

**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

In re: )  
Investigation into appropriate )  
methods to compensate carriers for ) Docket No. 000075-TP - Phase II  
exchange of traffic subject to Section 251 )  
of the Telecommunications Act of 1996 )

**PREFILED DIRECT TESTIMONY  
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WITNESS WILLIAM P. HUNT, III**

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1       **Q:    PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS**  
2       **FOR THE RECORD.**

3       **A:**    My name is William P. Hunt, III. I am Vice President for Public Policy for  
4       Level 3 Communications, Inc., the parent company of Level 3  
5       Communications, LLC (“Level 3”). My business address is 1025 Eldorado  
6       Boulevard, Broomfield, CO, 80021.

7       **Q:    PLEASE DESCRIBE YOUR RESPONSIBILITIES FOR LEVEL 3.**

8       **A:**    As Vice President for Public Policy, I am responsible for government  
9       relations and developing, implementing and coordinating worldwide  
10      regulatory policy for Level 3’s global operations, including North America,  
11      Europe, and Asia.

12      **Q:    PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND**  
13      **AND PROFESSIONAL EXPERIENCE.**

14      **A:**    I received a Bachelor of Journalism from the University of Missouri in 1984.  
15      I received my Juris Doctor from Western New England School of Law in  
16      1991. I joined Level 3 as Regulatory Counsel in February, 1999 and was  
17      promoted to Vice President and Regulatory Counsel in January, 2000, and to  
18      Vice President for Public Policy in January, 2001. Prior to joining Level 3,  
19      I spent almost five years at MCI Communications (“MCI”). I joined MCI’s  
20      Office of General Counsel in 1994 as a commercial litigator. In March of  
21      1996, I joined MCI’s state regulatory group in Denver, Colorado, where I  
22      was responsible for securing state certifications in the western United States,  
23      supporting arbitrations under the Communications Act of 1934, as amended

1 (“Act”), and prosecuting complaints against US West Communications (“US  
2 West”) in Washington and Minnesota.

3 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA**  
4 **PUBLIC SERVICE COMMISSION?**

5 **A:** No. Although I submitted prefiled testimony in Level 3’s arbitration with  
6 BellSouth in Florida in Docket No. 000907-TP, I did not attend the hearing  
7 and another Level 3 witness adopted my testimony. I testified before the  
8 South Dakota Public Utilities Commission during MCI’s state certification  
9 proceeding and before the Arizona Corporation Commission, California  
10 Public Utilities Commission, Colorado Public Utilities Commission, Georgia  
11 Public Service Commission, Illinois Commerce Commission, Michigan  
12 Public Service Commission, North Carolina Utilities Commission, and Texas  
13 Public Utilities Commission in connection with Level 3 arbitration  
14 proceedings. I am also scheduled to testify before the Utah Public Service  
15 Commission regarding a rulemaking on intercarrier compensation.

16 **Q: PLEASE DESCRIBE THE OPERATIONS OF LEVEL 3.**

17 **A:** Level 3 Communications, Inc., through its subsidiaries, including Level 3, is  
18 a global next-generation service provider with a state-of-the-art Internet  
19 Protocol based network capable of delivering a full range of services,  
20 including data, voice, video, fax and multi-media. Level 3’s network  
21 employs a “softswitch” technology. A softswitch is a software system  
22 running on commercially available servers that provides Level 3 with the

1 ability to offer services over the same Internet Protocol network that carries  
2 broadband data services. Level 3's system has non-proprietary interfaces  
3 intended to encourage the development of innovative new services and  
4 applications by software and hardware developers, Level 3's bandwidth  
5 customers, and other service providers. Level 3's initial service offerings  
6 have focused on enhanced service providers, web-centric companies, and, on  
7 a carrier's carrier basis, competitive local exchange carriers, fax service  
8 providers, and long distance carriers.

9 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 **A:** The purpose of my testimony is to provide the information requested by the  
11 Commission on Issue 11 (network architectures) and explain Level 3's  
12 positions on Issue 14 (LEC responsibilities for delivering traffic) and Issue  
13 16 (definition of and compensation for Internet Protocol ("IP") telephony).

14 **Q: COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY ON**  
15 **ISSUES 11 AND 14?**

16 **A:** Yes. In Issue 11, the Commission asks:

17 What types of local network architectures are  
18 currently employed by ILECs and ALECs, and what  
19 factors affect their choice of architecture?

20  
21 In Issue 14, the Commission asks:

22  
23 (a) What are the responsibilities of an originating  
24 local carrier to transport its traffic to another local  
25 carrier? (b) For each responsibility identified in part  
26 (a), what form of compensation, if any, should apply?  
27

1                   Level 3 typically installs a single switch and initially establishes a  
2                   single Point of Interconnection (“POI”) with the incumbent local exchange  
3                   carrier (“ILEC”) in each Local Access and Transport Area (“LATA”). The  
4                   Act and FCC rules establish “rules of the road” governing LECs’  
5                   interconnection responsibilities. The first rule is that an Alternative LEC  
6                   (“ALEC”) may select the POI where the parties will exchange traffic. The  
7                   second rule, explained in further detail by Mr. Gates, is that each LEC is  
8                   responsible for delivering its originating traffic to the POI and paying the  
9                   other LEC reciprocal compensation for terminating such traffic. As the  
10                  Commission found in Docket 000907-TP, together, these two rules establish  
11                  that each LEC must deliver its traffic to the POI selected by the ALEC and  
12                  each LEC recovers the costs of delivering that traffic from its end users, not  
13                  its competitor.

