation at both the federal and state levels.[60]

In sum, the FCC has refused to regulate VoIP services, although it has had ample opportunity. Recognizing the inherent difficulty in establishing broad classifications for VoIP due to its rapidly evolving nature, the FCC follows a case-by-case approach in determining whether a particular type of VoIP service should be regulated as a telecommunications service.

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[59] *See Report to Congress* at ¶ 93 (*citing Rules and Policies on Foreign Participation in the U.S. Telecommunications Market and Market Entry and Regulation of Foreign-Affiliated Entities*, Report and Order and Order on Reconsideration, 12 FCC Rcd. 23891 (1997)); *see also* Remarks of Commissioner Susan Ness (as prepared for delivery), Information Session – WTFP (Mar. 7, 2001) ("*Commissioner Ness Remarks*") (emphasis added).

[60] *See In The Matter Of Petition For Declaratory Ruling That Pulver.com's Free World Dialup Is Neither Telecommunications Nor A Telecommunications Service*, 19 FCC Rcd. 3307, 3326, Statement of Chairman Michael K. Powell (rel. February 19, 2004).

Q. ARE YOU AWARE OF ANY OTHER VOIP ISSUES CURRENTLY PENDING BEFORE THE FCC?

A. Yes. There is a declaratory ruling petition concerning VoIP services,[61] one forbearance petition (filed by Level 3) concerning intercarrier compensation for VoIP Traffic, and NPRMs considering various aspects of VoIP services. The FCC also held a public hearing on VoIP regulatory issues on December 1, 2003. The FCC released a notice of proposed rulemaking ("NPRM") in March of this year in which it will examine issues related to services and applications using Internet Protocol.[62] The issue of how VoIP should be treated from an intercarrier compensation perspective is also pending before the FCC in another NPRM.[63] In this proceeding, the FCC is considering broad reforms to its intercarrier compensation regime, including whether to implement a bill and keep system. In this *Intercarrier Compensation* proceeding, the FCC has stated that under the current state of the law, VoIP "is exempt from the access charges that traditional long-distance carriers must pay."[64] Level 3 will discuss these filings further in post hearing briefs.

Pending completion of the FCC proceedings, federal law remains that VoIP providers offering "enhanced" or "information" services (*i.e.*, those VoIP services

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[61] *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, WC Docket No. 03-211 (filed Sept. 22, 2003).

[62] *In the Matter of IP-Enabled Service*, WC Docket No. 04-36, Notice of Proposed Rulemaking (rel. March 10, 2004) ("*VoIP NPRM*").

[63] *See Intercarrier Compensation NPRM*, *supra*, at n.8.

[64] *Id* at ¶133.

that satisfy the FCC's enhanced services test or the Act's definition of "information service") are not required to pay access charges.

Q. SHOULDN'T THIS COMMISSION WAIT FOR THE FCC TO ACT RATHER THAN ISSUING A RULING IN THIS ARBITRATION?

A. No. As I mentioned earlier, this Commission needs to be proactive and adopt rules to govern the intercarrier compensation arrangements that will apply to the exchange of traffic between Level 3 and ILEC. The parties need this certainty to operate. Level 3, especially, needs this certainty in order to expand its business and offer competitive service alternatives to VoIP providers. As I mentioned earlier, Level 3 has designed its contract proposal to be consistent with the current access charge exemption for ESPs; consistent with that exemption, Level 3 requests that the Commission refrain from making VoIP subject to access charges. If the FCC modifies these rules, the parties will amend the agreement to incorporate that decision under the change in law clause. However, no one knows when the FCC will issue new rules. Therefore, the Commission should not defer this issue, but should adopt Level 3's position, which is consistent with current law.

Q. PLEASE SUMMARIZE YOUR POSITION ON THIS ISSUE.

A. Regulators' ultimate goal should be to move all intercarrier compensation to cost-based rates that do not vary based on, or provide advantages to, a particular service or type of service provider. Our current intercarrier compensation system has too many anomalies to be sustained in a competitive market. At the retail level, the industry is already moving away from distance-based and service-based pricing distinctions. At

the regulatory level, the industry is already moving away from above-cost intercarrier compensation by reducing both access charge and reciprocal compensation rates. No single competitor should be entitled to a revenue stream merely because it has historically relied on those revenues for purposes that may promote the public good, but may also increase its profit margin. The Commission should move the industry closer to its ultimate goal by adopting Level 3's position on this issue. When Level 3 and ILEC exchange IP enabled traffic, they should pay each other cost-based terminating compensation. This result is forward-looking, establishes operating certainty for the parties, encourages the development of nascent services such as VoIP, and creates a level playing field in the market to provide services to VoIP providers.

G. ISSUE 7 - INTERCARRIER COMPENSATION FOR THE EXCHANGE OF IP ENABLED SERVICES[65]

Q. PLEASE BRIEFLY DESCRIBE THE DISPUTE ON THIS POINT.

A. This issue concerns which intercarrier compensation mechanism applies to voice customers of both parties, including customers that purchase foreign exchange-like services. Level 3's position is that the terminating carrier is entitled to cost-based reciprocal compensation. SBC's position is that when SBC is the originating carrier, SBC is entitled to above-cost access charges.

[65] *See* Intercarrier Compensation, Sections 3.1, 3.6, 3.7, 4.7- 4.7.2.1, 5.1, 5.1.1-5.1.2.2.1, 7.1, 7.2, 12.1-12.6, 12.9, 13.1, 14.1, 15.1, 15.2, 15.3, 15.4, 16.1, and 17.

Q. WHY DO YOU LIMIT THE ISSUE TO VOICE CUSTOMERS?

A. I limit this issue to voice customers because the FCC compensation regime applies to ISP-bound traffic, including ISP-bound traffic terminated to customers utilizing FX-like services. As many state commissions have already held, state commissions do not have jurisdiction to alter the FCC's regime when an ISP uses an FX-like service. Level 3 will fully address legal nuances of this jurisdictional issue in post hearing briefs.

Q. PLEASE SUMMARIZE WHY LEVEL 3'S POSITION SHOULD BE ADOPTED.

A. Level 3's position should be adopted for at least five reasons.

First, calls are conventionally rated and routed throughout the U.S. based upon the NXX codes of the originating and terminating numbers. There is no reason to deviate from that convention here. These calls are routed to the POI for local traffic and handed off just as any other local call would be. This practice should be continued such that calls between an originating and terminating NXX associated with the same local calling area are rated and routed as local.

Second, from a functional perspective, the services that Level 3 provides to its customers are no different than those that ILECs such as SBC have provided for years to their own foreign exchange customers, and are no different than other comparable targeted services that many ILECs market today. While the network architecture may be different and the scope of the service coverage wider, the functionality delivered from the customer's perspective is no different at all – the customer gets a telephone

number in a serving area where the customer has no physical presence. The Commission should encourage, rather than discourage, this type of competition and service innovation.

Third, SBC's position is contrary to the efficient workings of a competitive telecommunications marketplace. As Mr. Gates explains, SBC's position penalizes competitors for deploying different kinds of networks and imposes unnecessary costs that will frustrate the delivery of competitive services.

Fourth, SBC's position discriminates against Level 3 vis-à-vis SBC's own operations and its treatment of other LECs. Applying originating access charges to Level 3-delivered competitive responses to SBC FX services would be discriminatory and result in a regulatory-created advantage for SBC's services.

Fifth, SBC incurs no more cost in originating a call to a Level 3 FX-like service customer than SBC would incur in originating a call to a Level 3 customer who has a physical presence in the local calling area. The only costs SBC incurs are the transport and switching charges required to bring traffic to the POI between SBC and Level 3. These costs do not change based upon the location of Level 3's customers, so there is no economic justification for treating these calls differently from any other locally dialed call. SBC's position is based not upon cost recovery, but upon a desire to claim access revenue to which it is not entitled. As I discussed previously, the fact that SBCs has historically enjoyed a revenue stream from above-cost access charges does not entitle them to maintain (or increase) that revenue in perpetuity.

In sum, so-called "Virtual NXX" number assignment is not some kind of nefarious CLEC scheme, as some ILECs imply. It is the same service functionality that ILECs such as SBC deliver to their own FX customers – albeit through what may be different technologies and network platforms – to respond to customer demand for local telephone numbers in different exchanges. If the Commission is going to direct Level 3 to pay originating access to SBC for terminating foreign exchange calls from SBC's customers, then the Commission must direct all carriers, ILECs and CLECs alike, to pay originating access to the carrier whose customer originates the call to the terminating carrier's FX-like customer.[66] In other words, the Commission must ensure that SBC does not engage in any discriminatory, unfair, or anti-competitive practices.

Q. IS FX TRAFFIC CONSIDERED TO BE LOCAL TRAFFIC?

A. Yes. For rating and compensation purposes, FX traffic is been treated as local. SBC rates and bills its customers based on the NXX codes of the calling and called party. If the call is rated as local, SBC bills its customer for a local call.

Q. WHY WOULD CUSTOMERS WANT TO BUY, AND CARRIERS WANT TO OFFER, FX-LIKE SERVICES?

A. Businesses want to buy FX-like services because it allows their customers to reach them without having to make a toll call. It also allows businesses to provide service in other areas before they have facilities or offices in those areas. For instance, FX-like services enable ISPs, among other customers, to offer local dial-up numbers

[66] *See* 47 USC §§ 201(a)-(b) and 252(a).

throughout Michigan, including in more isolated, rural, areas of the State. Access to the Internet is affordable and readily available in all areas of the state because these FX-like services allow ISPs to establish a small number of points of presence ("POPs") that can be reached by dialing a local number regardless of the physical location of the Internet subscriber.

Other organizations, such as the Michigan government, may also want to make use of FX-like services to allow residents to contact state agencies – which may actually reside in Lansing or Detroit – without incurring the cost of a toll call. Such an arrangement would allow the state to provide services in rural areas without building or renting space in those localities and without relocating employees. In sum, carriers provide FX-like services because customers demand them.

Q. DOES SBC OFFER FX SERVICE IN MICHIGAN?

A. Yes.

Q. HOW DO YOU RESPOND TO THE CLAIM THAT LEVEL 3'S SERVICE IS DIFFERENT FROM TRADITIONAL FX IN THAT THE LATTER IS TYPICALLY OFFERED AS A RETAIL SERVICE OFFERING WITH A DEDICATED CONNECTION TO THE CALLED PARTY?

A. This comparison is based on a misunderstanding of the service and the nature of a call flow in a competitive, multi-provider environment. First, Level 3's service is a "retail service offering" offered to customers such as ISPs, which have long been treated as end user customers by the FCC. Second, Level 3's service offers a "direct connection" to the customer – the call is delivered to the customer once it comes onto

the Level 3 network, without going through any intermediate carrier. While it is true that Level 3 and SBC are both involved in routing the call between their customers, that is not a function of the way in which Level 3 provides FX-like service; rather, multi-provider routing is a function of a competitive telecommunications marketplace – *all* calls between competing carriers must be exchanged at the POI regardless of customer location. Any call from an SBC customer to a Level 3 customer – even if both customers were physically located in the same local calling area – would require that SBC and Level 3 both be involved.

Likewise, any focus on a "dedicated circuit" from the "home exchange" to the "foreign exchange" proceeds from the inappropriate premise that if CLECs want to provide comparable services to ILECs, they have to build their networks and charge their customers in the same exact way the ILECs do. Adopting ILEC's proposal would discourage innovation and punish efficiency. New entrants design networks differently, but that doesn't necessarily change the basic functionality delivered to customers. The Commission should reject any SBC suggestions to treat a FX-like service differently based upon the way in which a carrier's technology and/or network supports that service. It would be discriminatory to prohibit a service based solely upon the way in which a carrier provisions that service to its customers, and it is an artificial economic constraint that is not justified from an economic, public policy, or operational standpoint.

The New York Public Service Commission summarized this well in considering disputes between independent ILECs and CLECs with respect to ISP-

bound foreign exchange-type calls. Specifically, the New York commission found that foreign exchange service should be defined "operationally, i.e., making local service possible in an exchange where the customer has no physical presence."[67] The New York commission further noted that an operational focus was more appropriate than a technological focus because "the architecture of new entrant networks will differ from that of incumbents and… CLECs need not replicate the incumbent's service offerings, rate centers, or customer mix."[68]

Q. TO YOUR KNOWLEDGE, HAS THE FCC OTHERWISE ADDRESSED THE ISSUE OF COMPENSATION FOR FX-LIKE SERVICES?

A. Yes. The FCC issued a Notice of Proposed Rulemaking to completely overhaul the existing intercarrier compensation regimes and replace them with a single, unified intercarrier compensation regime. The FCC has identified the use of "virtual central office codes" as an issue to be resolved in its rulemaking proceeding on such a unified intercarrier compensation regime.[69] Thus, the issue of the proper regulatory treatment of traffic using virtual central office codes ultimately will be addressed by the FCC. Until that time, however, this Commission retains the jurisdiction to determine, as it should, that voice calls using FX-like arrangements are eligible for reciprocal compensation under an interconnection agreement.

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[67] *In re AT&T*, Nos. 00-C-0789, 01-C-0181, 2001 WL 3082126, (N.Y.P.S.C., Sept. 07, 2001).

[68] *Id*.

[69] *Id* at ¶ 115.

Q. IS LEVEL 3 GETTING A "FREE RIDE" BY VIRTUE OF SBC CARRYING LEVEL 3'S TRAFFIC.

A. There is no "free ride" at issue here. Regardless of where Level 3's customer is located, SBC routes the call precisely the same way: it is delivered to Level 3 at the POI and, from that point on, Level 3 incurs all the costs of transporting the call to its customer's location. As noted in Issue I, it is SBC's responsibility to carry traffic to the POI that Level 3 has selected. That responsibility does not change if the called party has an FX-like service and, therefore, SBC incurs no additional cost. Level 3 assumes the financial responsibility for the traffic at the POI, regardless of the physical location of the terminating customer. These architecture issues are discussed in greater detail by Mr. Wilson.

Q. YOU STATED THAT LEVEL 3's SERVICE DOES NOT IMPOSE ANY ADDITIONAL COSTS ON ILEC. PLEASE EXPLAIN.

A. There is no additional cost incurred by SBC when a customer purchases a FX-like service from Level 3. From an interconnection perspective, SBC carries the call the same distance and incurs the same costs regardless of whether the call is terminated to a Level 3 customer with a physical location in the NXX rate center of the calling party, or to a Level 3 customer with a virtual presence. SBC's obligations and costs are therefore the same in delivering a call originated by one of its customers, regardless of whether the call terminates at a so-called "virtual" or "physical" NXX behind the Level 3 switch.

Q. DOES THE PHYSICAL LOCATION OF LEVEL 3'S CUSTOMER IMPACT THE HANDLING OR PROCESSING OF A CALL BY SBC?

A. No. SBC would always be responsible for carrying the call to the POI and then handing off the call to Level 3 to transport and terminate the call. The fact that the Level 3 customer may not be physically located in the same calling area as the SBC customer originating the call does not impact SBC's financial and/or operational responsibilities. Indeed, even if Level 3's customer has a presence in the local calling area of the originating caller, the way the call is handled is the same from SBC's perspective. This is no different than the case in which two neighboring ILECs exchange calls between each LEC's FX and FX-like customers today – SBC would hand the call off to a neighboring independent LEC at the same point as any other call, and would not route the call differently based upon the fact that the independent LEC's customer might be a FX-like customer.

Q. WHAT IS YOUR RECOMMENDATION WITH RESPECT TO THIS ISSUE?

A. My recommendation is that the Commission rule that the LEC terminating FX-like voice traffic is entitled to cost-based reciprocal compensation for the termination functions it performs and that the originating LEC is not entitled to assess above-cost originating access charges. This conclusion is consistent with: (i) the way in which ILECs have historically handled their own exchange of FX-like traffic; (ii) federal intercarrier compensation rules; (iii) the goal of promoting a competitive telecommunications marketplace; and (iv) the goal of a fair and reasonable interconnection structure that compensates carriers only for additional costs.

TIER II ISSUES

H. ISSUE 10[70] – LIABILITY FOR HAZARDOUS SUBSTANCES AND ENVIRONMENTAL HAZARDS[71]

Q. PLEASE DESCRIBE THE DISPUTE ON THIS POINT.

A. This issue revolves around the Parties' liability for hazardous substances and environmental hazards found at SBC sites, including but not limited to central offices where Level 3 is collocated. It is Level 3's position that it should not be liable for removal, treatment, transport, disposal and remediation of hazardous substances and environmental hazards if such hazardous substances and environmental hazards were introduced at the site by SBC or a third party unrelated to Level 3. It is commercially unreasonable for SBC to attempt to hold Level 3 liable for hazardous substances or environmental hazards that SBC itself or a third party with no contractual or other relationship to Level 3 introduces to an SBC site.

Q. ARE YOU SAYING THAT LEVEL 3 SHOULD NEVER BE HELD RESPONSIBLE FOR HAZARDOUS SUBSTANCES OR ENVIORNMENTAL HAZARDS?

A. No. Under Level 3's proposed contract language, Level 3 is responsible for hazardous substances or environmental hazards introduced to the affected site by either Level 3 or its authorized contractors. Only when Level 3 or a contractor acting on its behalf introduces hazardous substances or environmental hazards to a site

[70] Issues 8 & 9 reserved.

[71] *See* General Terms and Conditions, Section 32.

should Level 3 be held liable for related remediation, management, and disposition expenses. SBC's proposed contract language is so one-sided that Level 3 is forced to accept liability even if these hazardous materials were introduced to the site before Level 3 became collocated at the central office. Under SBC's proposal, Level 3 would be held responsible for hazardous material introduced to the site by SBC, its predecessors in interest, its contractors, or even unrelated parties years or even decades before Level 3 has leased collocation space in the affected SBC site.

Q. WHAT IS YOUR RECOMMENTION TO THE COMMISSION ON THIS ISSUE?

A. It is commercially unreasonable for SBC to attempt to hold Level 3 liable for removal, treatment, transport, disposal, remediation, excavation, storage or other legal disposition or management of hazardous substances or environmental hazards that SBC itself or a third party with no contractual or other relationship to Level 3 introduces to an SBC site before, during, or after Level 3's occupation of collocation space, access to a right-of-way, pole or conduit. Level 3 should only be held liable for hazardous substances or environmental hazards introduced to an SBC site by Level 3 or a contractor working on its behalf.

I. ISSUE 11 – NONPAYMENT & PROCEDURES FOR DISCONNECTION[72]

Q. PLEASE BRIEFLY DESCRIBE THE DISPUTE ON THIS ISSUE.

A. The Interconnection Agreement should make clear that neither party can unilaterally terminate services provided pursuant to the agreement without first following all of the applicable contractual and legal requirements with respect to discontinuance of services. SBC, however, has proposed contract language that would allow it to terminate services whenever Level 3 fails to pay charges that SBC believes are owed. Level 3 proposes more reasonable terms. Termination of services should occur only after a party has not paid money that it either agrees it owes or that the Commission or an arbitrator has found it owes.

Q. CAN YOU PROVIDE US WITH AN EXAMPLE OF SBC'S ATTEMPTS TO UNILATERALLY TERMINATE SERVICE TO LEVEL 3?

A. Yes. On or about March 11, 2004, SBC circulated an amendment to Level 3 and other CLECs requesting that Level 3, and other CLECs, agree to contract language permitting SBC the right to terminate UNE services should the CLEC fail to disconnect a UNE and transition UNE circuits to SBC tariffed services – to the extent SBC deems those services as "available" under its tariff – within 30 days of the date upon which the DC Circuit's Order in *USTAv. FCC*[73] takes effect. SBC also stated in the letter that parties not agreeing to its terms would face dispute resolution complaints within eight days of the date that it filed the letter. SBC's letter ignores

[72] *See* General Terms and Conditions §§ 8.8.1, 9.2, 9.3, 9.5, 9.6, and 9.7.

[73] *United States Telecom Ass'n v. FCC,* Case No. 00-1012 (D.C. Cir. Mar. 2, 2004).

the fact that Level 3 has effective agreements with SBC throughout its operating regions and that those agreements contain change in law provisions and procedures to follow should a change be required to be implemented. In its March 11th letter, SBC, however, unilaterally ignores that such agreements exist.

Q. PLEASE SUMMARIZE YOUR POSITION ON THIS ISSUE.

A. The Commission should reject SBC's proposed terms and adopt Level 3's more reasonable terms. Termination of service is a drastic measure that can have severe customer impact and should only be taken after a party has not paid money that it either agrees it owes – that is, it is not subject to dispute resolution – or a final Commission order that the money is owed has been entered.

J. ISSUE 12 – DEPOSITS[74]

Q. WHAT IS LEVEL 3'S POSITION REGARDING WHEN A DEPOSIT SHOULD BE REQUIRED?

A. Level 3's position is that it should be required to submit a deposit when it has substantially failed to comply with the requirements for disputing charges billed by SBC. Moreover, SBC should not be allowed to demand a deposit, or demand an increase of an existing deposit, unless there has been a significant and material change in Level 3's financial circumstances. In addition, Level 3 should not be required to provide a deposit where SBC itself has not substantially complied with the provisions of the agreement relating to presentation of invoices and dispute

[74] *See* General Terms and Conditions, § 7.

resolution. SBC should not be allowed to ignore such provisions and then use its noncompliance to demand an assurance of payment – demand a deposit or an increase thereof.

Q. HOW DOES LEVEL 3 PROPOSE TO MEASURE CREDITWORTHINESS?

A. Level 3 proposes to use the effective date of the agreement as the benchmark for determining creditworthiness; that is, Level 3's creditworthiness on the effective date of the agreement will be the measure against which any future deposit requirements will be evaluated. SBC objects to using the effective date of the agreement as the benchmark but has not offered a suitable objective substitute. Level 3's terms are fair to both parties and offer an objective benchmark against which deposit requirements can be measured.

Q. IS IT LEVEL 3'S POSITION THAT IT SHOULD NEVER BE REQUIRED TO PROVIDE A DEPOSIT?

A. No. Level 3 does not object to SBC's assurance of payment requirements but is simply trying to define the circumstances under which such deposit requirements can be required or increased. Without a narrow and defined limitation on SBC's ability to increase deposits – a significant and material change of Level 3's creditworthiness as of the date of the effective date of the agreement – SBC could conceivably take any unfavorable investment market comment/article as justification for increasing Level 3's deposit requirements.

Q. WHAT IS LEVEL 3'S RECOMMENDATION?

A. Level 3 asks that the Commission rule that Level 3 should not be required to submit a deposit (or increase a deposit) unless there has been a material change in its creditworthiness since the effective date of the agreement.

K. ISSUES 13, 15[75] - WHETHER ASSURANCE OF PAYMENT SHOULD BE REQUIRED ON STATE-BY-STATE BASIS AND WHETHER LEVEL 3 HAS A RIGHT TO DISPUTE ASSURANCE OF PAYMENT PROVISIONS?[76]

Q. CAN YOU BRIEFLY DESCRIBE THE ISSUES IN DISPUTE?

A. There are two issues in dispute: a) should assurance of payment requirements be implemented on a state-by-state basis, and b) can Level 3 dispute SBC's assurance of payment demands.

Q. WHAT IS LEVEL 3'S POSITION REGARDING WHETHER ASSURANCE OF PAYMENT REQUIREMENTS SHOULD BE IMPLEMENTED ON A STATE-BY-STATE BASIS?

A. SBC invoices apply for services rendered on a state-by-state basis. For example, Level 3 receives and pays invoices for services rendered by SBC in Michigan; the bill does not include billings for services rendered in any of the other SBC operating territories. Likewise, SBC does not invoice Level 3 in California for services provided in Michigan. Under SBC's proposal, however, SBC could demand or increase a deposit requirement in Michigan if Level 3 has disputed an invoice issued

[75] Issue 14 reserved

[76] *See* General Terms and Conditions, §§ 7.2, 7.8, 7.8.1,

by SBC for services rendered in California. The California pubic services commission has no jurisdiction in Michigan and likewise the Michigan commission has no jurisdiction in California. The Commission should be concerned about a provision in the agreement that would allow SBC to negatively impact consumers in Michigan based on a dispute between the parties in California.

Q. DOES LEVEL 3'S PROPOSAL PROHIBIT SBC FROM SEEKING ASSURANCE OF PAYMENT IN ANY OF ITS OPERATING TERRITORIES?

A. No. Nothing in Level 3's proposal would prohibit SBC from seeking assurance of payment in all 13 states in which SBC operates provided the contract requirements for a deposit or an increase thereof are triggered in each jurisdiction. Level 3's proposal only clarifies that where contract requirements are triggered with respect to only one state, say Nevada, SBC cannot demand a separate deposit in Texas, Illinois, Michigan, California, etc.

Q. WHAT IS LEVEL 3'S POSITION REGARDING WHETHER IT SHOULD BE PERMITED TO DISPUTE A DEMAND FOR ASSURANCE OF PAYMENT?

A. Level 3 should have the right to dispute whether an assurance of payment is required, and SBC should not be allowed to cease performing under the agreement when such a dispute arises. SBC, however, wants just that – it wants the ability to cease performing under the agreement simply because Level 3 disputes a deposit requirement. SBC cannot be permitted to unilaterally cease performance under the agreement where Level 3 has raised a good faith, bona fide dispute with respect to an SBC demand for deposit. Level 3 wants the ability to avail itself of the dispute

resolution provisions of the agreement, and to provide otherwise renders those provisions mute.

Q. WHAT ARE LEVEL 3'S RECOMMENTATIONS REGARDING THE ASSURANCE OF PAYMENT ISSUES?

A. Level 3's proposal is straight forward and fair to both parties. Deposit requirements must be implemented on a state-by-state basis. The Commission should not allow SBC to unilaterally alter provision requirements in Michigan based on a dispute between the parties in California or elsewhere. Second, Level 3 must be allowed to dispute whether an assurance of payment is required without threat that SBC will unilaterally ceasing to perform under the terms of the agreement.

L. ISSUE 16 – PERFORMANCE MEASURES APPENDIX/OUT OF EXCHANGE APPENDIX[77]

Q. WHAT ARE THE ISSUES RELATED TO THESE APPENDICES?

A. These are two distinct items, but I will address both issues together as they are pretty straight forward. The first issue has to do with the need to include a performance measurement appendix in the agreement, and the second issue has to do with whether SBC can force Level 3 to agree with SBC's interpretation of the law.

Q. CAN YOU BRIEFLY DESCRIBE THE FIRST ISSUE?

A. Yes. Over the course of the last year, SBC and Level 3 have negotiated the terms of a performance measurement appendix. Agreement was reached on language several months ago. That agreement, however, was never filed with the Commission for

[77] *See* Entire Performance Measurement Appendix.

approval, the thinking of the parties being to wait until the instant arbitration was filed – and to file the appendix as agreed-to language. At the eleventh hour, however, SBC has decided that it does not need or desire a performance measurement appendix in the agreement.

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Since the parties have already agreed to language for a performance measurement appendix, Level 3 believes that inclusion of such appendix in the agreement is appropriate. Level 3 has spent a considerable amount of time and resources working on this issue – working from an SBC-provided template – and Level 3 should be allowed the benefit gained from its efforts. SBC cannot be allowed to string a party along, at great expense, and at the end of the process be allowed to walk away from agreed-to language. SBC has offered no good reason why it shouldn't be required to comply with the appendix, and the Commission must not allow SBC to simply walk away from commitments made during negotiations, especially in light of the fact that the appendix would have been filed with the Commission months ago had the parties not agreed to wait until the instant arbitration to file the appendix as agree-to language.

M. ISSUE 17 – SBC'S OBLIGATION IN THE OUT OF EXCHANGE APPENDIX TO PROVIDE UNE, COLLOCATION AND INTERCONNECTION SERVICES PURSUANT ONLY TO FEDERAL LAW[78]

Q. CAN YOU BRIEFLY DESCRIBE THE DISPUTE DEALING WITH THE OUT OF EXCHANGE APPENDIX?

A. SBC has proposed language in the appendix providing that SBC will provide UNEs pursuant only to federal law. SBC's proposed language ignores state unbundling, collocation and interconnection obligations that may have been approved by the Commission. The SBC proposal also ignores any Section 271 unbundling obligations that may have been imposed on SBC in the 271 process. The contract language approved by the Commission should provide that SBC will not only comply with federal unbundling requirements, but also with any state requirements approved by the Commission.

N. ISSUES 18 & 19 – PHYSICAL COLLOCATION & VIRTUAL COLLOCATION APPENDICES[79]

Q. WHAT ARE THE ISSUES RELATED TO THIS APPENDICES?

A. I will be addressing four issues, three regarding the physical collocation appendix and one global issue with the virtual collocation appendix. I will address the physical collocation appendix issues first. Two of the disputes have to do with terminology proposed by SBC and the third with SBC's obligation to remove obsolete and unused equipment from SBC premises.

[78] *See* Out of Exchange Appendix, § 2.3.

[79] *See* Entire Physical & Virtual Collocation Appendices.

Q. CAN YOU BRIEFLY DESCRIBE THE PHYSICAL COLLOCATION APPENDIX DISPUTES?

A. The first two disputes have to do with the definitions of "Eligible Structure" and "Multifunctional Equipment." Level 3 has proposed replacing the phrase "Eligible Structure," which is not defined in the Act or any federal regulations, with "Premises," which has been defined by the FCC, at 47 CFR § 51.5, and is also used in the Act, at 47 USC 251(c)(6). Level 3's proposal insures that there is no ambiguity in the agreement, ambiguity that could lead to later disputes. The same is true with the definition of "Multifunctional Equipment." Level 3 has proposed contract language that tracks the FCC's definition, found at 47 CFR 51.5. Regarding the third issue, Level 3 believes that SBC should be obligated to use its premises efficiently, including the removal of obsolete or unused equipment. SBC should not be allowed to use equipment "retired in-place" to claim that collocation space is not available. Any such equipment should be removed from SBC premises at its expense. To provide otherwise would give SBC a competitive advantage over any CLEC attempting to reach end users subtending a particular end office (where collocation space is not available because of equipment retired in-place).

Q. PLEASE ADDRESS THE DISPUTE REGARDING THE VIRTUAL COLLOCATION APPENDIX.

A. SBC provided Level 3 with a draft appendix for virtual collocation on March of this year. The draft contained numerous errors and omissions, making it difficult to redline. In an effort to address the issue, Level 3 delivered an alternative draft

proposal on May 17, 2004, based on collocation appendices that SBC has used in the past and that is similar to the Parties existing virtual collocation appendix. The alternative proposal is attached to the Petition as part of Appendix C. As of the date of the filing of the Petition, SBC has not had an opportunity to advise Level 3 if the terms or acceptable. Should SBC submit proposed revisions to the proposed draft, Level 3 reserves the opportunity to respond to such revisions. That said, Level 3 recommends that the Commission approve the virtual collocation appendix as submitted. The appendix is similar to that found in the Parties current interconnection agreement and is consistent with FCC and state collocation requirements.

O. ISSUE 20 – COORDINATED HOT CUTS APPENDIX[80]

Q. PLEASE DESCRIBE THE ISSUE IN DISPUTE?

A. Level 3 has proposed language that confirms SBC's obligation to provide coordinated Hot Cuts at TELRIC-based rates. SBC has refused Level 3's recommendation and instead has proposed to direct the parties to SBC's federal tariffed rates. I have no idea whether SBC's tariffed services are TELRIC-based, although I doubt this to be the case since the TELRIC methodology has typically been used to price ILEC wholesale and not retail – tariffed – services. Since SBC is required to provide coordinated Hot Cuts at TELRIC-based rates, including such language in the parties' agreement will remove any ambiguity as to the parties' obligations during the term of the agreement.

[80] *See* Coordinated Hot Cuts, Sections 3.1, 3.2, 3.2.1, 3.2.1, 3.2.3, 3.2.4, 3.2.5.

TIER III ISSUES

P. ISSUES GT-1, THRU GT-4 – GENERAL TERMS AND CONDITIONS[81]

Q. CAN YOU BRIEFLY DESCRIBE THE ISSUES IN DISPUTE?

A. I will be addressing four issues. I will address the term of the agreement, the placement of multiple Intervening Law provisions within various appendices, the redundant use of definitions in multiple appendices, and SBC's proposal that Level 3 agree with SBC's legal interpretations.

Q. WHAT IS LEVEL 3'S POSITION REGARDING THE TERM OF THE AGREEMENT?

A. Level 3 has proposed a term of three years. A shorter term is not reasonable in view of the significant resources expended by the parties in negotiating and arbitrating an interconnection agreement. A shorter term does not give the parties a realistic chance to implement their business plans and could prove disruptive to Level 3 customers – resulting from more frequent changes to the terms under which Level 3 must operate.

