

**Are VoIP Services Telecommunications Services?
Business and Regulatory Considerations for
VoIP Service Providers and Connecting Carriers**

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Are VoIP Services Telecommunications Services? Business and Regulatory Considerations for VoIP Service Providers and Connecting Carriers

This paper examines the views of the Federal Communications Commission (“FCC”), state agencies, Congress, and the courts with regard to Voice over Internet Protocol (“VoIP”) otherwise known as “Internet Telephony” or “IP telephony.”

I. WHAT IS INTERNET TELEPHONY?

For over one hundred years, telephone companies have used circuit-switched technology to transport voice traffic over the public switched telephone network (“PSTN”).^{1/} In a circuit-switched environment, a fixed amount of bandwidth provides a dedicated transmission path for the duration of the call, even if no information is being transmitted.^{2/} The conversation is routed through a series of switches until it reaches its final destination, thereby establishing a dedicated line between the participants.

IP telephony, like access to the Internet, relies on packet switching rather than circuit switching to deliver voice and data. Data is broken down into individual packets of digital bits that are transmitted through numerous switches or routers until they reach their destination.^{3/} Unlike the dedicated bandwidth used in circuit switching, each packet of information shares the available bandwidth with other unrelated packets. In order for this process to work, each packet must be individually “addressed” with the ultimate destination for that packet.^{4/} Although each packet may take a different route, the packets are reassembled once they reach their destination. Because the process of packetizing, transmitting, and de-packetizing the conversation must be done quickly and seamlessly to avoid any disruption in the conversation, IP telephony uses a real time transport protocol (“RTP”)^{5/} to ensure that the packets are delivered in a timely manner.^{6/}

^{1/} Alcatel, Voice over IP for Carriers, Presentation at the Federal Communications Commission, at http://www.fcc.gov/Bureaus/Engineering_Technology/Public_Notices/2001/d011369a.ppt (June 15, 2001).

^{2/} Hank Intven et al., *Internet Telephony - The Regulatory Issues*, at <http://www.itu.int/osg/sec/spu/ni/iptel/regulatory/index.html> (Apr. 1998).

^{3/} searchnetworking.com, IP Telephony, at <http://www.whatis.com> (July 10, 2001).

^{4/} Hank Intven et al., *Internet Telephony - The Regulatory Issues*, at <http://www.itu.int/osg/sec/spu/ni/iptel/regulatory/index.html> (Apr. 1998).

^{5/} Developed by the Internet Engineering Task Force (“IETF”), RTP added a layer to the Internet protocol. It was designed to address problems caused when real-time interactive exchanges, such as video, were transported over local area networks (“LANs”) that were designed for data. Running video on a LAN can encounter significant end-to-end latency. RTP’s approach was to give video higher priority than connectionless data. See NEWTON’S TELECOM DICTIONARY 598 (17th ed. 2001).

^{6/} searchnetworking.com, VOIP, at http://searchnetworking.techtarget.com/sDefinition/0,,gci7_gci214148,00.html (July 10, 2001).

There are three general methods for providing IP telephony services to consumers: computer-to-computer, telephone-to-computer (and vice versa), and phone-to-phone.^{7/} Phone-to-phone IP telephony may be provided using either the public Internet or a private IP-based network.^{8/} In either of these situations, “gateways” must be used to allow the standard circuit-switched telephones to communicate with the packet-switched IP-based network or Internet.^{9/} The first gateway converts the circuit-switched signal from one user’s telephone into digital data, which is then packetized and transmitted over the public Internet with other data communication or over the service provider’s private IP network. Once the packetized data reaches its destination, a second gateway reassembles the packets, de-packetizes the data, and converts the data back to a circuit-switched signal. The gateways could be in the same local area, in the case of local IP telephony calls, or in two different calling areas, states or countries in the case of an interexchange, interstate or international transmission.

Rather than a standard phone, computer-to-computer IP telephony uses a microphone, speakers, a sound card, software that provides access to the Internet, and an Internet connection, preferably a fast connection such as a cable modem or Digital Subscriber Line (“DSL”). Like an e-mail message, once addressed to the proper destination, the call travels over the Internet to the distant computer. Beyond their normal monthly Internet-access fees, consumers have generally paid no additional charges for calls using computer-to-computer technology.^{10/}

Computer-to-telephone IP telephony is very similar to computer-to-computer IP telephony and likewise uses a microphone, speakers, and a sound card. Computer-to-telephone IP telephony, however, also requires special software so that the subscriber can place calls to individuals who may not have access to a computer. In addition, unlike computer-to-computer IP telephony, there may be a small per-minute charge for this feature.^{11/}

II. HISTORICALLY LIGHT OR NON-REGULATION OF INTERNET TELEPHONY

Providers of VoIP services currently are not burdened with the same regulatory obligations imposed upon traditional providers of circuit-switched telecommunications services. VoIP’s avoidance of these burdens rests upon regulatory distinctions between “telecommunications services” and “enhanced services” or “value added services” established by

^{7/} Jeff Tyson, *How IP Telephony Works*, at <http://www.howstuffworks.com/iptelephony.htm/printable> (July 5, 2001).

^{8/} *Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501, ¶ 84 (1998) (“*Report to Congress*”).

^{9/} Jeff Tyson, *How IP Telephony Works*, at <http://www.howstuffworks.com/iptelephony.htm/printable> (July 5, 2001). A gateway is similar to the switching system in a traditional telephony environment. In addition, IP telephony providers can purchase dedicated circuits from other carriers and use those circuits to originate or terminate IP-based calls. See *Report to Congress* ¶ 89.

^{10/} Jeff Tyson, *How IP Telephony Works*, at <http://www.howstuffworks.com/iptelephony.htm/printable> (July 5, 2001).