14                  Thus, to address Issue 14, the Commission must first determine where  
15                  each LEC must deliver its traffic to another LEC. As an ALEC, Level 3 has  
16                  the right to select a single POI per LATA under the Act and FCC rules.  
17                  However, Level 3 also has both a duty and a right to negotiate additional  
18                  POIs in good faith. While Level 3 prefers to negotiate additional POIs at the  
19                  local network planning level based on sound engineering principles,  
20                  including actual and forecasted traffic flows, Level 3 has been willing to  
21                  establish contractual traffic thresholds for additional POIs. Level 3 believes

1           that such an approach is consistent with the letter and intent of the Act and  
2           Commission and FCC rules.

3           **Q:    COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY ON**  
4           **ISSUE 16?**

5           **A:**    Yes. In Issue 16, the Commission asks:

6                           (a) What is the definition of Internet Protocol (IP)  
7                           telephony? (b) What carrier to carrier compensation  
8                           arrangements, if any, should apply to IP Telephony?  
9

10                           There is no single, or generally accepted, definition of IP telephony.

11                           Although the FCC has outlined a tentative definition of phone-to-phone IP  
12                           telephony, it has not adopted that definition, nor has it classified  
13                           phone-to-phone IP telephony as a telecommunications service. The FCC has  
14                           cautioned that it would not be appropriate to adopt a broad, sweeping  
15                           definition of IP telephony and classify such services as telecommunications.  
16                           Indeed, although the FCC has been given the opportunity to impose  
17                           traditional regulation on IP telephony providers, it has declined to do so.

18                           The Act and FCC rules distinguish between telecommunications  
19                           services, which are regulated, and information services, which are not. As I  
20                           will show in this testimony, the technology underlying a communication  
21                           makes a difference in how that communication is classified, and how a  
22                           communication is classified has far-reaching impacts that are not addressed  
23                           in Issue 16. Level 3 therefore recommends that the Commission neither  
24                           adopt a definition of IP telephony nor determine what intercarrier

1 compensation mechanism applies to IP telephony. Consistent with FCC  
2 rules, the determination of whether a service is telecommunications, and  
3 subject to access charges, or information, and exempt from access charges,  
4 should be made on a case-by-case basis. If a LEC believes a particular  
5 provider has misclassified its IP-based service to avoid access charges, the  
6 LEC may seek relief from the Commission.

7 **ISSUE 11: NETWORK ARCHITECTURE**

8 **Q: COULD YOU DESCRIBE LEVEL 3'S NETWORK?**

9 **A:** Yes. We are building what we believe will be the finest network in the world  
10 that uses Internet Protocol ("IP") technology end-to-end. You will not find  
11 a circuit switch in our network anywhere. We are building 16,000 miles of  
12 long haul network in the United States. This will connect 30 gateway cities,  
13 including Miami, Orlando, and Tampa, and a number of other sites  
14 throughout the country. We also have local networks in Miami, Orlando and  
15 Tampa. In each local network, Level 3 installs a single switch and a fiber  
16 ring to serve an area that an ILEC may serve through a more switch-  
17 intensive, hub and spoke network architecture.

18 During the past three years, we have focused on building our network.  
19 It is substantially completed and we expect to reap the benefits of our  
20 technology and network in 2001 as we shift to being an operations company.  
21 Our interconnection arrangements with ILECs are fundamental building

1 blocks that Level 3 needs to provide our customers with new competitive  
2 services.

3 **Q: WHAT IS LEVEL 3'S PREFERRED NETWORK**  
4 **INTERCONNECTION ARCHITECTURE?**

5 **A:** At least initially, Level 3 would like to establish a single POI in each LATA  
6 in which Level 3 provides local exchange service. As Mr. Gates discusses  
7 in the context of Issue 14, each carrier should be responsible for providing  
8 facilities and trunking to the POI for the hand off of local and toll traffic, and  
9 each carrier should be responsible for completing calls to all end users on its  
10 network.

11 **Q: CAN YOU PLEASE EXPLAIN WHAT A POI IS?**

12 **A:** The POI is a demarcation between the networks of two LECs where the  
13 exchange of traffic takes place. Each LEC is responsible for installing  
14 facilities on its side of the POI. As the physical and conceptual end point of  
15 each LEC's network, the POI also divides financial responsibility for the  
16 facilities between interconnecting LECs.

17 **Q: HOW DOES LEVEL 3 PROPOSE TO DETERMINE IF AND WHEN**  
18 **ADDITIONAL POIs SHOULD BE ESTABLISHED?**

19 **A:** We believe that the question of whether multiple POIs need to be established  
20 should be determined through consideration of specific network concerns by  
21 the planners responsible for running the networks. Because the network  
22 planners are most familiar with the network architecture, traffic volumes, and



1 forecasts, Level 3 prefers that the establishment of additional POIs be left to  
2 the discretion of the network planners from both companies, consistent with  
3 sound engineering principles. In considering new POIs, sound engineering  
4 principles dictate a case-by-case analysis under which carriers should  
5 consider factors such as the current network architecture, the current and  
6 forecasted level of traffic flowing through the existing POI, the location(s)  
7 from which traffic is flowing, the remaining capacity at the existing POI, and  
8 the demand placed upon that POI. After these and other relevant factors are  
9 taken into account, an appropriate, mutually agreeable determination can be  
10 made as to when and where an additional POI may be needed.

11 In our recent arbitration with BellSouth, we offered to establish a  
12 contractual traffic threshold that would govern the establishment of additional  
13 POIs. We proposed that once traffic originating from or terminating to a  
14 specific access tandem reached the level of an OC-12, an additional POI  
15 would be established at that access tandem. Level 3 has generally been  
16 successful at negotiating interconnection architectures tailored to meet both  
17 Level 3's and the interconnecting ILEC's needs, as evidenced by our  
18 settlements with Verizon and SBC Communications that incorporate both  
19 compensation and network architecture components.