[81] *See* Issues GT-1, GT-2, GT-3, & GT&C-4 in Petition; General Terms and Conditions, Section 5.2; General Terms and Conditions, Section 21), Clearinghouse Appendix, Section 9.1, 9.2.; Physical Collocation Appendix Section 15.1; Network Interconnection Methods, Section 5.1; Definitions from Interconnection Trunking Requirements, Section 1.4-1.26, 2.1-15; Recording Appendix 2.1-2.20; SS7 Appendix 1.1-1.24; Out of Exchange Appendix sections 1.2-1.8; Coordinated Hot Cuts Appendix, Sections 1.2-1.9; Clearinghouse Appendix Sections 1.2-1.24, 1.26-1.27, Physical Collocation Appendix, Sections 2.1-2.24, 2.26-33, UNE Appendix 1.2-1.24; Network Interconnection Methods, Section Appendix, Sections 1.2-1.24; Appendix SS7, Sections 1.2-1.24, 2.2.2, 2.3.1; Network Interconnection Methods, Section 7.1; SS7 Appendix, Section 9.1; Out of Exchange Appendix, Section 10.1; Coordinated Hot Cuts Appendix, Section 4.1; Clearinghouse Appendix, Section 11.1; 911 Appendix, Section 11.1; UNE Appendix, Section 21.1; Interconnection Trunking Requirements Appendix, Section 14.1; Intercarrier Compensation Appendix, Section 19.1; Directory Assistance Listing Appendix, Section 7.1; and Appendix SS7, Section 9.1.

Level 3 needs a certain degree of certainty and predictability in its contractual arrangement with SBC for interconnection services and facilities in order to provide high quality, reliable and innovative services to Michigan consumers, and a three year term provides that certainty and predictability. Moreover, the proposed agreement contains a change in law provision that should provide both parties with ample protection in the event certain sections of the agreement are deemed void as a result of ongoing or future legal action.

Q. CAN YOU BRIEFLY DESCRIBE THE DISPUTE REGARDING THE PLACEMENT OF THE INTERVENING LAW PROVISION WITHIN MULTIPLE APPENDICES, AND LEVEL 3'S PROPOSED SOLUTION?

A. SBC has proposed including Intervening Law provisions in multiple appendices of the agreement. Level 3 believes that the Intervening Law provision found in Section 49 of the General Terms and Conditions section of the agreement adequately covers the issue. The multiple provisions are unnecessarily duplicative and likely to lead to confusion. Level 3, or SBC, would be hard pressed to argue that the general terms and conditions of the agreement are not applicable to the different appendices; should that be the case, the Commission would now have before it multiple petitions for arbitrations, all of them addressing specific appendices of the proposed agreement. Such procedure is unnecessarily wasteful of the parties and the Commissions time and resources.

Q. CAN YOU PLEASE ADDRESS THE USE OF DEFINITIONS IN THE AGREEMENT?

A. SBC has proposed repeating identical definitions in each appendix of the agreement. Level 3 believes that repeating the same definitions throughout the agreement is wasteful and unnecessary since all of the appendices are part of a single agreement. As I've stated immediately above, if the appendices were not a part of the whole agreement, the Commission would be facing multiple arbitration proceedings to fashion a comprehensive interconnection agreement binding on the Parties.

Q. CAN YOU RESPOND TO SBC'S PROPOSAL THAT LEVEL 3 AGREE WITH SBC'S LEGAL INTERPRETATIONS?

A. As in other appendices, SBC has included language in the agreement that seeks to have Level 3 agree with SBC's legal interpretations of the Act. Here, SBC seeks to have Level 3 agree with SBC's interpretation of Sections 251 and 252(i) of the Act. If Level 3 agreed with SBC's legal interpretations, there would be no need for this arbitration; the filing of Level 3's petition is evidence that Level 3 does not agree with the terms of the agreement as initially proposed by SBC, and which are based on SBC's interpretation of the Act. Level 3 proposes that the provisions in question be removed from the agreement. The Commission will be the final arbiter of the various issues in dispute and order the filing of an agreement in compliance with such findings.

Q. ISSUES IC-1 THRU IC-3, & IC-5 – INTERCARRIER COMPENSATION APPENDIX[82]

Q. CAN YOU BRIEFLY DESCRIBE THE ISSUES IN DISPUTE?

A. The issues I address next all relate to compensation for the exchange of traffic between the parties and are addressed on a more comprehensive basis under my discussion of Tier I issues. The issues identified in this section of my testimony are raised to insure that the Commission's findings on the Tier I issues are applied consistently throughout the agreement. I will also address the treatment of EAS traffic and 8YY intraLATA calls that originate and terminate within the same local calling area.

Q. CAN YOU PROVIDE AN EXAMPLE OF WHAT YOU MEAN BY THE COMMISSION'S DECISIONS ON TIER I ISSUES IMPACTING CERTAIN TIER III ISSUES?

A. Yes. The Commission's decisions on the treatment of the use of NPA NXXs, the definition of "local call," and compensation for VoIP, FX-like traffic, ISP-bound traffic, which are all Tier I issues, will impact the treatment of certain secondary issues identified as Tier III Issues in Level 3's Petition for Arbitration. For example, if the Commission agrees with Level 3 and rules that VoIP traffic should be exchanged by the parties via local facilities and subject to reciprocal compensation, Level 3 is asking the Commission to apply such findings throughout the agreement, including the various appendices. The agreement would be entirely unworkable if

[82] *See* Issues IC-1, IC-2, IC-3 & IC-5 in Petition; Intercarrier Compensation, Sections 1.3, 1.4, 3.2 - 3.7, 4.2, 4.4, 4.5, 4.6, 8.1, 8.2, 8.3, 8.4, 11.1 and 11.2.

Level 3 were to succeed on the merits, but end up with an agreement with inconsistent language – having some appendices provide for reciprocal compensation for the transport and termination of VoIP traffic and other appendices provide that such traffic is subject to access charges. Thus, Level 3 is asking that the Commission's findings on Tier I issues be carried forward throughout the different appendices of the agreement in order to provide for a consistent, unambiguous agreement.

Q. WHAT IS IN DISPUTE REGARDING THE TREATMENT OF EAS TRAFFIC?

A. SBC has proposed language providing that Level 3 will pay an EAS additive on a per minute of use ("MOU") basis when Level 3 uses unbundled local switching to provide services to a number with an NXX that is within an SBC EAS area. Level 3 objects to this language and believes that all local calls, including EAS calls, are not subject to MOU charges. As I noted in my discussion of Issue 4 (the definition of "local call"), standard industry practice requires ILECs to rate and bill calls based on the NXX codes of the calling and called party. If the call is rated as local, Level 3 should not be required to pay an MOU additive.

Q. PLEASE EXPLAIN THE DISPUTE REGARDING COMPENSATION FOR LOCAL 8YY TRAFFIC.

A. This issue is about what form of intercarrier compensation should apply to a call that is dialed as toll-free but is routed to a number that is local to the calling party. Level 3's position is that this is a local call just like any other that is subject to reciprocal

compensation. SBC's position is that, notwithstanding the fact that it does not leave the local calling area, this call is an interexchange call subject to access charges. Comparing SBC's position on this issue to its position on FX-like compensation exposes SBC's true motive. On the one hand (FX-like traffic), SBC argues that if a call's physical end point is *outside* of the originating local calling area, that call is subject to originating access charges. On the other hand (local 8YY traffic), SBC argues that if a call's physical end point is *inside* the originating local calling area, that call is subject to access charges. At least SBC is consistent in demanding its entitlement to access charges, regardless of the circumstances.

Q. PLEASE EXPLAIN HOW A TOLL FREE CALL CAN BE ROUTED TO A LOCAL NUMBER.

A. I am not an expert on toll free service. However, I understand that when I dial a toll free number (*i.e.* NPA: 800, 888, 877, or 866) my carrier queries a database to get detailed instructions on how to route the call. These regional databases contain routing instructions for the toll free numbers located in their particular geographic regions. The database includes information such as the subscribers' telephone numbers to which toll free calls will be routed (NPA-NXX-XXXX). The database has the capability to perform complex vertical routing including: (1) translation of 800 numbers into POTS numbers; and (2) alternative POTS translation, which allows

subscribers to vary the destination of 800 calls based on factors such as time of day, or place of origination of the call.[83]

Q. CAN YOU PLEASE GIVE US AN EXAMPLE OF HOW THIS WORKS IN PRACTICE?

A. If I am an airline and I want to use one toll free number for my customers throughout the United States, but I want calls from Detroit to route to my local office at the Detroit airport, I can have the database programmed to ensure that when a customer in Detroit calls my toll free number, that number will be translated to a POTs number for my local office at Detroit airport.

Q. AND LEVEL 3'S POSITION IS THAT WHEN A TOLL FREE CALL IS ROUTED IN THIS MANNER, IT SHOULD BE SUBJECT TO RECIPROCAL COMPENSATION CHARGES, NOT ACCESS CHARGES?

A. Yes. Once SBC looks up the number and determines that the call should be routed to a local number, if the local number is assigned to a Level 3 customer, SBC should deliver that call to Level 3 at the POI. The only additional cost SBC incurs in routing a toll free call to the parties' POI is the 800 database query charge. Level 3 agrees that the 800 service provider should still pay that query charge provided it is included in SBC's tariff. However, because this local 8YY call is in fact routed as local, and not as a long distance call, it is not appropriate for SBC to demand access charges for originating the call.

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[83] *In the Matter of Provisioning of Access For 800 Service*, 1993 WL 755978 (F.C.C.), 71 Rad. Reg. 2d (P & F) 1291, ¶ 5 (rel. Feb. 10, 1993).

R. ISSUES REC-1 THRU REC-5 – RECORDING APPENDIX[84]

Q. WHAT ARE THE ISSUES IN DISPUTE IN THIS APPENDIX?

A. The appendix sets forth the terms and conditions under which the parties will provide recording, message processing and message detail services to each other. There are five areas of disagreement, all of them relating to the technology used to transmit data between the parties and/or the parties' obligations to use best efforts in transmitting that data.

Level 3's position is that the parties should not be limited to the use of MECAB/MECOD as the exclusive billing and recording formats to be used by the parties. Instead, Level 3 proposes that the parties include language in the agreement that permits them to discuss mutually agreeable ways in which to exchange data. This is especially critical given the anticipated reforms to the access charge system; once those reforms take effect, the MECAB/MECOD recording formats may not be the most efficient, and the agreement should provide language that allows the parties to discuss and agree on other formats.

Level 3 also believes that it should not be required to provide information in only one format. For example, Level 3 agrees to use the EMI format to the extent that it has in fact developed those capabilities; however, Level 3 proposes that the parties work together to develop systems that provide additional options for recording, assembling and editing of message detail records.

[84] *See* Recording, Sections 3.13, 4.112.1, 12.2, 12.5, 12.9, 14.1, 5.2, 15.3, 5.4, and 5.6.

Level 3 has also proposed changing the time limit for maintaining message details from 60 days to 90 days, to allow the parties additional time to recover lost data. Level 3 does not believe that adding the additional thirty days will cause SBC any harm, nor will it force SBC to incur costs Level 3 itself is not willing to incur – Level 3's proposal is reciprocal and will require both parties to maintain message details for the 90 day time period.

The forth area of dispute has to do with the parties liability for recording, message processing and message detail services provided under the agreement. SBC's proposal provides that the parties will not be liable when data is not received as a result of a transmission failure. Level 3 has inserted language that states the parties will use their best efforts to ensure the timely and accurate delivery of billing data.

Finally, Level 3 has proposed revisions providing that the parties are not exempt from willful misconduct or gross negligence. Level 3 believes its proposal is standard practice and imposes a reasonable limit on the parties' requirements to indemnify each other. Level 3 also proposes to make the entire limitations of liability provision reciprocal.

S. ISSUES CH-1 THRU CH-3 – CLEARINGHOUSE APPENDIX[85]

Q. CAN YOU BRIEFLY DESCRIBE THE ISSUES IN THIS APPENDIX?

A. SBC has developed a clearinghouse for the purpose of facilitating the exchange of certain billed intrastate intraLATA message toll call records and the recording of settlement revenues owed by and among participating LECs and CLECs, including Level 3 and the SBC operating affiliates. Level 3 has two objections to the provisions proposed by SBC. First, Level 3 proposes removing reference to a "Message Exchange Appendix" as the parties have not attempted to negotiate the terms of such appendix. Second, Level 3 objects to the use of SBC's Category 92 originating records for the purpose of billing reciprocal compensation. The parties are currently utilizing terminating records to invoice for such traffic and Level 3 sees no reason to change billing practices at this point in time. As the Texas Commission found, "…the use of terminating records among the parties to bill for reciprocal compensation is a more efficient and less burdensome method to track the exchange of traffic."[86] The Texas Commission also found that terminating records impose less cost upon terminating carriers than SBC's Category 92 originating records.[87]

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[85] *See* Clearinghouse, Sections 1.26, 1.27, and 2.1.

[86] *Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996*, Docket No. 21982, Arbitration Award, (TX PUC, July 2000).

[87] *Id.*

T. ISSUE – APPENDIX EMERGENCY SERVICES[88]

Q. WHAT ARE THE AREAS OF DISPUTE IN THIS APPENDIX?

A. There are three areas of dispute. First, Level 3 has changed all references from "CLEC" to "Level 3" – to reflect that Level 3 is in fact the contracting party. Second, Level 3 has proposed language providing that, whenever a calling party number ANI is not forwarded to SBC by Level 3, SBC will route the call to the default emergency service number associated with the 911 trunk group.[89] Finally, Level 3 clarifies that the parties' obligations and responsibilities for completing 911 calls end at the "Demarcation Point" of the parties networks, which is what is called for in 47 CFR § 68.3.

[88] *See* Appendix Emergency Services, Sections 3.2.2 and 4.2.11.

[89] The definition of "emergency service number" is not in dispute. The definition is found in Section 2.9 of Appendix 911, which provides that it means a three to five digit number representing a unique combination of emergency service agencies designated to serve a specific range of addresses within a particular geographic area.

U. ISSUE UNE-1 THRU UNE-4 – UNE APPENDIX[90]

Q. CAN YOU BRIEFLY DESCRIBE THE ISSUES IN DISPUTE?

A. Level 3 disagrees with SBC's attempts to force Level 3 to waive certain rights it has under current law. For example, certain provisions in the appendix limit SBC's obligations to provide UNEs to Section 251 of the Act, ignoring unbundling obligations under Section 271 of the Act as well as any obligations under applicable state laws and Commission orders. Likewise, SBC has inserted the phrase "lawful" throughout the appendix. Level 3 has removed those references as the issue of whether the provision of certain UNEs is lawful will be left to the Commission's

[90] *See* Unbundled Network Elements, Sections 1.1, 2.1 2.1.1, 2.1.2, 2.1.2.1, 2.1.2.2, 2.1.2.3, 2.1.3, 2.1.4, 2.3, 2.5, 2.5.1, 2.5.2, 2.7,, 2.7.1, 2.7.2, 2.7.3, 2.7.4, 2.7.5, 2.7.6, 2.7.7, 2.7.8, 2.7.9, 2.7.10, 2.8, 2.9, 2.10, 2.13.1, 2.13.2, 2.14.1, 2.14.2, 2.14.3, 2.14.3.1.1, 2.14.3.1.1.1, 2.14.3.1.1.2, 2.14.3.1.2.1, 2.14.3.1.2.2, 2.14.3.2, 2.14.3.3, 2.14.4, 2.14.4.1, 2.14.4.2, 2.14.4.3, 2.14.4, 2.14.4.1, 2.14.5, 2.14.5.2, 2.16.2, 2.16.3.4, 2.16.3.5, 2.16.3.6, 2.16.4, 2.16.4.2, 2.16.5, 2.16.5.1, 2.16.5.1.1, 2.16.5.2-2.16.5.5, 2.16.6, 2.16.1-2.16.2, 2.16.7, 2.17, 2.17.2, 2.17.3, 2.174, 2.17.5, 2.18.1.2, 2.18.2, 2.18.3, 2.18.3.1, 2.18.3.1.1, 2.18.3.1.2, 2.18.3.2, 2.18.4, 2.18.6, 2.18.9, 2.19.1, 2.19.2, 2.19.2.1, 2.19.2.2, 2.19.2.2.1, 2.19.2.2.7, 2.19.3.2, 2.19.4, 2.19.5, 2.19.7, 2.19.7.1, 2.19.7.4, 2.19.7.4.2, 2.20, 2.21, 2.22, 6.3.1, 6.3.4, 6.3.4.1, 7.2.1, 7.2.1.1, 7.2.1.2, 7.2.1.2.1, 7.2.1.3, 7.2.1.3.1, 8.2.1, 8.5.2, 8.5.3, 13.3.1, 13.3.4.2, 13.3.5.1, 13.5.2, 13.5.3, 14.3.1, 14.4.1, 14.8.1 14.11.3, 15.1, 18.2, 19.6, 19.8.1; Unbundled Network Elements, Sections 1.1, 2.1, 2.6, 2.7, 2..7.3, 2.7.4, 2.7.5, 2.7.7,2.7.8, 2.7.10, 2.8-2.10, 2.13.1, 2.13.3, 2.14, 2.14.1-2.14.3, 2.14.3.1.1, 2.14.3.2, 2.14.4, 2.14.4.1, 2.14.5, 2.14.5.2, 2.15, 2.15.1, 2.16, 2.16.1-2.16.3.6, 2.16.4, 2.16.4.1, 2.16.5, 2.17, 2.17.1, 2.17.3, 2.17.5, 2.17.5.1, 2.18.1, 2.18.2, 2.18.4.1, 2.18.5-2.18.8, 2.19, 2.19.1, 2.19.2, 2.19.7.4, 2.20-2.22, 3.1-3.3, 3.3.4-3.3.6, 3.3.8, 4.1.3, 4.17, 6.3.1, 6.4.2, 6.4.2.1-6.4.2.3, 7.1-7.9, 8.0, 8.1-8.3, 8.3.4-8.3.5, 8.8.4, 8.5, 8.5.1-8.5.6, 9.1-9.4, 9.6-9.12, 9.12.1-9.12.6, 9.12.8, 9.12.9, 9.11-9.12, 9.13, 9.14.2, 9.15, 9.15.1, 9.15.1.3-9.15.1.6, 9.15.2, 9.16, 9.16.1, 9.16.2, 10.2, 10.3-10.3.1, 10.3.6, 10.4.1.1-10.4.1.3, 10.4.2.3, 10.5, 13.0-13.2.1, 13.3, 13.3.1-13.3.4, 13.3.5-13.3.5.1, 14.0-14.4, 14.4.1, 14.5.1, 14.6.1, 14.6.1.2, 14.6.1.2, 14.6.2, 14.7, 14.7.1-14.7.3, 14.8.1-14.8.3, 14.9-14.9.2, 14.10, 18.1-18.2, 8.4-18.14, 19.1-19.8.1, 19.13.1-19.13.2; Unbundled Network Elements Sections 2.2, 2.12, 2.14, 2.16.1, 2.16.2, 2.16.3.3, 2.16.3.3.1, 2.16.3.3.2, 2.16.3.3.3, 2.16.3.4, 2.19.8, 2.22, 20.1, 20.2, 20.3, 20.4; and Unbundled Network Elements Sections 2.4, 2.5. 2.5.1, 2.5.2, 2.14.3.1.1, 2.16.3.3.2, 2.16.3.3.3, 2.17, 2.18.6.

decision making power and applicable state and federal unbundling requirements. The appendix also contains redundant reservation of rights provisions. Level 3 proposes eliminating these redundant provisions. Finally, Level 3 believes that the Change in Law provisions found in the General Terms and Conditions section of the agreement adequately address the parties rights and obligations under the agreement. It would be unnecessarily repetitive to include such provisions in this appendix. Level 3 is concerned that multiple Change in Law provisions will lead to confusion and/or ambiguity; for example, if a future event is deemed to qualify as a "change in law," which of the multiple provisions will control? If SBC's proposed language is adopted, the parties will likely end up before the Commission at some point in the future seeking guidance as to which of the several change in law provisions control in a particular instance. Level 3's proposal on the other insures that no such future proceeding is required as it removes any ambiguity resulting from having multiple provisions addressing the same issue.

V. ISSUES DAL-1, SS7-1, THRU SS7-3 – DIRECTORY ASSISTANCE LISTING /SS7 APPENDICES[91]

Q. WHAT ARE THE ISSUES RELATED TO THESE APPENDICES?

A. Regarding directory assistance listings, Level 3 has proposed amending indemnification language to require SBC to assume and undertake its own defense, and assist Level 3 in its defense, in the event Level 3 faces an action specifically alleging that an error or omission appeared in directory listing information.

Regarding the SS7 Appendix, Level 3 has proposed language making the provisions of the appendix reciprocal. Level 3 has also proposed a series of modifications to the appendix detailing the technical requirements for the SS7 network contemplated under the appendix and the manner in which the two company's SS7 networks will operate.

VI. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes. Level 3's network and business is in the vanguard of the Internet revolution. As revolutionary as this technology may be when compared to the traditional world of circuit based providers, Level 3 is not seeking changes to its interconnection rights and the way in which its IP traffic is treated.

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[91] See Directory Assistance Listing, Sections 2.1, 5.1, 5.3; SS7, Sections 2.4, 2.4.1, 2.4.1.1, 2.4.2.1, 2.5, 2.6, 2.7, 2.8, 2.9.2, 2.9.3, 2.9.4, 2.9.5, 2.9.6, 2.11.1, 2.11.2, 2.12.1, 3.2.1, 3.2.2, 3.2.3, 3.3, 3.4.1, 3.4.4, 3.4.5, 3.4.6, 3.4.7, 4.1, 4.2, 4.3, 4.4, 5.1; SS7, Sections 2.8, 2.9.4, 2.10.2, 2.10.3, 2.12.3, 3.2.2, 3.4.2, 3.4.2.1, 3.4.2.2, 3.4.3, 3.4.8, 3.5, 3.5.1, 4.1, 4.3, 4.4, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.1; and SS7, Sections 2.9.6, 2.10.4, 2.11.2, 7.1, 7.3, 7.3.1, 7.4, 7.4.1, 7.5, 7.5.1, 7.6, 7.6.1, 8.0, 8.1, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.3, 8.3.1, 8.3.1.1, 8..2, 8.3.2.1, 8.3.2.2, 8.3.3, 8.3.3.1, 8.4, 8.4.1, 8.5, 8.5.1, 8.6, 8.6.1.

BEFORE THE
MICHIGAN PUBLIC SERVICE COMMISSION

Petition of	)	
	)	
LEVEL 3 COMMUNICATIONS, LLC	)	Docket No. _____
	)	
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 Rates, Terms, and Conditions of Interconnection With Michigan Bell Telephone Company, d/b/a SBC Michigan, and SBC Communications, Inc.	)	

DECLARATION OF
WILLIAM P. HUNT III

I, William P. Hunt III, having been sworn upon my oath, do hereby state and depose that the Sworn Testimony attached hereto is true to the best of my knowledge and belief.

Wm. P. Hunt 3/
William P. Hunt III

Dated: May 28, 2004

Subscribed and sworn before me on this
28th day May, 2004

Julia Matthews
Notary Public

My commission expires: 11/18/07

JULIA MATTHEWS NOTARY PUBLIC STATE OF COLORADO

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE 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 Rates, Terms, and Conditions of Interconnection with Michigan Bell Telephone Company d/b/a SBC Michigan.	)	Case No. U-14152

Direct Testimony of

Kenneth L. Wilson

On Behalf of

Level 3 Communications, LLC

June 1, 2004

TABLE OF CONTENTS

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION, EMPLOYER, AND BUSINESS ADDRESS.

A. My name is Kenneth L. Wilson. I am a Senior Consultant and Technical Witness with Boulder Telecommunications Consultants, LLC. My business address is 970 11th Street, Boulder, Colorado, 80302. I am filing this testimony on behalf of Level 3 Communications, LLC of Broomfield, Colorado.

Q. PLEASE REVIEW YOUR EDUCATION AND RELEVANT WORK EXPERIENCE.

A. I received a BS in Electrical Engineering from Oklahoma State University in 1972. I received an MS in Electrical Engineering from the University of Illinois in 1974. I completed all the course work for a Ph.D. in Electrical Engineering from the University of Illinois in 1976.

I am currently a Senior Consultant and Expert Witness with Boulder Telecommunications Consultants, LLC. During the past six years I have participated as a witness and consultant in over fifty proceedings involving various aspects of the Telecom Act of 1996. In these proceedings I testified on all types of Unbundled Network Elements (UNEs), interconnection trunks, collocation, resale, advanced services and operational support systems. I have also testified in several anti-trust cases and in other regulatory and judicial matters involving telecommunications. In January 2003 I presented a three-day course on Emerging and Converging Telecommunications Services to the New York State Public Utilities Commission

Staff. From 1995 through spring 1998, I was the Business Management Director for AT&T in Denver, managing one of the groups responsible for getting AT&T into the local market in the QWEST states. My primary responsibility was as the lead negotiator for AT&T with QWEST in the 14 QWEST states. I was also the senior technical manager in Denver, leading teams working on local network and interconnection planning, OSS interface architectures, and the technical aspects of product delivery.

For the 15 years before coming to Denver, I worked at Bell Labs in New Jersey in a variety of positions. From January 1994 through May 1995 I led a team at Bell Labs investigating the various network infrastructure alternatives for entering the local telecommunications market. From 1992 through 1993, I was one of the key team leaders on a project to reduce AT&T's capital budget for network infrastructure. From 1986 through 1992, I led a Bell Labs group, which was responsible for network performance planning and assurance for AT&T Business Markets. From 1983 through 1985, I was a member of the first AT&T Bell Labs cellular terminal design team. From 1980 through 1982, I was a member of a network architecture and network planning team at Bell Labs for AT&T's long distance services. My Curriculum Vitae is attached as Exhibit KLW-1.

II. STATEMENT OF SCOPE AND SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked by Level 3 Communications, Inc. ("Level 3"), to testify regarding interconnection agreement terms and conditions between Level 3 and SBC in the state of Michigan that have arisen as unresolved issues during good faith negotiations. I will address various technical issues to provide a network and engineering perspective to the issues that are in dispute in this case. Specifically, I will address **Issue 1** (Single Point of Interface SPOI); **Issue 2** (Combining Traffic on Local Interconnection Trunks); **Issue 3** (Transit Traffic); **Issue 4** (Definition of a Local Call); **Issue 5 (**Unbundled Network Elements - UNEs); **Issue 6** (Voice Over Internet Protocol - VoIP), and several tier 2 and tier 3 issues**.**

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS.

A. I will provide the summaries by Issue:

Issue 1 SPOI – The Point of Interconnection (POI) is the point that demarcates where each carrier's network ends and where the two networks meet. For a CLEC entering the market, the most efficient configuration is to have a Single Point Of Interconnection (SPOI) in each LATA where they wish to do business. Each party should bear full technical and financial responsibility for originating its traffic on its side of a SPOI. SBC requires Level 3 to have many additional POIs in each LATA. This would be inefficient from a network point of view. There are no technical or engineering reasons that require a CLEC to establish more than one POI in a LATA.

Issue 2 – Combining traffic on Local Interconnection Trunks – SBC is requiring that Level 3 establish two separate interconnection networks. They are doing this by refusing to allow multiple traffic types to flow across interconnection trunks. SBC is requiring Level 3 to establish separate trunk groups, one for local and IntraLATA traffic and a second for InterLATA traffic. This is inefficient from a network point of view and can cause increased blocking due to smaller sized trunk groups. It is technically feasible to have local, IntraLATA and InterLATA traffic on the same trunk group and it has been done by a number of companies in many states for over five years.

Issue 3 – Transit Traffic – It is essential for a CLEC such as Level 3 to have connectivity with other CLECs and independent companies in local calling areas within the SBC region. When SBC acts as an intermediary between two CLECs it provides this essential transiting function. Transiting of local traffic has been done by SBC and other ILECs since the passage of the ACT in 1996. SBC is now claiming that Level 3 must establish separate trunk groups for transit traffic and pay access rates for transiting service. This would be very inefficient from a network point of view, creating multiple, small trunk groups where now single trunk groups efficiently carry both normal local traffic and local transit traffic. SBC should not be permitted to require separate trunk groups and charge arbitrarily high prices for transiting traffic as it will ultimately result in a proliferation of new trunk groups between all carriers.

Issue 4 – Geographic Location of End User Customers for the determination of local traffic. SBC is turning the definition of local traffic on its head. Local traffic is

currently defined (and has been defined for over 50 years) as calls between two phone numbers that are homed to the same local calling area. SBC is requiring Level 3 to define local calls by the geographic location of the end user's premises. SBC is requiring Level 3 to deliver end user location information as part of SS7 messaging, which is not possible. Furthermore, switch routing and billing are based on phone numbers and switches have no way of storing or associating a geographic location of the customer premises with a phone number. Level 3 believes that the current method of determining what is a local call should continue as it is now defined.

Issue 5 – Unbundled Network Elements - UNEs - SBC is placing restrictions on UNEs and UNE combinations that could be used to restrict Level 3's use of UNEs in general and UNE combinations in particular. The language in many of the restrictions is so vague that SBC could use them to cut off Level 3's access to common UNEs and UNE combinations in a unilateral manner. SBC is placing three types of restrictions on UNEs and UNE combinations. First, SBC is restricting UNEs for use by "qualified services" it is impossible to meet the qualification all the time and it would be impossible to know when traffic flowing down a facility was qualified or not. Second, SBC is putting restrictions on commingling which at some levels and threshold would always be violated as the thresholds are ambiguous, vague, and could be interpreted to be arbitrarily low. Third, SBC is claiming the right to arbitrarily convert UNEs to wholesale services in a very short time after SBC unilaterally decides that it has permission to discontinue a UNE.

Issue 6 – Enhanced Service Provider Traffic – VoIP Traffic: SBC is attempting to include some types of Enhanced Service Provider Traffic, including VoIP traffic, as part of switched access traffic. This would result in Level 3 paying access charges for VoIP traffic. VoIP traffic is Internet Protocol (IP) based traffic and Level 3 should be allowed to complete this traffic to SBC as local traffic, under the current reciprocal compensation regime. This traffic is currently exchanged by the two companies without the need for separate networks and should continue to be processed in this manner. Level 3 has a local network, nationwide for IP and has invested in the equipment and facilities to make the net protocol conversion necessary to complete VoIP traffic on the PSTN. SBC will incur no additional costs to originate or complete VoIP traffic.

Issue 16 – Performance Measurements: SBC has refused to include the Performance Measurements Appendix with the Agreement. Performance measurements are critical for Level 3 to assure proper service to its customers.

Issue 18 – Physical Collocation: SBC has not provided Level 3 with comments on Level 3's proposals for physical collocation. Level 3 has used reasonable language in laying out what is necessary for physical collocation.

Issue 19 – Virtual Collocation: SBC has not provided Level 3 with comments on Level 3's proposals for virtual collocation. Level 3 has used reasonable language in laying out what is necessary for virtual collocation.

Tier 3 Issues – NIM, ITR, Recording, Clearinghouse, E911, UNE-5: SBC has provided language that is restrictive and inadequate for Level 3's requirements. Level 3 has responded with reasonable language that addresses their concerns.

III. ISSUE 1 – SPOI : ORIGINATING TRANSPORT RESPONSIBILITY

Statement of the Issue: Is each Party required to bear financial responsibility for delivering its originating traffic to the POI selected by Level 3 and is Level 3 entitled to a Single Point of Interconnection in a LATA?1

Q. WHAT IS SBC'S POSITION ON THIS ISSUE?

A. There are two main parts to this issue. First, SBC is requiring Level 3 to have multiple POIs per LATA. Second, SBC is requiring Level 3 to pay for all or part of the transport of SBC originated traffic from the SBC switch to the POI. Level 3 is already responsible for transport of traffic that it originates. Several of the SBC contract positions state: "each party being financially responsible for approximately half of the Interconnection facilities." This type of provision ignores which party is originating traffic and how the traffic flows through the POI to each network.

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Level 3's position on the first point is that a single POI is the most efficient network configuration in a LATA until Level 3 builds up enough traffic to warrant additional

1 The following paragraphs in the agreement are covered by the testimony in this issue: Network Interconnection Methods, Sections 2.1, 2.2, 2.3, 2.5,2.7, 4.1, and 4.2; Interconnection Trunking Requirements, Sections 4.1, 4.2, 4., 5.2.1-5.2.9, 5.3.2, 5.3.3.1, 5.3.4.2 (subject to confirmation for dispute), 5.7.3, and 5.7.4; Intercarrier Compensation, Sections 3.1, 3.5.

POIs in the LATA. To the second point, each Party is responsible from a network point of view and a financial point of view for delivering its originating traffic to the POI selected by Level 3. SBC is attempting to shift responsibility and costs to Level 3 for traffic originated by SBC customers, ignoring the reality of where the traffic originates and where it is flowing.

Q. WHAT IS A POI?

A. As stated in the Parties' Agreement, a POI is the location where the two Parties physically connect their networks for the purpose of exchanging traffic. In this case, it is the place where Level 3 brings its facilities to connect to SBC's existing network. Each party has control over its network on its respective side of the POI. This allows each party to provide service according to the technical requirements of their network. Each party is responsible for the transport of traffic to the POI when their end user originates it. There is no ambiguity in which party is originating traffic and which party is terminating the traffic. Origination of a call sets in motion a series of SS7 messages between switches, the seizing of an interconnection trunk and the initiation of a call. The originating party is recorded in call detail messages by the switches involved in the calls.