^{11/} *Id.* (describing Net2Phone’s calling plans in which the first five minutes of the call is free and every minute after five minutes is 3.9 cents per minute).

the FCC in the early 1980s. Based on these classifications, “telecommunications services,”^{12/} such as basic local telephone service and long distance service, had been subject to all of the trappings of telecommunications regulation. Meanwhile, “information services,”^{13/} such as e-mail and Internet access, have flourished free from regulation. IP telephony services -- most of which have been interstate or international in nature -- avoided regulation through providers’ claims that VoIP fell into the category of information services. The distinctions between telecommunications services and information services have significant regulatory consequences.

A. FCC Regulation of IP Telephony

1. 1998 Report to Congress

In its 1998 *Report to Congress*, the FCC analyzed VoIP services. It did so in light of the two distinct classifications for “telecommunications service” and “information service.” The FCC found that IP telephony blurred the line between telecommunications services and information services. Indeed, the FCC found that phone-to-phone VoIP had begun to “resemble traditional basic transmission offerings,” which would require the service to be regulated as a telecommunications service, and noted that “to the extent we conclude that certain forms of ‘phone-to-phone’ IP telephony services should be characterized as ‘telecommunications services,’ the providers of those services would fall within the 1996 Act’s mandatory requirement to contribute to universal service mechanisms.”^{14/} The FCC also stated “certain ‘phone-to-phone IP telephony’ services lack the characteristics that would render them ‘information services’ within the meaning of the statute, and instead bear the characteristics of ‘telecommunications services.’”^{15/}

Based on those findings, the FCC tentatively defined the term “phone-to-phone IP telephony” to mean instances in which the provider: (1) held itself out as providing voice telephony or facsimile transmission service; (2) allowed customers to use the same customer premises equipment (telephone handsets) used to make voice calls over the public switched telephone network; (3) permitted calls to ordinary telephone numbers; and (4) transmitted calls without making any net change in form or content.^{16/} These “phone-to-phone” services, the FCC suggested, were the types of IP telephony that bore the closest resemblance to traditionally regulated telecommunications services. The 1998 *Report to Congress* was the first time the FCC had taken steps to distinguish between the various types of IP telephony (phone-to-phone, computer-to-computer, computer-to-phone, and vice versa) and to discuss how those services compare to traditional telecommunications services.^{17/}

^{12/} 47 U.S.C. §§ 153(43) (defining “telecommunications”); 153(46) (defining “telecommunications service”).

^{13/} 47 U.S.C. § 153(20) (defining “information service”). The definition of information services encompasses enhanced services and value added services.

^{14/} *Report to Congress* ¶ 15.

^{15/} *Report to Congress* ¶¶ 83, 89.

^{16/} *Report to Congress* ¶ 88.

^{17/} The FCC noted that computer-to-computer IP telephony was not a telecommunications service, primarily because vendors who sell the software and hardware needed to make IP voice calls with a computer were merely selling customer premises equipment, not transmission capacity. See *Report to Congress* ¶ 77. Likewise, the FCC

Despite the FCC's findings that phone-to-phone IP telephony resembled a telecommunications service, the FCC stopped short of concluding that it is a telecommunications service. The FCC concluded that it would be inappropriate "to make any definitive pronouncements in the absence of a more complete record focused on individual service offerings."^{18/} This permitted VoIP services to continue to be free from access charges and other regulatory burdens. The FCC said it would address the regulatory status of VoIP in upcoming proceedings with more focused records. The FCC has not done so thus far, but has indicated that a VoIP proceeding may be on the horizon.^{19/} The FCC also recognized its forbearance authority, stating it would have "to consider carefully" whether to forbear from imposing any of the rules that would apply to phone-to-phone VoIP providers as telecommunications carriers.^{20/}

2. Cable Modem Classification Proceedings

The FCC's 2002 *Cable Modem Ruling*^{21/} is important to the classification of VoIP services provided via a cable modem. The FCC there determined that cable modem service was properly classified as an interstate information service subject to Title I, not a cable service subject to Title VI, and that there is no separate offering of telecommunications service by cable modem providers.^{22/} The FCC defined cable modem service, for the purpose of this proceeding, as "a service that uses cable system facilities to provide residential subscribers with high-speed Internet access, as well as many applications or functions that can be used with high-speed Internet access."^{23/}

The FCC found that cable modem service as then offered by cable operators was an integrated offering -- the telecommunications component was not separable from the data processing or information service capabilities of the service.^{24/} Cable operators providing cable modem service over their own facilities were not offering telecommunications service to end

determined that Internet service providers ("ISPs") were not "providing" or "offering" telecommunications services because ISPs were providing a service that typically included storage, retrieval, and manipulation of data, and generally had no way of knowing whether their customers were using Internet access services for transmission capacity to make computer-to-computer voice calls. *See id.* ¶ 87.

^{18/} *Report to Congress* ¶ 90.

^{19/} Howard Buskirk, *DSL, VoIP, Intercarrier Compensation Top FCC's Wireline Agenda This Fall*, TR DAILY (Sept. 17, 2003).

^{20/} *Id.* ¶ 92.

^{21/} *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002) ("*Cable Modem Ruling*").

^{22/} *Id.* ¶ 7.

^{23/} *Id.* ¶ 31.

^{24/} *Cable Modem Ruling* ¶ 39.

users; rather they were using telecommunications to provide end users with cable modem service.^{25/}

In the NPRM portion of the *Cable Modem Ruling*, however, the FCC asked for comment on what factors would indicate that a cable operator is offering a stand-alone telecommunications service, and asked what regulations should apply to that service, and whether it would be appropriate to forbear from common carrier regulation where a cable operator was offering a stand-alone telecommunications service to ISPs or subscribers.^{26/} The FCC tentatively concluded that forbearance would be justified because common carrier regulation was not necessary for the protection of consumers or to ensure that rates were just and reasonable and not unjustly or unreasonably discriminatory.^{27/}