20 **Q: HAS LEVEL 3 IMPLEMENTED A SINGLE POI PER LATA**  
21 **ARCHITECTURE WITH ILECs IN FLORIDA?**

1       **A:**     Yes. Although I am not a network planner, I understand that Level 3 initially  
2               established a single POI per LATA with each major ILEC (BellSouth, Sprint,  
3               and Verizon). Local network planners for Level 3 and those ILECs confer  
4               on a weekly basis and review the Florida network architecture as necessary  
5               during these weekly discussions.

6       **Q:     DOES LEVEL 3 MAINTAIN A SINGLE POI IN EACH LATA OR**  
7               **MULTIPLE POIs IN OTHER MARKETS?**

8       **A:**     Level 3 generally enters a new market by establishing a single POI per LATA  
9               and then works at the local network planning level to determine when  
10              additional POIs are necessary.

11       **ISSUE 14 - LEC RESPONSIBILITIES FOR DELIVERING TRAFFIC**

12       **Q:     WHAT IS THE LEGAL BASIS FOR LEVEL 3'S POSITION**  
13              **REGARDING     APPROPRIATE     INTERCONNECTION**  
14              **ARCHITECTURES?**

15       **A:**     The Act and FCC rules establish “rules of the road” governing LECs’  
16              interconnection responsibilities. The first rule is that an ALEC may select  
17              the POI where the parties will exchange traffic. The second rule, explained  
18              in further detail by Mr. Gates, is that each LEC is responsible for delivering  
19              its originating traffic to the POI and paying the other LEC reciprocal  
20              compensation for terminating such traffic. Together, these two rules establish  
21              that each LEC must deliver its traffic to the POI selected by the ALEC and  
22              each LEC recovers the costs of delivering that traffic from its end users, not

1 its competitor. Thus the threshold question that must be addressed under  
2 Issue 14 is where the exchange of traffic takes place. As the Commission  
3 found in Docket 000907-TP, the ALEC has the right to select that point of  
4 exchange.

5 The Act and the FCC recognize that new entrants, such as Level 3,  
6 must be able to determine the most efficient location for their switches. The  
7 Act grants ALECs, not ILECs, the right to select the POI. Under 47 U.S.C.  
8 § 251(c)(2)(B),<sup>1</sup> an ILEC must provide interconnection at any technically  
9 feasible point within its network selected by an ALEC. This means that the  
10 ALEC has the right to interconnect at a single POI per LATA.<sup>2</sup> Mandating  
11 interconnection at any point unilaterally selected by an ILEC may require  
12 ALECs' to mirror ILECs' legacy network architecture, which may not be the  
13 most efficient forward-looking architecture for an entrant deploying a new  
14 network, and therefore constitutes a barrier to entry.

15 **Q: BUT SHOULDN'T THE COMMISSION TAKE INTO ACCOUNT**  
16 **ILEC CONCERNS ABOUT THE COST OF DELIVERING THEIR**  
17 **TRAFFIC TO THE POI?**

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<sup>1</sup> 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 U.S.C. §251(c)(2).

<sup>2</sup> *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).

1       A:    No. The Commission and FCC addressed this very question and found that  
2            these kinds of cost considerations are not to be considered in evaluating  
3            whether an ALEC's chosen POI is acceptable or not. This is a rate issue, not  
4            a network design/architecture issue. As the FCC argued in an amicus brief  
5            submitted to the U.S. District Court for the District of Oregon, a state  
6            commission may not consider the cost to the ILEC in determining the  
7            technical feasibility of points of interconnection:

8                            Nothing in the 1996 Act or binding FCC regulations  
9                            requires a new entrant to interconnect at multiple  
10                           locations within a single LATA. Indeed, such a  
11                           requirement could be so costly to new entrants that it  
12                           would thwart the Act's fundamental goal of opening  
13                           local markets to competition. The provision in the  
14                           AT&T and MCI agreements that allows  
15                           interconnection at "any point designated by [AT&T or  
16                           MCI] that is technically feasible" is consistent with  
17                           the Act and FCC regulations and should be upheld.<sup>3</sup>

18    Under binding FCC rules, unless the ILEC can meet its burden of  
19    showing that the exchange of both parties' traffic at a single POI per LATA  
20    is not technically feasible, it must offer such interconnection.<sup>4</sup> Furthermore,  
21    the fact that ALECs have already interconnected with ILECs in Florida at a  
22    

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<sup>3</sup>        *US West Communications, Inc. v. AT&T Communications of the Pacific Northwest, Inc.*, No. CV-97-1575-JE, Memorandum of the FCC as Amicus Curiae (D. Ore. Sept. 14, 1998).

<sup>4</sup>        *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499, ¶¶ 198, 205 (1996) ("*Local Competition Order*").

1 single POI per LATA is evidence that a single POI per LATA is technically  
2 feasible.<sup>5</sup>

3 **Q: WHY DID YOU SAY THE COST OF DELIVERING TRAFFIC TO**  
4 **THE POI IS A RATE ISSUE, NOT A NETWORK ARCHITECTURE**  
5 **ISSUE?**

6 **A:** Under the FCC's rules, each carrier must pay the other carrier for "transport  
7 and termination" of the traffic it delivers to the POI. The transport portion  
8 of that payment covers delivery of traffic from the POI to the end office  
9 serving the called party.<sup>6</sup> Most ILECs have adopted a mileage-sensitive  
10 charge for this transport. Therefore, if the ALEC chooses a POI location that  
11 is far away from where most of its calls terminate, it will have to pay  
12 additional transport charges to the ILEC for termination of its traffic.  
13 Conversely, each party bears its own cost of delivering originating traffic to  
14 the POI, and has the opportunity to recover that cost through the rates it  
15 charges its end users for local exchange service.

16 **Q: WHAT PROVISIONS OF THE ACT GOVERN SELECTION OF**  
17 **POIs?**

18 **A:** Congress placed the requirement to provide technically feasible POIs in  
19 Section 251(c)(2), which applies only to incumbent LECs. If Congress had

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<sup>5</sup> *Id.* at ¶ 204.