Q. IS IT TECHNICALLY FEASIBLE FOR LEVEL 3 TO HAVE A SINGLE POI IN EACH SBC LATA?

A. Yes, it is technically feasible for Level 3 to have a single POI in each SBC LATA. It is common practice for a CLEC to have a single POI in each LATA when they are first starting up business in a state. CLECs typically have a switch or switching

equipment in a single location in a particular area. Since the ILEC, such as SBC, typically has dozens and sometimes hundreds of end office switches linked by one or more tandem switches in a LATA, the CLEC must get efficient interconnection with these switches. The efficient way to interconnect to all of the ILEC switches is at a single POI, usually at or near one of the ILEC tandem switches. This allows the CLEC to efficiently interconnect when their business is new and has relatively small amounts of traffic, without building facilities to every local calling area.

Q. IS IT OPERATIONALLY EFFICIENT FOR LEVEL 3 TO HAVE A SINGLE POI PER LATA?

A. Yes, from an operational standpoint, a CLEC such as Level 3 should minimize the number of POIs per LATA so that it can build up traffic before expanding to additional POIs, focusing its efforts on proper management of a small number of POIs in each state. If a CLEC is forced to expand its operations too quickly, its staff will be stretched over too many sites, causing a risk of less than optimal maintenance schedules and repair times.

Q. WHEN SHOULD LEVEL 3 PLACE ADDITIONAL POINTS OF INTERFACE IN A LATA.

A. Additional POIs can be installed as traffic and economics warrant. Placement of additional POIs should be done according to sound engineering and economic principles. From an engineering point of view, this is done on a case-by-case basis according to traffic patterns, availability of high capacity facilities, maintenance and repair staffing, equipment size and configuration and a host of other variables. Mr.

Gates addresses the economic issues associated with the establishment of additional POIs in his testimony.

Q. SHOULD LEVEL 3 BE ALLOWED TO SELECT THE LOCATION OF THE POI IN EACH LATA?

A. Yes, it is appropriate for the CLEC, Level 3 in this case, to select the location for the POI. Level 3 has risked investor capital (exceeding $16 billion in initial construction costs) constructing what it believes is a technically efficient local network. Level 3 has selected the most efficient and reasonable locations for its POIs. Even though it might be even more efficient to have a single POI in a state, Level 3 has interconnected with SBC in at least one point in each LATA in which it currently provides service with additional POIs in some LATAs where traffic warrents.

Q. PLEASE DESCRIBE THE LEVEL 3 NETWORK IN MICHIGAN.

A. Level 3 has constructed 13 POIs in 4 LATAs in Michigan. One of these LATAs has a single POI in the LATA. Level 3 has provisioned facilities to each of these POIs from its switching equipment and modem banks. In addition to these facilities, Level 3 has a fiber route with 6 locations that contain amplifiers, regenerators, or full gateway facilities in Michigan. Figure 1, attached hereto as Exhibit A-___(KLW-2), is a map that shows the POIs, fiber routes, regeneration/amplification facilities and serving areas for Level 3 in Michigan.

Q. SHOULD LEVEL 3 BE ALLOWED TO DECIDE WHEN AND WHERE TO ADD ADDITIONAL POINTS OF INTERCONNECTION?

A. Yes. As traffic increases on the Level 3 network, Level 3 should be allowed to select the locations for additional POIs. Level 3 has by far the smaller network and it is more efficient for the smaller network to pick the next location for interconnection.

Q. IS LEVEL 3 ASKING SBC TO TRANSPORT TRAFFIC FROM EACH POI TO THE LEVEL 3 SWITCH?

A. No. Even though some CLECs require the ILEC to transport traffic that the ILEC has originated, as part of transport and termination, Level 3 is only asking SBC to transport SBC originated traffic to the POI.

Q. ON THE SBC SIDE OF THE POI, HOW FAR MUST SBC HAUL ITS ORIGINATING TRAFFIC FOR INTERCONNECTION WITH LEVEL 3?

A. SBC must haul traffic that originates from its customers from its switches within the LATA to the POI. This is a basic requirement of the FCC's rules on interconnection. SBC has existing fiber facilities between its switch locations and can easily provide the appropriate transport. This transport is all within the SBC network.

Q. IS SBC ASKING LEVEL 3 TO COMPENSATE IT FOR TRANSPORT FROM SBC SWITCHES TO THE POI FOR CALLS ORIGINATED WITHIN THE SBC NETWORK?

A. Yes, SBC is effectively requiring Level 3 to provide some of the transport for SBC originated calls, within the SBC network. This makes no sense, as the traffic is SBC originated traffic, within the SBC network. The responsibility for transporting SBC

originated calls within the SBC network to the POI is SBC's responsibility, not Level 3's.

Q. IS THERE ANY AMBIGUITY AS TO WHICH PARTY ORIGINATES A CALL?

A. No, there is no ambiguity at all. The party that initiates a call is the originating party. When a call is originated, the originating switch launches SS7 messages that are routed to the other party's SS7 network and then on to the terminating party's switch. The recording mechanisms in the switches keep track of which switch originates and which switch terminates a call.

Q. WHAT IS LEVEL 3 ASKING THIS COMMISSION TO DECIDE ON THIS ISSUE?

A. Level 3 asks the Commission to reaffirm that only one POI is required in each LATA and that Level 3 can select the location of the SPOI and any additional POIs that are necessary to handle traffic loads. Level 3 is further asking this Commission to rule that each Party should be required to bear the responsibility for delivering its originating traffic to the POI selected by Level 3. The Level 3 language in the Agreement accomplishes these goals and the Commission should rule in favor of Level 3's language.

IV. ISSUE 2: COMBINING DIFFERENT TRAFFIC TYPES ON LOCAL INTERCONNECTION TRUNKS

Statement of the Issue: SBC is requiring Level 3 to set order separate trunk groups for different types of traffic, thus forcing Level 3 to set up a separate, second network?[2]

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Level 3 would like to use the same interconnection trunk groups for local, Intra LATA toll, and Inter LATA toll. This is the efficient way to do interconnection and is being done successfully by many carriers in many states.

Q. WHAT IS SBC'S POSITION ON THIS ISSUE?

A. SBC is requiring Level 3 to order and provision two separate trunk groups to each POI in the state. They require one set of trunk groups for local and intra LATA traffic and another set of trunk groups for Inter LATA Intra State and Inter LATA Inter State traffic.

Q. IS THERE ANY TECHNICAL REASON TO REQUIRE SEPARATE TRUNK GROUPS FOR INTRA LATA AND INTER LATA CALLS?

A. No, there is no technical reason that would require separate trunk groups. On the contrary, from a network point of view there are several reasons that single, large trunk groups should be used instead of multiple, smaller trunk groups.

[2] The following paragraphs in the agreement are covered by the testimony in this issue: Network Interconnection Methods, Sections 1.1, 2.4, and 2.7; Interconnection Trunking Requirements, Sections 1.2, 3.2, 3.3, 3.4, 3.6, 4.2, 4.4, 4.4.1, 4.5, 5.2, 5.2.1, 5.2.2, 5.2.1 – 5.2.9, 5.3, 5.3.1.1, 5.3.3.1, 5.4.1, 5.4.2, 5.4.3, 5.4.1-5.4.4, 5.7.1, 5.7.2, 5.7.3, 5.7.4, 8.8.1, 12.1, 12.1.1-12.1.4, 12.2, 12.3, 12.4, and 13.1; Intercarrier Compensation, Sections 3.1, 10.1, and 13.1.

Q. WHAT ARE SOME OF THE REASONS WHY A SINGLE LARGE TRUNK GROUP IS BETTER THAN TWO SMALLER TRUNK GROUPS?

A. Requiring two sets of trunk groups at every POI is inefficient, costly, and it will lower the blocking Grade of Service (GOS) unless additional trunks are installed. Essentially SBC is requiring Level 3 to build two separate networks.

Q. WHY WOULD THE REQUIREMENT FOR SEPARATE TRUNK GROUPS CAUSE LEVEL 3 TO BUILD TWO SEPARATE NETWORKS?

A. To meet the SBC requirement, Level 3 would need to order, build and provision a second set of trunk groups from the Level 3 switch serving the state to each POI. So Level 3 would need to build a second network for interconnection in the state. This network would be composed of transport facilities and switching facilities and would require duplication of both, for Level 3 and for SBC.

Q. **WHY IS THIS INEFFICIENT?**

A. From a network point of view, it is always preferable to combine as much traffic as possible on a single trunk group. One large trunk group is much more efficient than two smaller trunk groups. For example, one trunk group with four DS1s will handle much more traffic than two trunk groups each with two DS1s. To handle the same amount of traffic, the two trunk groups would need to contain 3 DS1s each to approach the same level of capacity. This would require a total of six DS1s to do the same job as four DS1s on one trunk group. "Breakage" of a single trunk group into multiple trunk groups always requires additional trunks to carry the same traffic load with the same blocking GOS.

Q. **WHAT IS BLOCKING GRADE OF SERVICE OR GOS?**

A. Blocking Grade of Service is the measure of call blocking on a trunk group. Blocking is generally measured at the busy hour and is given as a percent of the calls that are blocked due to insufficient trunk capacity. A standard, acceptable blocking GOS would be 1% end-to-end. This means that for every 100 calls that a customer makes, one call will be blocked due to insufficient capacity. When 1% call blocking is desired end-to-end, an allocation is made to various facilities and equipment to achieve the 1%. Typically, a trunk group between two switches is allocated ½ % blocking level so that 1% can be maintained end-to-end. This is due to the fact that many calls involve more than one switch and thus more than one trunk group. There are also small probabilities of blocking on digital loop carrier equipment and associated loop transport.

Q. **WHAT IS THE IMPACT ON BLOCKING GOS WHEN A REQUIREMENT IS MADE FOR MULTIPLE TRUNK GROUPS?**

A. When a large trunk group is split into two trunk groups of half the size, the total carrying capacity of the two smaller trunk groups is smaller than the original trunk group. The laws of trunk engineering dictate that the total number of trunk members in two trunk groups must be significantly larger in order to carry the same amount of traffic. The effect is like congestion on the highway. One four lane highway will carry considerably more traffic than two, 2-lane highways.

Q. IS THERE ANOTHER TYPE OF EFFICIENCY WITH RESPECT TO SPLITTING A LARGE TRUNK GROUP INTO TWO SMALLER TRUNK GROUPS?

A. Yes. Earlier I mentioned "breakage". This term is used to describe the problem when facilities with discrete sizes must be divided into smaller facilities. For trunking between switches, DS1s (which carry a maximum capacity of 24 simultaneous calls) must be used as that is the transport size that is most typically terminated by switching and transport equipment. For example, if a trunk group needs a total capacity of 90 DS0 members, then four DS1s must be used (with a total capacity of 96 calls). If the trunk must be divided to handle two different call types on two different trunk groups, it is likely that the ratio between the two call types is not 50/50. Whenever the trunk requirement is larger than a multiple of 24 (even if it is only one member larger – say 25 members) a new DS1 must be provisioned and the associated equipment added to terminate the new DS1. Coupled with the need for additional capacity to maintain the same blocking GOS, this leads to significant increases in the overall number of DS1s needed for a given traffic volume when the trunk groups must be split.

Q. WHAT COST ELEMENTS ARE ADDED TO THE NETWORK WHEN TWO SEPARATE TRUNK GROUPS MUST BE MAINTAINED?

A. The larger number of DS1s needed to carry the same amount of traffic will increase the number of facilities in use and the number of switch terminations for those facilities. Increasing the number of switch terminations can cause one company or

the other to need additional switch modules, greatly increasing the capital requirements. Switches themselves have limits as to the number of switch modules and DS1 terminations that they can handle. At some point, the addition of DS1s will force the purchase of a new switch. Likewise, fiber facilities carry a discrete number of DS1s on a given amount of lit fiber. Increasing the number of DS1s can require a company to add fiber equipment to increase capacity. Provisioning and maintaining additional trunk groups and the resultant facilities requires additional staff time as well. Mr. Gates addresses the economic issues in more detail in his testimony.

Q. ARE THERE ANY TECHNICAL ISSUES WITH RESPECT TO BILLING CALLS PROPERLY WHEN TRUNKS CARRY MULTIPLE TRAFFIC TYPES?

A. There are several ways to properly bill calls when there are multiple traffic types on a single trunk group. First, one company or the other can keep track of each call and determine on a call-by-call basis whether the call is a local call or a call requiring access charges. Secondly, one company or the other can establish a Percent Local Use (PLU) for calls on the trunk group, updating the information periodically to assure that it is correct. This information can be audited by the other company if there is any doubt as to its validity. These two methods are being used today by various CLECs and ILECs to manage the combining of different traffic types on single trunk groups.

Q. HAVE OTHER COMPANIES DEALT WITH THE BILLING ISSUES ASSOCIATED WITH COMBINING DIFFERENT TYPES OF TRAFFIC ON INTERCONNECTION TRUNKS?

A. Yes. AT&T uses a PLU factor in many states and has done so for years. I helped to successfully negotiate and arbitrate this issue for AT&T with Qwest in many of its states soon after the Telecommunications Act of 1996. AT&T is currently using interconnection trunks for multiple traffic types in many states, some of them for over five years. The Level 3 request is for the same type configuration that AT&T is successfully using.

Q. **WHAT IS LEVEL 3 ASKING THIS COMMISSION TO DECIDE ON THIS ISSUE?**

A. Level 3 is asking this Commission to rule that SBC must allow Level 3 to combine both local and LD calls on a single trunk group to preserve network efficiency, call blocking standards and efficient costs. The language that Level 3 is proposing for this issue is fair and balanced and will allow the efficient use of trunks by both companies.

V. ISSUE 3: TRANSIT TRAFFIC

Statement of the Issue: Transit traffic has been an essential part of interconnection since the passage of the Act. SBC now intends to redefine traffic types and exclude transit traffic from interconnection?[3]

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Transit traffic (local traffic originated or terminated by a third party Independent phone company or third party CLEC) is a fundamental part of SBC's interconnection obligation. Transit traffic should be passed between Level 3 and SBC on regular interconnection trunks as part of normal call flow. Separate trunk groups should not be required to pass transit traffic.

Q. WHAT IS SBC'S POSITION ON THIS ISSUE?

A. SBC requires that Level 3 provision separate trunk groups for transit traffic and must pay access rates when SBC provides transit services.

Q. WHAT IS TRANSIT TRAFFIC?

A. Transit traffic is traffic that is originated or terminated by a third party local service provider such as an Independent Phone Company (ICO) or a CLEC other than Level 3. These carriers provide local service within the SBC region and within local calling areas where SBC provides service. SBC has interconnection trunks to these providers and passes traffic to them on a regular basis. Level 3 needs access to these

[3] The following paragraphs in the agreement are covered by the testimony in this issue: Interconnection Trunking Requirements, Sections 1.3, 3.2, 3.4, 4.3, 4.3.1 – 4.3.4, and 12.3; Intercarrier Compensation, Section 4.6.

other carriers and it would be inefficient and a burden to Level 3 to require new trunks to all other carriers.

Q. IS TRANSIT TRAFFIC LOCAL TRAFFIC?

A. Yes. Transit traffic as discussed in this issue is local traffic and is not subject to long distance rates. The end users on both ends of the call do not expect to pay toll rates for these calls as they are within the local calling area or EAS area.

Q. IS IT TECHNICALLY FEASIBLE FOR SBC TO CARRY TRANSIT TRAFFIC TO AND FROM THE LEVEL 3 POINTS OF INTERFACE ON THE SAME INTERCONNECTION TRUNKS AS OTHER LOCAL TRAFFIC?

A. Yes, SBC regularly carries transit traffic between various carriers in their region. Level 3, as a CLEC, is no different in its need to complete local calls to other local carriers. There is no technical problem for SBC to carry transit traffic on local interconnection trunks. This has been a common practice in the past.

Q. IS IT TECHNICALLY EFFICIENT FOR SBC TO CARRY TRANSIT TRAFFIC FOR LEVEL 3?

A. Yes. SBC has existing interconnection trunks to all of the carriers in its region. It is much more efficient for SBC to carry the transit traffic than for Level 3 to establish interconnection trunks with all of these carriers. Level 3 and the other carriers would need whole new sets of interconnection trunk groups to carry this traffic. There is no efficiency and little point in Level 3 and all the other carriers establishing dozens of new trunk groups to carry traffic that is today carried very efficiently by SBC.

Q. IS IT REASONABLE FOR SBC TO REQUIRE SEPARATE TRUNK GROUPS FOR TRANSIT TRAFFIC?

A. No it is not. Transit traffic is local traffic and should be included on local trunk groups with other local traffic. The SBC requirement of separate trunk groups for transit traffic is a burden on CLECs such as Level 3. Requiring separate trunk groups causes greater expense in provisioning and equipment, more to manage over time, and greater likelihood of higher blocking rates. The total number of trunks would need to be increased significantly to keep the same blocking grade of service.

Q. ARE THE PROBLEMS SURROUNDING THE REQUIREMENT FOR SEPARATE TRUNK GROUPS SIMILAR TO THOSE DESCRIBED IN ISSUE 2 ABOVE?

A. Yes. The requirement for separate trunk groups for transit traffic creates the same costs, provisioning, management and blocking concerns described in detail in the previous issue on the use of interconnection trunks for both local and long distance traffic.

Q. **WHAT IS LEVEL 3 ASKING THIS COMMISSION TO DECIDE ON THIS ISSUE?**

A. Level 3 is asking this Commission to rule that SBC must continue to transit traffic to and from Level 3 to third party CLECs and ICOs as it has done in the past. The language that Level 3 is proposing for this issue is fair and balanced and will allow transiting of traffic to continue as it has in the past.

VI. ISSUE 4: DEFINITION OF A LOCAL CALL - GEOGRAPHIC LOCATION OF END USERS

Statement of the Issue: For purposes of the nature of traffic and reciprocal compensation, does the geographical location of end users control the definition of a local call?[4]

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Level 3 believes that the normal and historic practice of determining if a call is a local call should continue to be standard. For over 50 years the PSTN has used the phone number of the calling party and the called party to determine if a call is local.

Q. WHAT IS SBC'S POSITION ON THIS ISSUE?

A. SBC maintains that the definition of a local call should be changed to reflect the geographic location of both the calling and called party premises.

Q. HAS THE CUSTOMER PREMISES LOCATION BEEN THE DETERMINING FACTOR IN THE DEFINITION OF A LOCAL CALL IN THE PAST?

A. No, except for CMTS calls (Cellular Mobile Telephone System), the network uses the calling party's number and the called parties number to determine if a call is a local call.

[4] The following paragraphs in the agreement are covered by the testimony in this issue: General Terms and Conditions, Section 1.72; Interconnection Trunking Requirements, Sections 5.4.3 and 12.2; Intercarrier Compensation, Sections 3.5, 4.7, 4.7.1, 4.7.2, 4.7.2.1, 5.1.1-5.1.2.2.1, 7.1, 7.2, 8.1, 8.2, 8.3, 8.4, 10.1, and 12.6; Unbundled Network Elements, Section 2.19.4.

Q. DO LOCAL SWITCHES KNOW THE LOCATION OF THE PARTIES WHEN A CALL IS MADE?

A. No, the switches have no way of knowing the geographic location of the calling or called party. The switch knows which numbers are "native" to its area and treats calls to and from such numbers accordingly.

Q. HOW ARE CALLS ROUTED IN THE PSTN?

A. Calls are routed between switches according to the Local Exchange Routing Guide (LERG). The LERG is a database that identifies switches and numbers associated with those switches, based on the NPA NXX codes of the North American Numbering Plan (NANP). Switches within a local calling area know which numbers are associated with the local calling area and which numbers are not.

Q. SO CALLS BETWEEN TWO LOCAL NUMBERS ARE TREATED AS LOCAL CALLS?

A. Yes. The local switches know which numbers are local numbers, route the calls accordingly and bill accordingly. A call that is made between two numbers assigned to a local calling area is treated as a local call.

Q. HOW WOULD SWITCHES IMPLEMENT THE SBC IDEA OF USING THE GEOGRAPHIC LOCATION AS THE DETERMINATION FOR A LOCAL CALL?

A. I have no idea. Switches have no way of storing information regarding the premises location associated with a phone number. I have worked in switch design for 25 years and I have never heard of a feature that would store the geographic location

associated with a phone number in the switch or in any peripheral that is accessible by a switch.

Q. WHAT IS FOREIGN EXCHANGE (FX) SERVICE?

A. FX is a service that has been offered by phone companies for many years. The service allows an end user (generally a business) to appear to have a local presence when in fact their office is not actually located in the same local calling area. The customer pays for an arrangement (a special trunk or other facility) that connects them to the switch covering the local area. The customer is given a phone number in the local calling area so that end users in that local calling area can call them by dialing a local phone number. FX numbers have been popular in the past with airlines and other companies who needed a method for people to call them using a local number. Today, Internet Service Providers (ISPs) use FX type configurations so consumers can make local calls to their ISP when they need dial up modem service. An ISP will typically have a centralized modem bank to aggregate customer demand, rather than having to collocate modem banks in every end office, as SBC would have ISPs do.

Q. HOW ARE FX CALLS ROUTED?

A. FX calls are routed between the local switches as normal local calls. The originating and terminating switches have no way to know where the end user with the FX line is located, nor does it matter for proper switching. The switch that hosts the FX customer has a circuit coming in that it associates with a local phone number,

providing dial tone and other local services. The switch has no way to know whether the FX line is 2 miles long or 200 miles long.

Q. HOW ARE FX CALLS BILLED?

A. When a local end user customer of one phone company places a call to a local number of an end user customer of another phone company, the call is a local call and there is no toll charge. It does not matter if the number being called is 2 miles from the end office or 200 miles from the end office. The FX line is paid for separately by the FX customer. No toll charges are applied to calls to the FX number from numbers in the same local calling area as the FX number.

Q. IS SBC'S INTERCONNECTION TRUNKING THE SAME NO MATTER WHERE THE LEVEL 3 END USER CUSTOMER IS LOCATED?

A. Yes, SBC's trunking is always to the POI, no matter where the Level 3 end user customer is located. It doesn't matter if the Level 3 customer is 2 miles from the POI or 200 miles from the POI. Level 3 carries the traffic to its end user customer, no matter where they are located.

Q. IS LEVEL 3 REQUESTING THAT IT CONTINUE TO BE ALLOWED TO USE A STANDARD NETWORK CONFIGURATION?

A. Yes. Level 3 would like SBC to continue transporting calls that SBC customers originate to a Level 3 customer's local number to the POI. There is nothing unusual about this configuration and it is used throughout the SBC region today.

Q. **SO THE DISTANCE SBC TRANSPORTS TRAFFIC IS THE SAME WHETHER THE LEVEL 3 CUSTOMER IS 2 MILES FROM THE LEVEL 3 POI OR 200 MILES FROM THE POI?**

A. Yes, SBC transports calls that it originates to the POI, regardless of where the Level 3 customer is located. The location of the Level 3 customer or end user is immaterial to SBCs call transport or for SBC's costs for that matter. Mr. Gates will discuss in his testimony how SBC's costs are the same no mater where the Level 3 end user is located.

Q. WHAT IS LEVEL 3 REQUESTING THIS COMMISSION TO ORDER?

A. Level 3 would like the Commission to rule that SBC continue using the telephone number of the calling party and the called party to determine which calls are local calls. This is currently the way switches determine local calls and should remain so. The language that Level 3 has included in the Agreement accomplishes this objective.

VII. ISSUE 5: UNBUNDLED NETWORK ELEMENTS - UNES

Statement of the Issue: SBC places restrictions on UNEs and UNE combinations such as the qualification of services, no commingling with tariffed services and unilateral conversion to tariffed services when SBC decides they have received a favorable ruling to disallow.[5]

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. Level 3 does not believe that SBC should place restrictions on UNEs. First, SBC should not be permitted to limit the types of services that a CLEC can place on UNEs. Second, SBC should not be permitted to require separate facilities for UNEs and tariffed services. Third, SBC should not have the ability to convert UNEs to tariffed services when SBC unilaterally decides that a court, the FCC or a state PUC decision allows such conversion.

Q. WHAT IS SBC'S POSITION ON THIS ISSUE?

A. SBC seeks to limit Level 3's ability to use UNEs in a free and unrestricted manner. The first restriction SBC would impose would be that only qualifying services can use UNE facilities. SBC would no doubt decide what is qualifying and what is not, so there is uncertainty around what services will qualify. The second restriction puts a number of limitations and conditions on commingling of UNEs and wholesale services. The third restriction or condition that SBC would place on Level 3 is that

[5] The following paragraphs in the agreement are covered by the testimony in this issue: Unbundled Network Elements, 3.3.1, 2.3, 2.10 and subsections, 2.12 and subsections, and 2.15 and subsections.

SBC wants to switch UNEs to tariffed services virtually immediately after SBC unilaterally determines that a change in law allows them to discontinue a UNE.

Q. WHAT ARE THE PROBLEMS ASSOCIATED WITH SBC'S REQUIREMENTS FOR QUALIFYING SERVICES?

A. SBC has placed a number of unreasonable requirements in the Agreement whereby services that use UNEs must be "qualified" services. There are several problems with these qualifications and the ways in which SBC proposes to administer them. First, SBC requires that UNEs continuously carry only qualified services. This is unreasonable as the difference between telecommunications services and information services is vague in some instances and end users tend to mix their traffic. One could say that today's dial up Internet service is not a qualified service and should not be allowed over a UNE. This would be absurd as end users are free to use their local loops for whatever services they desire and can make a POTs call or a dial up Internet call at any time. Transport at the DS1 level may carry multiple calls some of which are telecommunications services and some of which are information services. Under the restrictive SBC language SBC could declare that the UNE transport is carrying unqualified service and discontinue the UNE to Level 3.

Q. DOES LEVEL 3 HAVE A MORE REALISTIC APPROACH TO THIS ISSUE?

A. Yes. Level 3 correctly states that if a UNE is carrying or has carried telecommunications services then the use of the UNE is legitimate. This avoids issues of uncontrollable mixed use by end users.

Q. IS THERE ANOTHER WAY TO LOOK AT THE ISSUE OF QUALIFIED SERVICES?

A. Yes. Telecommunications loops and transport facilities by their very nature are qualified. In general, Level 3 is a CLEC that sells wholesale services to customers providing services to end users. When Level 3 leases a UNE from SBC, such as a DS1, Level 3 provides that facility as a telecommunications service, to its customers. Level 3's customers are then free to provide whatever services they choose to their end users. These services might be regular phone service, Internet service, VoIP, streaming media, or any other type of service that can flow over a DS1 telecommunications facility.

Q. WHAT IS COMMINGLING?

A. Commingling as it is used in the agreement is the connection of UNE loops and facilities with wholesale services such as private line or special access. For example, several private line loops could be multiplexed together with several UNE loops on a UNE transport facility.

Q. WHAT ARE THE ADVANTAGES TO BOTH COMPANIES WHEN COMMINGLING IS ALLOWED?

A. Commingling of UNEs and wholesale facilities is much more efficient that the alternative, which is to essentially build two separate networks to carry what is basically the same type of service and traffic.

Q. WHAT ARE THE LIMITATIONS THAT SBC IS PUTTING ON THE COMMINGLING OF UNES AND WHOLESALE FACILITIES?

A. First, SBC is specifying that it will not commingle traffic if Level 3 can do the work itself when Level 3 is collocated. This is unreasonable as there is no clear specification of what "work" Level 3 can do or even will be permitted to do within a specific SBC office. Facilities must be taken to the Level 3 collocation site from other places in an SBC office and generally CLECs are not permitted to do all of the work required themselves. Second, SBC refuses to commingle if: "network reliability and security would be impaired." This is a very vague standard and as an engineer I would not know how to operate under a condition this vague. Anything done to a network in terms of addition of equipment or changes in facilities has some impact on reliability and security. Third, SBC refuses to commingle if: "SBC-13STATE's ability to retain responsibility for the management, control, and performance of its network would be impaired." Again, this is too vague to know how to implement. Management and control of telecommunications facilities is always a bit worse when another party is involved. This does not mean that either party is doing anything wrong or incorrectly, it is just a fact of complexity. Network performance is also marginally impaired when multiple parties work on them. Fourth, SBC refuses to commingle if: "SBC 13STATE would be placed at a disadvantage in operating its own network." Once again, this is so vague that SBC could arbitrarily argue that Level 3 violated it. Fifth, SBC refuses to commingle if: "it would undermine the ability of other Telecommunications Carriers to obtain

access to UNEs or to Interconnect with SBC-13State's Network." From an engineering point of view, this provision is technically violated daily because every time Level 3 leases a UNE facility from SBC, that facility is not available for use by another CLEC. The crowning restriction that SBC places on commingling UNEs is a requirement for Level 3 to submit a BFR every time they want SBC to "perform the functions necessary to Commingle (as well as requests where CLEC also wants SBC-13STATE to complete the actual Commingling)." This is absurd. The work required to do Commingling is routine central office work that SBC does for itself every day. UNE facilities and wholesale facilities are identical. A loop is a loop and a trunk is a trunk, no matter if the facility is sold as a UNE or wholesale as private line. The BFR process was created for processing requests for the creation of new UNEs and for new and unique configurations, not everyday facilities provisioning. The vast majority of Commingling requests are nothing more than connecting facilities together in standard configurations. BFR should be saved for those unique situations that have never been done before.

Q. WHAT WOULD BE THE IMPACT OF SBC ARBITRARILY CONVERTING UNES TO WHOLESALE SERVICES WHEN THEY INTERPRET RULINGS TO DISALLOW THE UNES?

A. SBC has placed language in the agreement that would allow it to convert UNEs to wholesale services anytime it decides that a new ruling by the FCC, a State Commission or a court seems to give it the ability to discontinue a UNE. This effectively subverts the change of law provisions in the agreement. The arbitrary

conversion of a UNE to a wholesale service could be very disruptive to Level 3's business. Some services or routes may be uneconomical or impractical without the use of UNEs. If there is a legitimate change in law, Level 3 needs much more time to transition onto alternative services or facilities. This should be done in a rational manner, not arbitrarily as SBC proposes.

Q. WHAT IS LEVEL 3 ASKING THIS COMMISSION TO RULE ON THESE ISSUES?

A. Level 3 is asking this Commission to approve the Level 3 language for UNEs in the agreement.

VIII. ISSUE 6: ESP TRAFFIC - VOIP TRAFFIC

Statement of the Issue: Whether SBC may prohibit Level 3 from utilizing local interconnection facilities to terminate Internet-enabled traffic.[6]

Q. WHAT IS LEVEL 3'S POSITION ON THIS ISSUE?

A. When Level 3 traffic is originated by or terminated to an ESP provider, that traffic should be excluded from access charges.

Q. WHAT IS SBC'S POSITION ON THIS ISSUE?

A. SBC is requiring Level 3 to pay access rates for VoIP traffic and other types of ESP originated traffic that it determines is telecommunications traffic.

[6] The following paragraphs in the agreement are covered by the testimony in this issue: Interconnection Trunking Requirements Appendix, Section 13.1; Intercarrier Compensation, Sections 3.1, 4.2, 4.5, 4.7-4.7.2.1, 7.1, 7.2, 16.1, and 17.1

Q. WHAT IS AN ENHANCED SERVICE PROVIDER AND WHAT TYPES OF NETWORK TRAFFIC DO THEY CREATE AND TRANSMIT?

A. An ESP is a company that provides enhanced or value-added services to end users; services referred to as information services in the Act. Examples of ESPs would be email providers, Internet Service Providers, web hosting companies, Voice mail providers, and other data applications providers. ESPs generate or process such traffic as email, data downloads from web pages, voice mail, and VoIP. This traffic is typically sent over a packet network using Internet Protocol (IP), though voice mail may be sent and received completely over the Public Switched Telephone Network (PSTN).

Q. WHAT IS INTERNET PROTOCOL?

A. A protocol is a specific set of rules and conventions that relate to the format and timing of data transmission between two computers. Packet networks typically use a layered set of protocols to keep the applications separate from the transmission medium. Internet Protocol (IP) is a mid layer protocol that facilitates the transmission of data applications between computers by managing internet addresses, routing outgoing messages, and recognizing incoming messages. IP rides on lower layer protocols such as Ethernet, Asynchronous Transfer Mode (ATM) or other packet transmission protocols.

Q. WHAT IS VOICE OVER INTERNET PROTOCOL OR VoIP?

A. IP technology treats services like voice as an Internet application in the same manner as it treats voicemail, video, or viewing a web page or any other application. With

VoIP, telephony signals, including voice signals, are digitized and transmitted as packets to their destination, just as with an email, streaming video or any other kind of IP transaction. In short, IP destroys the old distinctions between "voice" and "data" that are a standard part of PSTN thinking. Indeed, because the information associated with any particular application is broken down into packets of bits and does not take its analog form (i.e. sound, text or pictures) until it is reassembled at the terminating end, it is impossible to assign the transmission to any particular service classification at any point other than origin or destination. An IP network provider, for example, can be carrying real-time two-way voice packets without actually offering voice service to any end- user customer.

Also, a separate signaling protocol is used for VoIP, such as Session Interface Protocol (SIP), to manage the call or data session. When one end of a VoIP call is on the PSTN, a net protocol conversion is necessary to convert the packetized IP data into a Time Division Multiplexed (TDM) signal that can be used on the PSTN. Today, VoIP comes in many forms, and some closely resemble traditional phone service from the point of view of the end user; however, the application remains an information service.