Having determined that cable modem service is an interstate information service, the FCC also sought comment on the regulatory implications of that determination. For example, the FCC, recognizing that cable modem service is provided over the facilities of cable systems that occupy public rights-of-way in local communities (and therefore, may be subject to oversight by local franchising authorities), sought comment on how to deal with such local regulations under its information service regime.^{28/} However, it also invited “comment on any other forms of State and local regulation that would discourage investment in advanced communications facilities, or create an unpredictable regulatory environment.”^{29/} The cable industry took the position that the FCC should preempt state and local regulations that attempt to regulate cable modem service or public rights-of-way.^{30/} In contrast, the state and local governments argued that the FCC should not preempt state and local laws, including laws regulating cable modem service, the public rights-of-way, customer proprietary network information (“CPNI”), and truth-in-billing.^{31/}

3. Wireline Broadband Classification Proceeding

^{25/} *Cable Modem Ruling* ¶ 41. Several groups appealed the FCC’s finding that cable modem service was an interstate information service that is not subject to open access requirements. Many of these parties believed the FCC should have classified cable modem service as a telecommunications service and imposed telecommunications regulation on the service. *See Brand X Internet, et al. v. FCC*, Nos. 02-70518, 02-70684, 02-70685, 02-70686, 02-70879, 02-70518, 02-70684, 02-70685, 02-70686, 02-70879 (9th Cir. filed Mar. 22, 2002). The appeals were consolidated and heard in the Ninth Circuit, which had previously found (contrary to the FCC’s statements that the definitions were mutually exclusive) that cable modem service was both an information service and a telecommunications service.

^{26/} *Cable Modem Ruling* ¶ 93.

^{27/} *Id.* ¶ 95.

^{28/} *Id.* ¶¶ 96-108.

^{29/} *Id.* ¶ 99.

^{30/} *See, e.g.*, Comments of AOL Time Warner, Inc. at 8, 12; Comments of Arizona Cable Telecommunications Association at 12, 14-15, 18; Comments of Charter Communications at 18-20.

^{31/} *See, e.g.*, Comments of the Attorney General of Texas at 5-6; Comments of the People California and the California Public Utilities Commission at 6; City of New York at 6, 17; Comments of the City Council of New Orleans at 4.

In the 1998 *Report to Congress*, the FCC also generally concluded that Internet access services, are information services, not telecommunications services.^{32/} The FCC's 2002 *Wireline Broadband NPRM*^{33/} addressed that issue further, with the FCC tentatively concluding that wireline broadband Internet access services were interstate information services, whether provided over a third-party's facilities or self-provisioned facilities.^{34/} Significantly, the FCC acknowledged that classifying wireline broadband Internet access service as an information service might affect the obligations traditionally imposed on telecommunications service providers, and sought comment on how its classification would affect those requirements.^{35/}

The only reference in this proceeding to VoIP services occurred in the FCC's discussion on the possibility of imposing universal service obligations on all broadband Internet access providers.^{36/} However, the FCC's discussion was limited to its concern with the universal service implications of traditional services, such as voice traffic, migrating to broadband platforms.^{37/} Specifically, the FCC questioned whether that migration would affect the FCC's ability to support universal service in an equitable and non-discriminatory manner or whether such migration will lower or raise the cost of providing service to consumers.

4. Universal Service Proceedings

In another 2002 proceeding addressing the methodology for assessing and recovering universal service contributions, the FCC noted that the "accelerating development of new technologies like 'voice over Internet' increases the strain on regulatory distinctions such as interstate/intrastate and telecommunications/non-telecommunications, and may reduce the overall amount of assessable revenues reported under the current system."^{38/} Given the FCC's

^{32/} *Report to Congress* ¶¶ 56-82.

^{33/} *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Universal Service Obligations of Broadband Providers; Computer III Further Remand Proceedings*, Notice of Proposed Rulemaking, 17 FCC Rcd 3019 (2002) ("Wireline Broadband NPRM").

^{34/} *Wireline Broadband NPRM* ¶ 17.

^{35/} *Wireline Broadband NPRM* ¶ 16. Specifically, the FCC asked about the obligations imposed on telecommunications carriers by the Communications Assistance for Law Enforcement Act ("CALEA"), possible obligations imposed by the USA PATRIOT Act of 2001, network reliability requirements, consumer protection requirements (including the process for discontinuing service), privacy restrictions, slamming prohibitions, obligations for serving persons with disabilities, and telecommunications carriers' general unbundling and access requirements. *Id.* ¶¶ 54-59, 61. Thus, despite its tentative conclusion to classify wireline broadband Internet access services as information services, the FCC recognized that some national security, network reliability, and consumer protection obligations might be required to protect the interests of consumers. However, the FCC asked commenters to discuss "whether there are adequate incentives" for providers to protect consumers' interests without the imposition of additional regulation. *Id.* ¶ 60.

^{36/} The FCC sought comment on the application of universal service requirements to *all* facilities-based providers of broadband Internet access services, including wireline, wireless, cable, and satellite. *See Wireline Broadband NPRM* ¶ 79.

^{37/} *Wireline Broadband NPRM* ¶ 82.

^{38/} *Federal-State Joint Board on Universal Service; 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*, 17 FCC Rcd 3752 ¶ 13 (2002) ("Universal Service NPRM").

commitment in the *Report to Congress* “to ensure that financial support for federal universal service support mechanisms [are] maintained,”^{39/} the FCC might subject broadband Internet access services to universal service obligations despite its tentative classification of the service as an information service. A similar result could be expected for VoIP services, even if those services were classified as information services, or classified as telecommunications services for which the FCC chooses to apply a policy of forbearance of most regulations applicable to telecommunications services.

5. Petitions for Declaratory Ruling

Several carriers have filed petitions for declaratory ruling asking the FCC to make a definitive statement regarding the classification of VoIP services. The FCC had as of 2003 not yet ruled on any of these petitions.