<sup>6</sup> 47 C.F.R. § 51.701(c).

1 wanted to have ALECs bear the same duty in establishing POIs as incumbent  
2 LECs bear, it would have specifically stated that outcome, rather than  
3 separating out the interconnection obligations to apply only to incumbent  
4 LECs under Section 251(c)(2). Although an ALEC has an obligation under  
5 Section 251(a) to interconnect directly or indirectly with an ILEC, the Act  
6 places no obligation on an ALEC to provide an ILEC interconnection at any  
7 technically feasible point, nor does it give an ILEC any right to select POIs  
8 at its whim. Only Section 251(c)(2) designates who may pick POIs.

9 **Q: ARE THERE PUBLIC POLICY REASONS TO DENY ILECs THE**  
10 **ABILITY TO REQUIRE ALECs TO BUILD FACILITIES, OR PAY**  
11 **FOR FACILITIES, TO PICK UP ILEC TRAFFIC IN EACH LOCAL**  
12 **CALLING AREA?**

13 **A:** Yes. If ILECs were allowed to identify POIs for originating traffic and  
14 require ALECs to build or buy facilities to reach those POIs, ILECs would  
15 be able to disadvantage ALECs and impose additional and unwarranted costs  
16 on new entrants, impeding the development of competition. Indeed, if ILECs  
17 were allowed such discretion, they may force ALECs to essentially duplicate  
18 the incumbent's network. Duplication of the ILEC network is not required  
19 by the Act; indeed, it runs counter to the Act's objective of opening local  
20 markets to competition to promote innovation in networks and services.

1           **Q: DID CONGRESS RECOGNIZE THAT ILECs WOULD HAVE TO**  
2           **MODIFY THEIR NETWORKS IN OPENING UP LOCAL**  
3           **EXCHANGE MARKETS TO COMPETITION?**

4           **A:** Yes. In crafting ILECs' interconnection obligations, Congress chose to  
5           require ILECs to provide interconnection at any technically "feasible" point.

6           As the FCC found:

7                           use of the term "feasible" implies that interconnecting  
8                           or providing access to a LEC network element may be  
9                           feasible at a particular point even if such  
10                          interconnection or access requires a novel use of, or  
11                          some modification to, incumbent LEC equipment.  
12                          This interpretation is consistent with the fact that  
13                          incumbent LEC networks were not designed to  
14                          accommodate third-party interconnection or use of  
15                          network elements at all or even most points within the  
16                          network. If incumbent LECs were not required, at  
17                          least to some extent, to adapt their facilities to  
18                          interconnection or use by other carriers, the purposes  
19                          of sections 251(c)(2) and 251(c)(3) would often be  
20                          frustrated. For example, Congress intended to  
21                          obligate the incumbent to accommodate the new  
22                          entrant's network architecture by requiring the  
23                          incumbent to provide interconnection "for the  
24                          facilities and equipment" of the new entrant.  
25                          Consistent with that intent, the incumbent must accept  
26                          the novel use of, and modification to, its network  
27                          facilities to accommodate the interconnector or to  
28                          provide access to unbundled elements.<sup>7</sup>

29  
30           By choosing the word "feasible," Congress indicated that ILECs  
31           would have to consider new uses of, and modifications to, their  
32           networks in order to provide interconnection to ALECs. It should

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<sup>7</sup>           *Local Competition Order at 202.*

1 also be noted again that the FCC barred a consideration of cost in  
2 determining technical feasibility. Taken together, this means that an  
3 ILEC should not be allowed to use its own network inefficiencies as  
4 an excuse to prevent an ALEC from selecting a technically feasible  
5 interconnection point.

6 **Q: HOW DID THE FCC RECOGNIZE THAT ILECs WOULD HAVE TO**  
7 **MODIFY THEIR NETWORKS IN OPENING UP LOCAL**  
8 **EXCHANGE MARKETS TO COMPETITION?**

9 **A:** In the FCC’s Local Competition proceeding, the United States Telephone  
10 Association (“USTA”) argued that the Act only requires ILECs to provide  
11 interconnection to their networks as they are “configured presently.”<sup>8</sup> The  
12 FCC rejected USTA’s interpretation of the Act, finding that:

13 the obligations imposed by sections 251(c)(2) and  
14 251(c)(3) include modifications to incumbent LEC  
15 facilities to the extent necessary to accommodate  
16 interconnection or access to network elements.<sup>9</sup>

17  
18 In many instances, the Act and the FCC’s rules show that neither Congress  
19 nor the FCC want to constrain the ability of an ALEC to innovate and deploy  
20 services, technologies, and network architectures that differ from historical  
21 services, technologies, and network architectures deployed by ILECs. For

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<sup>8</sup> *Id.* at ¶ 195.

<sup>9</sup> *Id.* at ¶ 198.



1 example, Congress provided two alternative definitions of “telephone  
2 exchange service:”

3 The term “telephone exchange service” means (A)  
4 service within a telephone exchange, or within a  
5 connected system of telephone exchanges within the  
6 same exchange area operated to furnish to subscribers  
7 intercommunicating service of the character ordinarily  
8 furnished by a single exchange, and which is covered  
9 by the exchange service charge, or (B) comparable  
10 service provided through a system of switches,  
11 transmission equipment, or other facilities (or  
12 combination thereof) by which a subscriber can  
13 originate and terminate a telecommunications  
14 service.<sup>10</sup>

15  
16 The FCC also recognizes differences in incumbent and competitive  
17 technologies in its reciprocal compensation rules, which, for example, define  
18 transport as:

19 the transmission and any necessary tandem switching  
20 of local telecommunications traffic subject to section  
21 251(b)(5) of the Act from the interconnection point  
22 between the two carriers to the terminating carrier’s  
23 end office switch that directly serves the called party,  
24 *or equivalent facility provided by a carrier other than*  
25 *an incumbent LEC.*<sup>11</sup>  
26

27 Examples such as these show that Congress and the FCC anticipated  
28 differences between incumbent and competitive networks and crafted rules  
29 to ensure that ALECs would not be required to mimic ILECs. If ILECs are  
30 permitted to require ALECs to establish a POI in each local calling area, the

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<sup>10</sup> 47 U.S.C. § 153(47) (emphasis added).