Q. WHAT IS NET PROTOCOL CONVERSION?

A. Net protocol conversion is when the media stream that uses one protocol, native to one particular type of network, is converted into a different media stream using a different protocol on a different type of network. In the case of VoIP, a voice call

originating on the PSTN using TDM must be converted to IP by packetizing the data, generating the Internet protocol and sending out the result on the packet network.

Q. IS NET PROTOCOL CONVERSION NECESSARY ON VoIP CALLS BETWEEN LEVEL 3 AND SBC?

A. Yes, all VoIP calls that begin with a Level 3 customer and terminate to a SBC customer require a net protocol conversion. Likewise, calls that begin with a SBC customer and terminate to a Level 3 customer also require a net protocol conversion. The reason for this is simple. Level 3 has no circuit switches on its network. Any and all media streams generated by Level 3 will originate in an IP format and must be converted to TDM for terminating on the PSTN. The reverse is also true. A call originating from a SBC end user (on the SBC network) must be converted to IP in order for Level 3 to move such media through its network. Finally, Level 3 receives and terminates services to its ESP customers in an IP format – the media in NOT converted back to TDM by Level 3. Thus, a net protocol conversion occurs – media streams go from IP to TDM or vise versa depending on whether Level 3 originates or terminates the call.

Q. WHAT TYPE OF CUSTOMER PREMISES EQUIPMENT IS NEEDED FOR VoIP?

A. VoIP requires specialized Customer Premises Equipment (CPE). Standard Touch Tone or dial pulse phones will not work on VoIP unless they are connected to a computer. Special SIP phones can be used for VoIP. These phones have small

computers built into them that packetize the voice data and generate SIP messages. Computers with headsets and microphones can also be used for VoIP.

Q. CAN A VoIP CUSTOMER MOVE THEIR SIP PHONE OR COMPUTER PHONE TO DIFFERENT LOCATIONS, WHILE STILL MAINTAINING THE SAME PHONE NUMBER?

A. Yes, a SIP phone or computer phone can be plugged into any broadband connection to receive VoIP service. The end user could send and receive calls from any location with this type of broadband connection. This gives VoIP users a degree of mobility that is not available to users of PSTN service.

Q. PLEASE DESCRIBE THE LEVEL 3 FIBER AND IP NETWORKS.

A. Level 3 has a large all fiber-optic backbone network that connects 68 markets in the U.S. and 17 markets in Europe, with over 16,000 route miles of fiber in the US intercity network and 3600 route miles in Europe. Figure 2 shows the current configuration of the Level 3 fiber network that is installed and operational in the US. Riding on this Fiber Backbone, Level 3 maintains a large IP network that it manages as a separate network, composed of high-speed links and core routers. Figure 3 shows the current configuration of this network. The Level 3 IP backbone is run as a private network and is connected to the public Internet via hundreds of peering arrangements at Level 3 Gateways, located in 29 metropolitan areas. Level 3 central office facilities are state of the art facilities in the heart of 70 major metropolitan areas. They range in size from 50,000 to 550,000 square feet of equipped floor space. This is where both local and intercity fiber networks terminate, where high speed

transmission equipment is situated, and where routers and Softswitch equipment is located.

Q. HOW HAS THE LEVEL 3 NETWORK BEEN OPTIMIZED FOR IP?

A. The Level 3 network was designed as a high-speed packet network for carrying IP traffic. It is composed of IP routers instead of PSTN type switches and all of its facility links are IP based.

Q. WHAT IS THE BASIC DIFFERENCE BETWEEN THE PSTN AND LEVEL 3'S IP BASED NETWORK?

A. The PSTN was designed to optimally carry voice traffic. The PSTN is made up of circuit switches and facilities linking them that carry circuit based phone traffic. The Level 3 IP network is a data network, not a voice network. It is made up of IP routers and IP data links between the routers.

Q. **WHAT TYPES OF CUSTOMERS DOES LEVEL 3 SERVE AND WHAT TYPES OF SERVICES DO THEY USE?**

A. Level 3 serves a number of ISPs. ISPs require local connectivity to the PSTN and transport and termination services from Level 3, including modem banks and collocation space. ISPs use the Level 3 network to pass all types of data, including email, web download services, computer-to-computer data transfer, VoIP and other streaming media. Level 3 is also beginning to serve cable companies, DSL providers and enterprise companies with transport and termination of VoIP traffic. Level 3 is a wholesale provider of transport and termination services for its customers.

Q. DO LEVEL 3 CUSTOMERS NEED LEVEL 3 TO PROVIDE THEM WITH THE ABILITY TO RECEIVE TRAFFIC FROM THE PSTN AND TO ORIGINATE TRAFFIC BOUND FOR THE PSTN?

A. Yes, traditional ISPs, a subset of ESPs, need to receive dial up modem access from the PSTN. Though high-speed service from cable and DSL is becoming increasingly popular, there are still a great number of customers who utilize dial up modems to access the Internet from the PSTN, in part because the costs of high-speed access to the edge of the network are still too expensive for many customers. In part the collapse of competitive telecommunications in recent years has slowed the pace with which broadband is being pushed out to the edge of the network. Many SBC customers today call Level 3's ISP customers for dial up Internet service. Level 3's VoIP customers today need Level 3 to complete calls to SBC end users and to receive calls from SBC end users bound for Level 3's customers' end users.

Q. DOES THE SBC NETWORK NEED TO TERMINATE VoIP CALLS IN A MANNER THAT IS DIFFERENT FROM THE TERMINATION OF NORMAL PSTN BASED LOCAL TELEPHONE CALLS?

A. SBC terminates VoIP calls to its end users in the same manner they would use to terminate regular PSTN based local calls to their end users. There are no extra processes, no additional transport and no additional switching.

Q. WHAT IS LEVEL 3 ASKING THIS COMMISSION TO RULE ON THESE ISSUES?

A. Level 3 is asking this Commission to approve the Level 3 language for VoIP and other related ESP traffic in the agreement.

IX. ISSUE 16: PERFORMANCE MEASUREMENTS APPENDIX.

Q. IS THE INCLUSION OF A PERFORMANCE SECTION IMPORTANT IN AN INTERCONNECTION AGREEMENT?[7]

A. Yes, Interconnection Agreements should contain sections on performance measurements and performance metrics. It is essential that Level 3, or any CLEC, have assured levels of performance from SBC. Without such assurances, Level 3 will not have the ability to plan work or give its customers dates for completion of service. Level 3's operations would become chaotic without the performance metrics and assured performance levels that are contained in the appendix on performance.

Q. WHAT ARE THE ISSUES WITH THE PERFORMANCE SECTION IN THE SBC CONTRACT WITH LEVEL 3?

A. We don't know. SBC, after agreeing to include the Performance Appendix in the agreement has now refused to include such appendix in the proposed Agreement.

Q. IF SBC RAISES SPECIFIC PERFORMANCE ISSUES, ARE YOU PREPARED TO ADDRESS THEM?

[7] The entire Performance Measurements Appendix is the subject of this issue.

A. Yes, I am. I have over 20 years of experience in dealing with network performance issues at Bell Labs, AT&T Local Services, and as a consultant.

Q. WHAT IS LEVEL 3 ASKING THIS COMMISSION TO RULE ON THIS ISSUE?

A. Level 3 is asking this Commission to approve the Performance Appendix, in its entirety, as Level 3 has presented it.

X. ISSUE 18: PHYSICAL COLLOCATION

Q. IS PHYSICAL COLLOCATION IN SBC SPACE NECESSARY FOR LEVEL 3 TO INTERCONNECT WITH SBC?

A. Yes, physical collocation is a critical part of interconnection, both for the exchange of traffic and for access to UNEs.[8]

Q. WHAT ARE THE ISSUES AT DISPUTE IN THE PHYSICAL COLLOCATION APPENDIX?

A. We don't really know as SBC has not responded to Level 3's proposals for physical collocation.

Q. DO YOU HAVE EXPERIENCE WITH PHYSICAL COLLOCATION ISSUES?

A. Yes, I was the lead technical negotiator and lead witness for AT&T as it negotiated and arbitrated for physical collocation in all 14 of Qwest's states. The issues involved in collocation are generally the same across ILEC regions and states.

8 The entire Physical Collocation Appendix is the subject of this issue.

Q. IS THE REPLACEMENT OF THE TERM "ELIGIBLE STRUCTURE" WITH THE TERM "PREMISES" REASONABLE?

A. Yes, the term "premises" has a long history of use in collocation and is well defined by the FCC and state jurisdictions, while "eligible structure" is not.

Q. SHOULD THIS COMMISSION REQUIRE SBC TO CONVERT OFFICE SPACE INTO COLLOCATION SPACE IN SOME INSTANCES?

A. Yes, space in central offices is very valuable for the placement of collocation equipment. There are severe limitations on the distances that loops can travel without degradation. Level 3 may need access to UNE loops, requiring collocation in specific offices. SBC may need to relocate office space in less valuable real estate.

Q. HAVE YOU REVIEWED THE OTHER CHANGES THAT LEVEL 3 HAS MADE IN THE PHYSICAL COLLOCATION APPENDIX AND ARE THEY REASONABLE?

A. Yes, I have reviewed the changes Level 3 is proposing and they are reasonable.

Q. WHAT IS LEVEL 3 ASKING THIS COMMISSION TO RULE ON THESE ISSUES?

A. Level 3 is asking this Commission to approve the Appendix on Physical Collocation, in its entirety, as Level 3 has presented it.

XI. ISSUE 19: VIRTUAL COLLOCATION

Q. IS VIRTUAL COLLOCATION NECESSARY FOR LEVEL 3 TO INTERCONNECT WITH SBC AND TO GAIN ACCESS TO UNES?

A. Yes, virtual collocation is a critical part of interconnection, both for the exchange of traffic and for access to UNEs.[9]

Q. WHAT ARE THE ISSUES AT DISPUTE IN THE PHYSICAL COLLOCATION APPENDIX?

A. We don't really know as SBC has not responded to Level 3's proposals for virtual collocation.

Q. DO YOU HAVE EXPERIENCE WITH VIRTUAL COLLOCATION ISSUES?

A. Yes, I was the lead technical negotiator and lead witness for AT&T as it negotiated and arbitrated for virtual collocation in all 14 of Qwest's states. The issues involved in virtual collocation are generally the same across ILEC regions and states.

Q. HAVE YOU REVIEWED THE CHANGES THAT LEVEL 3 HAS MADE IN THE VIRTUAL COLLOCATION APPENDIX AND ARE THEY REASONABLE?

A. Yes, I have reviewed the changes Level 3 is proposing and they are reasonable. Level 3 has primarily moved the definitions from this appendix to the body of the Agreement.

[9] The entire Virtual Collocation Appendix is the subject of this issue.

Q. WHAT IS LEVEL 3 ASKING THIS COMMISSION TO RULE ON THESE ISSUES?

A. Level 3 is asking this Commission to approve the Appendix on Virtual Collocation, in its entirety, as Level 3 has presented it.

XII. TIER 3 ISSUES

Q. DO YOU HAVE ANY OPINION ON ISSUE NIM-1, CONCERNING THE DEFINITION OF NIMS AND THE RECIPROCITY OF INTERCONNECTION CONFIGURATIONS?

A. Level 3 is proposing language in the Agreement that would make the definitions of NIMs include all of the methods that are necessary for efficient network interconnection. Level 3 also modified the language to make it more reciprocal in nature, which is reasonable in that interconnection is a responsibility of both parties. The Level 3 language is appropriate and fair for both parties.[10]

Q. DO YOU HAVE ANY OPINION ON ISSUE NIM-2, CONCERNING OPTICAL HANDOFFS FOR THE EXCHANGE OF TRAFFIC?

A. The Level 3 language is appropriate and fair for both parties. Fiber meet points are important for interconnection and should be available to Level 3 on a nondiscriminatory basis.[11]

[10] The following paragraphs in the agreement are at issue: Network Interconnection Methods, Sections 1.25, 1.27, 2.4, 2.5, 2.6, 2.8.3, 3.3.1, and 3.4.2.

[11] The following paragraphs in the agreement are at issue: Network Interconnection Methods, Sections 2.8.2, and 2.8.3.

Q. DO YOU HAVE ANY OPINION ON ISSUE NIM-3, CONCERNING THE ABILITY TO USE COLLOCATION AND LEASED FACILITIES FOR INTERCONNECTION?

A. The Level 3 language is appropriate and fair for both parties. It is critical that Level 3 can use collocation, leased facilities and other interconnection means in an efficient manner.[12]

Q. DO YOU HAVE ANY OPINION ON ISSUE NIM-4, CONCERNING THE USE OF SONET FACILITIES FOR MEET POINTS?

A. The language Level 3 is proposing is less restrictive than the language proposed by SBC. CLECs must be able to use fiber facilities for all types of traffic.[13]

Q. DO YOU HAVE ANY OPINION ON ISSUE NIM-5, CONCERNING THE USE OF FACILITIES LEASED FROM SBC FOR INTERCONNECTION?

A. The SBC language would limit the ability of Level 3 to lease facilities from SBC for interconnection. It is essential that Level 3 have the ability to lease facilities from SBC under this agreement for interconnection and for access to UNEs.[14]

[12] The following paragraphs in the agreement are at issue: Network Interconnection Methods, Sections 3.1.1, 3.2.1. 3.3.1, 3.4.2.

[13] The following paragraphs in the agreement are at issue: Network Interconnection Methods, Section 3.4.2

[14] The following paragraphs in the agreement are at issue: Network Interconnection Methods, Sections 5.1 and 5.2.

Q. DO YOU HAVE ANY OPINION ON ISSUE NIM-6, CONCERNING PLANNING MEETINGS AND PROVISIONING INTERVALS?

A. Level 3 would like the planning and provisioning process to be as expeditious as possible and the language they proposes does just that.[15]

Q. DO YOU HAVE ANY OPINION ON ISSUE ITR-1, CONCERNING THE RECIPROCAL NATURE OF INTERCONNECTION TRUNKING?

A. Trunking for interconnection is reciprocal in nature, applying to both parties, and the language in the agreement should reflect this fact. The Level 3 language also clarifies the scope [16]

Q. DO YOU HAVE ANY OPINION ON ISSUE ITR-2, CONCERNING OS/DA TRUNKS?

A. Level 3 should not be required to provision trunk groups that it does not use. This would be inefficient from a network utilization point of view. Level 3 has deleted the language for trunk groups that it does not plan to use.[17]

[15] The following paragraphs in the agreement are at issue: Network Interconnection Methods, Sections 4.1, and 4.2.

[16] The following paragraphs in the agreement are at issue: Interconnection Trunk Group, Section 1.2 and all subsections.

[17] The following paragraphs in the agreement are at issue: Interconnection Trunk Group, Sections 3.1.2–3.1.4, and 8.8.1.

Q. DO YOU HAVE ANY OPINION ON ISSUE ITR-3, CONCERNING TRANSIT TRAFFIC?

A. I have addressed Transit Traffic in general in Issue-3, above. SBC should handle transit traffic for Level 3 as it makes the most sense from the point of view of network efficiency. The Level 3 language correctly defines SBC's responsibility.[18]

Q. DO YOU HAVE ANY OPINION ON ISSUE ITR-4, CONCERNING POINTS OF INTERCONNECTION AND TYPES OF TRAFFIC ON INTERCONNECTION TRUNKS?

A. Level 3 should have the ability to select one or more POIs at any technically feasible location. In addition, Level 3 should be able to efficiently use interconnection trunks to carry all types of traffic. These issues are discussed in detail above, in Issue-1 and Issue-2.[19]

Q. DO YOU HAVE ANY OPINION ON ISSUE ITR-5, CONCERNING TRAFFIC ENGINEERING?

A. Level 3 should not be restricted in efficiently engineering its network and the interconnection to the SBC network. The Level 3 language in the Agreement accomplishes this goal.[20]

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[18] The following paragraphs in the agreement are at issue: Interconnection Trunk Group, Sections 3.2, and 4.3.

[19] The following paragraphs in the agreement are at issue: Interconnection Trunk Group, Sections 5.2.1 – 5.2.9, 5.3.1.1, 5.3.3.1, 5.4.1,- 5.4.4, and 5.6.3.

[20] The following paragraphs in the agreement are at issue: Interconnection Trunk Group, Sections 4.5, 5.7.1, 5.7.3, 5.7.4, and 6.2.2.

Q. DO YOU HAVE ANY OPINION ON ISSUES REC-1 THROUGH REC-5, CONCERNING BILLING AND RECORDING ISSUES?

A. I have reviewed the issues and the language proposed by both sides. Level 3 must have the ability to efficiently receive and process message detail information from SBC. The language that Level 3 is proposing on these issues will accomplish this goal.[21]

Q. DO YOU HAVE ANY OPINION ON ISSUES CH-1 THROUGH CH-3, CONCERNING CLEARINGHOUSE ISSUES?

A. I have reviewed the issues and the language proposed by both sides. The clearinghouse function is important for Level 3 to correctly bill customers. The language that Level 3 is proposing on these issues will accomplish this goal.[22]

Q. DO YOU HAVE ANY OPINION ON ISSUES ES-1 THROUGH ES-2, CONCERNING E911 ISSUES?

A. E911 is an essential service for many of Level 3's customers. SBC must work with Level 3 to make E911 accurate and reliable. The language that Level 3 is proposing on these issues will accomplish this goal.[23]

[21] The following paragraphs in the agreement are at issue: Recording, Section 3.13, 4.112.1, 5.2, 5.4, 5.6, 12.2, 12.5, 12.9, 14.1, and 15.3,

[22] The following paragraphs in the agreement are at issue: Clearinghouse, Section 1.26, 1.27, and 2.1.

[23] The following paragraphs in the agreement are at issue: E911, Sections 3.2.2, and 4.2.11.

Q. DO YOU HAVE ANY OPINION ON ISSUE UNE-5, CONCERNING PROVISIONING DURING SWITCH CONVERSIONS?

A. Switch conversions require that some provisioning processes cease for a designated time. However, the SBC language does not minimize the impact on Level 3 of such conversions. The changes that Level 3 has made to the language are reasonable and help to minimize the impact.[24]

Q. DO YOU HAVE ANY OPINION ON ISSUES SS7-1 THROUGH SS7-3, CONCERNING THE EXCHANGE OF SS7 INFORMATION?

A. The initial SS7 appendix provided by SBC was written more for CLECs who would lease elements of the SBC network as UNEs, as for example with UNE-P. Level 3 needs interconnection with the SBC network and the exchange of signaling messages as a carrier, which is very different. To this end, Level 3 has modified the language in the SS7 appendix to make it reciprocal in nature, which is appropriate for the relationship between Level 3 and SBC and the nature of the traffic they exchange. The Level 3 language is balanced and reasonable.[25]

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24 The following paragraphs in the agreement are at issue: Unbundled Network Elements Section 2.13.3.

25 The following paragraphs in the agreement are at issue: SS7, Sections 2.4, 2.4.1, 2.4.1.1, 2.4.2.1, 2.5, 2.6, 2.7, 2.8, 2.9.2, 2.9.3, 2.9.4, 2.9.5, 2.9.6, 2.11.1, 2.11.2, 2.12.1, 3.2.1, 3.2.2, 3.2.3, 3.3, 3.4.1, 3.4.4, 3.4.5, 3.4.6, 3.4.7, 4.1, 4.2, 4.3, 4.4, 5.1, 2.9.4, 2.10.2, 2.10.3, 2.12.3, 3.2.2, 3.4.2, 3.4.2.1, 3.4.2.2, 3.4.3, 3.4.8, 3.5, 3.5.1, 4.1, 4.3, 4.4, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.1, 2.9.6, 2.10.4, 2.11.2, 7.1, 7.3, 7.3.1, 7.4, 7.4.1, 7.5, 7.5.1, 7.6, 7.6.1, 8.0, 8.1, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.3, 8.3.1, 8.3.1.1, 8..2, 8.3.2.1, 8.3.2.2, 8.3.3, 8.3.3.1, 8.4, 8.4.1, 8.5, 8.5.1, 8.6, 8.6.1.

XIII. CONCLUSIONS

Q. HAVE YOU REVIEWED THE CONTRACT LANGUAGE PROPOSED BY LEVEL 3 AND SBC IN THIS CASE?

A. Yes I have.

Q. FOR THE ISSUES YOU HAVE ADDRESSED, WHICH LANGUAGE IS MORE CONSISTENT WITH THE POINTS YOU HAVE MADE IN THIS TESTIMONY?

A. Level 3's language is reasonable and balanced from a technical and engineering standpoint and is consistent with the FCC's orders from an engineering point of view.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes. It does.

CURRICULUM VITAE

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Current Position

1998-Present Senior Consultant, Boulder Telecommunications Consultants, LLC.

Past Positions

1995-1998 AT&T Technical Negotiations Director, Local Service Organization Western Region – Technical leader of negotiations and witnessing team responsible for all aspects of AT&T's contracts in 14 states with US WEST. Led technical planning for local infrastructure and Operations Support Systems "OSS" interfaces.

1994-1995 AT&T Bell Labs local infrastructure development and business analysis – technical lead for team evaluating local infrastructure alternatives and OSS.

1992-1994 Bell Labs Technical Director Network Deployment and Asset Management – key team leader on AT&T project to optimize network infrastructure by changing engineering rules and OSS processes.

1988-1992 Bell Labs MTS Supervisor responsible for network design and OSS performance of the FTS2000 network. Network performance planning for new business customer features. Competitive testing and analysis of multiple vendor networks.

1984-1987 Bell Labs MTS and MTS Supervisor, Cellular Telephone Development. Responsible for systems requirements and systems testing of new cellular telephones.

1980-1984 Bell Labs MTS responsible for 4ESS feature and architecture planning.

1977-1980 Software, hardware and manufacturing engineering in two small companies.

1972-1977 Teaching Assistant, University of Illinois Department of Electrical Engineering.

Education

ABD for Ph.D. in Electrical Engineering, University of Illinois, 1976
MS in Electrical Engineering, University of Illinois, 1974
BS in Electrical Engineering, Oklahoma State University, 1972

A. WRITTEN TESTIMONY, AFFIDAVITS AND REPORTS

Date	State	Docket	Filed By	Description
2/11/1998	IA	AIA-96-1	AT&T	Direct Testimony - Arbitration Remand - USWC
2/12/1998	OR	UT138	AT&T	Reply Testimony UM351 Compliance Tariffs - USWC
2/12/1998	OR	UT139	AT&T	Reply Testimony UM351 Compliance Tariffs - GTE
3/9/1998	IA	AIA-96-1	AT&T	Direct Answer Testimony - Arbitration Remand - USWC
3/13/1998	NM	96-411-TC	AT&T	Direct Testimony - Arbitration AT&T/USWC
3/23/1998	IA	AIA-96-1	AT&T	Rebuttal Testimony - Arbitration Remand - USWC
4/8/1998	CO	96S-331T	AT&T	Testimony - Arbitration - Cost Issues - USWC
5/26/1998	AZ	T-0000A-97-238	AT&T	Reply Testimony - Sect. 271 Telecom Act
6/16/1998	MT	D97.5.87	AT&T	Direct & Rebuttal Testimony - Sect. 271 Telecom Act
7/27/98	NM	97-106-TC	AT&T	Direct & Rebuttal Testimony - Interconnection - Sect. 271
7/27/1998	NM	97-106-TC	AT&T	Direct & Rebuttal Testimony - Signaling - Sect. 271
8/7/1998	NE	C-1830	AT&T	Direct & Rebuttal Testimony - Signaling - Sect. 271
8/7/1998	NE	C-1830	AT&T	Direct & Rebuttal Testimony - Interconnection - Sect. 271
9/8/1998	NM	97-106-TC	AT&T	Reply Testimony - Sect. 271 Telecom Act
9/8/1998	NM	97-106-TC	AT&T	Reply Testimony (prop version) - Sect. 271 Telecom Act
11/6/1998	MT	D97.5.87	AT&T	Supplemental Rebuttal Testimony - Sect. 271 Telecom Act
11/13/1998	WA	UT-960369 et al.	AT&T	Sup. Responsive Testimony Arbitration Cost Case
12/1/1998	WA	C97-1073Z	ELI	Expert Opinion - ELI complaint against US WEST for violation of the Sherman Act
2/1/99	WA	C97-1073Z	ELI	Expert Report - ELI complaint against US WEST for violation of the Sherman Act
10/22/99	CA	CA97-2015	CalTech	Expert Report – CalTech complaint against Pacific Tel for violation of the Sherman Act

12/99	CA	CA97-2015	CalTech	Supplement to Expert Report - CalTech complaint against Pacific Tel for violation of the Sherman Act
12/17/99	WA	UT-991292	AT&T	Direct and Rebuttal – Access complaint against US WEST
1/00	CA	CA97-2015	CalTech	Declaration - CalTech complaint against Pacific Tel for violation of the Sherman Act
1/00	AZ	USW application for Section 271 relief	AT&T	Comments on 271 Checklist items 3, 7, 8, 9, 10, 12, and 13
4/00	CO	USW application for Section 271 relief	AT&T	Comments on 271 Checklist items 3, 7, 8, 9, 10, 12, and 13
5/00	WA	USW application for Section 271 relief	AT&T	Testimony on 271 Checklist Items 3, 7, 8, 9, 10, 12, and 13
6/00	CO	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 3, 7, 8, 9, 10, 12, and 13
7/00	WA	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 3, 7, 8, 9, 10, 12, and 13
7/00	VA	Circuit Court, Fairfax County, Chancery # 166950	Hogan Hartson	Initial Expert Report in Trade Secret Case involving High Speed Access and Internet.
7/00	VA	Circuit Court, Fairfax County, Chancery # 166950	Hogan Hartson	Final Expert Report in Trade Secret Case involving High Speed Access and Internet. This report was not filed but was produced in discovery
8/00	CO	Section 271 PUC Workshop, checklist	AT&T	Affidavit on checklist items 1, 14
8/00	AZ	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 1, 14
9/00	AZ	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 1, 14
9/00	CO	Section 271 PUC Workshop, checklist items 1, 14 (follow-up)	AT&T	Affidavit on checklist items 1, 14
10/00	UT, IA, etc.	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 1, 11, 14
10/00	AZ	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 2, 5, 6
10/00	OR	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 1, 11, 14

11/00	CO	Section 271 PUC Workshop,	AT&T	Affidavit on emerging services checklist items (dark fiber, DSL, subloop unbundling)
11/00	WA	Section 271 PUC Workshop,	AT&T	Affidavit on checklist items 1, 11, 14
11/00	AZ	Section 271 PUC Workshop	AT&T	Affidavit on Unbundled loops and Number Portability
12/00	CO	Section 271 PUC Workshop	AT&T	Affidavit on Packet Switching, Line Sharing, DSL, Dark Fiber and SubLoop Unbundling
12/00	WA	Antitrust Case against US WEST	Metronet	Plaintiffs Report on Telecommunications issues
01/01	CO	Section 271 PUC Workshop	AT&T	Affidavit on Unbundled Switching, Unbundled Transport, Combinations, UNE-P and general UNE issues
02/01	UT, IA, etc.	Section 271 PUC Workshop	AT&T	Affidavit on Unbundled Switching, Unbundled Transport, Combinations, UNE-P and general UNE issues
02/01	WA	Section 271 PUC Workshop	AT&T	Affidavit on Unbundled Switching, Unbundled Transport, Combinations, UNE-P and general UNE issues
03/01	OR	Section 271 PUC Workshop	AT&T	Affidavit on Unbundled Switching, Unbundled Transport, Combinations, UNE-P and general UNE issues
03/01	WA	Antitrust Case against US WEST	Metronet	Declaration in Support of Opposition to US WEST Motion for Summary Judgement
03/01	UT, IA, etc	Section 271 PUC Workshop	AT&T	Comments on Unbundled Loops, Line Splitting and Network Interface Devices
03/01	CO	Section 271 PUC Workshop	AT&T	Comments on Unbundled Loops, Line Splitting and Network Interface Devices
03/01	AZ	Section 271 PUC Workshop	AT&T	Comments on Unbundled Loops, Line Splitting and Network Interface Devices
04/01	DC	Class Action, DC Superior Court, 01CA000405	Cohen, Milstein	Affidavit for Plaintiff on technical issues in DSL case against Verizon, in response to motion to dismiss.
05/01	WA	Section 271 PUC Workshop	AT&T	Comments on Unbundled Loops, Emerging Services, Subloop Unbundling
05/01	OR	Section 271 PUC Workshop	AT&T	Comments on Unbundled Loops, Emerging Services, Subloop Unbundling
05/01	GA	Section 271 PUC Hearing	AT&T	Affidavit on Interconnection Trunking and Local Number Portability
05/01	LA	Section 271 PUC Hearing	AT&T	Affidavit on Interconnection Trunking and Local Number Portability

06/01	KY	Section 271 PUC Hearing	AT&T	Affidavit on Interconnection Trunking and Local Number Portability
07/01	AL	Section 271 PUC Hearing	AT&T	Testimony on Interconnection Trunking and Local Number Portability
08/01	CO	Civil Action 01-S-0025	City of Louisville	Defendant's Report on Technical Issues. Involving placement of Microwave Towers
10/01	AZ	Affidavit in Docket T-00000A-97-0238	AT&T	Affidavit regarding the redesignation of Interoffice Facilities (IOF) as loop facilities
12/01	AZ	Section 271 PUC Workshop	AT&T	Comments on Qwest's Stand Alone Test Environment OSS interface simulator
01/02	MN	Section 271 PUC Hearing	AT&T	Affidavit on Non-OSS Checklist items. Docket MPUC P-421/CI-01-0370
01/02	AZ	Section 271 PUC	AT&T	Comments on SATE Summary Evaluation Report Version 3. Docket T-00000A-97-0238
01/02	OR	UM 1038	AT&T and Worldcom	Testimony regarding Commission policy of posting quality reports to its website
02/02	MN	Section 271 PUC Hearing	AT&T	Surrebuttal Affidavit on Non-OSS Checklist items. Docket MPUC P-421/CI-01-0370
02/02	AZ	Section 271 PUC	AT&T	Affidavit Supporting Motion to Reopen Checklist Item 7. Docket T-00000A-97-0238
03/02	AZ	Section 271 PCU	AT&T	Second Affidavit Supporting Motion to Reopen Checklist Item 7. Docket T-00000A-97-0238
03/02	SD	Section 271	AT&T	Affidavit on Checklist Item 4 – Unbundled Loops and Checklist Item 11 LNP. Docket TC 01-165
03/02	SD	Section 271	AT&T	Affidavit on Checklist Item 3 – Rights-of-Way and Checklist item 7 911/E911. Docket TC 01-165
03/02	SD	Section 271	AT&T	Affidavit on Checklist Item 13 – Reciprocal Compensation. Docket TC 01-165
03/02	SD	Section 271	AT&T	Affidavit on Checklist Item 1 and 14 – Interconnection, Collocation and Resale. Docket TC 01-165
03/02	SD	Section 271	AT&T	Affidavit on Issues Regarding Emerging Services. Docket TC 01-165
04/02	WY	Section 271	Contact Communications	Testimony on Issues Regarding Interconnection, Collocation, Loops, Subloops and Emerging services
04/02	OR	UM 1038	AT&T and Worldcom	Rebuttal testimony regarding Commission policy of posting quality reports to its website
06/02	MN	Section 271 PUC Hearing	AT&T	Affidavit on Loops and Number Portability. Docket MPUC P-421/CI-01-0370

06/02	MN	Section 271 PUC Hearing	AT&T	Affidavit on Interconnection, collocation and resale. Docket MPUC P-421/CI-01-0370
06/02	MN	Section 271 PUC Hearing	AT&T	Affidavit on Reciprocal compensation. Docket MPUC P-421/CI-01-0370
06/02	MN	Section 271 PUC Hearing	AT&T	Affidavit on UNEs, Switching and Transport. Docket MPUC P-421/CI-01-0370
06/02	MN	Section 271 PUC Hearing	AT&T	Affidavit on Emerging Services. Docket MPUC P-421/CI-01-0370
07/02	FCC	Qwest 271 Filing	AT&T	Declaration on Checklist items in Qwest I filing for CO, ID, IA, NE and ND
08/02	FCC	Qwest 271 Filing	AT&T	Declaration on Checklist Items in Qwest II filing for MT, UT, WA, WY
08/02	MN	Section 271 PUC Hearing	AT&T	Surrebuttal Affidavit on Loops and Number Portability. Docket MPUC P-421/CI-01-0370
08/02	MN	Section 271 PUC Hearing	AT&T	Surrebuttal Affidavit on Interconnection, collocation and resale. Docket MPUC P-421/CI-01-0370
08/02	MN	Section 271 PUC Hearing	AT&T	Surrebuttal Affidavit on Reciprocal compensation. Docket MPUC P-421/CI-01-0370
08/02	MN	Section 271 PUC Hearing	AT&T	Surrebuttal Affidavit on UNEs, Switching and Transport. Docket MPUC P-421/CI-01-0370
08/02	MN	Section 271 PUC Hearing	AT&T	Surrebuttal Affidavit on Emerging Services. Docket MPUC P-421/CI-01-0370
09/02	FCC	Qwest 271 Filing	AT&T	Ex Parte Declaration on the discriminatory impact of Qwest's secret deals with CLECs WC Docket No. 02-148
10/02	FCC	Qwest 271 Filing	AT&T	Declaration on Qwest's Unfiled Agreements with CLECs WC Docket No. 02-314
10/02	FCC	Qwest 271 Filing	AT&T	Joint Declaration of John F. Finnegan, Timothy M. Connolly, and Kenneth L. Wilson. On Qwest's OSS. WC Docket No. 02-314
11/02	FCC	Qwest 271 Filing	AT&T	Declaration on access to Mechanized Loop Test (MLT) and loop qualification issues. WC Docket No. 02-314
11/02	FCC	Qwest 271 Filing	AT&T	Supplemental Declaration on Qwest's Unfiled Agreements. WC Docket No. 02-314
12/02	FCC	Qwest 271 Filing	AT&T	Supplemental MLT and loop qualification Declaration. WC Docket No. 02-314
2/03	FCC	Qwest 271 Filing	AT&T	Declaration on checklist item issues. WC Docket No. 03-11.
2/03	NY State	Student Guide	NY State	Course on "Emerging Technologies and Convergence in the Telecommunications