In 1995, a coalition of small interexchange carriers calling themselves America’s Carriers Telecommunications Association (“ACTA”), petitioned the FCC to issue a declaratory ruling confirming its authority over interstate and international telecommunications services using the Internet and regulating entities providing IP telephony services as common carriers, subject to tariff filing and facilities authorization requirements.^{40/} While ACTA was particularly concerned with long distance services, its petition took a much broader position by asking the FCC to institute a rulemaking “to govern the use of the Internet for providing telecommunications services” because of the “impact on the traditional means, methods, systems, providers, and users of telecommunications services.”^{41/} The ACTA petition also proposed potential bases for the FCC’s authority to regulate the Internet.^{42/} Predicting the worst, the petition asserted that the “new technology” would be used to circumvent the FCC’s rules and regulations to allow “gambling, obscenity, prostitution, drug traffic, and other illegal acts.”^{43/} The FCC never acted upon the petition, although in late 1997, then Commissioner Powell told ACTA members that “I believe strongly that I must understand clearly your perspective and have some faith that you are not acting like Chicken Little, crying unnecessarily that the sky is falling.”^{44/}

In 1999, US WEST filed a petition asking the FCC to declare that phone-to-phone IP telephony services were telecommunications services and therefore should be subject to the FCC’s access charge requirements when they originate or terminate calls using LEC facilities.^{45/}

^{39/} *Report to Congress* ¶ 4.

^{40/} *In the Matter of the Provision of Interstate and International Interexchange Telecommunications Service via the “Internet” by Non-tariffed, Uncertified Entities*, RM 8775, Petition for Declaratory Ruling and Institution of Rulemaking, (filed March 4, 1995) (“ACTA Petition”).

^{41/} ACTA Petition at i, 4.

^{42/} ACTA Petition at 10; *see also* 47 U.S.C. § 151.

^{43/} ACTA Petition at 10.

^{44/} *Speech of Commissioner Michael K. Powell* before the America’s Carriers Telecommunications Association, McLean, VA (Dec. 15, 1997).

^{45/} *Petition of US WEST, Inc. for Declaratory Ruling Affirming Carrier’s Carrier Charges on IP Telephony*, Petition for Expedited Declaratory Ruling (filed April 5, 1999) (“US WEST Petition”). In late 1998, both BellSouth and US WEST reportedly asked the FCC to consider using its accelerated complaint procedures to determine

US WEST argued that long distance carriers providing phone-to-phone IP telephony used precisely the same access service that US WEST provided to long distance carriers circuit-switched facilities. US WEST also claimed that IP telephony services transported traffic in the same way as traditional voice services, except for the internal use of a packet-switched protocol that does not involve a net change in the form or content of the traffic. The FCC never issued a public notice requesting comment on US WEST's Petition.

In 2002, AT&T filed a petition for declaratory ruling asking the FCC to find that AT&T's phone-to-phone IP telephony services were exempt from access charges.^{46/} AT&T asked the FCC to rule that incumbent LECs were not permitted to impose access charges on the phone-to-phone IP telephony service that AT&T provided over the Internet. AT&T argued that the incumbent LECs' efforts to impose access charges on this type of traffic violated Congress's goal to preserve the vibrant and competitive free market that then existed for the Internet and the FCC's policy established in the *Report to Congress* of exempting all VoIP services from access charges pending the future adoption of nondiscriminatory regulations on this subject.

In 2003, pulver.com filed a petition for declaratory ruling requesting the FCC to rule that its Free World Dialup service was neither telecommunications nor a telecommunications service within the Act's definitions.^{47/} Free World Dialup facilitated point-to-point broadband Internet protocol voice communications and was only provided within pulver.com's network to those customers that subscribed to the service. pulver.com argued that its service did not fit within the statutory definitions of "telecommunications" or "telecommunications service" because Free World Dialup did not offer subscribers transmission services or telecommunications for a fee.

B. State Regulation of IP Telephony

In September 2003, Vonage filed a Petition for Declaratory Ruling asking the FCC to preempt the Minnesota PUC's finding that Vonage offers "telephone service" under Minnesota law.^{48/} No action has been taken on this petition.

Most states have not considered the question of how -- or even whether -- they should regulate VoIP. Some states have found few differences between IP-based voice services and

whether Qwest's long distance phone-to-phone voice services using IP technology should be subject to the payment of access charges. Neither carrier filed such a complaint. Qwest's quarterly financial statements, in which it publicly stated that it was not paying access charges for phone-to-phone IP telephony, may have prompted the April 1999 US WEST Petition. See Qwest Communications International, Inc., Form SEC 10-Q, at 18-19 (May 13, 1999). After the announcement of its acquisition of US WEST, however, Qwest's quarterly financial statement no longer contained a reference to phone-to-phone IP telephony.

^{46/} *Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services Are Exempt from Access Charges*, AT&T Petition for Declaratory Ruling, WC Docket No. 02-361 (filed Oct. 18, 2002).

^{47/} *Petition for Declaratory Ruling that pulver.com's Free World Dialup Is Neither Telecommunication Nor a Telecommunications Service*, WC Docket No. 03-45 (filed Feb. 5, 2003).

^{48/} *In the Matter of Vonage Holding Corporation's Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, Petition for Declaratory Ruling (filed Sept. 22, 2003).

traditional circuit-switched voice services.^{49/} Pending a definitive ruling from the FCC on the classification of VoIP services, states remain free to make their own determinations regarding the level of regulation applicable to Internet telephony services.

1. New York

The New York Public Service Commission in 2002 issued a decision in a complaint proceeding between two carriers, finding that a provider of intrastate long distance services using IP telephony is subject to access charges because it is providing a telecommunications service, not an information service.^{50/} Although the New York PSC relied heavily on the FCC's analysis of VoIP services in the FCC's *Report to Congress*, the New York PSC chose to subject the IP telephony provider to intrastate access charges, despite the FCC's refraining from subjecting VoIP providers to access charges or any other regulatory requirements.