<sup>11</sup> 47 U.S.C. § 51.701(c) (emphasis added).

1 Commission would be undermining Congressional and FCC intent to  
2 promote competition and innovation in network design.

3 **Q: IS IT POSSIBLE THAT ALECs MAY ONLY DESIGNATE POIs FOR**  
4 **DELIVERY OF THEIR TRAFFIC, NOT THE ILEC's?**

5 **A:** No. The FCC affirmed an ALEC's right to *exchange* traffic with the ILEC  
6 at a single POI:

7 Of course, requesting carriers have the right to select  
8 points of interconnection at which to exchange traffic  
9 with an incumbent LEC under section 251(c)(2).<sup>12</sup>

10 Similarly, in the Intermedia arbitration, this Commission rejected BellSouth's  
11 one-sided definition of the POI, recognizing that at the POI "traffic is  
12 mutually exchanged between carriers."<sup>13</sup>

13  
14 **Q: PLEASE SUMMARIZE LEVEL 3'S POSITION ON THIS ISSUE.**

15 **A:** Consistent with the Act and applicable FCC rules, ALECs have the right to  
16 interconnect with an ILEC at a single POI in each LATA for the exchange of  
17 traffic between the companies, and ILECs may not dictate where ALECs  
18 must pick up an ILEC's traffic. Similarly, as Mr. Gates testifies, each LEC  
19 is operationally and financially responsible for delivering its traffic to the POI  
20 selected by the ALEC and recovering those costs from its end users, not its  
21 competitor. While it may be appropriate to establish additional POIs as

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<sup>12</sup> *Local Competition Order at ¶ 220* (footnotes omitted).

<sup>13</sup> *Petition of BellSouth Telecommunications, Inc. for Section 252(b) arbitration of interconnection agreement with Intermedia Communications, Inc.*, Docket No. 991854-TP, Final Order on Arbitration, Order No. PSC-00-1519-FOF-TP, 48 (Aug. 22, 2000).

1 traffic volumes grow, Level 3 prefers to let local network planners evaluate  
2 traffic patterns and other factors to determine where and when additional  
3 POIs should be established.

4 **ISSUE 16: IP TELEPHONY**

5 **Q: ARE YOU AWARE OF A COMMONLY ACCEPTED DEFINITION**  
6 **OF IP TELEPHONY?**

7 **A:** No. The phrase “IP Telephony” seems to refer to voice communications  
8 carried over Internet Protocol. For this reason, IP Telephony is sometimes  
9 also referred to as VOIP (voice over Internet Protocol). However, the phrase  
10 “IP telephony” can mean different things to different people and could  
11 encompass a wide variety of services. For instance, it could be  
12 phone-to-phone, computer-to-phone, phone-to-computer, or  
13 computer-to-computer. In some cases it could be delivered to a World Wide  
14 Web address, in others, to a North American Numbering Plan number, in  
15 others to an Internet Protocol address not on the World Wide Web. It could  
16 also originate from any one of these several points. Furthermore, Internet  
17 Protocol telephony could include other bells and whistles such as storage and  
18 retrieval of data or translation of English to French.

19 **Q: WHAT IS INTERNET PROTOCOL?**

20 **A:** The Internet Protocol is simply a set of rules for the transmission of  
21 information over networks in the form of data packets. As the name implies,  
22 it is the protocol used on the public Internet; but it can also be used in other

1 packet-switched networks, such as Level 3's proprietary network.  
2 Significantly, the protocol only specifies the format and routing of data  
3 packets, not their content. Therefore, it can be used to transmit any kind of  
4 information that can be expressed in digital form, including voice  
5 transmissions.

6 **Q: DO YOU AGREE WITH THE COMMISSION'S IMPLIED**  
7 **DISTINCTION BETWEEN THE "INTERNET" AND PRIVATE**  
8 **NETWORKS THAT CARRY INTERNET PROTOCOL**  
9 **TELEPHONY?<sup>14</sup>**

10 **A:** No. Based on the limited record in the BellSouth/Intermedia arbitration, the  
11 Commission stated:

12 Except for, perhaps, calls routed over the internet, the  
13 underlying technology used to complete a call should  
14 be irrelevant to whether switched access charges  
15 apply.<sup>15</sup>

16  
17 I do not believe it is possible to draw a black and white distinction between  
18 private networks that carry Internet Protocol telephony and communications  
19 that traverse the Internet. There is a reason that people often draw a cloud to  
20 represent the Internet. The Internet is a loosely organized group of *private*  
21 *networks* that connect and exchange information at public access points.  
22 Because Level 3 is connected to these public access points, it is possible that

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<sup>14</sup> See *Intermedia Order* at 53.

<sup>15</sup> *Intermedia Order* at 57.

1 providers of Internet Protocol telephony will handle communications that  
2 begin, traverse, or end on the “public” Internet.

3 **Q: DO YOU AGREE THAT THE UNDERLYING TECHNOLOGY USED**  
4 **TO COMPLETE A CALL IS IRRELEVANT?**

5 **A:** No. Under federal law, specifically the FCC’s enhanced services framework  
6 and the Act’s definition of information services, the technology used to  
7 complete a communication is relevant.