				Network
4/03	CA	Expert Report	Albert Stein, on behalf of	Class Action Suit against Pacific Bell regarding problems provisioning DSL service to DLECs in California
4/03	WY	Expert Report	Contact Communications	Arbitration between Contact Communications and Qwest regarding reciprocal compensation for ISP traffic.
10/03	CO	Direct Testimony	Micro Tech-Tel	Testimony in support of MicroTech-Tel's Triennial Review 90 Day case regarding Enterprise Switching
3/04	CO	Expert Report	Pinnacle Properties	Dispute over Right of Way for telecommunications and power

B. LIVE TESTIMONY AND DEPOSITIONS

Date	State	Case
2/97	Arizona	Arbitration Hearings between AT&T and U S WEST, representing AT&T.
6/97-12/97	Arizona	Arbitration Hearings between AT&T and U S WEST, representing AT&T. Total of approximately 15 days.
10/17/97	Iowa	Second Motion to compel U S WEST to perform under AT&T Interconnection Agreement, representing AT&T.
4/98	Colorado	96S-331T U S WEST Arbitration Cost Case, representing AT&T.
3/98	NM	96-441-TC U S WEST Arbitration Hearing, representing AT&T.
2/98	OR	UM 351 U S WEST Compliance Tariffs, representing AT&T
3/98	IA	Arbitration Remand between AT&T and U S WEST, representing AT&T.
11/98	WA	UT 960369 U S WEST Arbitration cost case, representing AT&T.
12/98	WA	Deposition – ELI Complaint under the Sherman Act against U S WEST
2/99	WA	Hearing – ELI Complaint under the Sherman Act against U S WEST
12/99	CA	Deposition – CalTech Complaint under the Sherman Act against Pacific Bell
12/99	CO	Hearing – AT&T Complaint against U S WEST for Access

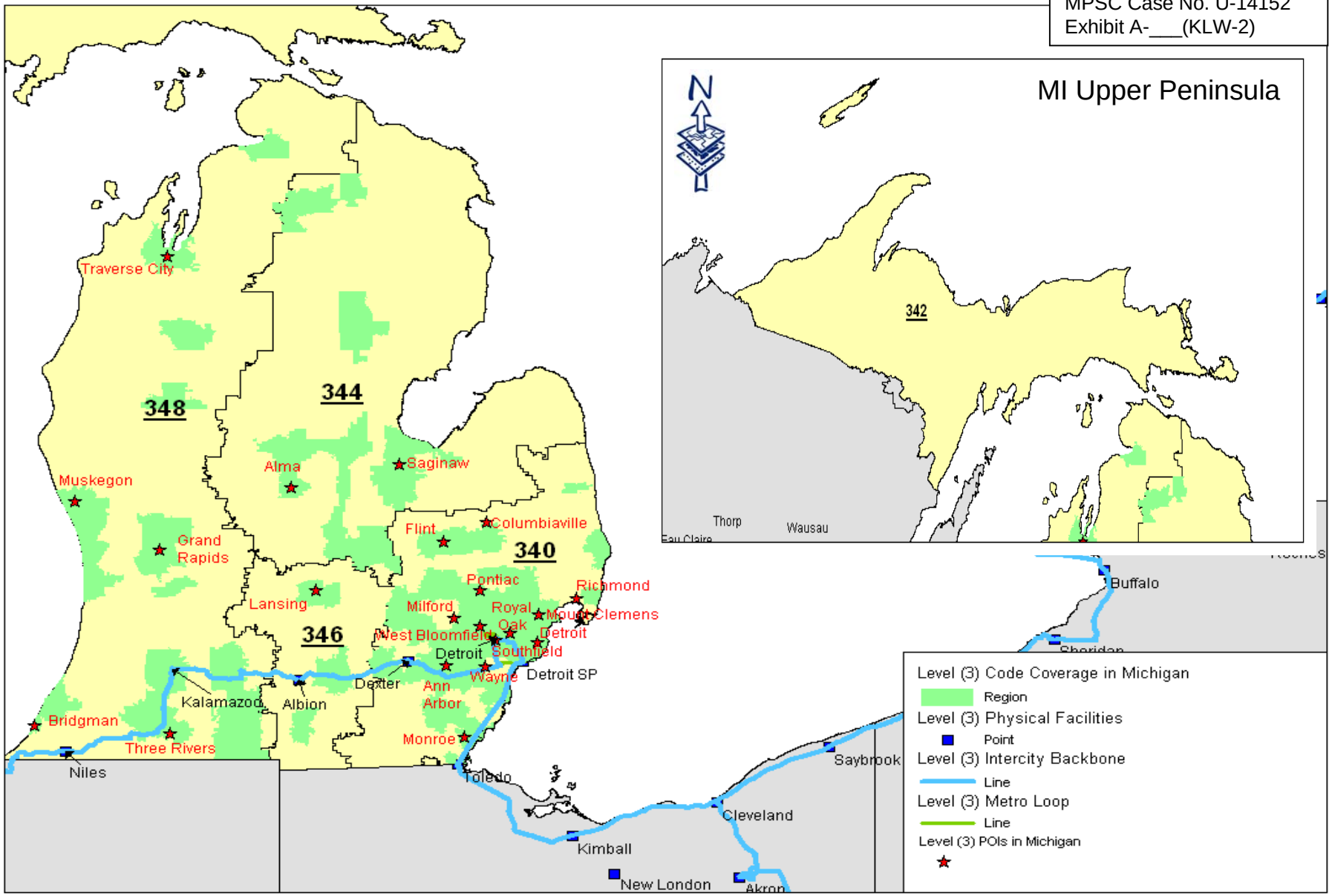
		Service Quality
1/00	MN	Deposition – AT&T Complaint against U S WEST for Access Service Quality in Minnesota
2/00	WA	Hearing – AT&T Complaint against U S WEST for Access Service Quality
1/00	AZ	Section 271 Workshop, representing AT&T on checklist items 3, 7, 8, 9, 10, 12, and 13
2/00	MN	Hearing – AT&T Complaint against U S WEST for Access Service Quality
3/00	AZ	Section 271 PUC Workshop, representing AT&T on checklist items 3, 7, 8, 9, 10, 12, and 13
6/00	CO	Section 271 PUC Workshop, representing AT&T on checklist items 3, 7, 8, 9, 10, 12, and 13
6/00	WA	Section 271 PUC Workshop, representing AT&T on checklist items 3, 7, 8, 9, 10, 12, and 13
6/00	CO	Section 271 PUC Workshop, representing AT&T on checklist items 3, 7, 8, 9, 10, 12, and 13 (follow-up)
7/00	WA	Section 271 PUC Workshop, representing AT&T on checklist items 3, 7, 8, 9, 10, 12, and 13 (follow-up)
8/00	CO	Section 271 PUC Workshop, representing AT&T on checklist items 1, 14
8/00	AZ	Section 271 PUC Workshop, representing AT&T on checklist items 1, 14
9/00	AZ	Section 271 PUC Workshop, representing AT&T on checklist items 1, 14 (follow-up)
9/00	CO	Section 271 PUC Workshop, representing AT&T on checklist items 1, 14 (follow-up)
10/00	UT, IA, etc.	Section 271 PUC Workshop, representing AT&T on checklist items 1, 11, 14 (6 State consolidated proceeding)
10/00	AZ	Section 271 PUC Workshop, representing AT&T on checklist items 2, 5, 6
10/00	OR	Section 271 PUC Workshop, representing AT&T on checklist items 1, 11, 14
11/00	CO	Section 271 PUC Workshop, representing AT&T on emerging services checklist items (dark fiber, DSL, subloop unbundling)
11/00	WA	Section 271 PUC Workshop, representing AT&T on checklist items 1, 11, 14
11/00	CA	Antitrust trial CalTech vs. Pacific Bell in Federal Court.
11/00	WA	Section 271 PUC Workshop, representing AT&T on checklist items 1, 11, 14 -
12/00	CO	Section 271 PUC Workshop, representing AT&T on

		checklist items for Dark Fiber, DSL, Packet Switching and Subloop Unbundling
12/00	UT, IA, etc.	Section 271 PUC Workshop, representing AT&T on checklist items for Interconnection and Collocation (7 State consolidated proceeding)
01/01	WA	Section 271 PUC Workshop, representing AT&T on checklist items for Interconnection and Collocation
01/01	UT, IA, etc.	Section 271 PUC Workshop, representing AT&T on checklist items for Collocation, Dark Fiber, DSL, Packet Switching (7 State consolidated proceeding)
01/01	CO	Section 271 PUC Workshop, representing AT&T on checklist items for Interconnection and Collocation
01/01	AZ	Section 271 PUC Workshop, representing AT&T on checklist items for Dark Fiber, DSL, Packet Switching and Subloop Unbundling
02/01	OR	Section 271 PUC Workshop, representing AT&T on checklist items for Interconnection and Collocation
02/01	AZ	Section 271 PUC Workshop, representing AT&T on checklist items for Interconnection and Collocation
02/01	CO	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations
02/01	UT, IA, etc.	Section 271 PUC Workshop, representing AT&T on checklist items for DSL, Packet Switching and Subloop elements (7 State consolidated proceeding)
03/01	AZ	Section 271 PUC Workshop, representing AT&T on checklist items for UNE Loops, Line Splitting and Number Portability
03/01	WA	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations
03/01	CO	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations
03/01	UT, IA, etc.	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations (7 State consolidated proceeding)
04/01	AZ	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations
04/01	CO	Section 271 PUC Workshop, representing AT&T on

		checklist items for Loops, Number Portability and Line Splitting.
04/01	WA	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations
04/01	UT, IA, etc.	Section 271 PUC Workshop, representing AT&T on checklist items for Loops and Line Splitting. (7 State consolidated proceeding)
05/01	OR	Section 271 PUC Workshop, representing AT&T on checklist items for Unbundled Platform, UNE Switching, Transport and Combinations
05/01	AZ	Section 271 PUC Workshop, representing AT&T on checklist items for Loops, Number Portability and Line Splitting.
05/01	CO	Section 271 PUC Workshop, representing AT&T on checklist items for Loops, Number Portability and Line Splitting.
06/01	AL	Section 271 Hearing, representing AT&T on checklist items for Interconnection Trunks and Number Portability
07/01	WA	Section 271 PUC Workshop, representing AT&T on checklist items for Loops, DSL, Subloop and Line Splitting.
07/01	OR	Section 271 PUC Workshop, representing AT&T on checklist items for Loops, DSL, Subloop and Line Splitting.
07/01	WA	Section 271 PUC Workshop, representing AT&T on checklist items for Loops, DSL, Subloop and Line Splitting.
12/01	AZ	Section 271 PUC Workshop, representing AT&T in the evaluation of Qwest's OSS test environment.
01/02	AZ	Section 271 PUC Workshop, representing AT&T in the evaluation of Qwest's OSS test environment.
03/02	MN	Section 271 Hearing on Non-OSS Checklist items, representing AT&T in the evaluation of Qwest's compliance
04/02	AZ	Section 271 PUC Workshop, representing AT&T in the evaluation of Qwest's OSS test environment
05/02	WY	Section 271 PUC Hearing, representing Contact Communications on various interconnection issues
06/02	CO, IA, ID, NE, ND	Ex Parte presentation with AT&T to DOJ regarding Qwest compliance with 271 checklist items, OSS, and performance
06/02	CO, IA, ID, NE, ND	Ex Parte presentation with AT&T to FCC regarding Qwest compliance with 271 checklist items, OSS, and performance
07/02	MT, UT, WA, WY	Ex Parte presentation with AT&T to DOJ regarding Qwest compliance with 271 checklist items, OSS, and performance
07/02	MT, UT,	Ex Parte presentation with AT&T to FCC regarding Qwest

	WA, WY	compliance with 271 checklist items, OSS, and performance
09/02	MN	Section 271 PUC Hearing, testifying for AT&T on issues of interconnection, resale and unbundled network elements.
02/03	NY	Course on "Emerging Technologies and Convergence in the Telecommunications Network" given to the New York Department of Public Service
5/03	CA	Deposition in Class Action Suit representing plaintiff Albert Stein in his case against Pacific Bell.
6/03	WY	Deposition in Arbitration Case, representing Contact Communications in their suit against Qwest.
7/03	WY	Testimony in Arbitration Case, representing Contact Communications in their suit against Qwest.

MPSC Case No. U-14152
Exhibit A-___(KLW-2)



Level (3) COMMUNICATIONS

Michigan

deliver the difference (3)

BEFORE THE
MICHIGAN PUBLIC SERVICE COMMISSION

Petition of	)	
	)	
LEVEL 3 COMMUNICATIONS, LLC	)	Docket No. _____
	)	
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	)	
Rates, Terms, and Conditions of Interconnection	)	
With Michigan Bell Telephone Company,	)	
d/b/a SBC Michigan, and SBC Communications, Inc.	)	

DECLARATION OF
KENNETH L. WILSON

I, Kenneth L. Wilson having been sworn upon my oath, do hereby state and depose that the Sworn Testimony attached hereto is true to the best of my knowledge and belief.

Kenneth L. Wilson

Dated: May 28, 2004

Subscribed and sworn before me on this
28th day of May 2004

Notary Public

My commission expires:
10/31/07

NOTARY PUBLIC
JABEN BROACH
My Commission Expires
10/31/2007
STATE OF COLORADO

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE 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 Rates, Terms, and Conditions of Interconnection with Michigan Bell Telephone Company d/b/a SBC Michigan.	)	Case No. U-14152

Direct Testimony of

Timothy J Gates

On Behalf of

Level 3 Communications, LLC

June 1, 2004

TABLE OF CONTENTS

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

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

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

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

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I received a Bachelor of Science degree from Oregon State University and a Master of Management degree in Finance and Quantitative Methods from Willamette University's Atkinson Graduate School of Management. Since I received my Masters, I have taken additional graduate-level courses in statistics and econometrics. I have also attended numerous courses and seminars specific to the telecommunications industry, including both the NARUC Annual and NARUC Advanced Regulatory Studies Programs.

Prior to joining QSI, I was a Senior Executive Staff Member at MCI WorldCom, Inc. ("MWCOM"). I was employed by MCI and/or MWCOM for 15

years in various public policy positions. While at MWCOM I managed various functions, including tariffing, economic and financial analysis, competitive analysis, witness training and MWCOM's use of external consultants. Prior to joining MWCOM, I was employed as a Telephone Rate Analyst in the Engineering Division at the Texas Public Utility Commission and earlier as an Economic Analyst at the Oregon Public Utility Commission. I also worked at the Bonneville Power Administration (United States Department of Energy) as a Financial Analyst doing total electric use forecasts while I attended graduate school. Prior to doing my graduate work, I worked for ten years as a reforestation forester in the Pacific Northwest for multinational and government organizations. Exhibit A-___ (TJG-1) to this testimony is a summary of my work experience and education.

Q. HAVE YOU EVER TESTIFIED BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION ("COMMISSION")?

A. Yes. I have also testified more than 200 times in 43 states and filed comments with the FCC on various public policy issues ranging from costing, pricing, local entry and universal service to strategic planning, merger and network issues. As noted above, a list of proceedings in which I have filed testimony or provided comments is attached hereto as Exhibit A-___ (TJG-1).

Q. ON WHOSE BEHALF WAS THIS TESTIMONY PREPARED?

A. This testimony was prepared on behalf of Level 3 Communications, LLC. ("Level 3"), a licensed competitive local exchange carrier ("CLEC") in Michigan.

II. PURPOSE OF DIRECT TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address certain issues identified in the Level 3 Petition for Arbitration ("Petition"). Specifically, I will address **Issue 1** Single Point of Interconnection ("SPOIs") / Efficient Network Construction[1]; **Issue 2** Local Interconnection Trunks; **Issue 3** Transit Traffic; **Issue 4** Defining "Local Call"; **Issue 5** Unbundled Network Elements ("UNEs"), **Issue 6** Using Interconnection for Internet Enabled Traffic, and **Issue 7** Intercarrier (Reciprocal) Compensation. While some of these issues are primarily engineering issues, I will be addressing them from an economic perspective. Mr. Wilson will also be providing testimony on behalf of Level 3 in this proceeding, and he will address these issues from an engineering perspective.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

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

[1] The POI is the physical interconnection between the two networks and represents the point where financial and operational responsibility changes for handling local calls. This concept will be discussed further in this testimony.

I will address the **Tier 2** and **3** issues beginning on page 44 and 48 respectively.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS.

A. I will provide the summaries by Issue:

Issue 1 – Single Point of Interconnection. It is Level 3's position that it may establish a single point of interconnection within the SBC LATA to terminate SBC's traffic to Level 3 customers. SBC asserts that each party should be able to unilaterally designate its own POI for originating traffic. Nothing in the Telecommunications Act of 1996 ("Telecommunications Act" or the "Act") or the FCC orders implementing the Act permits SBC to require Level 3 to interconnect with SBC at more than a single POI per LATA. Permitting SBC to unilaterally designate the POI, or require multiple POIs, would place an undue burden on carriers such as Level 3 and eviscerate the single POI per LATA standard. CLECs are permitted to establish a single POI for both parties' originating traffic, and henceforth, each bears full financial and operational responsibility for the origination and termination of traffic on its side of the POI. By only requiring a single POI per

LATA, the Act and the FCC has recognized and maintained the balance among promoting competitive entry and sharing the costs of exchanging telecommunications traffic.

Issue 2 – Efficient Use of Interconnection Trunks for All Traffic. Level 3 proposes terms in its Interconnection Agreement that would permit Level 3 to build its interconnection network based on the actual need for network facilities. SBC is seeking to impose requirements upon Level 3 that would put Level 3 at a significant disadvantage to SBC and to other carriers. SBC's proposed language in the interconnection agreement would require Level 3 to operate its network in an extremely inefficient manner, and a manner in which SBC does not operate its own network. SBC utilizes trunks in an efficient manner such that multi-jurisdictional traffic is carried on a single trunk. This method of network operation provides economic efficiencies since it allows for the optimal use of trunk capacity and facilities. However, SBC insists that Level 3 dedicate trunks based on traffic types, essentially requiring Level 3 to establish multiple interconnection networks. Level 3 would, therefore, be required to establish and maintain a separate trunk for each type of traffic carried, and would be prohibited from taking advantage of the economic efficiencies that are available to SBC. This would obviously necessitate that Level 3 commit to expenses (recurring and nonrecurring) above and beyond those which are incurred by SBC.

Issue 3 – Transit Traffic. Level 3's proposed Interconnection Agreement would provide that the parties are required to interconnect third party traffic to the other carriers' network. SBC has taken the position in this arbitration that it is no longer required under the Act to transit traffic from level 3 to CLECs. It is critical that Level 3 continue to be able to rely on SBC to interconnect with other carriers. In order to continue to efficiently serve its customers in Michigan and to not be disadvantaged *vis-à-vis* SBC. The Commission can accomplish this by maintaining the status quo with respect to this issue.

Issue 4 – Defining "Local Call". Level 3's proposed terms define a "local call" based on the originating and terminating NPA/NXX. SBC proposes to rate and distinguish traffic based on the physical location of customers. This proposal is not consistent with the traditional manner in which calls have been rated since the establishment of the public switched telephone network. Calls have traditionally been rated based upon a comparison of the NPA/NXX of the called and calling numbers. Further, the use of NXX codes in the manner currently employed by Level 3, other CLECs and SBC itself, allows consumers efficient and non-discriminatory access to Internet Service Providers ("ISPs") that would otherwise be impossible if such calls were treated as toll calls or anything other than local. SBC's proposal to either not pay reciprocal compensation on calls to customers who are not physically located in the same local exchange or require toll treatment for such calls, would give SBC a competitive advantage over CLECs. SBC's proposal would improperly

benefit its own affiliated ISPs, increase the cost of Internet access and reduce competition to the detriment of consumers. The Commission should deny SBC's attempt to establish these barriers by evading payment of reciprocal compensation and by imposing switched access charges on calls deemed local for puposes of NPA/NXX routing conventions.

Issue 5 – Unbundled Network Elements. One distinguishing characteristic of Level 3 is that Level 3 has built its business – for the most part – by investing in its own facilities. Even so, in order for Level 3 to provide certain services, it is still necessary for Level 3 to access certain ILEC "bottleneck facilities" by purchasing UNEs. Level 3 must have access to these bottleneck facilities at rates that are consistent with the FCC's TELRIC standards. Additionally, Level 3 has entered into agreements with SBC that include contracts of up to five (5) years to provide certain services to Level 3. Level 3 understands that the FCC's Triennial Review Order may result in some significant changes in the manner in which UNEs are provided to CLECs, but unless or until there is a change of law the contracts are binding.

Issue 6 – Using Interconnection for Internet Enabled Traffic. Internet enabled traffic, such as voice over Internet protocol ("VoIP") network provided by Level 3 to its' ISP and ESP customers, are information services that are carried over the telecommunications infrastructure; the CLECs fully compensate other carriers for this use. Consistent with FCC and state regulatory decisions, access charges or other non-cost-based intercarrier compensation schemes should not apply to such services.

Indeed, the RBOCs are leading the way in deploying such services and have supported the FCC in its decision to allow VoIP to evolve in a regulation-free zone. Yet, in this proceeding, SBC is advocating that this traffic be treated as if they were not fundamentally different from historical telecommunications traffic. Such treatment is in no way economically justified and would hamstring this emerging technology. Therefore, the Commission should not adopt SBC's position.

Issue 7 – Reciprocal Compensation. SBC has proposed language to be included in the interconnection agreement that would allow it to avoid its obligation under law to provide compensation to Level 3 for terminating local traffic originating with an SBC retail customer, while preserving SBC's ability to receive compensation from Level 3 for terminating local traffic originating with a Level 3 customer. Level 3's position is consistent with the provisions of the Act, in that section 251 (b)(5) of the Act imposes on each local exchange carrier the duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications. Once again, Level 3 asks that the Commission resolve this issue by maintaining the status quo.

Q. BEFORE YOU ADDRESS THESE SPECIFIC ISSUES, PLEASE PROVIDE A GENERAL OVERVIEW OF THE REQUIREMENTS FOR INTERCONNECTION PURSUANT TO THE ACT?

A. Section 251(a) of the Act requires all telecommunications carriers to "interconnect directly or indirectly with the facilities and equipment of other telecommunications

carriers."[2] Section 251(b) imposes additional duties on local exchange carriers ("LECs") and section 251(c) imposes further obligations and specific interconnection duties on ILECs, such as SBC, including the duty to negotiate in good faith.[3] The FCC and state commissions have recognized that the various subsections of section 251 impose escalating obligations on carriers depending upon their classification (*i.e.*, telecommunications carrier, LEC, or ILEC) and apply their requirements accordingly.[4] These duties and obligations are all focused on affording CLECs equal, non-discriminatory access to ILEC network facilities on a cost effective, efficient basis that inhibits the ILEC's use of market power in anti-competitive ways.

Q. IS THERE ANYTHING ABOUT LEVEL 3'S PETITION OR OPERATIONS THAT ALLOWS SBC TO REFUSE TO INTERCONNECT?

A. Not to my knowledge.

Q. IF ALL OF THE TRAFFIC THAT LEVEL 3 TERMINATES WERE ISP-BOUND, WOULD THAT CHANGE THE INTERCONNECTION RESPONSIBILITIES OF SBC?

A. No. ISP-bound traffic has not been excluded for purposes of interconnection or reciprocal compensation. As will be discussed below, however, the FCC has pre-empted the states as to the appropriate compensation for ISP-bound traffic.

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[2] 47 USC § 251(a)(1).

[3] My reference to negotiating in good faith should not be read to suggest that the parties have negotiated in bad faith.

[4] *Total Telecommunications Services, Inc and Atlas Telephone Company, Inc v. AT&T Corp*, Memorandum Opinion Order, FCC 01-84, ¶ 25 (rel. Mar. 13, 2001).

III. TIER 1 ARBITRATION ISSUES

ISSUE 1 – SINGLE POINT OF INTERCONNECTION[5]

Q. PLEASE SUMMARIZE THE DISPUTE BETWEEN THE PARTIES ON THIS ISSUE.

A. SBC alleges that it is entitled to designate multiple POIs for traffic originated by its customers and require interconnection at all of its access tandems within the LATA. Level 3 argues that such authority would enable SBC to arbitrarily and strategically impose unwarranted additional interconnection costs and network inefficiencies on Level 3. Should the Commission accept SBC's position, SBC could impose substantial uneconomic costs and network inefficiencies on Level 3 even when accepted engineering practices and network utilization levels provide no justification for such additional POIs. Additionally, the discretion that SBC seeks has no foundation in the language or economic objectives of the Act or the FCC orders implementing the Act.

Q. COULD YOU DESCRIBE WHAT A POINT OF INTERCONNECTION IS?

A. Interconnection is the physical linking of local networks for the purpose of exchanging traffic between customers subscribed to the respective networks. The

[5] See, Network Interconnection Methods, Sections 2.1, 2.2, 2.3, 2.5, 2.7, 4.1, 4.2.; Interconnection Trunking Requirements, Sections 4.1, 4.2, 4., 5.2.1-5.2.9, 5.3.2, 5.3.3.1, 5.3.4.2 (subject to confirmation for dispute), 5.7.3, 5.7.4; Intercarrier Compensation, Sections 3.1, 3.5.

FCC recognized this when it defined the term "interconnection" in the First Report and Order at paragraph 176 in the following manner:

> We conclude that the term "interconnection" under section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic.[6]

A point of interconnection or POI is the physical place where the two networks interconnect.

Q. WHO SHOULD BEAR THE COSTS OF INTERCONNECTION?

The FCC recognized that the financial responsibilities for interconnection linkages for originating traffic should be borne solely by each carrier when it codified Rule 703(b), which prohibits carriers from shifting costs of transporting traffic to the POI to other carriers. In other words, each carrier is responsible for incurring the costs of delivering its traffic to other carriers for termination. Several Federal Circuit Courts of Appeal, including the Fourth Circuit Court of Appeals for the Federal Circuit have specifically upheld this interpretation. For example, as the Fourth Circuit recently stated in a dispute between SBC and MCI on this very point,

> In sum, we are left with an unambiguous rule, the legality of which is unchallenged, that prohibits the charge that SBC seeks to impose. Rule 703(b) is unequivocal in prohibiting LECs from levying charges for traffic originating on their own networks, and, by its own terms, admits of no exceptions. Although we find some surface appeal in SBC's suggestion that the charge here is not reciprocal compensation, but rather the

[6] *In The Matter Of Implementation Of The Local Competition Provisions In The Telecommunications Act Of 1996, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, First Report and Order, 11 FCC Rcd. 15,499, ¶ 176 (rel. Aug 8, 1996).

> permissible shifting of costs attending interconnection, the FCC, as noted above, has endorsed cost-shifting related to interconnection only as it relates to the one-time costs of physical linkage, and in doing so, expressly declined the invitation to extend the definition of "interconnection" to include the transport and termination of traffic.[7]

These decisions flow from the simple technical expedient that interconnection simply means linking up networks. Cost shifting is unnecessary from a technical perspective: it has nothing to do with the underlying network requirements or any costs that arise from those underlying network requirements. This point is recognized by the FCC and by the five federal circuit courts of appeal that have addressed the issue in the context of interconnection agreements, to wit: each carrier pays its own costs of exchanging traffic. Further, it is appropriate that each carrier bear the responsibility of initially setting up interconnection trunks in relation to the traffic they originate.

Q. PLEASE DEFINE A POI.

A. The POI is a demarcation point between networks. It is a point at which one party's network ends and the other party's network begins. More specifically, the POI is the physical interconnection of the trunk groups provided by each party for the transport and termination of local telephone calls between their respective networks. It is also the financial demarcation point that defines where one party's financial obligations end and the other party's begin.

[7] *MCImetro Access Transmission Services, Inc. v. SBC Telecommunications, Inc.*, No. 03-1238 2003 US App. LEXIS 25782, *24-5 (4th Cir. Dec 18, 2003).

Q. WHY DOES LEVEL 3 REQUIRE A SINGLE POI PER LATA?

A. The location and number of POIs has both financial and operational impacts, because each carrier needs to install transmission facilities and equipment to deliver its originating traffic to each POI, and to receive terminating traffic. Of course, SBC already has a ubiquitous network throughout many areas of the State and can use its existing facilities for originating and terminating traffic. On the other hand, Level 3 as a relatively new provider must construct (or lease or acquire) new facilities for access to each POI. Therefore, this issue has significant competitive cost and operational implications.

Q. DO ILECS SUCH AS SBC HAVE THE RIGHT TO SELECT POIs?

A. No. That right is limited to CLECs and does not extend to ILECs. The FCC explained, in part, why this right is provided to the CLECs and not to the ILECs in the *Local Competition Order*, wherein it states,

> Given that the incumbent LEC will be providing interconnection to its competitors pursuant to the purpose of the 1996 Act, the LEC has the incentive to discriminate against its competitors by providing them less favorable terms and conditions of interconnection than it provides itself.[8]

The FCC recognized that one of the goals of the Act and competition in general was to eliminate this ILEC ability to impose the significant additional financial burden on

[8] *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 Aug 8, 1996; at ¶218. Hereinafter referred to as the FCC's "*Local Competition Order*".

CLECs that multiple POIs could create. At paragraph four of the *Local Competition Order* the FCC states,

> Competition in local exchange and exchange access markets is desirable, not only because of the social and economic benefits competition will bring to consumers of local services, but also because competition eventually will eliminate the ability of an incumbent local exchange carrier to use its control of bottleneck local facilities to impede free market competition. Under section 251, incumbent local exchange carriers (LECs), including the Bell Operating Companies (BOCs), are mandated to take several steps to open their networks to competition, including providing interconnection, offering access to unbundled elements of their networks, and making their retail services available at wholesale rates so that they can be resold.

The FCC reinforced this point in its Arbitration Order in the FCC Virginia Arbitration case.

> Under the Commission's rules, competitive LECs may request interconnection at any technically feasible point. This includes the right to request a single point of interconnection in a LATA. [9]

Q. PLEASE MORE FULLY DESCRIBE THE NEGATIVE IMPACTS THAT REQUIRING MULTIPLE POIs COULD HAVE ON LEVEL 3 AND THE DEVELOPMENT OF COMPETITION?

A. If SBC were allowed to identify POIs for originating traffic it would be able to force Level 3 to build out its network before there is a customer base or market sufficient to

[9] *See, e.g.*, 47 USC § 251(c)(2); 47 CFR §51.305*; [Consolidated] Petitions of WorldCom, Inc., Cox Virginia Telecom, Inc., and AT&T Communications of Virginia, Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia Corporation Commission Regarding Interconnection Disputes with Verizon Virginia, Inc., and for Arbitration*, Memorandum Opinion and Order, CC Docket Nos. 00-219, 00-249 and 00-251, July 17, 2002 ("*FCC Virginia Arbitration Order*").

justify the investment. In short, SBC would have control over Level 3's investment decisions and could force Level 3 to invest in facilities that are not justified from a market or engineering standpoint. This forced investment would disadvantage CLECs and impose additional and unwarranted costs on them. Specifically, SBC could force CLECs to build or lease facilities (or even switches) to reach into every local calling area regardless of how many customers a CLEC might actually have in a given local calling area. In the past, Level 3 has negotiated provisions that provide for additional POIs if demand merits such an investment. However, establishing additional POIs before such demand thresholds are approached would force Level 3 to operate in a foolish manner, a manner that deploys and utilizes capacity inefficiently. Such a result would make no economic sense whatsoever, is not in the public interest and would severely impede the development of competition.

Since the implosion of the CLEC industry in 2000, it has become increasingly more difficult for CLECs to attract capital necessary to expand. Forcing CLECs to build or lease facilities where margins are slim or nonexistent would only worsen the CLECs' prospects for attracting capital. Indeed, if SBC were allowed such discretion, it may force CLECs to essentially duplicate the incumbent's network. Such a result would be inefficient from both an economic and operational standpoint and has consequently been regularly rejected by regulators as not in the public interest. A more likely result of such a finding would be that CLECs would choose not to enter the market.