The *DataNet Decision* may have limited precedential value. The New York PSC specifically noted that this issue was part of a specific complaint proceeding involving DataNet's service and did not constitute a general policy ruling.^{51/} Nonetheless, the *DataNet Decision* raised two issues for the FCC to consider: whether state regulation of *intrastate* long distance VoIP services interferes with the promotion of its national broadband policies, and whether VoIP service should ever be considered intrastate. Relevant to the FCC's consideration of these issues was the FCC's inquiry in its 2001 *Intercarrier Compensation NPRM* whether all intercarrier compensation arrangements are within its jurisdiction, including intrastate access charges.^{52/} In the 2002 AT&T Petition for Declaratory Ruling proceeding before the FCC, the New York PSC argued that the findings of its *DataNet Decision* should be followed.^{53/}

2. California

The California Public Utilities Commission found in 2002 that, despite the FCC's determination that Digital Subscriber Line service ("DSL") is interstate in nature, the California PUC has concurrent jurisdiction with the FCC over DSL transport service and thus can exercise

^{49/} See, e.g., Docket No. 00-00309, *Petition of MCI Metro Access Transmission Services, LLC and Brooks Fiber Communications of Tennessee, Inc. for Arbitration of Certain Terms and Conditions of Proposed Agreement with Bellsouth Telecommunications, Inc. Concerning Interconnection and Resale under the Telecommunications Act of 1996*, Interim Order of Arbitration Award, at 23 (Tenn. R.U.C. Apr. 3, 2002) (finding that calls using IP technologies should be treated the same as circuit-switched traffic and be subject to the FCC's rules for intercarrier compensation, regardless of whether the call is data or voice), *upheld by* Final Order of Arbitration Award (Tenn. R.U.C. Apr. 24, 2002).

^{50/} Case 01-C-1119, *Complaint of Frontier Telephone of Rochester Against US DataNet Corporation Concerning Alleged Refusal to Pay Intrastate Carrier Access Charges*, Order Requiring Payment of Intrastate Carrier Access Charges (N.Y.P.S.C. May 31, 2002) ("*DataNet Decision*").

^{51/} *DataNet Decision* at 9.

^{52/} *Developing a Unified Intercarrier Compensation Regime*, Notice of Proposed Rulemaking, 16 FCC Rcd 9610, ¶¶ 121-22 (2001) (seeking comment on the FCC's legal authority and responsibility to ensure that all access charges, including intrastate access charges, are subject to the same compensation regime).

^{53/} Comments of New York Public Service Commission on AT&T Petition for Declaratory Ruling, at 4 (filed Dec. 18, 2002).

jurisdiction over certain aspects of the service.^{54/} The California PUC reasoned that DSL transport involved both interstate and intrastate applications, and that there was no “clear and manifest” congressional intent to preempt all state authority over those services.

Specifically, the California PUC relied on Section 414 of the Communications Act,^{55/} which, in its view, permitted states to exercise “their traditional police powers to safeguard consumer health, safety and welfare and to enforce their own laws with regard to interstate services provided to California customers, particularly where the state laws address misrepresentations to consumer and other marketing practices.”^{56/} Moreover, because the California PUC found that the FCC’s end-to-end analysis had “been questioned” by the courts, it chose not to rely on such an analysis, which would have supported the complete preemption of the California PUC’s jurisdiction over DSL transport.^{57/} While the California PUC’s decision did not address VoIP, it did illustrate how a state might seek to invoke concurrent jurisdiction even where the FCC had determined a service to be interstate in nature.

In addition, the California PUC initiated a rulemaking proceeding in December 2002 to amend its service quality standards.^{58/} The California PUC sought comment on applying its service quality rules “to any intrastate telecommunications service, including any services using Internet Protocol (IP) telephony.” The PUC stated, “Anticipating this emerging technology, we intend for the rules we adopt in this proceeding to apply to similar services regardless of the technology used to provide the service. We seek comment on whether the measures and standards proposed for telecommunications services using traditional technologies are adequate and appropriate for application to services that use IP telephony. We seek comment on whether additional measures are needed for telecommunications services offered over an IP platform.”^{59/}

3. Florida

The Florida Public Service Commission has made conflicting statements on the regulation of VoIP services. In one instance, in the context of an interconnection arbitration, the Florida PSC determined that the definition of switched access traffic should include IP telephony, and included IP telephony services within the definition of services subject to access

^{54/} Case No. 01-07-207, *California ISP Association, Inc., Complainant v. Pacific Bell Telephone Company; SBC Advanced Solutions, Inc., Defendants*, Assigned Commissioner’s and Administrative Law Judge’s Ruling Denying Defendants’ Motion to Dismiss (Cal. P.U.C. Mar. 28, 2002) (“*California DSL Decision*”).

^{55/} 47 U.S.C. § 414 (“Nothing in this Act contained shall in any way abridge or alter the remedies now existing at common law or by statute, but the provision of this Act are in addition to such remedies.”).

^{56/} *California DSL Decision* at 8-9.

^{57/} *Id.* at 9-10.

^{58/} Rulemaking No. 02-12-004, *Order Instituting Rulemaking on the Commission's Own Motion into the Service Quality Standards for All Telecommunications Carriers and Revisions to General Order 133-B.R.*, Order Instituting Rulemaking Into The Service Quality Standards For All Telecommunications Carriers And Revisions To General Order 133-B (Cal. P.U.C. Dec. 5, 2002).

^{59/} *Id.*

charges.^{60/} On the other hand, in a generic proceeding to review its compensation rules for all services, the PSC deferred a definitive ruling on VoIP services stating that “a broad sweeping decision on this particular issue would be premature at this time.”^{61/}

Similarly, the PSC refused to review a petition for declaratory ruling by CNM Networks, Inc. that phone-to-phone IP telephony was not telecommunications under Florida law.^{62/} The Florida PSC found that the issue was pending review before the FCC and it would defer to the outcome of that proceeding. The PSC did, however, direct the staff to “conduct a[n] undocketed workshop to explore the issue of phone-to-phone IP telephony,” which was held in January 2003.^{63/}

4. Colorado

In 1999, US WEST (now Qwest) filed a petition with the Colorado Public Utilities Commission regarding the application of access charges to VoIP services.^{64/} The PUC never reached the merits of US WEST’s arguments.^{65/} Qwest then took the issue to the Colorado state courts. In response, the Colorado District Court for the City and County of Denver concluded in 2001 that VoIP providers should be subject to switched access charges.^{66/} Despite the court’s decision, in a series of interconnection arbitration decisions, the PUC repeatedly found that IP telephony services should not be included in the definition of switched access service and should not be subject to access charges.^{67/}

^{60/} Docket No. 991854-TP, *Petition of BellSouth Telecommunications, Inc. for Section 252(b) Arbitration of Interconnection Agreement with Intermedia Communications, Inc.*, Final Order on Arbitration, Order No. PSC-00-1519-FOF-TP (Fla. P.S.C. Aug. 22, 2000) (including phone-to-phone IP telephony in the definition of switched access traffic).