8 **Q: COULD YOU PLEASE BRIEFLY EXPLAIN THE IMPACT OF**  
9 **INTERNET PROTOCOL TECHNOLOGY ON EXISTING**  
10 **REGULATORY CLASSIFICATIONS?**

11 **A:** Yes. Internet Protocol technology blurs traditional distinctions between local  
12 and long distance service and between voice, fax, data, and video services,  
13 thereby making regulation of this technology a difficult proposition. As I  
14 have already explained, Internet Protocol networks transmit indistinguishable  
15 packets of digital bits. Packets are routed through networks based on a  
16 non-geographical, non-hierarchical addressing scheme that allows packets to  
17 follow several possible routes between network nodes. Additionally, Internet  
18 Protocol technology allows users to designate multiple “ports” on their  
19 terminals so that multiple applications may simultaneously send and receive  
20 information. This means that in the streams of packets flowing to a particular  
21 terminal, some may be carrying digitized voice messages, others may be

1 carrying a computer program being downloaded from a remote server, and  
2 others may be carrying video entertainment.

3 **Q: WHAT IS YOUR UNDERSTANDING OF THE REGULATORY**  
4 **DISTINCTION BETWEEN TELECOMMUNICATIONS (BASIC) AND**  
5 **INFORMATION (ENHANCED) SERVICES?**

6 **A:** The FCC initially established the distinction between “basic services” and  
7 “enhanced services” in the Second Computer Inquiry, 77 F.C.C.2d 384  
8 (1980) (“Computer II”). There, the FCC defined “basic services” as “the  
9 common carrier offering of transmission capacity for the movement of  
10 information.”<sup>16</sup> In general, a basic service transmits information generated  
11 by a customer from one point to another, without changing the content of the  
12 transmission. Thus, the “basic” service category is intended to define the  
13 transparent transmission capacity that makes up conventional  
14 communications service. Because the FCC considers “basic” services to be  
15 “wholly traditional common carrier activities,” they are regulated under Title  
16 II of the Act.<sup>17</sup> Among other things, Title II requires that basic interstate and  
17 international services be offered at non-discriminatory, just and reasonable  
18 rates.

19 **Q: DID THE FCC DEFINE “ENHANCED” SERVICES?**

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<sup>16</sup> *Computer II* at ¶ 420.

<sup>17</sup> *Id.* at ¶ 435.

1       **A:**    Yes. In contrast to basic services, the FCC defined unregulated “enhanced  
2                   services” as:

3                   services, offered over common carrier transmission  
4                   facilities used in interstate communications, which [1]  
5                   employ computer processing applications that act on  
6                   the format, content, code, protocol or similar aspects  
7                   of the subscriber’s transmitted information; [2]  
8                   provide the subscriber additional, different or  
9                   restructured information; or [3] involve subscriber  
10                  interaction with stored information.<sup>18</sup>

11  
12                Clause one of this definition is often referred to as the protocol processing  
13                test. To determine whether a service meets the enhanced services definition,  
14                the FCC has traditionally acted on a *case-by-case basis*, applying each clause  
15                of the definition against the specific functionalities of the service in question.  
16                The service is generally deemed “enhanced” if it meets the language of one  
17                of the three clauses, as interpreted by the FCC. After the 1996 Act was  
18                passed, the FCC determined that protocol processing services that qualified  
19                as enhanced should be treated as information services under the Act.<sup>19</sup>

20        **Q:    HOW DOES THE FCC REGULATE ENHANCED SERVICES?**

21        **A:**    In *Computer II*, the FCC concluded that regulation of enhanced services is  
22                unwarranted because the market for those services is competitive and

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<sup>18</sup>        47 C.F.R. § 64.702(a).

<sup>19</sup>        *Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, As Amended*, CC Docket 96-149, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 21905, 21955-58, ¶¶ 104-107 (1996) (“*Non-Accounting Safeguards Order*”).

1 consumers benefit from that competition.<sup>20</sup> The FCC reached this  
2 conclusion notwithstanding the close relationship between communications  
3 and some services it classified as enhanced:

4 We acknowledge, of course, the existence of a  
5 communications component. And we recognize that  
6 some enhanced services may do *some of the same*  
7 *things that regulated communications services did in*  
8 *the past.* On the other side, however, is the  
9 substantial data processing component in all these  
10 services.<sup>21</sup>

11  
12 **Q: IS THE BASIC/ENHANCED DICHOTOMY CODIFIED IN THE**  
13 **FEDERAL ACT?**

14 **A:** No. The Act distinguishes between telecommunications and information  
15 services. It defines “telecommunications service” as the “offering of  
16 telecommunications for a fee directly to the public or to such classes of users  
17 as to be effectively available directly to the public regardless of the facilities  
18 used.”<sup>22</sup> The term “telecommunications” is defined as “transmission,  
19 between or among points specified by the user, of information of the user’s  
20 choosing, without change in the form or content of the information as sent  
21 and received.”<sup>23</sup> The definitions of “telecommunications” and  
22 “telecommunications service” can be contrasted with “information service,”

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<sup>20</sup> *Computer II* at ¶ 433.

<sup>21</sup> *Id.* at ¶ 435 (emphasis added).

<sup>22</sup> 47 U.S.C. § 153(46).

<sup>23</sup> 47 U.S.C. § 153(43).