Q. HAS THE FCC EXPRESSED AN OPINION REGARDING THE LIKELY IMPACT OF MULTIPLE POIs?

A. Yes. In a brief, the FCC stated:

> Nothing in the 1996 Act or binding FCC regulations requires a new entrant to interconnect at multiple locations within a single LATA. Indeed, such a requirement could be so costly to new entrants that it would thwart the Act's fundamental goal of opening local markets to competition.[10]

SBC's desire to identify multiple POIs for its originating traffic is understandable, especially given its incentives discussed above. Nevertheless, such ability would force Level 3 to build facilities to each SBC access tandem. Further, simply because SBC's network has been in place for decades does not mean that it is the most efficient network, or that other carriers should develop similar networks. As such, requiring multiple POIs would force investment in a network design that is no longer optimal.

Q. PLEASE EXPLAIN.

A. CLECs utilizing new technology and information should not be limited or hampered by the historic decisions of SBC network planners who established switch locations and local calling areas decades ago based upon more limited technology.[11] Those

[10] Memorandum of the Federal Communications Commission as *Amicus Curiae*; In the United States District Court for the District of Oregon; US WEST Communications, Inc, Plaintiff v. AT&T Communications of the Pacific Northwest, Inc *et al*, Defendants; No. CV 97-1575 JE; Dated Sept 14, 1998 at 20.

[11] In the past, switching was relatively cheaper than transport, so a switch-centric PSTN was developed. Today, with fiber and electronics making transport very inexpensive, and packet

decisions, which were justifiable and supportable then, would certainly be different today given the changes in technology. As such, forcing CLECs to conform to a specific network topology would be inconsistent with the goals of the *Local Competition Order* and the Act. Rather, the promotion of efficient markets dictates that CLECs such as Level 3 only be required to interconnect in a specific area where traffic volumes and customer demand justify investment in facilities needed to reach that area. Level 3 is not required to extend its facilities to POIs unilaterally identified by SBC; instead, SBC is obligated to provide interconnection for Level 3 facilities at POIs which Level 3 properly determines best serve its network architecture and business plans.

Q. DOES THE SINGLE POI PER LATA RULE ALLOW FOR EFFICIENT DEPLOYMENT OF NETWORK FACILITIES AND THE MORE EFFICIENT ENTRY INTO MARKETS?

A. Yes. Mr. Wilson discusses these efficiencies from an operational standpoint in his direct testimony. From an economic standpoint, the single POI allows CLECs to have a minimal yet efficient presence until its customer base warrants the further expansion of its own network. In other words, a single POI allows Level 3 to enter the market quickly and offer services to customers without having to uneconomically duplicate an outdated network design (the ILEC network). This is especially important since engineering options are much more robust today than when the

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switching increasing efficiencies even more, carriers can serve very large areas with only one switch.

ILECs deployed their traditional circuit switched network with hierarchical intelligence. Indeed, the economics of telecommunications engineering – especially with respect to transport and switching technologies -- have changed dramatically in the last ten years.

ISSUE 2 – EFFICIENT USE OF INTERCONNECTION TRUNKS FOR ALL TRAFFIC.[12]

Q. PLEASE SUMMARIZE THE POSITIONS OF THE PARTIES ON THIS ISSUE.

A. Level 3, like other carriers, has a mix of traffic that its customers originate and terminate that must be connected to SBC's network for call completion. Further, SBC customers originate various types of traffic directed to Level 3 customers. In order to serve these customers, Level 3 must establish trunking facilities to carry its calls. SBC has proposed language that would require Level 3 to purchase separate interconnection trunks that would be used exclusively for either local, interLATA and intraLATA traffic. Such language would interfere with Level 3's ability to operate its network in an efficient manner and would, therefore, place Level 3 at a significant

[12] See: Network Interconnection Methods, Sections 1.1, 2.4, and 2.7; Interconnection Trunking Requirements, Sections 1.2, 3.2, 3.3, 3.4, 3.6, 4.2, 4.4, 4.4.1, 4.5, 5.2, 5.2.1, 5.2.2, 5.2.1 – 5.2.9, 5.3, 5.3.1.1, 5.3.3.1, 5.4.1, 5.4.2, 5.4.3, 5.4.1-5.4.4, 5.7.1, 5.7.2, 5.7.3, 5.7.4, 8.8.1, 12.1, 12.1.1-12.1.4, 12.2, 12.3, 12.4, and 13.1; Out of Exchange, Sections 4.1, 4.2, 4.3, 4.4, 4.5, 4..6, 4.7, 9.1, 9.2 , 9.4, and 9.5; Intercarrier Compensation, Sections 3.1, 10.1, and 13.1.

and artificial economic disadvantage. These restrictions sought by SBC should not be adopted by this Commission.

Q. HOW WOULD LEVEL 3 BE DISADVANTAGED BY THE LANGUAGE PROPOSED BY SBC?

A. If SBC prevails on this issue, Level 3 would be forced to provide service to its customers in an extremely inefficient manner, and in a manner that differs from how SBC uses its own network. Mr. Wilson provides detailed testimony regarding the network inefficiencies which would be thrust upon Level 3 if SBC were to prevail on this issue. Distilling Mr. Wilson's testimony to the most salient point – from an economic perspective – SBC's proposed language would require Level 3 to deploy the facilities required to efficiently interconnect with SBC, and then, to duplicate those facilities, perhaps several times, unnecessarily increasing Level 3's cost of providing service to its customers.

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

A. No. Mr. Wilson will address the technical concerns that have been raised by ILECs in the past in his testimony. I will add to Mr. Wilson's testimony only by noting that the actual practices of these carriers refutes such arguments. This is because there is solid proof that the problems historically raised by ILECs can be overcome, and in fact, have been overcome.

Q. WHAT EVIDENCE SHOULD THE COMMISSION CONSIDER IF SBC RAISES CONCERNS WITH RESPECT TO COMBINING TRAFFIC ON TRUNKS?

A. The Commission should consider that SBC's concerns with respect to Feature Group D calling, billing problems, traffic identification, may have been concerns at one time with respect to these and other issues, however, those concerns have been resolved. The Commission need look no further than to SBC's own practices in which it combines multi-jurisdictional traffic on individual trunks or trunk groups to conclude that any and all concerns have been resolved.

SBC and others have utilized trunking facilities in this manner in order to achieve optimum network efficiency. Obviously, the ability to combine traffic in this manner represents a far more efficient use of capacity than building separate facilities for different traffic types. To require Level 3 to operate in an inefficient manner by precluding them from taking advantage of fundamental trunking efficiencies constitutes an economic barrier to Level 3. This observation is born out by the Michigan Public Service Commission's finding in a Sprint/Ameritech arbitration proceeding that:

> It appears to the Commission that economic entry into the market requires that Sprint by permitted to use its existing trunks for *all* traffic whenever feasible.[13] (emphasis added)

[13] *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.

ISSUE 3 – TRANSIT TRAFFIC[14]

Q. PLEASE SUMMARIZE THE POSITIONS OF THE PARTIES ON THIS ISSUE.

A. Currently, SBC transits traffic for Level 3 and other CLECs which allows, for example, a Level 3 customer to complete a call to a customer of another CLEC or IXC. This is known as "transit" and it has been SBC's position in this arbitration that it is no longer required to provide this function. This is in spite of the fact that transits traffic destined for Level 3's network. It is Level 3's position that this Commission should maintain the status quo, and require SBC to continue to perform this critical function. The current arrangement between the parties allows for the most efficient use of resources, and an economically sound utilization of the existing network.

Q. WHY DO YOU SAY THAT SBC PROVIDING TRANSIT TRAFFIC TO CLECS IS AN EFFICIENT USE OF RESOURCES?

A. Because if SBC is allowed to stop transiting traffic from CLECs, carriers like Level 3 will be forced to construct facilities that essentially duplicate facilities which SBC already has in place and which are entirely suited to carrying CLEC traffic. Similar to the situation described in the previous issue, there is just no operational or economic justification for forcing Level 3 and other CLECs to duplicate facilities

[14] Interconnection Trunking Requirements, Sections 1.3, 3.2, 3.4, 4.3, 4.3.1 – 4.3.4, and 12.3; Intercarrier Compensation, Section 4.6; Out of Exchange, 6.1, 6.2, and 6.3.

which are already in place, or to manufacture additional interconnection facilities that would not be efficiently used. Because SBC would fully recover its costs for providing transit, SBC is in no way financially harmed., and the unnecessary duplication of facilities that would be necessary if SBC prevailed on this issue constitutes an extremely inefficient use of society's scarce resources. In addition, as Mr. Wilson describes in his testimony, SBC's advocacy would result in greater potential for customer disruption and would create significant operational problems. In short, both economic efficiency and operational stability support the maintenance of the status quo with respect to this issue.

Q. IF SBC WOULD NOT BE HARMED FINANCIALLY AS A RESULT OF THE COMMISSION MAINTAINING THE STATUS QUO WITH RESPECT TO THIS ISSUE, WHY WOULD SBC SEEK TO STOP TRANSITING TRAFFIC?

A. I can't speak for SBC. However, a flash cut away from SBC transiting traffic would significantly and negatively impact Level 3's operations and ability to offer services to customers. It would also make it difficult if not impossible to compete with SBC. Therefore, even though SBC would not experience any financial damage itself, withholding this service would be so disruptive to CLECs that it is entirely consistent with what the FCC recognized to be ILEC incentives to provide CLECs with less favorable terms and conditions of interconnection than it provides itself. This Commission has recognized the anti-competitive impact that SBC's proposed language would have in the past.

Q. HAS THIS COMMISSION ADDRESSED THIS ISSUE PREVIOUSLY?

A. Yes. Ameritech Michigan argued in Case No. U-11203 that there was nothing in the Act requiring it to continue to transit CLEC traffic and that if Congress had intended to require incumbent LECs to provide this function, it could have explicitly stated so in the Act, but did not.[15]

Q. HOW DID THIS COMMISSION RESPOND TO AMERITECH MICHIGAN'S ARGUMENTS IN CASE NO. U-11203?

A. This Commission rejected Ameritech Michigan's arguments, noting if Ameritech Michigan did not transit CLEC traffic, CLECs would face significant barriers to entry due to their inability to simultaneously interconnect with every other LEC. This Commission further noted that the Act was intended to encourage the development of competition in local exchange markets, and was not persuaded by Ameritech Michigan that the Act should be interpreted in such a way that would allow Ameritech Michigan to refuse to provide transit. Finally, this Commission concluded that Ameritech Michigan's proposed language to stop providing transit created a barrier to competition. Level 3 completely agrees with the Commission's past ruling and the underlying rationale. Truly, absent the ability to rely on SBC to perform the

[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.

transiting function, Level 3 and other CLECs would face significant economic barriers to competition.[16]

Q. ARE THERE OTHER REASONS THAT THE COMMISSION SHOULD REFRAIN FROM DIVERGING FROM THE STATUS QUO WITH RESPECT TO THIS ISSUE?

A. Level 3's business, to a certain extent, was built and developed based upon certain expectations and understandings with respect to the availability of services from SBC. The same is true of other CLECs. If SBC is able to prevail on this issue, the current efficient operation of the network would be disrupted, and would not be reflective of the circumstances present in Michigan when Level 3 and other CLECs made the crucial investment decisions associated with entering the market. Having to duplicate SBC's network would require such massive investment by Level 3 and other CLECs that, if those costs were known at the time investment decisions were made, Level 3 and other CLECs may not have elected to enter the market. To discontinue this service at this point in time may leave CLECs in the position of being forced to discontinue service altogether, stranding facilities for which costs were incurred based on the assumption that the network would continue to be utilized efficiently – a negative result to say the least. By maintaining the status quo, the

[16] *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.

Commission would avoid these issues, allow for the continued efficient utilization of this portion of the network, and, in doing so, would not harm SBC.

Q. HOW SHOULD THE COMMISSION RESOLVE THIS ISSUE?

A. The Commission should adopt Level 3's proposed Interconnection terms and require that SBC Transit Level 3's traffic to other carriers at in the same manner, and under the same terms and conditions that it has provided in the past.

ISSUE 4 – DEFINING "LOCAL CALL"[17]

Q. PLEASE SUMMARIZE THE POSITIONS OF THE PARTIES ON THIS ISSUE.

A. As with previous issues, Level 3 asks the Commission to maintain the status quo with respect to this issue. SBC has proposed language in this arbitration that would depart from the Parties' current interconnection agreement that the rating of a call for purposes of defining the appropriate intercarrier compensation is determined based on the NPA-NXX of the calling and called parties. This departure is inconsistent with industry standards, would place Level 3 at an unwarranted competitive disadvantage, would undoubtedly be used by SBC in an attempt to avoid paying reciprocal compensation which it is legally obligated to pay, and for all intents and purposes, would be unworkable from an operational standpoint. Level 3's position is consistent

17 General Terms and Conditions, Section 1.72; Interconnection Trunking Requirements, Sections 5.4.3, and 12.2; Intercarrier Compensation, Sections 3.5, 4.7, 4.7.1, 4.7.2, 4.7.2.1, 5.1.1-5.1.2.2.1, 7.1, 7.2, 8.1, 8.2, 8.3, 8.4, 10.1, and 12.6; Unbundled Network Elements, Section 2.19.4.

with the arrangement to which the Parties' agreed in the previous interconnection agreement. That arrangement recognizes the industry standard of routing and rating calls based upon the NPA-NXX of the calling and called parties. This traditional way of routing calls is consistent with industry standards and FCC rules and Orders and would avoid the competitive inequities that would result from adopting SBC's language.

Q. YOU MENTIONED THAT SBC'S PROPOSAL IS "INCONSISTENT WITH INDUSTRY STANDARDS" AND "UNWORKABLE", WHY HAVE YOU CHARACTERIZED SBC'S POSITION IN THAT MANNER?

A. As Mr. Wilson discusses in greater detail in his testimony, the standard industry practice is to route and rate calls in the manner that Level 3 and SBC currently rely upon and the manner that is reflected in Level 3's proposed language with respect to this issue. Relying upon an industry standard is, however, not sufficient to warrant its continued use. The history of the telecommunications industry is filled with examples of "the industry standard" changing over time (analog to digital, copper to fiber, etc.). Therefore, if an alternative to rating and routing calls based on the NPA-NXX of the calling and called parties existed, and such an alternative allowed for greater efficiency, lower costs or any other benefits without causing greater costs, that alternative should be considered. This type of evolution to more efficient systems and utilization of resources should be expected in a developing competitive marketplace. However, such an evolution with respect to defining local calls is not

possible at this time due to operational barriers and billing issues that, to date, have been determined to be impassable. This is, in large part, due to the fact that in order to define calls based on SBC's proposed method, telecommunications switches would require the ability to determine the geographic location of the calling and called parties. As Mr. Wilson explains in his testimony, current switch technology does have that functionality.

Q. HAS THE FCC RECOGNIZED THAT RATING AND ROUTING CALLS BASED ON GEOGRAPHIC ENDPOINTS IS NOT WORKABLE?

A. Yes. The FCC *Virginia Arbitration Order* established that rating calls based on the geographical endpoints of calls has no bearing on how the call should be rated, finding that

> The parties all agree that rating calls by their geographical starting and ending points raises billing and technical issues that have no concrete, workable solutions at this time.[18]

Despite these technical and billing issues, there has never been a need to rate or route calls based on the geographic location of customers. Instead, calls are rated based upon the NPA/NXX of the calling and called parties. This traditional process should be maintained, as there is no reason to change the status quo.

[18] *In the Matter of Petition of WorldCom, Inc, Cox Virginia Telcom, Inc, and AT&T Communications of Virginia, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expanded Arbitrations*, DA 02-1731, Released: July 17, 2002. ¶ 301.

Q. YOU ALSO MENTIONED THAT SBC'S PROPOSAL TO RATE CALLS BASED ON THE GEOGRAPHIC LOCATION OF THE CALLING AND CALLED PARTIES WOULD DISADVANTAGE LEVEL 3. CAN YOU EXPLAIN WHY THAT IS THE CASE?

A. Yes. SBC seeks, through the interconnection agreement, to implement standards that apply to Level 3 to which SBC itself does not adhere. For example, SBC itself ignores the geographical location of calling and called parties when it offers FX service to its customers. FX service allows customers to appear to have a local presence when in fact their geographic location is not actually located in the same local calling area. Further, it is clear, based on my experience throughout the country, that ILECs have never made an attempt to determine the physical location of their customers for purposes of rating or routing a call, regardless of the type of service offered.

While Level 3's service may or may not include longer transport in its FX service than in traditional ILEC FX service (the cost of which is borne entirely by Level 3 and its customer), the fact is that what is offered from a functional perspective – a telephone number in a rate center where the customer is not present – is the same. In fact, CLECs offering the kinds of services provided by Level 3 here are doing so for the very same reasons that drove ILECs to offer FX services in the first instance – efficiency and customer demand. CLECs can just offer these services over greater distances because of the broader scope and efficiency of their networks.

By contrast, the Bell Operating Companies such as SBC developed their networks when transport was relatively more expensive, and they were prohibited from offering anything other than intraLATA service by the MFJ.[19]

Q. ARE THERE OTHER WAYS IN WHICH SBC'S PROPOSED METHOD OF RATING CALLS COULD DISADVANTAGE LEVEL 3?

A. Yes. The language proposed by SBC would allow it to avoid paying reciprocal compensation, that it is legally obligated to pay, and impose switched-access charges on Level 3. There is absolutely no cost justification for this departure from the status quo. SBC's costs associated with an FX call from a Level 3 customer are identical to the costs associated with any local call from a Level 3 customer. SBC's costs are limited to the cost of getting the calls to and from the POI, and remain the same regardless of the distance the traffic is carried beyond the POI.

Q. ARE YOU SUGGESTING THAT THE CALLING SCOPE OF THE FX SERVICE IS NOT AN IMPORTANT DISTINCTION FROM A COST OR POLICY PERSPECTIVE?

A. Yes. The point is that even though the manner in which Level 3 is offering this service may be "wider" in scope than traditional FX service, that is just because Level 3 and other CLECs have not faced the same historical limitations – either imposed upon or internally determined – as the ILECs. The Bell Operating Companies had geographical and line of business restrictions in place for many years

[19] Modification of Final Judgment or MFJ – *United States v Western Electric Co*, 552 FSupp 131 (DDC 1982).

after divestiture. Those restrictions have largely been lifted now. The CLECs, which were not subject to the MFJ restrictions, expanded their networks based upon best in class technology and true cost drivers per their internal business plans – not artificial regulatory constructs.

Q. CAN YOU CONCEIVE OF ANY CIRCUMSTANCES WHERE THE PUBLIC INTEREST WOULD BE HARMED BY ALLOWING LEVEL 3 TO OFFER ITS SERVICE?

A. Certainly not. During the past few years Level 3 has spent about $13 billion on the deployment of its network without any support from captive monopoly ratepayers or an "allowed" rate of return. All of Level 3's customers were the result of its own marketing efforts, network deployment, and network management. Perhaps more importantly, if Level 3 fails in its market entry strategy in Michigan, Level 3's stockholders, and not consumers, will bear the burden of that failure. As such, consumers and the State have only an upside opportunity associated with Level 3's entry into the market. All Level 3 is asking is to be allowed to offer a service to compete with the services that SBC is already offering today. It is the consumers who should decide whether Level 3's services are providing benefits. Consumer choice should not be precluded by preventing competitive entry.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THIS ISSUE?

A. I recommend that the Commission adopt Level 3's proposed language to define a "local call" for purposes of establishing the applicable intercarrier compensation rate

for traffic exchanged between SBC and Level 3 for circuit switched traffic. There is simply no reason to depart from the status quo at this time. Indeed, SBC's language should be rejected, if not because it would allow SBC to collect windfall revenues through the non-payment of reciprocal compensation and the imposition of access charges, then because SBC's proposed methodology has been recognized by both the industry and the FCC as being completely unworkable.

ISSUE 5 – UNBUNDLED NETWORK ELEMENTS ("UNES")[20]

Q. PLEASE SUMMARIZE THE POSITIONS OF THE PARTIES ON THIS ISSUE.

A. Level 3 must have access to certain facilities at rates that are consistent with the FCC's TELRIC standards.[21] Although Level 3 has built its business – for the most part – by investing in its own facilities, in order for Level 3 to provide service, it is still necessary for Level 3 to access certain ILEC "bottleneck facilities" by purchasing UNEs. Further, Level 3 must have access to these bottleneck facilities at rates that are consistent with the FCC's TELRIC pricing rules, terms and conditions. Additionally, Level 3 has entered into agreements with SBC that include contracts of up to 5 years to provide certain services to Level 3. Level 3 understands that the FCC's Triennial Review Order may result in some significant changes in the manner

[20] Unbundled Network Elements, Sections 3.3.1, 2.3, 2.10 and subsections, 2.12 and subsections, and 2.15 and subsections.

[21] The FCC's TELRIC pricing rules are set forth at 47 CFR § 51.501 through 51.515.

in which UNEs are provided to CLECs, but it is Level 3's position in this arbitration that all previous contracts are binding.[22] In short, SBC has proposed language that would unduly restrict Level 3's access to UNEs. That language should be rejected.

Q. IS LEVEL 3 ASKING THIS COMMISSION TO GIVE PREFERENTIAL TREATMENT TO LEVEL 3 FOR ACCESS TO UNBUNDLED NETWORK ELEMENTS?

A. Absolutely not. Level 3 is only asking this Commission to prohibit SBC from having the ability to, through this interconnection agreement, restrict Level 3's lawful and necessary access to UNEs. By restricting access to critical network elements in accordance with its proposed language, SBC could erect operational and economic barriers that could significantly damage Level 3's commercial viability in Michigan. These are the same economic and operational barriers that the Act intended to remove.[23] In short, Level 3 is not asking the Commission for special treatment, but instead is only asking that it be treated like any other CLEC.

Q. ISN'T THE SITUATION WITH RESPECT TO CLECS' FUTURE ACCESS TO CERTAIN UNE'S IN QUESTION RIGHT NOW?

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[22] *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, and Deployment of Wireline Services Offering Advanced Telecommunications Capability,* CC Docket Nos. 01-338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36, ¶ 3 (rel. Aug. 21, 2003) ("*Triennial Review Order*" or "*TRO*").

[23] See, for example, *Local Competition Order* at ¶ 18.

A. Yes. The FCC's TRO was challenged and the Order has been partially vacated and partially remanded. In the meantime, the FCC has urged ILECs and CLECs to engage in commercial negotiations that would resolve the issue. Those negotiations have produced limited results to this point, but are ongoing. It is anybody's guess as to how the negotiations will turn out, or how the FCC (or the courts) will resolve this issue. Obviously, Level 3 will comply with whatever rules, laws or regulations become final, but, it is not anticipated that any FCC or state commission decision would result in a "flash cut" from existing UNE arrangements.

Q. IF YOU ACKNOWLEDGE THAT THERE IS SOME UNCERTAINTY WITH RESPECT TO THE FUTURE AVAILABILITY OF UNES, WHY DO YOU HAVE CONCERNS WITH SBC'S PROPOSED LANGUAGE?

A. Because, even though, either through negotiations with ILECs or as mandated by some regulatory body, UNEs may be restricted in the future, SBC's language within the context of the interconnection agreement may add an additional level of restriction on UNEs that is above and beyond what may result from these fora, which would disadvantage and, in fact, impair Level 3. Mr. Wilson describes the negative operational ramifications to Level 3 associated with SBC's proposed restrictions in detail in his direct testimony. Level 3 will certainly comply with any and all new restrictions related to UNEs, if they are ordered, but those restrictions (if any) should be the result of policy decisions at the state or federal level. Level 3 is certainly willing to include language that would provide for changes in rules or law. However,

this Commission should not leave the manner in which any changes are implemented up to SBC.

Level 3's position is that anticipated change in law provisions associated with any federal and / or state UNE-related rulings would permit Level 3 and other CLECs to, at a minimum, have some opportunity to adjust their operations in such a way that impact to end users would be minimized. The decision in this arbitration between Level 3 and SBC should in no way alter any future agreements or mandates with respect to UNEs. The interconnection agreement between Level 3 and SBC as it relates to the future availability of UNEs should not interfere with Level 3's responsibilities to its customers, yet, if the SBC-proposed language is adopted, it very well could.

Once again, the best course of action for the Commission in deciding this issue is to adopt the status quo. Any future changes in the availability of UNEs and the implementation of such changes will be the result of very high level policy decisions that will undoubtedly ensure the continued reliability and stability of the marketplace. The interconnection agreement is not the proper place to address these complex issues.

ISSUE 6 – USING INTERCONNECTION FOR INTERNET ENABLED TRAFFIC[24]

Q. PLEASE INTRODUCE THIS ISSUE AND THE DISPUTE BETWEEN LEVEL 3 AND SBC.

A. IP enabled services, such as VoIP services, are becoming more common as they offer significant efficiencies from both an economic and network operations perspective. ILECs and CLECs alike are offering IP-Enabled services. For instance, SBC offers SBC PremierSERV Hosted IP Communication Service ("HIPCS") which is a fully hosted VoIP solution.[25] SBC would require Level 3 to create separate interconnection facilities solely for the purpose exchanging IP-Enabled traffic with SBC. SBC seeks to do this so that it may collect non-cost-based access charges for IP-Enabled traffic. The Commission must reject this approach, and adopt Level 3's proposed terms for interconnection, and maintain the status quo to prohibit SBC from collecting access charges on IP-Enabled traffic. The ILECs tend to refer to IP-Enabled services – when offered by CLECs -- as "toll substitutes" to which access charges should apply. The CLECs, including Level 3, point to the emerging nature of this new technology and encourage the FCC and the state commissions to forbear regulating these offerings.

[24] Interconnection Trunking Requirements Appendix, Section 13.1; Intercarrier Compensation, Sections 3.1, 4.2, 4.5, 4.7-4.7.2.1, 7.1, 7.2, 16.1, 17.1.

[25] *See*, SBC's website for a complete description of HIPCS and other VoIP services.

A detailed description of the differences between VoIP calls and PSTN calls is contained in Mr. Wilson's testimony.

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

A. No. These services do not impose any additional costs on the ILECs or their network. As such, treating these services as if they were traditional telecommunications services, and imposing their associated charges, would, inasmuch as ILECs already fully recover the costs of their networks, allow ILECs to over-recover such costs. Such a result would not only constitute a windfall for ILECs, but it would impede the natural efficiency of the market by unnecessarily burdening the development of new services and hindering their deployment. There is simply no economic justification for treating IP enabled services as if they are traditional services.

Q. HAS THE HISTORICAL APPROACH TO REGULATING THESE TYPES OF SERVICES BEEN SUCCESSFUL FROM A MARKET EFFICIENCY PERSPECTIVE?

A. Yes. The FCC approach to information services has been very successful over the last 20 years. As discussed later, the hands-off approach has allowed Internet based technology to grow and develop resulting in significant benefits to the economy and

the consuming public. In fact, this hands-off approach is consistent with Congress' goals for regulating the Internet. Specifically, Congress stated:

> It is the policy of the United States . . . to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation."[26]

This approach is consistent with allowing the free market to drive the introduction of new technologies to the marketplace.

Q. HOW HAS THE FCC HISTORICALLY ADDRESSED THE ISSUE OF WHETHER TO REGULATE IP-ENABLED TRAFFIC FROM A MARKET PERSPECTIVE?

A. As noted briefly above, the FCC has consistently resisted regulating the Internet and information services. Congress has directed the FCC not to subject the Internet and nascent IP-based services to restrictions that threaten to stifle innovation and competition. At its core, this policy is based upon the recognition the liberating the Internet from government imposed economic burdens and regulation – allowing the free market to determine the winners and losers – is the best way in which to promote economic growth, technological advancement and social welfare. For example, in the 1998 Report to Congress, the FCC noted the "intention of the drafters of both the House and Senate bills" leading to the passage of the Act that the two categories of telecommunications services and information services "be separate and distinct," and that "information service providers not be subject to telecommunications

[26] 47 USC § 230(b).

regulation."[27] The FCC underscored in the 1998 Report to Congress that the Internet and VoIP services were in the early stages of development and that subjecting them to regulation could stifle innovation and investment at this tenuous stage of development. Specifically, the FCC stated that:

> *The Internet and other enhanced services have been able to grow rapidly in part because the Commission concluded that enhanced service providers were not common carriers within the meaning of the Act.* This policy of distinguishing competitive technologies from regulated services not yet subject to full competition remains viable. Communications networks function as overlapping layers, with multiple providers often leveraging a common infrastructure. As long as the underlying market for provision of transmission facilities is competitive or is subject to sufficient pro-competitive safeguards, *we see no need to regulate the enhanced functionalities that can be built on top of those facilities.* We believe that Congress, by distinguishing `telecommunications service' from `information service,' and by stating a policy goal of preventing the Internet from being fettered by state or federal regulation, endorsed this general approach. *Limiting carrier regulation to those companies that provide the underlying transport ensures that regulation is minimized and is targeted to markets where full competition has not emerged.* As an empirical matter, the level of competition, innovation, investment, and growth in the enhanced services industry over the past two decades provides a strong endorsement for such an approach.[28]

Further, "Congress intended to maintain a regime in which information service providers are not subject to regulation as common carriers merely because they

[27] 1998 Report to Congress, at ¶ 43, at 11523.

[28] *Id* at ¶ 95. (emphasis added; footnotes omitted)

provide their services `via telecommunications.'"[29] ESPs provide information services "via telecommunications" – the services that Level 3 provides. To sustain this economic vitality, this distinction must be preserved. Level 3 must be granted its full rights as an interconnecting carrier to provide services to its ESP customers, and its ESP VoIP application customers must be afforded their full rights not to be pigeonholed in the regulatory constructs of a moribund technology.

Q. HAS THE FCC RECENTLY STATED ANY POSITIONS REGARDING THE ECONOMIC IMPACT OF REGULATION OF VOIP?

A. Yes. FCC Chairman Powell recently maintained this support for leaving IP-Enabled services unregulated at the recent FCC Forum on Voice over Internet Protocol in Washington, where he was quoted as saying, "As one who believes unflinchingly in maintaining an Internet free from government regulation, I believe that IP-based services such as VoIP should evolve in a regulation-free zone". Chairman Powell went on to caution regulators with respect to IP-Enabled services' regulation, saying "No regulator, either federal or state, should tread into this area without an absolutely compelling justification for doing so."[30] Chairman Powell's statements were part of a daylong forum to address business, technical, service feature and policy issues. More recently, Chairman Powell stated,

[29] *Id* at ¶ 21; see also, 47 USC § 153(20).

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

> The burden should be placed squarely on government to demonstrate why regulation is needed, rather than on innovators to explain why it is not."[31]

Q. CAN YOU DISCUSS FURTHER WHY THE "HANDS-OFF" APPROACH BY THE FCC HAS BEEN SO SUCCESSFUL?

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

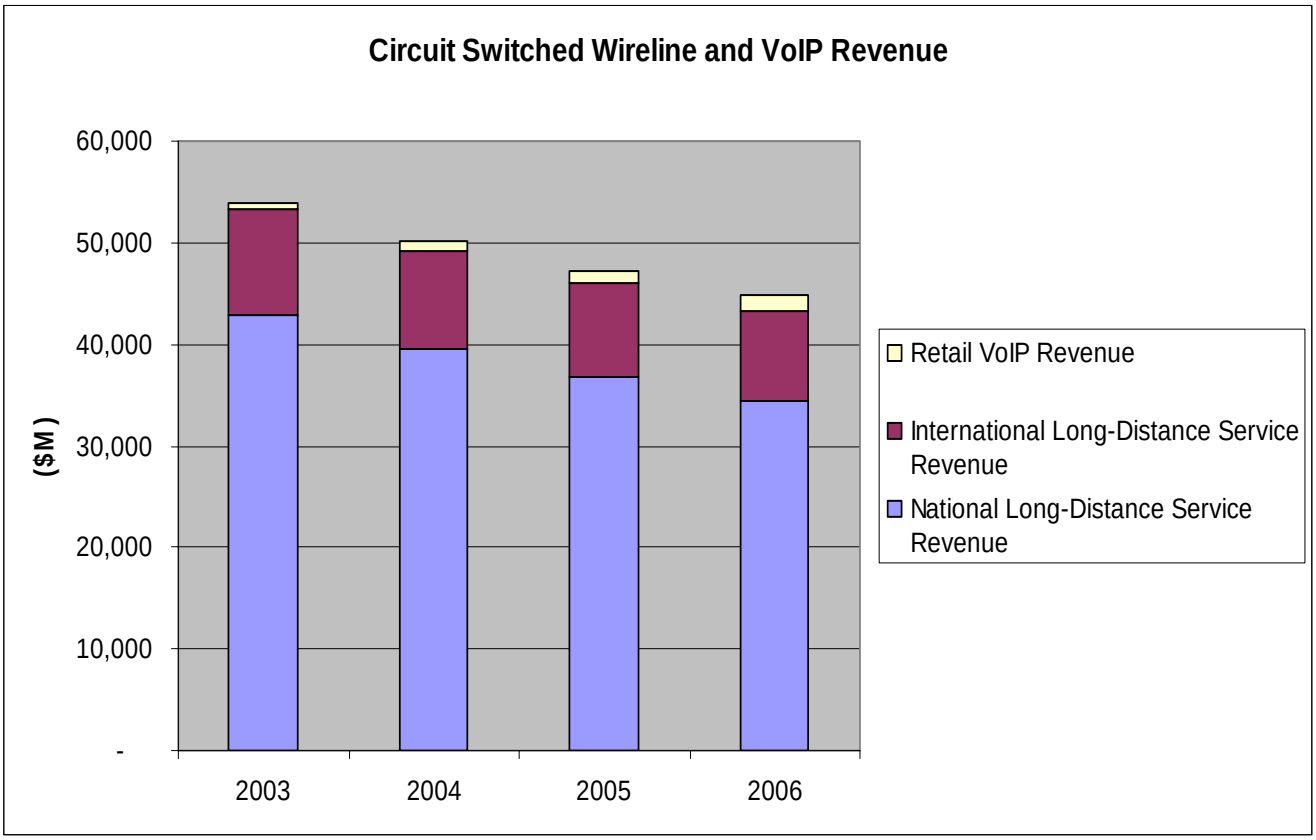
It is very difficult for companies to develop products and technology when faced with a patchwork of regulatory requirements. The Balkanization of the regulatory landscape increases not only the costs of compliance – if what constitutes compliance can even be determined – but also embeds an unacceptable level of inefficiency resulting from an inability to achieve economies of scale – economies of scale that the ILECs have enjoyed throughout their life cycle by virtue of their monopoly hold on the market. In other words, there should be one unified regulatory approach to VoIP services and technology. The Federal approach has been very successful, so the states should seriously consider what benefits would derive from imposing multiple and perhaps wildly varying regulatory paradigms of their own. The impact to economic growth and jobs, as companies assess where to locate, shut down facilities and increase jobs, by adhering to the intransigent regime of the past as

[31] *See*, US News & World Report, "Courting Calls – Telecom and Cable Firms Scramble to Offer Internet Calls"; by Mary Kathleen Flynn; Feb 2, 2004.

opposed to the flexibility afforded by Internet based applications such as VoIP, will be considerable. The Commission should maintain its current policy of not applying access charges or other non-cost-based fees on IP-Enabled traffic until the FCC has completed its proposed NPRMs on intercarrier compensation and VoIP issues.