^{61/} Docket No. 000075-TP, *Investigation into Appropriate Methods to Compensate Carriers for Exchange of Traffic Subject to Section 251 of the Telecommunications Act of 1996*, Amendatory Order, Order No. PSC-02-1248A-FOF-TP, at 34 (Sept. 12, 2002).

^{62/} Docket 021061-TP, *Petition of CNM Networks, Inc. for Declaratory Statement that CNM's Phone-to-Phone Internet Protocol (IP) Telephony Is Not "Telecommunications" and that CNM Is Not A "Telecommunications Company" Subject to Florida Public Service Commission Jurisdiction*, Order Denying Petition for Declaratory Statement, at 3 (Fl. P.S.C. Dec. 31, 2002).

^{63/} *Staff Workshop: Voice over Internet Protocol* (Fla. P.S.C. Jan. 27, 2003).

^{64/} Docket No. 99F-141T, *US WEST Communications, Inc. v. Qwest Communications Corporation*, US WEST Communications, Inc. Complaint for Declaratory Judgment (filed April 2, 1999).

^{65/} Docket No. 99F-141T, *US WEST Communications, Inc. v. Qwest Communications Corporation*, Order Dismissing Case and Closing Docket, Decision No. C99-1051 (Col. P.U.C. Sept. 15, 1999).

^{66/} *Qwest Corp., Inc. v. IP Telephony, Inc. d/b/a Mountain Solutions Telecom Group, Inc.*, Case No. 99-CV-8252, Order (Dist. Ct. Denver Jan. 12, 2001).

^{67/} See, e.g., Docket No. 00B-601T, *Petition of Level 3 Communications LLC, for Arbitration Pursuant to § 252(B) of The Telecommunications Act of 1996 to Establish an Interconnection Agreement with Qwest Corporation*, Initial Commission Decision, Decision No. C01-312, at 30-31 (Colo. P.U.C. Mar. 16, 2001) (finding that the functionality and network use of IP telephony is different than circuit-switched technology, and therefore, should not be subject to access charges), upheld by Decision on Applications for Rehearing, Reargument, or Reconsideration, Decision No. C01-477 (Colo. P.U.C. May. 1, 2001).

5. Minnesota

In August 2003, the Minnesota Public Utilities Commission ruled that the VoIP service provided by Vonage constituted a “telephone service” under Minnesota law and ordered Vonage to comply with state law by seeking a Certificate of Public Convenience and Necessity (“CPCN”), filing a 911 plan, and submitting tariffs.^{68/} The PUC closely examined the service provided by Vonage and concluded that “Vonage is offering two-way communication that is functionally no different than any other telephone service.”^{69/} In addition, the PUC found that it could exercise jurisdiction over Vonage as a company providing telephone service within Minnesota because there is no “federal law that preempts state law with respect to telephone services provided using VoIP technology.”^{70/} Vonage has filed a Petition for Declaratory Ruling with the FCC seeking to have this state action preempted.^{71/}

6. Other States

Several other states have examined the issue of regulating VoIP services. For example, in 1999, the South Carolina Public Service Commission established a generic docket to examine the issue of IP telephony, but because it was concerned about the far-reaching implications of such a proceeding it voted to hold the matter in abeyance.^{72/}

The Nebraska Public Service Commission, on its own motion, also opened a docket in 1999 to determine what types of services would be included in the definition of IP telephony, as well as the responsibilities VoIP providers have to consumers, and concluded that, “because IP telephony does not place the same burdens upon the network as does traditional switched telecommunications, the obligations of its providers should not be the same.”^{73/}

More recently, the Public Utilities Commission of Ohio, the Washington Utilities and Transportation Commission, the Pennsylvania Public Utilities Commission, and the Alabama Public Service Commission have initiated generic proceedings to consider the regulation of VoIP

^{68/} Docket No. P-6214/C-03-108, *In the Matter of the Complaint of the Minnesota Department of Commerce Against Vonage Holding Corp Regarding Lack of Authority to Operate in Minnesota*, Order Finding Jurisdiction and Requiring Compliance (Sept. 11, 2003).

^{69/} *Id.* at 8.

^{70/} *Id.*

^{71/} *In the Matter of Vonage Holding Corporation’s Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, Petition for Declaratory Ruling (filed Sept. 22, 2003).

^{72/} Docket No. 98-651-C, *Generic Proceeding to Review Voice Over the Internet (IP Telephony)*, Order Holding Matter in Abeyance, Order No. 1999-183 (S.C.P.S.C. Mar. 10, 1999).

^{73/} Application C-1825/PI-21, *Application of the Nebraska Public Service Commission on its Own Motion, Seeking to Conduct an Investigation Into the Effects of Internet Telephony on the Telecommunications Industry in Nebraska*, Order (Neb. P.S.C. Sept. 28, 1999); see also Docket 27385, *Petition for Arbitration of the Interconnection Agreement between BellSouth Telecommunications, Inc., and Intermedia Communications, Inc.*, Pursuant to Section 252(b) of the Telecommunications Act of 1996, Order, at 33-34 (Ala. P.S.C. May 21, 2001) (concluding that VoIP should not be included in the definition of switched access traffic because the FCC had not addressed the classification of VoIP).

providers operating within their states and the jurisdictional issues raised by VoIP services.^{74/} In addition, Florida and Illinois have held workshops to investigate the status of VoIP.^{75/}

When presented in 2000 with the classification of VoIP in the context of interconnection agreement arbitrations, the North Carolina Utilities Commission, the Alabama Public Service Commission, and the Kentucky Public Service Commission declined to determine whether IP telephony should be included in the definition of switched access traffic until the service was defined with some certainty or some definitive statement was made by the FCC.^{76/}