1           which is defined as the “offering of a capability for generating, acquiring,  
2           storing, transforming, processing, retrieving, utilizing or making available  
3           information via telecommunications, and includes electronic publishing, but  
4           does not include any use of any such capability for the management, control,  
5           or operation of a telecommunications system or the management of a  
6           telecommunications service.”<sup>24</sup>

7           However, the FCC determined that in adopting these definitions,  
8           Congress intended to continue the distinction between basic and enhanced  
9           services.<sup>25</sup> Specifically, the FCC found that services previously classified  
10          as basic fit the definition of “telecommunications” and services previously  
11          classified as enhanced fit the definition of “information services.” The FCC  
12          also determined that the categories of “telecommunications” and  
13          “information service” are *mutually exclusive*.<sup>26</sup> In other words, a particular  
14          service can be an information service or telecommunications, but it cannot be  
15          both. Although providers of information services may offer their service by  
16          using telecommunications, they provide a separate and distinct information  
17          service that is not regulated. For instance, ISPs buy local telephone lines  
18          from carriers, and may also purchase private line transport services from  
19          carriers, and combine these carrier-provided telecommunications services

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<sup>24</sup> 47 U.S.C. § 153(20).

<sup>25</sup> *Report to Congress* at ¶ 21.

<sup>26</sup> *Id.* at ¶ 39.

1 with the ISP's equipment to provide Internet access service to the ISP's end  
2 users. However, although the ISP uses telecommunications services as an  
3 input, the services it offers to others are information services because they  
4 include, for instance, the capability for generating, acquiring, storing,  
5 transforming, processing, and/or retrieving information.<sup>27</sup>

6 **Q: HAS THE FCC ADOPTED A DEFINITION OF, OR CLASSIFIED, IP**  
7 **TELEPHONY?**

8 **A:** No. In its 1998 *Report to Congress*, although the FCC crafted a loose  
9 definition of phone-to-phone Internet Protocol telephony, *it specifically and*  
10 *expressly refused to classify that service as telecommunications absent*  
11 *further information about how such services are provided.*<sup>28</sup> Although  
12 Qwest, then U S WEST, filed a petition in April 1999 asking the FCC to find  
13 that phone-to-phone IP telephony is subject to access charges, the FCC has  
14 taken no action on that Petition.

15 **Q: DID THE FCC CONSIDER WHETHER TO CLASSIFY IP**  
16 **TELEPHONY AFTER ITS 1998 REPORT?**

17 **A:** Yes, and it again refused to do so. Shortly after U S WEST, now Qwest,  
18 filed its 1999 petition with the FCC, the FCC reviewed and rejected language  
19 that would have classified calls carried using Internet Protocol as

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<sup>27</sup> See *Bell Atlantic Telephone Cos. v. FCC*, 206 F.3d 1, 7 (D.C. Cir. 2000).

<sup>28</sup> *Report to Congress* at ¶ 90.

1 telecommunications. In an attempt to reduce the reporting requirements  
2 placed on interstate common carriers, the FCC consolidated a number of  
3 worksheets carriers complete to support various federal programs. When the  
4 FCC proposed the consolidated worksheet, it included language that would  
5 have required carriers to report revenue from “calls handled using Internet  
6 technology as well as calls handled using more traditional switched circuit  
7 techniques” as telecommunications (rather than information) service  
8 revenue.<sup>29</sup> The FCC removed this language when it adopted the final  
9 consolidated worksheet:

10 As noted by certain commenters, this Commission in  
11 its *April 10, 1998 Report to Congress* considered the  
12 question of contributions to universal service support  
13 mechanisms based on revenues from Internet and  
14 Internet Protocol (IP) telephony services. We note  
15 that the Commission, in the Report to Congress,  
16 specifically decided to defer making pronouncements  
17 about the regulatory status of various forms of IP  
18 telephony until the Commission develops a more  
19 complete record on individual service offerings. We,  
20 accordingly, delete language from the instructions that  
21 might appear to affect the Commission’s existing  
22 treatment of Internet and IP telephony.<sup>30</sup>  
23

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<sup>29</sup> 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, CC Docket No. 98-171, Notice of Proposed Rulemaking and Notice of Inquiry, 13 FCC Rcd 19295 (1998).

<sup>30</sup> 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, CC Docket No. 98-171, Report and Order, ¶ 22 (rel. July 14, 1999) (footnotes omitted).

1       **Q:    HAS THE FCC EXPRESSED CONCERNS ABOUT DEFINING AND**  
2       **CLASSIFYING IP TELEPHONY?**

3       **A:**    Yes.  The FCC noted that given the wide array of services that can be  
4       provided using packetized voice technology, it needs to consider if its  
5       tentative definition of the service “accurately distinguishes between  
6       phone-to-phone and other forms of IP telephony, and is not likely to be  
7       quickly overcome by changes in technology.”<sup>31</sup>

8               For instance, based on the record in the Intermedia arbitration, I  
9       expect that even BellSouth will concede that under federal law some IP  
10      telephony services, such as computer-to-phone, are enhanced and should not  
11      be subject to access charges.  Yet, as a terminating carrier, Level 3 has no  
12      means of knowing what the originating carrier hands off to Level 3, for  
13      instance, whether a communication originated on a phone or computer.  
14      Furthermore, a call could begin on an IP-enabled “phone” and still fit within  
15      the enhanced services test even as it would fit under a broadly defined  
16      category of “phone-to-phone IP telephony.”  What might be considered  
17      subject to access charges under a definition of phone-to-phone IP telephony  
18      could also be a hybrid service that incorporates an information processing  
19      component, even as it originates and terminates on “phones.”  Thus, it may  
20      be impossible for carriers to distinguish between phone-to-phone and

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<sup>31</sup>       *Report to Congress* at ¶ 90.

1 computer-to-phone IP telephony or phone-to-phone IP telephony with no  
2 enhancements and phone-to-phone IP telephony with enhancements that  
3 would bring the service into an information classification.