Q. IS IP-ENABLED TRAFFIC A SIGNIFICANT PART OF THE TOTAL TRAFFIC IN THE UNITED STATES?

A. No. The chart below provides a forecast of various traffic types over the next few years, and as you can see, IP-Enabled traffic is not a significant portion of the total. Today, traffic routed in the manner represents less than 5 percent of the total interexchange traffic.



So, while IP-Enabled traffic is getting significant attention today, the volumes of traffic are not yet significant. Internet Protocol technologies are in their infancy from a market-penetration standpoint, and although they hold much promise, their market impact will be negligible in the foreseeable future.

Q. WON'T ILECS BE HARMED BY NOT RECEIVING ACCESS CHARGES ON IP-ENABLED TRAFFIC?

A. No. Neither the ILECs' dire predictions of reduced local revenue (as market share shifts to VoIP providers), nor their dire predictions of all long distance traffic moving to VoIP to avoid access charges, even if they were correct, would justify common

carrier regulation of IP-Enabled services. Moreover, as Verizon's Chief Executive Officer Seidenberg has stated: "Our view is to let cannibalization occur."[32] Seidenberg has said that while VoIP probably would reduce Verizon's local phone market share from 90% to 60%, Verizon plans to participate in VoIP both as a backbone provider and as an ISP, "meaning more revenue per customer."[33]

One ILEC, Qwest, recently supported the FCC's position against regulation of voice communications over the Internet. In an article dated December 5, 2003, Qwest's CEO said, "…it would be inconsistent for the commission to regulate what's known as "voice over Internet protocol" (VoIP) service when similar services, such as telephone via cable connection and wireless phones, are not regulated." He went on to note that Qwest was launching its VoIP service in Minnesota and that VoIP could be more profitable to the company than traditional phone service, because it does not have the added costs of regulation.[34]

Q. HAVE ILECS ARGUED IN THE PAST THAT IN THE ABSENCE OF ACCESS CHARGE REVENUES WOULD NEGATIVELY IMPACT RATEPAYERS?

A. Yes. The faulty premise of the previous RBOC argument has been that the impact of VoIP would negatively impact RBOC margins, resulting in the need for RBOCs to increase local rates. Today, however, the RBOCs are rapidly deploying VoIP

[32] Communications Daily, (June 20, 2001).

[33] *Id.*

[34] "Qwest Chief Backs Up FCC on Voice Over Internet"; Denver Post, Dec 5, 2003.

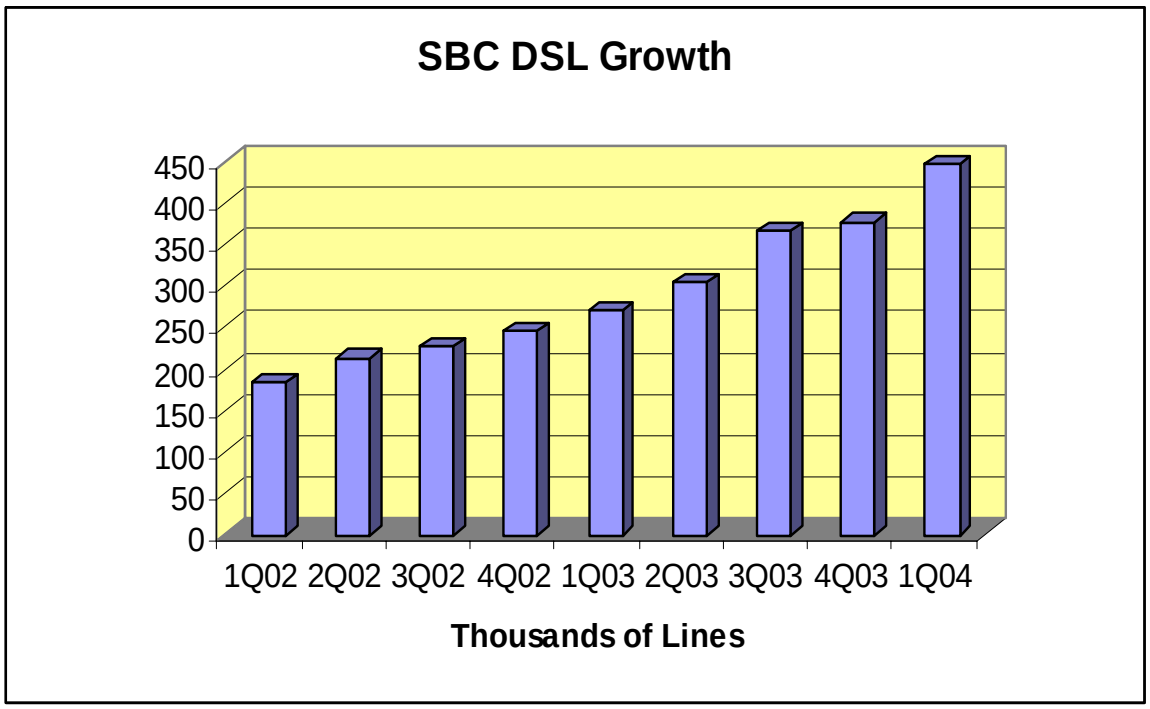
services and embracing the new technology. Indeed, the RBOCs are supporting the FCC decision to not regulate these services, in part because of their offerings. Qwest and Verizon have announced development of a new network using VoIP. AT&T has rolled out an aggressive VoIP initiative. Time Warner Cable has said that it is teaming with MCI and Sprint to offer VoIP services nationally. As such, this is not just a niche market, but one that all providers – ILECs, CLECs, cable providers, etc. – are rushing to participate in. As the U. S. News and World Report article concluded, "The bottom line: Consumers and businesses stand to benefit from lower prices and a wide range of sophisticated features."[35] What is really occurring is the ILEC's attempt at maintaining its sinecure of unwarranted access revenue as a prop as it migrates itself to the IP platforms – the end result being a continuation of its predominant market position and the lack of competition.

Q. HOW IS IT POSSIBLE FOR VOIP TO CONTINUE TO DEVELOP, AND THRIVE WITHOUT CRIPPLING UNIVERSAL SERVICE?

A. Over the last few years, RBOCs have been the beneficiaries of gaining, for the first time, access to markets and associated revenues that have experienced tremendous growth. For example, as the graph below indicates SBC has experienced tremendous

[35] *See*, US News & World Report, "Courting Calls – Telecom and Cable Firms Scramble to Offer Internet Calls"; by Mary Kathleen Flynn; Feb 2, 2004.

growth in DSL revenues achieving an increase of 446,000 DSL lines in the past quarter, and a 60 percent increase over the past 4 quarters.[36]



SBC has also gained significant revenues in the wireless and long distance markets, adding nearly *10 million* new long distance lines over the past year. Finally, RBOCs have seen the development of a significant wholesale market that was not present in the past with the entry of CLECs into the market that rely upon unbundled network elements in order to provide retail service to their customers. These markets represent new revenue streams to the RBOCs, which were heretofore not available to

[36] SBC *Investor Briefing* Apr 20, 2004, <http://www.sbc.com/Investor/Financial/Earning_Info/docs/1Q_04_IB_FINAL.pdf>.

them.[37] Past RBOC arguments that "the sky would fall" without access charge revenues are therefore even less applicable today than they were in the past. Secondly, all of the preceding growth was based upon the ILEC's superior market position, subsidized and cemented by access revenues. Finally, as I have noted, VoIP, at least at this point in time, represents a miniscule portion of the market.

Q. EVEN THOUGH VOIP CURRENTLY REPRESENTS A SMALL PORTION OF THE MARKET, HAS SBC BENEFITED FROM GROWTH IN THIS AREA?

A. Absolutely, according to SBC's most recent *Investor Briefing*, SBC's continued expansion of its portfolio of data solutions, (which include VoIP), have achieved solid growth recently, growing 6.8 percent to $2.6 Billion and *representing 29 percent of SBC's total wireline revenues* in the first quarter of 2004.[38] Not only is SBC experiencing increased revenues from new market opportunities, VoIP is playing a significant role in contributing to those revenues.

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

A. No. The Internet, VoIP applications, wireless, fixed wireless and other developing technologies only increase the value local phone service. Today we are seeing

[37] UNEs are providing a new revenue stream, but an often overlooked source of revenues come from collocation. In the past the unused space in central offices was simply an expense. Today, however, collocation is a large revenue stream for the ILECs, with little or no accompanying cost.

[38] SBC *Investor Briefing* April 20, 2004.

significant investments in newer technologies (3G wireless, IP networks, IP CPE, PDAs, cable plant upgrades, automation and robotics, etc.) instead of continuing investment in the traditional circuit switched network.[39] These new investments and technologies are resulting in more efficient provisioning of service, new features and mobility, and flexibility in managing services and features. In fact, IP-Enabled services, with its integrated voice and data features, will make business and personal use of communications much more efficient. This new trend is adding value to the economy and consumers (residential and business alike) are enjoying new services and flexibility.

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

A. There are several reasons why consumers are attracted to these new offerings. These new services offer flexibility that a fixed wireline cannot offer. Wireless and VoIP service are portable so you can in effect take your service with you. In certain environments this is a significant benefit to consumers. Efficiency is also a consumer issue. For instance, if you can talk on the phone and conduct business while you drive, this is a significant benefit for certain individuals, such a real estate brokers.

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

[39] I don't mean to suggest that investment in the traditional PSTN has stopped. Investments continue to be made, including maintenance on existing plant in service, the new investments are focusing on new technologies.

A. The Commission should adopt the same "hands off" policy that has been so successful in encouraging the development of Internet and other IP-based applications, including VoIP. Concurrently, the Commission should reaffirm its commitment to competitors, especially competitors that serve the VoIP application community, that non-discriminatory, cost based, pro-competitive access to the network infrastructure of the ILECs will be vigorously promoted and enforced. Unless there is some specific need to regulate such offerings, they should be allowed to thrive or fail based on the market dynamics they face and create.

ISSUE 7 – INTERCARRIER (RECIPROCAL) COMPENSATION[40]

Q. PLEASE SUMMARIZE THE DISPUTE BETWEEN THE PARTIES ON THIS ISSUE.

A. Once again, Level 3 asks that the Commission resolve this issue by maintaining the status quo. SBC has proposed language to be included in the interconnection agreement that would allow it to avoid its obligation under law to provide compensation to Level 3 for terminating local traffic originating with an SBC retail customer, while preserving SBC's ability to receive compensation from Level 3 for terminating local traffic originating with a Level 3 customer. Level 3's position is consistent with the provisions of the Act, in that section 251 (b)(5) of the Act imposes

[40] Intercarrier Compensation, Sections 3.1, 3.6, 3.7, 4.7- 4.7.2.1, 5.1, 5.1.1-5.1.2.2.1, 7.1, 7.2, 12.1-12.6, 12.9, 13.1, 14.1, 15.1, 15.2, 15.3, 15.4, 16.1, 17.1.

on each local exchange carrier the duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications.

Q. WHAT ARE THE ECONOMIC RAMIFICATIONS OF SBC'S PROPOSED LANGUAGE?

A. The adoption of SBC's proposed language would be financially devastating to Level 3. As discussed previously, Level 3 has made significant investment decisions in the past based on a certain set of expectations. SBC's determination to change circumstances once these decisions have been made would jeopardize Level 3's ability to continue to operate in Michigan, and would therefore jeopardize Level 3's ability to even recover its costs. SBC's legal obligations are in place in order to prevent such occurrences which would devastate the competitive telecommunications market.

Q. HOW SHOULD THE COMMISSION RESOLVE THIS ISSUE?

A. The Commission should maintain the status quo. The Commission should adopt terms and conditions in the parties Interconnection Agreement that require reciprocal compensation to be paid for all Local Traffic, as defined in the Agreement, exchanged on the PSTN, as well as on the exchange of all IP-Enabled traffic. Of course, the FCC's existing regime for ISP-bound traffic would also apply to that traffic.

IV. TIER 2 ARBITRATION ISSUES

Q. BEFORE ADDRESSING EACH OF THE TIER 2 ISSUES INDIVIDUALLY, PLEASE DISCUSS THEM IN GENERAL.

A. These issues are red herrings. SBC, in its proposals regarding these issues, is not seeking to accomplish anything other than to create an environment that is unappealing to its competitors in order to maintain its monopoly dominance. For each of these issues, Level 3's language is fair and reasonable to both Parties in that Level 3 is willing to agree to reasonable language with respect to each of these issues that would protect SBC as well as Level 3. SBC, however, insists on interconnection agreement language that would allow SBC to unilaterally impose penalties or conditions upon Level 3 that are unreasonable, which would expose Level 3 to unnecessary risk and avoidable uncertainty, and would disrupt service to Michigan's consumers. I will briefly discuss each of these issues in more detail below.

ISSUE 10 – LIABILITY FOR HAZARDOUS SUBSTANCES AND ENVIRONMENTAL HAZARDS[41]

Q. PLEASE SUMMARIZE THE DISPUTE BETWEEN THE PARTIES ON THIS ISSUE.

A. SBC seeks to include language within the interconnection agreement that would impose liability on Level 3 for hazardous substances and / or environmental hazards

[41] *See*, General Terms and Conditions, Section 32.

that were introduced to collocation spaces in SBC's central offices by SBC or a third party not related to Level 3. Level 3 does not object to language that would place liability on Level 3 for hazardous substances contributed by itself, but Level 3 objects to accepting responsibility for the actions of other parties, which are entirely beyond its control. Through its proposed language, SBC is essentially transferring risks that should be born by SBC to Level 3.

Q. ARE THERE OTHER REASONS WHY THE COMMISSION SHOULD REJECT SBC'S LANGUAGE WITH RESPECT TO LIABILITY FOR HAZARDOUS SUBSTANCES?

A. Yes. By rejecting SBC's proposed language, and adopting the proposed language of Level 3, the Commission would provide all parties with the proper incentive to manage hazardous substances safely and effectively, in that each party would be economically liable for its own actions. SBC's language would inappropriately spread the liability among other parties, thereby reducing the potential economic liability to SBC its own mismanagement of such substances. Such language would reduce SBC's incentive to prevent problems associated with hazardous substances in that if such problems should occur, Level 3 would bear some of the responsibility for paying for them.

ISSUE 11 – NONPAYMENT AND PROCEDURES FOR DISCONNECTION[42]

Q. PLEASE SUMMARIZE THE DISPUTE BETWEEN THE PARTIES ON ISSUE 11.

A. SBC has proposed language in the interconnection agreement that would allow it to terminate service to Level 3 whenever SBC determines that Level 3 has failed to pay charges that are owed to SBC. Level 3 does not object to SBC having the ability to discontinue service for nonpayment, if there is agreement that payment is owed, or it is found that it is owed through arbitration or some other means. However, SBC insists upon language that would allow SBC to unilaterally make such determinations, essentially eliminating Level 3's ability and prerogative to dispute payments. Level 3 proposes more reasonable terms that would protect SBC in all circumstances, yet would recognize that legitimate payment disputes can exist between Level 3 and SBC.

Q. WHAT DOES LEVEL 3 PROPOSE?

A. Level 3 proposes that its language that provides that neither party may unilaterally terminate service without first following all of the applicable contractual and legal requirements with respect to discontinuance of services.

ISSUES 12, 13 AND 15 – DEPOSITS AND ASSURANCE OF PAYMENT, SHOULD ASSURANCE OF PAYMENT APPLY ON A STATE-BY-

[42] *See*, General Terms and Conditions §§ 8.8.1, 9.2, 9.3, 9.5, 9.6, and 9.7

STATE BASIS OR ACROSS THE SBC 13-STATE REGION, AND, SHOULD LEVEL 3 BE PERMITTED TO DISPUTE A DEMAND FOR ASSURANCE OF PAYMENT[43]

Q. PLEASE SUMMARIZE THE DISPUTE BETWEEN THE PARTIES ON THESE ISSUES.

A. The dispute between the Parties with respect to these issues relates to the terms and conditions under which SBC can demand that Level 3 provide assurance of payment deposits, whether such demands should be limited to a state-by-state basis, and the ability of Level 3 to dispute SBC's demands for deposits. As is the case with the other Tier 2 issues, SBC proposes language with respect to these issues that would accomplish nothing more than creating an environment of excessive and unnecessary risk for Level 3. It should be clear that Level 3 is not proposing language that would prohibit SBC from including assurance of payment provisions in the interconnection agreement, but is merely seeking to set parameters around when such assurance can be sought or increased, and limiting SBC's ability to act unilaterally with respect to making demands.

Q. HOW SHOULD THESE ISSUES BE RESOLVED?

A. Level 3 has proposed reasonable language with respect to these issues, and that language should be adopted by this Commission. SBC's demands with respect to deposits would result in a situation in which SBC could unilaterally increase or

[43] *See*, General Terms and Conditions, Section 7, 7.2, 7.8, and 7.8.1.

demand deposits from Level 3. Worse yet, the SBC language would also prevent Level 3 from having the ability to dispute SBC's demands, and would actually put Level 3 at SBC's mercy if any dispute was to arise, as SBC's proposal would allow SBC to unilaterally terminate its agreement with Level 3 to provide service (thereby disrupting Level 3's customers) if Level 3 did not comply with SBC's demands. While it is completely understandable for SBC to seek provisions within the interconnection agreement that would provide assurance of payment, SBC's proposed language goes well beyond protecting its rights in this area, and would allow SBC to effectively control the viability of Level 3 to compete and operate in Michigan. Level 3's reasonable language preserves SBC's rights, while avoiding this uncertainty by clearly defining the conditions under which deposits can be increased or demanded.

V. TIER 3 ARBITRATION ISSUES

Q. CAN YOU PROVIDE A GENERAL DESCRIPTION OF THE NATURE OF THE TIER 3 ARBITRATION ISSUES?

A. Yes. In general, Level 3 has determined that the level of disagreement between the Parties regarding this group of issues does not appear to be significant, and that there may be resolution of most of these issues prior to the arbitration hearings. Nevertheless, the ultimate resolution of certain of these issues is critical in order for Level 3 to continue to conduct commercial operations in Michigan.

Q. CAN YOU BRIEFLY DISCUSS THE MOST IMPORTANT ECONOMIC ISSUES THAT HAVE BEEN GROUPED IN TIER 3?

A. Yes. In general, the most important Tier 3 issues pertain to Level 3's access to facilities and services under the terms of the interconnection agreement, and the manner in which Level 3 may obtain such access. In many instances, SBC has proposed language with respect to these issues that would result in either operational or economic barriers to Level 3's expansion or even continuance of service in Michigan. The language that Level 3 has proposed with respect to the Tier 3 issues, particularly with respect to the NIM, ITR, IC, OET, UNE, and SS7 appendices to the agreement was proposed in order to afford Level 3 access to facilities and services critical to its operations in a manner that is consistent with federal law and TELRIC standards.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY

A. Yes.

QUALIFICATIONS OF TIMOTHY J. GATES

Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.

A. Prior to my current position with QSI Consulting, I was a Senior Executive Staff Member in MCI WorldCom's ("MCIW") National Public Policy Group. In this position, I was responsible for providing public policy expertise in key cases across the country and for managing external consultants for MCIW's state public policy organization. In certain situations, I also provided testimony in regulatory and legislative proceedings.

Prior to my position with MCIW in Denver, I was an Executive Staff Member II at MCI Telecommunications ("MCI") World Headquarters in Washington D.C.. In that position I managed economists, external consultants, and provided training and policy support for regional regulatory staffs. Prior to that position I was a Senior Manager in MCI's Regulatory Analysis Department, which provided support in state regulatory and legislative matters to the various operating regions of MCI. In that position I was given responsibility for assigning resources from our group for state regulatory proceedings throughout the United States. At the same time, I prepared and presented testimony on various telecommunications issues before state regulatory and legislative bodies. I was also responsible for managing federal tariff reviews and presenting MCI's position on regulatory matters to the Federal Communications Commission. Prior to my assignment in the Regulatory Analysis Department, I was the Senior Manager of Economic Analysis and Regulatory Policy in the Legal, Regulatory and Legislative Affairs Department for the Midwest Division of MCI. In that position I developed and promoted regulatory policy within what was then a five-state operating division of MCI. I promoted MCI policy positions through negotiations, testimony and participation in industry forums.

Prior to my positions in the Midwest, I was employed as Manager of Tariffs and Economic Analysis with MCI's West Division in Denver, Colorado. In that position I was responsible for managing the development and application of MCI's tariffs in the fifteen MCI West states. I was also responsible for managing regulatory dockets and for providing economic and financial expertise in the areas of discovery and issue analysis. Prior to joining the West Division, I was a Financial Analyst III and then a Senior Staff Specialist with MCI's Southwest Division in Austin, Texas. In those positions, I was responsible for the management of regulatory dockets and liaison with outside counsel. I was also responsible for discovery, issue analysis, and for the development of working relationships with consumer and business groups. Just prior to joining MCI, I

was employed by the Texas Public Utility Commission as a Telephone Rate Analyst in the Engineering Division responsible for examining telecommunications cost studies and rate structures.

I was employed as an Economic Analyst with the Public Utility Commissioner of Oregon from July, 1983 to December, 1984. In that position, I examined and analyzed cost studies and rate structures in telecommunications rate cases and investigations. I also testified in rate cases and in private and public hearings regarding telecommunications services. Before joining the Oregon Commissioner's Staff, I was employed by the Bonneville Power Administration (United States Department of Energy) as a Financial Analyst, where I made total regional electric use forecasts and automated the Average System Cost Review Methodology. Prior to joining the Bonneville Power Administration, I held numerous positions of increasing responsibility in areas of forest management for both public and private forestry concerns.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL CREDENTIALS.

A. I received a Bachelor of Science degree from Oregon State University and a Master of Management degree in Finance and Quantitative Methods from Willamette University's Atkinson Graduate School of Management. I have also attended numerous courses and seminars specific to the telecommunications industry, including the NARUC Annual and Advanced Regulatory Studies Program.

Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?

A. Effective April 1, 2000, I joined QSI Consulting as Senior Vice President and Partner. In this position I provide analysis and testimony for QSI's many clients. The deliverables include written and oral testimony, analysis of rates, cost studies and policy positions, position papers, presentations on industry issues and training.

Q. PLEASE IDENTIFY THE JURISDICTIONS IN WHICH YOU HAVE TESTIFIED.

A. I have filed testimony or comments on telecommunications issues in the following 43 states: Alabama, Arizona, California, Colorado, Delaware, Georgia, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Washington, West Virginia, Wisconsin and

Wyoming. I have also filed comments with the FCC and made presentations to the Department of Justice.

I have testified or presented formal comments in the following proceedings and forums:

Alabama:

October 18, 2000; Docket No. 27867; Adelphia Business Solutions Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

January 31, 2001; Docket No. 27867; Adelphia Business Solutions Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

Arizona:

September 23, 1987; Arizona Corporation Commission Workshop on Special Access Services; Comments on Behalf of MCI.

August 21, 1996; Affidavit in Opposition to USWC Motion for Partial Summary Judgment; No. CV 95-14284, No. CV-96-03355, No. CV-96-03356, (consolidated); On Behalf of MCI.

October 24, 1997; Comments to the Universal Service Fund Working Group; Docket No. R-0000-97-137; On Behalf of MCI.

May 8, 1998; Comments to the Universal Service Fund Working Group; Docket No.R-0000-97-137; On Behalf of MCI.

November 9, 1998; Docket No. T-03175A-97-0251; Application of MCImetro Access Transmission Services, Inc. to Expand It's CCN to Provide IntraLATA Services and to Determine that Its IntraLATA Services are Competitive; Direct Testimony on Behalf of MCI WorldCom, Inc.

September 20, 1999; Docket No. T-00000B-97-238; USWC OSS Workshop; Comments on Behalf of MCI WorldCom, Inc.

January 8, 2001; Docket Nos. T-03654A-00-0882, T-01051B-00-0882; Petition of Level 3 Communications, LLC, for Arbitration with Qwest Corporation; Direct Testimony on Behalf of Level 3.

September 2, 2001; Docket No. T-00000A-00-0194 Phase II – A; Investigation into Qwest's Compliance with Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts; Rebuttal Testimony on Behalf of WorldCom, Inc.

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

California:

August 30, 1996; Application No. 96-08-068; MCI Petition for Arbitration with Pacific Bell; Direct Testimony on Behalf of MCI.

September 10, 1996; Application No. 96-09-012; MCI Petition for Arbitration with GTE California, Inc.; Direct Testimony on Behalf of MCI.

June 5, 2000; Docket No. A0004037; Petition of Level 3 Communications for Arbitration of an Interconnection Agreement with Pacific Bell Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

Colorado:

December 1, 1986; Investigation and Suspension Docket No. 1720; Rate Case of Mountain States Telephone and Telegraph Company; Direct Testimony on Behalf of MCI.

October 26, 1988; Investigation and Suspension Docket No. 1766; Mountain States Telephone and Telegraph Company's Local Calling Access Plan; Direct Testimony of Behalf of MCI.

September 6, 1996; MCImetro Petition for Arbitration with U S WEST Communications, Inc.; Docket No. 96A-366T (consolidated); Direct Testimony on Behalf of MCI.

September 17, 1996; MCImetro Petition for Arbitration with U S WEST Communications, Inc.; Docket No. 96A-366T (consolidated); Rebuttal Testimony on Behalf of MCI.

September 26, 1996; Application of U S WEST Communications, Inc. To Modify Its Rate and Service Regulation Plan; Docket No. Docket No. 90A-665T (consolidated); Direct Testimony on Behalf of MCI.

October 7, 1996; Application of U S WEST Communications, Inc. To Modify Its Rate and Service Regulation Plan; Docket No. Docket No. 90A-665T (consolidated); Rebuttal Testimony on Behalf of MCI.

July 18, 1997; Complaint of MCI to Reduce USWC Access Charges to Economic Cost; Docket Nos. 97K-237T, 97F-175T (consolidated) and 97F-212T (consolidated); Direct Testimony on Behalf of MCI.

August 15, 1997; Complaint of MCI to Reduce USWC Access Charges to Economic Cost; Docket Nos. 97K-237T, 97F-175T (consolidated) and 97F-212T (consolidated); Rebuttal Testimony on Behalf of MCI.

March 10, 1998; Application of WorldCom, Inc. for Approval to Transfer Control of MCI to WorldCom, Inc.; Docket No. 97A-494T; Supplemental Direct Testimony on Behalf of MCI.

March 26, 1998; Application of WorldCom, Inc. for Approval to Transfer Control of MCI to WorldCom, Inc.; Docket No. 97A-494T; Rebuttal Testimony on Behalf of MCI.

May 8, 1998; Application of WorldCom, Inc. for Approval to Transfer Control of MCI to WorldCom, Inc.; Docket No. 97A-494T; Affidavit in Response to GTE.

November 4, 1998; Proposed Amendments to the Rules Prescribing IntraLATA Equal Access; Docket No. 98R-426T; Comments to the Commission on Behalf of MCI WorldCom and AT&T Communications of the Mountain States, Inc.

May 13, 1999; Proposed Amendments to the Rules on Local Calling Area Standards; Docket No. 99R-128T; Oral Comments before the Commissioners on Behalf of MCIW.

January 4, 2001; Petition of Level 3 Communications, LLC for Arbitration with Qwest Corporation; Docket No. 00B-601T; Direct Testimony on Behalf of Level 3.

January 16, 2001; Petition of Level 3 Communications, LLC for Arbitration with Qwest Corporation; Docket No. 00B-601T; Rebuttal Testimony on Behalf of Level 3.

January 29, 2001; Qwest Corporation, Inc., Plaintiff, v. IP Telephony, Inc., Defendant. District Court, City and County of Denver, State of Colorado; Case No. 99CV8252; Direct Testimony on Behalf of IP Telephony.

June 27, 2001; US WEST Statement of Generally Available Terms and Conditions; Docket No. 991-577T; Direct Testimony on Behalf of Covad Communications Company, Rhythms Links, Inc., and New Edge Networks, Inc.

January 26, 2004; Regarding the Unbundling Obligations of ILECs Pursuant to the Triennial Review Order; Docket No. 03I-478T; Direct Testimony on Behalf of WorldCom, Inc. (MCI).

Delaware:

February 12, 1993; Diamond State Telephone Company's Application for a Rate Increase; Docket No. 92-47; Direct Testimony on Behalf of MCI.

Florida:

July 1, 1994; Investigation into IntraLATA Presubscription; Docket No. 930330-TP; Direct Testimony on Behalf of MCI.

October 5, 2000; Petition of Level 3 for Arbitration with BellSouth; Docket No. 000907-TP; Direct Testimony On Behalf of Level 3.

October 13, 2000; Petition of BellSouth for Arbitration with US LEC of Florida Inc.; Docket No. 000084-TP; Direct Testimony On Behalf of US LEC.

October 27, 2000; Petition of BellSouth for Arbitration with US LEC of Florida Inc.; Docket No. 000084-TP; Rebuttal Testimony On Behalf of US LEC.

November 1, 2000; Petition of Level 3 for Arbitration with BellSouth; Docket No. 000907-TP; Rebuttal Testimony On Behalf of Level 3.

Georgia:

December 6, 2000; Docket No. 12645-U; Petition of Level 3 for Arbitration with BellSouth; Direct Testimony on Behalf of Level 3.

December 20, 2000; Docket No. 12645-U; Petition of Level 3 for Arbitration with BellSouth; Rebuttal Testimony on Behalf of Level 3.

Idaho:

November 20, 1987; Case No. U_1150_1; Petition of MCI for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

March 17, 1988; Case No. U_1500_177; Investigation of the Universal Local Access Service Tariff; Direct Testimony on Behalf of MCI.

April 26, 1988; Case No. U_1500_177; Investigation of the Universal Local Access Service Tariff; Rebuttal Testimony on Behalf of MCI.

November 25, 2002; Case No. GNR-T-02-16; Petition of Potlatch, CenturyTel, the Idaho Telephone Association for Declaratory Order Prohibiting the Use of "Virtual" NXX Calling; Comments/Presentation on Behalf of Level 3, AT&T, WorldCom, and Time Warner Telecom.

Illinois:

January 16, 1989; Docket No. 83_0142; Appropriate Methodology for Intrastate Access Charges; Rebuttal Testimony Regarding Toll Access Denial on Behalf of MCI.

February 16, 1989; Docket No. 83_0142; Appropriate Methodology for Intrastate Access Charges; Testimony Regarding ICTC's Access Charge Proposal on Behalf of MCI.

May 3, 1989; Docket No. 89_0033; Illinois Bell Telephone Company's Rate Restructuring; Direct Testimony on Behalf of MCI.

July 14, 1989; Docket No. 89-0033; Illinois Bell Telephone Company's Rate Restructuring; Rebuttal Testimony on Behalf of MCI.

November 22, 1989; Docket No. 88-0091; IntraMSA Dialing Arrangements; Direct Testimony on Behalf of MCI.

February 9, 1990; Docket No. 88-0091; IntraMSA Dialing Arrangements; Rebuttal Testimony on Behalf of MCI.

November 19, 1990; Docket No. 83-0142; Industry presentation to the Commission re Docket No. 83-0142 and issues for next generic access docket; Comments re the Imputation Trial and Unitary Pricing/Building Blocks on Behalf of MCI.

July 29, 1991; Case No. 90-0425; Presentation to the Industry Regarding MCI's Position on Imputation.

November 18, 1993; Docket No. 93-0044; Complaint of MCI and LDDS re Illinois Bell Additional Aggregated Discount and Growth Incentive Discount Services; Direct Testimony on Behalf of MCI and LDDS.