D. Previous Congressional Action

Like the FCC and state commissions, Congress began to take notice of IP telephony in 2000. H.R. 1291, the “Internet Access Charge Prohibition Act of 2000,”^{77/} was introduced by Fred Upton (R-MI) to codify the FCC’s long-standing exemption from access charges for ISPs.^{78/} An amendment added by the House Commerce Committee at the instigation of the US Telecom Association (“USTA”), however, appeared to invite the FCC to impose access charges on providers of IP telephony. As amended, the bill stated that “[n]othing . . . shall preclude the FCC from imposing access charges on the providers of Internet telephone services, irrespective of the type of customer premises equipment used in connection with such services.”^{79/} H.R. 1291

^{74/} Case No. 03-950-TP-COI, *In the Matter of the Commission’s Investigation into Voice Services Using Internet Protocol*, Entry (Pub. Utils. Comm’n Ohio. Apr. 17, 2003); Docket No. UT-030694, *Staff Investigation re: Voice over Internet Protocol (VOIP)* (Wash. Utils. Trans. Comm’n May 13, 2003); Docket No. M-00031707, *Investigation into Voice over Internet Protocol as a Jurisdictional Service*, Order (Pa. P.U.C. May 1, 2003); Docket No. 29016, *In re: Petition for Declaratory Order Regarding Classification of IP Telephony Service*, Order Establishing Declaratory Proceeding (Ala. P.S.C. Aug. 2003).

^{75/} *Staff Workshop: Voice over Internet Protocol* (Fla. P.S.C. Jan. 27, 2003); *Workshop: Regulatory Issues – Local Voice Services Delivered over Packet Switched Networks* (I.C.C. May 8, 2003).

^{76/} Docket No. P-55, Sub 1178, *Petition of BellSouth Telecommunications, Inc. for Arbitration of Interconnection Agreement with Intermedia Communications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996*, Recommended Arbitration Order (N.C.U.C. June 13, 2000); Docket 27385, *Petition for Arbitration of the Interconnection Agreement between BellSouth Telecommunications, Inc., and Intermedia Communications, Inc.*, Pursuant to Section 252(b) of the Telecommunications Act of 1996, Order, at 33-34 (Ala. P.S.C. May 21, 2001) (concluding that VoIP should not be included in the definition of switched access traffic because the FCC has not addressed the classification of VoIP); Case No. 2000-465, *Petition by AT&T Communications of the South Central States, Inc. and TCG Ohio for Arbitration of Certain Terms and Conditions of a Proposed Agreement with Bellsouth Telecommunications, Inc. Pursuant to 47 U.S.C. Section 252*, Order, at 5 (Ky. P.S.C. May 16, 2001) (declining to address the issue of IP telephony because it seems “more hypothetical than actual”).

^{77/} H.R. 1291, 106th Cong. (2000).

^{78/} Access charges are paid by long distance carriers to local exchange telephone companies for the use of local facilities to originate and terminate long distance calls. Even in this regard the bill was probably ineffective, because it precluded only “contribution[s] for the support of universal service . . . based on a measure of time that telecommunications services are used in the provision of such Internet access service.” H.R. 1291, § 2(1)(1). This limited ban arguably would not have barred access charges paid to local telephone companies to carry traffic from customers to an ISP’s point of presence.

^{79/} H.R. 1291, 106th Cong. § 2(1)(2) (2000).

passed the House by a voice vote, but was never considered by the Senate.^{80/} In response to the bill, Representative Ed Markey (D-MA), the senior Democrat on the Telecommunications Subcommittee, introduced a bill that would have specifically prohibited the FCC from imposing access charges on providers of IP telephony.^{81/} The introduction of recent bills, such as the Internet Freedom and Broadband Deployment Act of 2001,^{82/} reflect Congress's continued focus on the area of new technologies. Although the bills are an effort, in the first instance, to reduce regulation of advanced services or high-speed Internet access services, they appear to preserve the possible future application of regulation to VoIP services.

III. POTENTIAL REGULATION OF IP TELEPHONY

If IP telephony were determined to be a telecommunications service, IP telephony would be potentially subject to a host of regulations at both the state and federal level. If it remained an information service, VoIP would likely avoid most regulation. However, certain fees and consumer protection measures might be applied even if IP telephony services were not classified as telecommunications services.^{83/}

A. Tension Between Federal and State Jurisdiction

Historically, information services have been free from state regulation. Generally, once the FCC exercises its Title I authority over an "information service," any state regulations interfering with the FCC's exercise of its authority could be preempted.^{84/} In its *Computer Inquiry* proceedings, the FCC found that information services must remain free of state and federal regulations to promote the competitive growth of such services.^{85/}

As a result, the FCC preempted the imposition of certain state regulatory requirements on information service providers that would have resulted in the application of inconsistent regulatory requirements at the state and federal levels. The Ninth Circuit upheld the FCC's narrowly-tailored preemption because the FCC was able to demonstrate that it would preempt only those state regulations that would negate the FCC's regulatory goals or otherwise frustrate the FCC's purposes.^{86/} Given the FCC's previous preemption of state regulations governing

^{80/} Bill Summary and Status for the 106th Congress, H.R. 1291, at <http://thomas.loc.gov> (last visited Mar. 10, 2002).

^{81/} H.R. 4769, 106th Cong. (2000).

^{82/} H.R. 1542, 107th Cong. (2002) (referred to Senate Committee after being received from House) (also known as the "Tauzin-Dingell Bill").

^{83/} *Wireline Broadband NPRM* ¶¶ 54–61.

^{84/} *California v. FCC*, 39 F.3d 919, 931-33 (9th Cir. 1994) (affirming the FCC's authority to preempt state regulation of jurisdictionally mixed enhanced (information) services). In contrast, if the FCC, for example, had determined that cable modem service is a "cable service" subject to Title VI, the states would have limited authority over cable service with regards to access requirements, franchise requirements, and franchise fees. See *Cable Modem Ruling* ¶¶ 97-99.