4 **Q: HOW DID THE FCC SUGGEST THIS PROBLEM COULD BE**  
5 **RESOLVED?**

6 **A:** The FCC specifically cautioned against making definitive pronouncements  
7 as to the nature of a service “in the absence of a more complete record  
8 *focused on individual service offerings.*”<sup>32</sup> Any characterization of an  
9 evolving IP service for regulatory purposes without a detailed analysis would  
10 be futile and prejudicial to the provider’s interests. As the FCC said:

11 [w]e defer a more definitive resolution of these issues  
12 pending the development of a more fully-developed  
13 record because we recognize the need, when dealing  
14 with emerging services and technologies in  
15 environments as dynamic as today’s Internet and  
16 telecommunications markets, to have as complete  
17 information and input as possible.<sup>33</sup>

18  
19 Thus, a detailed consideration of the service needs to be made, and an  
20 analysis of the appropriate regulation to be attached to such a product, if any.

21 **Q: ARE YOU ADVOCATING THAT THE COMMISSION UNDERTAKE**  
22 **A CASE-BY-CASE SERVICE ANALYSIS RATHER THAN**  
23 **ADOPTING A DEFINITION OF IP TELEPHONY?**

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<sup>32</sup> *Report to Congress at ¶ 90.*

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

1       **A:**    Yes. In the first instance, Level 3 believes that a case-by-case analysis is  
2                   consistent with the Act and FCC rules. If, however, the Commission wants  
3                   to adopt a definition of IP telephony in this proceeding, there are many other  
4                   pieces of this puzzle that the Commission should consider. For instance, if  
5                   the Commission were to find that intrastate phone-to-phone IP telephony is  
6                   a telecommunications service, that finding could impact access charge  
7                   revenue, universal service support, and carrier certification and reporting  
8                   requirements. Furthermore, to impose access charges on one Internet Protocol  
9                   application and not another (*e.g.*, voice but not data, or phone-to-phone but  
10                  not computer-to-phone) would raise privacy concerns, since a provider would  
11                  have to determine the origin, destination, and nature of the packet. Such  
12                  monitoring would likely be expensive if it could be done at all.

13                         Because the Commission does not have jurisdiction over interstate  
14                         services, it would have to limit its definition to intrastate services. The FCC  
15                         expressed concern about making such intrastate versus interstate distinctions  
16                         as another reason for refusing to classify phone-to-phone IP telephony as  
17                         telecommunications.<sup>34</sup> To date, the FCC has maintained a “hands-off”  
18                         approach to IP telephony and has not imposed legacy, circuit-switched  
19                         regulatory or compensation requirements on providers of IP telephony. It  
20                         would be an administrative nightmare for all parties involved if this

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<sup>34</sup>        *Id.* at ¶ 91.

1 Commission and the FCC were to adopt inconsistent rulings. Level 3  
2 therefore recommends that the Commission defer these issues until the FCC  
3 takes action.

4 As these examples show, the classification of Internet-based services  
5 raises many complicated and overlapping issues, with implications far  
6 beyond a definition and compensation arrangement. Yet this proceeding does  
7 not permit the Commission to consider the host of other regulatory  
8 requirements that would be imposed on IP telephony service providers based  
9 on a telecommunications classification. If the Commission, contrary to Level  
10 3's recommendation, decides to address the definition and compensation  
11 issues prior to a FCC determination, the Commission must at least explore  
12 the global impact a definition and classification would have on providers of  
13 such services. It must also ensure that it does not adopt a definition that  
14 paints all "IP telephony" services as telecommunications without reference  
15 to binding statutory definitions.

16 **Q: WHY IS THE FCC'S "HANDS-OFF" APPROACH GOOD POLICY?**

17 **A:** IP telephony is in its infancy, and regulators may stunt its growth and stifle  
18 innovation by imposing burdensome regulatory obligations on such services  
19 at this time. Regulations designed for circuit-switched networks make little  
20 sense in an environment where packet switching, Internet Protocol  
21 transmission protocols, optical switching, and decreasing transport costs  
22 permit more efficient networks.

1       **Q:    WHAT IMPACT COULD THE IMPOSITION OF TRADITIONAL**  
2       **ACCESS CHARGES HAVE ON THE DEPLOYMENT OF IP-BASED**  
3       **SERVICES?**

4       **A:**    Applying regulations designed for circuit-switched communications could  
5       distort pricing incentives for Internet Protocol-based services. Today’s  
6       access charges are assessed on a per-minute basis. Assessment of a  
7       per-minute charge on a provider of Internet-based service will inevitably lead  
8       to that provider passing on its costs in the form of per-minute charges to end  
9       users. The relative higher usage of the Internet in the United States has been  
10      attributed to the prevalence of flat-rate local telephone service pricing.  
11      Flat-rate pricing for Internet access is a by-product of the exemption from  
12      per-minute access charges for providers of enhanced services. Assessment  
13      of per-minute access charges on IP telephony providers would result in a  
14      per-minute pricing structure and a hampering of demand for this information  
15      service.

16      **Q:    HOW SHOULD THE COMMISSION ADDRESS THE**  
17      **COMPENSATION ISSUE?**

18      **A:**    FCC rules define “access service” as “services and facilities provided for the  
19      origination or termination of any interstate or foreign *telecommunication*[.]”<sup>35</sup>  
20      In contrast, under the FCC’s enhanced service provider exemption, an

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<sup>35</sup> 47 C.F.R. § 69.2(b) (emphasis added).



1 information service is not subject to access charges and information service  
2 providers may access the local exchange network by purchasing local service  
3 as an end user.<sup>36</sup> Thus a service must meet the definition of  
4 telecommunications before it becomes subject to access charges. If an ILEC  
5 alleges that a specific service provided by an IP-based provider should be  
6 subject to access charges, it may take advantage of the Commission's  
7 complaint procedures and attempt to prove that a particular IP-based provider  
8 is using its services in violation of a tariff or applicable state or federal law.

9 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

10 **A:** Yes, it does.

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<sup>36</sup> *Access Charge Reform*, CC Docket No. 96-262, First Report and Order, FCC 97-158, 12 FCC Rcd 15982, ¶¶ 344-7 (re. May 16, 1997).