January 10, 1994; Docket No. 93-0044; Complaint of MCI and LDDS re Illinois Bell Additional Aggregated Discount and Growth Incentive Discount Services; Rebuttal Testimony on Behalf of MCI and LDDS.

May 30, 2000; Docket No. 00-0332; Level 3 Petition for Arbitration to Establish and Interconnection Agreement with Illinois Bell Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

July 11, 2000: Docket No. 00-0332; Level 3 Petition for Arbitration to Establish and Interconnection Agreement with Illinois Bell Telephone Company; Supplemental Verified Statement on Behalf of Level (3) Communications, LLC.

Indiana:

October 28, 1988; Cause No. 38561; Deregulation of Customer Specific Offerings of Indiana Telephone Companies; Direct Testimony on Behalf of MCI.

December 16, 1988; Cause No. 38561; Deregulation of Customer Specific Offerings of Indiana Telephone Companies; Direct Testimony on Behalf of MCI Regarding GTE.

April 14, 1989; Cause No. 38561; Deregulation of Customer Specific Offerings of Indiana Telephone Companies; Direct Testimony on Behalf of MCI Regarding Staff Reports.

June 21, 1989; Cause No. 37905; Intrastate Access Tariffs -- Parity with Federal Rates; Direct Testimony on Behalf of MCI.

June 29, 1989; Cause No. 38560; Reseller Complaint Regarding 1+ IntraLATA Calling; Direct Testimony on Behalf of MCI.

October 25, 1990; Cause No. 39032; MCI Request for IntraLATA Authority; Direct Testimony on Behalf of MCI.

April 4, 1991; Rebuttal Testimony in Cause No. 39032 re MCI's Request for IntraLATA Authority on Behalf of MCI.

Iowa:

September 1, 1988; Docket No. RPU 88_6; IntraLATA Competition in Iowa; Direct Testimony on Behalf of MCI.

September 20, 1988; Docket No. RPU_88_1; Regarding the Access Charges of Northwestern Bell Telephone Company; Direct Testimony on Behalf of MCI.

September 25, 1991; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Direct Testimony on Behalf of MCI.

October 3, 1991; Docket No. NOI-90-1; Presentation on Imputation of Access Charges and the Other Costs of Providing Toll Services; On Behalf of MCI.

November 5, 1991; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Rebuttal Testimony on Behalf of MCI.

December 23, 1991; Docket No. RPU-91-4; Investigation of the Earnings of US WEST Communications; Inc.; Supplemental Testimony on Behalf of MCI.

January 10, 1992; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Rebuttal Testimony on Behalf of MCI.

January 20, 1992; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Surrebuttal Testimony on Behalf of MCI.

June 8, 1999; Docket NOI-99-1; Universal Service Workshop; Participated on numerous panels during two day workshop; Comments on Behalf of MCIW.

October 27, 1999: Docket NOI-99-1; Universal Service Workshop; Responded to questions posed by the Staff of the Board during one day workshop; Comments on Behalf of MCIW and AT&T.

November 14, 2003; Docket Nos. INU-03-4, WRU-03-61; In Re: Qwest Corporation; Sworn Statement of Position on Behalf of MCI.

December 15, 2003; Docket Nos. INU-03-4, WRU-03-61; In Re: Qwest Corporation; Sworn Counter Statement of Position on Behalf of MCI.

Kansas:

June 10, 1992; Docket No. 181,097-U; General Investigation into IntraLATA Competition within the State of Kansas; Direct Testimony on Behalf of MCI.

September 16, 1992; Docket No. 181,097-U; General Investigation into IntraLATA Competition within the State of Kansas; Rebuttal Testimony on Behalf of MCI.

Kentucky:

May 20, 1993; Administrative Case No. 323, Phase I; An Inquiry into IntraLATA Toll Competition, an Appropriate Compensation Scheme for Completion of IntraLATA Calls by Interexchange Carriers, and WATS Jurisdictionality; Direct Testimony on Behalf of MCI.

December 21, 2000; Case No. 2000-404; Petition of Level 3 Communications, LLC for Arbitration with BellSouth; Direct Testimony on Behalf of Level 3.

January 12, 2001; Case No. 2000-477; Petition of Adelphia Business Solutions for Arbitration with BellSouth; Direct Testimony on Behalf of Adelphia.

Louisiana:

December 28, 2000; Docket No. U-25301; Petition of Adelphia Business Solutions for Arbitration with BellSouth; Direct Testimony on Behalf of Adelphia.

January 5, 2001; Docket No. U-25301; Petition of Adelphia Business Solutions for Arbitration with BellSouth; Rebuttal Testimony on Behalf of Adelphia.

Maryland:

November 12, 1993; Case No. 8585; Competitive Safeguards Required re C&P's Centrex Extend Service; Direct Testimony on Behalf of MCI.

January 14, 1994; Case No. 8585; Competitive Safeguards Required re C&P's Centrex Extend Service; Rebuttal Testimony on Behalf of MCI.

May 19, 1994; Case No. 8585; Re Bell Atlantic Maryland, Inc.'s Transmittal No. 878; Testimony on Behalf of MCI.

June 2, 1994; Case No. 8585; Competitive Safeguards Required re C&P's Centrex Extend Service; Rebuttal Testimony on Behalf of MCI.

September 5, 2001; Case No. 8879; Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996; Rebuttal Testimony on behalf of the Staff of the Public Service Commission of Maryland.

October 15, 2001; Case No. 8879; Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996; Surrebuttal Testimony on behalf of the Staff of the Public Service Commission of Maryland.

Massachusetts:

April 22, 1993; D.P.U. 93-45; New England Telephone Implementation of Interchangeable NPAs; Direct Testimony on Behalf of MCI.

May 10, 1993; D.P.U. 93-45; New England Telephone Implementation of Interchangeable NPAs; Rebuttal Testimony on Behalf of MCI.

Michigan:

September 29, 1988; Case Nos. U_9004, U_9006, U_9007 (Consolidated); Industry Framework for IntraLATA Toll Competition; Direct Testimony on Behalf of MCI.

November 30, 1988; Case Nos. U_9004, U_9006, U_9007 (Consolidated); Industry Framework for IntraLATA Toll Competition; Rebuttal Testimony on Behalf of MCI.

June 30, 1989; Case No. U-8987; Michigan Bell Telephone Company Incentive Regulation Plan; Direct Testimony on Behalf of MCI.

July 31, 1992; Case No. U-10138; MCI v Michigan Bell and GTE re IntraLATA Equal Access; Direct Testimony on Behalf of MCI.

November 17, 1992; Case No. U-10138; MCI v Michigan Bell and GTE re IntraLATA Equal Access; Rebuttal Testimony on Behalf of MCI.

July 22, 1993; Case No. U-10138 (Reopener); MCI v Michigan Bell and GTE re IntraLATA Equal Access; Direct Testimony on Behalf of MCI.

February 16, 2000; Case No. U-12321; AT&T Communications of Michigan, Inc. Complainant v. GTE North Inc. and Contel of the South, Inc., d/b/a GTE Systems of Michigan; Direct Testimony on Behalf of AT&T. (Adopted Testimony of Michael Starkey)

May 11, 2000; Case No. U-12321; AT&T Communications of Michigan, Inc. Complainant v. GTE North Inc. and Contel of the South, Inc., d/b/a GTE Systems of Michigan; Rebuttal Testimony on Behalf of AT&T.

June 8, 2000; Case No. U-12460; Petition of Level 3 Communications for Arbitration to Establish an Interconnection Agreement with Ameritech Michigan; Direct Testimony on Behalf of Level (3) Communications, LLC.

September 27, 2000; Case No. U-12528; In the Matter of the Implementation of the Local Calling Area Provisions of the MTA; Rebuttal Testimony on Behalf of Focal Communications, Inc.

Minnesota:

January 30, 1987; Docket No. P_421/CI_86_88; Summary Investigation into Alternative Methods for Recovery of Non-traffic Sensitive Costs; Comments to the Commission on Behalf of MCI.

September 7, 1993; Docket No. P-999/CI-85-582, P-999/CI-87-697 and P-999/CI-87-695, In the Matter of an Investigation into IntraLATA Equal Access and Presubscription; Comments of MCI on the Report of the Equal Access and Presubscription Study Committee on Behalf of MCI.

September 20, 1996; Petition for Arbitration with U S WEST Communications, Inc.; Docket No. P-442, 421/M-96-855; P-5321, 421/M-96-909; and P-3167, 421/M-96-729 (consolidated); Direct Testimony on Behalf of MCI.

September 30, 1996; Petition for Arbitration with U S WEST Communications, Inc.; Docket No. P-442, 421/M-96-855; P-5321, 421/M-96-909; and P-3167, 421/M-96-729 (consolidated); Rebuttal Testimony on Behalf of MCI.

September 14-16, 1999; USWC OSS Workshop; Comments on Behalf of MCI WorldCom, Inc. re OSS Issues.

September 28, 1999; Docket No. P-999/R-97-609; Universal Service Group; Comments on Behalf of MCI WorldCom, Inc. and AT&T Communications.

April 18, 2002; Commission Investigation of Qwest's Pricing of Certain Unbundled Network Elements; Docket Nos. P-442, 421, 3012/M-01-1916; P-421/C1-01-1375; OAH Docket No. 12-2500-14490; Rebuttal Testimony on Behalf of McLeod USA Telecommunications Services, Inc., Eschelon Telecom of Minnesota, Inc., US Link, Inc., Northstar Access, LLC, Otter Tail Telecomm LLC, VAL-Ed Joint Venture, LLP, dba 702 Communications.

January 23, 2004; In the Matter of the Commission Investigation into ILEC Unbundling Obligations as a Result of the Federal Triennial Review Order; Docket No.: P-999/CI-03-961; Direct Testimony on Behalf of WorldCom, Inc. (MCI).

Mississippi:

February 2, 2001; Docket No. 2000-AD-846; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

February 16, 2001; Docket No. 2000-AD-846; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

Montana:

May 1, 1987; Docket No. 86.12.67; Rate Case of AT&T Communications of the Mountain States, Inc.; Direct Testimony on Behalf of MCI.

September 12, 1988; Docket No. 88.1.2; Rate Case of Mountain States Telephone and Telegraph Company; Direct Testimony on Behalf of MCI.

May 12, 1998; Docket No. D97.10.191; Application of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.; Rebuttal Testimony on Behalf of MCI.

June 1, 1998; Docket No. D97.10.191; Application of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.; Amended Rebuttal Testimony on Behalf of MCI.

Nebraska:

November 6, 1986; Application No. C_627; Nebraska Telephone Association Access Charge Proceeding; Direct Testimony on Behalf of MCI.

March 31, 1988; Application No. C_749; Application of United Telephone Long Distance Company of the Midwest for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

New Hampshire:

April 30, 1993; Docket DE 93-003; Investigation into New England Telephone's Proposal to Implement Seven Digit Dialing for Intrastate Toll Calls; Direct Testimony on Behalf of MCI.

January 12, 2001; Docket No. DT 00-223; Investigation Into Whether Certain Calls are Local; Direct Testimony on Behalf of BayRing Communications.

April 5, 2002; Docket No. DT 00-223; Investigation Into Whether Certain Calls are Local; Rebuttal Testimony on Behalf of BayRing Communications.

New Jersey:

September 15, 1993; Docket No. TX93060259; Notice of Pre-Proposal re IntraLATA Competition; Comments in Response to the Board of Regulatory Commissioners on Behalf of MCI.

October 1, 1993; Docket No. TX93060259; Notice of Pre-Proposal re IntraLATA Competition; Reply Comments in Response to the Board of Regulatory Commissioners on Behalf of MCI.

April 7, 1994; Docket Nos. TX90050349, TE92111047, and TE93060211; Petitions of MCI, Sprint and AT&T for Authorization of IntraLATA Competition and Elimination of Compensation; Direct Testimony on Behalf of MCI.

April 25, 1994; Docket Nos. TX90050349, TE92111047, and TE93060211; Petitions of MCI, Sprint and AT&T for Authorization of IntraLATA Competition and Elimination of Compensation; Rebuttal Testimony on Behalf of MCI.

New Mexico:

September 28, 1987; Docket No. 87_61_TC; Application of MCI for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

August 30, 1996: Docket No. 95-572-TC; Petition of AT&T for IntraLATA Equal Access; Rebuttal Testimony on Behalf of MCI.

September 16, 2002; Utility Case No. 3495, Phase B; Consideration of Costing and Pricing Rules for OSS, Collocation, Shared Transport, Nonrecurring Charges, Spot Frames, Combination of Network Elements and Switching; Direct Testimony on Behalf of the Staff of the New Mexico Public Regulation Commission.

February 9, 2004; Case Nos. 03-00403-UT and 03-00404-UT; Testimony on Behalf of WorldCom, Inc. (MCI).

New York:

April 30, 1992; Case 28425; Comments of MCI Telecommunications Corporation on IntraLATA Presubscription.

June 8, 1992; Case 28425; Reply Comments of MCI Telecommunications Corporation on IntraLATA Presubscription.

North Carolina:

August 4, 2000; Docket No. P779 SUB4; Petition of Level (3) Communications, LLC for Arbitration with Bell South; Direct Testimony on Behalf of Level (3) Communications, LLC.

September 18, 2000; Docket No. P779 SUB4; Petition of Level (3) Communications, LLC for Arbitration with Bell South; Rebuttal Testimony on Behalf of Level (3) Communications, LLC.

October 18, 2000; Docket No. P-886, SUB 1; Petition of Adelphia Business Solutions of North Carolina, LP for Arbitration with BellSouth; Direct Testimony on Behalf of Adelphia.

December 8, 2000; Docket No. P-886, SUB 1; Petition of Adelphia Business Solutions of North Carolina, LP for Arbitration with BellSouth; Rebuttal Testimony on Behalf of Adelphia.

North Dakota:

June 24, 1991; Case No. PU-2320-90-183 (Implementation of SB 2320 -- Subsidy Investigation); Direct Testimony on Behalf of MCI.

October 24, 1991; Case No. PU-2320-90-183 (Implementation of SB 2320 -- Subsidy Investigation); Rebuttal Testimony on Behalf of MCI.

December 4, 2002; Case No. PU-2065-02-465; Petition of Level 3 for Arbitration with SRT Communications Cooperative; Direct Testimony on Behalf of Level (3) Communications, LLC.

May 2, 2003; Case No. PU-2342-01-296; Qwest Corporation Price Investigation; Direct Testimony on Behalf of the CLEC Coalition (US Link, Inc., VAL-ED Joint Venture LLP d/b/a 702 Communications, McLeodUSA Telecommunications, Inc. and IdeaOne Telecom Group, LLC).

Ohio:

February 26, 2004; Case No. 04-35-TP-COI; In the Matter of the Implementation of the FCC's Triennial Review Regarding Local Circuit Switching in the Cincinnati Bell Telephone Company's Mass Market; Direct Testimony on Behalf of AT&T.

Oklahoma:

April 2, 1992; Cause No. 28713; Application of MCI for Additional CCN Authority to Provide IntraLATA Services; Direct Testimony on Behalf of MCI.

June 22, 1992; Cause No. 28713; Application of MCI for Additional CCN Authority to Provide IntraLATA Services; Rebuttal Testimony on Behalf of MCI.

Oregon:

October 27, 1983; Docket No. UT 9; Pacific Northwest Bell Telephone Company Business Measured Service; Direct Testimony on Behalf of the Public Utility Commissioner of Oregon.

April 23, 1984; Docket No. UT 17; Pacific Northwest Bell Telephone Company Business Measured Service; Direct Testimony on Behalf of the Public Utility Commissioner of Oregon.

May 7, 1984; Docket No. UT 17; Pacific Northwest Bell Telephone Company Business Measured Service; Rebuttal Testimony on Behalf of the Public Utility Commissioner of Oregon.

October 31, 1986; Docket No. AR 154; Administrative Rules Relating to the Universal Service Protection Plan; Rebuttal Testimony on Behalf of MCI.

September 6, 1996; Docket ARB3/ARB6; Petition of MCI for Arbitration with U S WEST Communications, Inc.; Direct Testimony on Behalf of MCI.

October 11, 1996; Docket No. ARB 9; Interconnection Contract Negotiations Between MCImetro and GTE; Direct Testimony on Behalf of MCI.

November 5, 1996; Docket No. ARB 9; Interconnection Contract Negotiations Between MCImetro and GTE; Rebuttal Testimony on Behalf of MCI.

November 6, 2002; Docket No. UM 1058; Investigation into the Use of Virtual NPA/NXX Calling Patterns; Comments/Presentation on Behalf of Level (3) Communications, LLC.

Pennsylvania:

December 9, 1994; Docket No. I-00940034; Investigation Into IntraLATA Interconnection Arrangements (Presubscription); Direct Testimony on Behalf of MCI.

September 5, 2002; Docket No. C-20028114; Level 3 Communications, LLC v. Marianna & Scenery Hill Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

Rhode Island:

April 30, 1993; Docket No. 2089; Dialing Pattern Proposal Made by the New England Telephone Company; Direct Testimony on Behalf of MCI.

South Carolina:

Oct. ??, 2000; Docket No. 2000-0446-C; US LEC of South Carolina Inc. Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of US LEC.

November 22, 2000; Docket No. 2000-516-C; Adelphia Business Solutions of South Carolina, Inc. Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

December 14, 2000; Docket No. 2000-516-C; Adelphia Business Solutions of South Carolina, Inc. Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

South Dakota:

November 11, 1987; Docket No. F_3652_12; Application of Northwestern Bell Telephone Company to Introduce Its Contract Toll Plan; Direct Testimony on Behalf of MCI.

May 27, 2003; Docket No. TC03-057; Application of Qwest to Reclassify Local Exchange Services as Fully Competitive; Direct Testimony on Behalf of WorldCom, Inc., Black Hills FiberCom and Midcontinent Communications.

Tennessee:

January 31, 2001; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

February 7, 2001; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

Texas:

June 5, 2000; PUC Docket No. 22441; Petition of Level 3 for Arbitration with Southwestern Bell Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

June 12, 2000; PUC Docket No. 22441; Petition of Level 3 for Arbitration with Southwestern Bell Telephone Company; Rebuttal Testimony on Behalf of Level (3) Communications, LLC.

October 10, 2002; PUC Docket No. 26431; Petition of Level 3 for Arbitration with CenturyTel of Lake Dallas, Inc. and CenturyTel of San Marcos, Inc.; Direct Testimony on Behalf of Level (3) Communications, LLC.

October 16, 2002; PUC Docket No. 26431; Petition of Level 3 for Arbitration with CenturyTel of Lake Dallas, Inc. and CenturyTel of San Marcos, Inc.; Reply Testimony on Behalf of Level (3) Communications, LLC.

Utah:

November 16, 1987; Case No. 87_049_05; Petition of the Mountain State Telephone and Telegraph Company for Exemption from Regulation of Various Transport Services; Direct Testimony on Behalf of MCI.

July 7, 1988; Case No. 83_999_11; Investigation of Access Charges for Intrastate InterLATA and IntraLATA Telephone Services; Direct Testimony on Behalf of MCI.

November 8, 1996; Docket No. 96-095-01; MCImetro Petition for Arbitration with USWC Pursuant to 47 U.S.C. Section 252; Direct Testimony on Behalf of MCI.

November 22, 1996; Docket No. 96-095-01; MCImetro Petition for Arbitration with USWC Pursuant to 47 U.S.C. Section 252; Rebuttal Testimony on Behalf of MCI.

September 3, 1997; Docket No. 97-049-08; USWC Rate Case; Surrebuttal Testimony on Behalf of MCI.

September 29, 1997; Docket No. 97-049-08; USWC Rate Case; Revised Direct Testimony on Behalf of MCI.

February 2, 2001; Docket No. 00-999-05; In the Matter of the Investigation of Inter-Carrier Compensation for Exchanged ESP Traffic; Direct Testimony on Behalf of Level 3 Communications, LLP.

January 13, 2004; Docket No. 03-999-04; In the Matter of a Proceeding to Address Actions Necessary to Respond to the FCC's Triennial Review Order; Direct Testimony on Behalf of WorldCom, Inc. (MCI).

Washington:

September 27, 1988; Docket No. U-88-2052-P; Petition of Pacific Northwest Bell Telephone Company for Classification of Services as Competitive; Direct Testimony on Behalf of MCI.

October 11, 1996; Docket No. UT-96-0338; Petition of MCImetro for Arbitration with GTE Northwest, Inc., Pursuant to 47 U.S.C.252; Direct Testimony on Behalf of MCI.

November 20, 1996; Docket No. UT-96-0338; Petition of MCImetro for Arbitration with GTE Northwest, Inc., Pursuant to 47 U.S.C.252; Rebuttal Testimony on Behalf of MCI.

January 13, 1998; Docket No. UT-97-0325; Rulemaking Workshop re Access Charge Reform and the Cost of Universal Service; Comments and Presentation on Behalf of MCI.

December 21, 2001; Docket No. UT-003013, Part D; Continued Costing and Pricing of Unbundled Network Elements, Transport, and Termination; Direct Testimony on Behalf of WorldCom, Inc.

October 18, 2002; Docket No. UT-023043; Petition of Level 3 for Arbitration with CenturyTel of Washington, Inc.; Direct Testimony on Behalf of Level (3) Communications, LLC.

November 1, 2002; Docket No. UT-023043; Petition of Level 3 for Arbitration with CenturyTel of Washington, Inc.; Rebuttal Testimony on Behalf of Level (3) Communications, LLC.

January 31, 2003; Docket No. UT-021569; Developing an Interpretive or Policy Statement relating to the Use of Virtual NPA/NXX Calling Patterns; Comments on Behalf of WorldCom, Inc. and KMC Telecom.

May 1, 2003; Docket No. UT-021569; Developing an Interpretive or Policy Statement relating to the Use of Virtual NPA/NXX Calling Patterns; Workshop Participation on Behalf of MCI, KMC Telecom, and Level (3) Communications, LLC.

August 13, 2003; Docket No. UT-030614; In the Matter of the Petition of Qwest Corporation for Competitive Classification of Basic Exchange Telecommunications Services; Direct Testimony on Behalf of MCI, Inc.

August 29, 2003; UT-030614; In the Matter of the Petition of Qwest Corporation for Competitive Classification of Basic Exchange Telecommunications Services; Rebuttal Testimony on Behalf of MCI, Inc.

West Virginia:

October 11, 1994; Case No. 94-0725-T-PC; Bell Atlantic - West Virginia Incentive Regulation Plan; Direct Testimony on Behalf of MCI.

June 18, 1998; Case No. 97-1338-T-PC; Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.; Rebuttal Testimony on Behalf of MCI.

Wisconsin:

October 31, 1988; Docket No. 05_TR_102; Investigation of Intrastate Access Costs, Settlements, and IntraLATA Access Charges; Direct Testimony on Behalf of MCI.

November 14, 1988; Docket No. 05_TR_102; Investigation of Intrastate Access Costs, Settlements, and IntraLATA Access Charges; Rebuttal Testimony on Behalf of MCI.

December 12, 1988; Docket No. 05_TI_116; In the Matter of Provision of Operator Services; Rebuttal Testimony on Behalf of MCI.

March 6, 1989; Docket No. 6720_TI_102; Review of Financial Data Filed by Wisconsin Bell, Inc.; Direct Testimony on Behalf of MCI.

May 1, 1989; Docket No. 05_NC_100; Amendment of MCI's CCN for Authority to Provide IntraLATA Dedicated Access Services; Direct Testimony on Behalf of MCI.

May 11, 1989; Docket No. 6720_TR_103; Investigation Into the Financial Data and Regulation of Wisconsin Bell, Inc.; Rebuttal Testimony on Behalf of MCI.

July 5, 1989; Docket No. 05-TI-112; Disconnection of Local and Toll Services for Nonpayment -- Part A; Direct Testimony on Behalf of MCI.

July 5, 1989; Docket No. 05-TI-112; Examination of Industry Wide Billing and Collection Practices -- Part B; Direct Testimony on Behalf of MCI.

July 12, 1989; Docket No. 05-TI-112; Rebuttal Testimony in Parts A and B on Behalf of MCI.

October 9, 1989; Docket No. 6720-TI-102; Review of the WBI Rate Moratorium; Direct Testimony on Behalf of MCI.

November 17, 1989; Docket No. 6720-TI-102; Review of the WBI Rate Moratorium; Rebuttal Testimony on Behalf of MCI.

December 1, 1989; Docket No. 05-TR-102; Investigation of Intrastate Access Costs, Settlements, and IntraLATA Access Charges; Direct Testimony on Behalf of MCI.

April 16, 1990; Docket No. 6720-TR-104; Wisconsin Bell Rate Case; Direct Testimony of Behalf of MCI.

October 1, 1990; Docket No. 2180-TR-102; GTE Rate Case and Request for Alternative Regulatory Plan; Direct Testimony on Behalf of MCI.

October 15, 1990; Docket No. 2180-TR-102; GTE Rate Case and Request for Alternative Regulatory Plan; Rebuttal Testimony on Behalf of MCI.

November 15, 1990; Docket No. 05-TR-103; Investigation of Intrastate Access Costs and Intrastate Access Charges; Direct Testimony on Behalf of MCI.

April 3, 1992; Docket No. 05-NC-102; Petition of MCI for IntraLATA 10XXX 1+ Authority; Direct Testimony on Behalf of MCI.

September 30, 2002; Docket No. 05-MA-130; Petition of Level 3 for Arbitration with CenturyTel; Direct Testimony on Behalf of Level (3) Communications, LLC.

October 9, 2002; Docket No. 05-MA-130; Petition of Level 3 for Arbitration with CenturyTel; Reply Testimony on Behalf of Level (3) Communications, LLC.

Wyoming:

June 17, 1987; Docket No. 9746 Sub 1; Application of MCI for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

May 19, 1997; Docket No. 72000-TC-97-99; In the Matter of Compliance with Federal Regulations of Payphones; Oral Testimony on Behalf of MCI.

Comments Submitted to the Federal Communications Commission and/or the Department of Justice

March 6, 1991; Ameritech Transmittal No. 518; Petition to Suspend and Investigate on Behalf of MCI re Proposed Rates for OPTINET 64 Kbps Service.

April 17, 1991; Ameritech Transmittal No. 526; Petition to Suspend and Investigate on Behalf of MCI re Proposed Flexible ANI Service.

August 30, 1991; Ameritech Transmittal No. 555; Petition to Suspend and Investigate on Behalf of MCI re Ameritech Directory Search Service.

September 30, 1991; Ameritech Transmittal No. 562; Petition to Suspend and Investigate on Behalf of MCI re Proposed Rates and Possible MFJ Violations Associated with Ameritech's OPTINET Reconfiguration Service (AORS).

October 15, 1991; CC Docket No. 91-215; Opposition to Direct Cases of Ameritech and United (Ameritech Transmittal No. 518; United Transmittal No. 273) on Behalf of MCI re the introduction of 64 Kbps Special Access Service.

November 27, 1991; Ameritech Transmittal No. 578; Petition to Suspend and Investigate on Behalf of MCI re Ameritech Directory Search Service.

September 4, 1992; Ameritech Transmittal No. 650; Petition to Suspend and Investigate on Behalf of MCI re Ameritech 64 Clear Channel Capability Service.

February 16, 1995; Presentation to FCC Staff on the Status of Intrastate Competition on Behalf of MCI.

November 9, 1999; Comments to FCC Staff of Common Carrier Bureau on the Status of OSS Testing in Arizona on Behalf of MCI WorldCom, Inc.

November 9, 1999; Comments to the Department of Justice (Task Force on Telecommunications) on the Status of OSS Testing in Arizona and the USWC Collaborative on Behalf of MCI WorldCom, Inc.

Presentations Before Legislative Bodies:

April 8, 1987; Minnesota; Senate File 677; Proposed Deregulation Legislation; Comments before the House Committee on Telecommunications.

October 30, 1989; Michigan; Presentation Before the Michigan House and Senate Staff Working Group on Telecommunications; "A First Look at Nebraska, Incentive Rates and Price Caps," Comments on Behalf of MCI.

May 16, 1990; Wisconsin; Comments Before the Wisconsin Assembly Utilities Committee Regarding the Wisconsin Bell Plan for Flexible Regulation, on Behalf of MCI.

March 20, 1991; Michigan; Presentation to the Michigan Senate Technology and Energy Committee re SB 124 on behalf of MCI.

May 15, 1991; Michigan; Presentation to the Michigan Senate Technology and Energy Commission and the House Public Utilities Committee re MCI's Building Blocks Proposal and SB 124/HB 4343.

March 8, 2000; Illinois; Presentation to the Environment & Energy Senate Committee re Emerging Technologies and Their Impact on Public Policy, on Behalf of MCI WorldCom, Inc.

February 19, 2004; Presentation to the Iowa Senate Committee Regarding House Study Bill622/Senate Study Bill 3035; Comments on Behalf of MCI.

Presentations Before Industry Groups -- Seminars:

May 17, 1989; Wisconsin Public Utility Institute -- Telecommunications Utilities and Regulation; May 15-18, 1989; Panel Presentation -- Interexchange Service Pricing Practices Under Price Cap Regulation; Comments on Behalf of MCI.

July 24, 1989; National Association of Regulatory Utility Commissioners -- Summer Committee Meeting, San Francisco, California. Panel Presentation -- Specific IntraLATA Market Concerns of Interexchange Carriers; Comments on Behalf of MCI.

May 16, 1990; Wisconsin Public Utility Institute -- Telecommunications Utilities and Regulation; May 14-18, 1990; Presentation on Alternative Forms of Regulation.

October 29, 1990; Illinois Telecommunications Sunset Review Forum; Two Panel Presentations: Discussion of the Illinois Commerce Commission's Decision in Docket No. 88-0091 for the Technology Working Group; and, Discussion of the Treatment of Competitive Services for the Rate of Return Regulation Working Group; Comments on Behalf of MCI.

May 16, 1991; Wisconsin Public Utility Institute -- Telecommunications Utilities and Regulation Course; May 13-16, 1991; Participated in IntraLATA Toll Competition Debate on Behalf of MCI.

November 19, 1991; TeleStrategies Conference -- "Local Exchange Competition: The $70 Billion Opportunity." Presentation as part of a panel on "IntraLATA 1+ Presubscription" on Behalf of MCI.

July 9, 1992; North Dakota Association of Telephone Cooperatives Summer Conference, July 8-10, 1992. Panel presentations on "Equal Access in North Dakota: Implementation of PSC Mandate" and "Open Network Access in North Dakota" on Behalf of MCI.

December 2-3, 1992; TeleStrategies Conference -- "IntraLATA Toll Competition -- A Multi-Billion Dollar Market Opportunity." Presentations on the interexchange carriers' position on intraLATA dialing parity and presubscription and on technical considerations on behalf of MCI.

March 14-17, 1993; NARUC Introductory Regulatory Training Program; Panel Presentation on Competition in Telecommunications on Behalf of MCI.

May 13-14, 1993; TeleStrategies Conference -- "IntraLATA Toll Competition -- Gaining the Competitive Edge"; Presentation on Carriers and IntraLATA Toll Competition on Behalf of MCI.

May 23-26, 1994; The 12th Annual National Telecommunications Forecasting Conference; Represented IXCs in Special Town Meeting Segment Regarding the Convergence of CATV and Telecommunications and other Local Competition Issues.

March 14-15, 1995; "The LEC-IXC Conference"; Sponsored by Telecommunications Reports and Telco Competition Report; Panel on Redefining the IntraLATA Service Market -- Toll Competition, Extended Area Calling and Local Resale.

August 28-30, 1995; "Phone+ Supershow '95"; Playing Fair: An Update on IntraLATA Equal Access; Panel Presentation.

August 29, 1995; "TDS Annual Regulatory Meeting"; Panel Presentation on Local Competition Issues.

December 13-14, 1995; "NECA/Century Access Conference"; Panel Presentation on Local Exchange Competition.

October 23, 1997; “Interpreting the FCC Rules of 1997"; The Annenberg School for Communication at the University of Southern California; Panel Presentation on Universal Service and Access Reform.

February 5-6, 2002; “Litigating Telecommunications Cost Cases and Other Sources of Enlightenment”; Educational Seminar for State Commission and Attorney General Employees on Litigating TELRIC Cases; Denver, Colorado.

February 19-20, 2003; Seminar for the New York State Department of Public Service entitled “Emerging Technologies and Convergence in the

Telecommunications Network". Presented with Ken Wilson of Boulder Telecommunications Consultants, LLC.

July 25, 2003; National Association of Regulatory Utility Commissioners Summer Committee Meetings; Participated in Panel regarding "Wireless Substitution of Wireline – Policy Implications."

BEFORE THE
MICHIGAN PUBLIC SERVICE COMMISSION

Petition of	)	
	)	
LEVEL 3 COMMUNICATIONS, LLC	)	Docket No. _____
	)	
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 Rates, Terms, and Conditions of Interconnection With Michigan Bell Telephone Company, d/b/a SBC Michigan, and SBC Communications, Inc..	)	

DECLARATION OF
TIMOTHY GATES

I, Timothy Gates, having been sworn upon my oath, do hereby state and depose that the Sworn Testimony attached hereto is true to the best of my knowledge and belief.

Timothy Gates

Dated: May 28, 2004

Subscribed and sworn before me on this
28th day of May, 2004

Julia Matthews
Notary Public

My commission expires: 11/18/07