^{85/} *Amendment of Section 64.702 of the Commission's Rules and Regulations*, Report and Order, 104 F.C.C.2d 958 (1986) (subsequent history omitted).

^{86/} *California v. FCC*, 39 F.3d at 932-33.

information services in the *Computer Inquiry* proceedings, and its statements in the *Cable Modem Ruling*, state commissions' ability to impose burdensome regulations on local VoIP services could be limited if those regulations interfered with the FCC's overarching national policy goals.

State regulators might find it difficult to determine the jurisdictional nature of IP-based services and to isolate the intrastate portion of those services. In its 1998 *Report to Congress*, the FCC noted that it might be difficult for VoIP providers themselves to determine whether VoIP calls are interstate or intrastate.^{87/} Typically, to determine the jurisdictional nature of telecommunications traffic, regulators employ an end-to-end analysis that takes into account the origination and termination points of the communication. The FCC used this analysis to determine that DSL transmission used to provide Internet access services are interstate services.^{88/} The FCC also affirmed the application of this analysis in 2002 in its determination that cable modem service is an interstate service.^{89/}

The states and the FCC will likely use such an analysis in their determination of the jurisdictional nature of VoIP services. The test will be whether applying the end-to-end analysis to VoIP services permits the calls to be distinguished as local, interexchange, or interstate.

B. Functionality vs. Facilities

Both the FCC and some states have made clear that they make regulatory classifications based on the functionality provided to end users rather than the facilities used to provide those services. The FCC's overarching principle in the proceedings discussed above is "to develop an analytical framework that is consistent, to the extent possible, across multiple platforms."^{90/} In its 1998 *Report to Congress*, the FCC specifically noted that "Congress did not limit the definition of 'telecommunications' to circuit-switched wireline transmission, but instead defined that term on the basis of the essential functionality provided to users."^{91/} In that vein, the FCC has historically applied its regulatory authority consistent with the statutory definition of telecommunications service -- "the offering of telecommunications . . . regardless of the facilities used."^{92/}

In the *Wireline Broadband NPRM*, the FCC reiterated the "function over facilities" principle, and concluded that the Communications Act and the FCC's prior rulings suggest that the FCC should take a functional approach to regulation that focuses on the nature of the service provided to consumers, rather than an approach that focuses on the technical attributes of the

^{87/} *Report to Congress* ¶ 91.

^{88/} *GTE Telephone Operating Cos., GTOC Tariff No. 1, GTE Transmittal No. 1148*, Memorandum Opinion and Order, 13 FCC Rcd 22466, ¶ 16 (1998).

^{89/} *Cable Modem Ruling* ¶ 59.

^{90/} *Wireline Broadband NPRM* ¶ 6; *Cable Modem Ruling* ¶ 85, n.315.

^{91/} *Report to Congress* ¶ 98.

^{92/} 47 U.S.C. § 153(46).

underlying architecture used to provide the services.^{93/} Likewise, in the *Cable Modem Ruling*, the FCC concluded that the classification of cable modem service turns on the nature of the functions that the end user is offered.^{94/} The New York PSC similarly relied upon the FCC's functional approach in reaching its *DataNet Decision*.^{95/}

Thus, it is generally irrelevant what technology a provider utilizes to provide telecommunications services. For example, carriers using 39 GHz, microwave or data packet switched technologies to provide voice and data communications have all been subject to the FCC's common carrier (i.e., Title II) regulations.^{96/} In addition, services that function as both telecommunications services and information services, but are inseparable from the end user's perspective, have been deemed to be information services under the functional approach.^{97/}

Consistent with these proceedings, any future regulatory classification of VoIP would likely rely on the functions that are made available to consumers, rather than the particular types of facilities used to provide those functions. While VoIP may provide similar functions as plain old telephone service ("POTS") today, it is clear that, as VoIP evolves, it will not be just another form of telephony, even from a functional standpoint. For instance, POTS is a "network-level function" whereas VoIP is an "an Internet application just like unregulated e-mail and file sharing" that can follow its users everywhere, over any network.^{98/} Indeed, many industry followers believe the VoIP applications of tomorrow will combine voice and data in new and innovative ways, going far beyond the functionality offered by POTS. In light of the present and evolving functional differences between VoIP services and POTS, it may be inappropriate and stifling to nascent VoIP products to overlay legacy regulations designed for a very different service.

C. Taxation of VoIP Services

^{93/} *Wireline Broadband NPRM* ¶ 7, n.10.

^{94/} *Cable Modem Ruling* ¶ 38.

^{95/} *DataNet Decision* at 7; see also New York Public Service Commission Comments on AT&T Petition for Declaratory Ruling, at 4 (filed Dec. 18, 2002).

^{96/} See generally, e.g., *Independent Data Communications Manufacturers Association, Inc. Petition for Declaratory Ruling that AT&T's InterSpan Frame Relay Service is a Basic Service; American Telephone and Telegraph Company Petition for Declaratory Ruling that All IXC's Be Subject to the Commission's Decision on the IDCMA Petition*, Memorandum Opinion and Order, 10 FCC Rcd 13717 ¶¶ 22, 54 (1995) (finding that all interexchange carriers must offer packet-switched, frame relay service on a common carrier basis); *WINSTAR WIRELESS FIBER CORP. Request for Waiver of Sections 101.65(a)(3) and 101.305(d) of the Commission's Rules*, Order, 14 FCC Rcd 118 ¶ 5 (1999) (noting that Winstar's operations using fixed-wireless technology are common carrier in nature); *Establishment of Policies and Procedures for Consideration of Applications to Provide Specialized Common Carrier Services in the Domestic Public Point-to-Point Microwave Radio Service and Proposed Amendments to Parts 21, 43, and 61 of the Commission's Rules*, Final Report and Order, 78 F.C.C.2d 1291 ¶ 2 (1980) (noting that the FCC received 2560 applications for the provision of common carrier services via microwave facilities).

^{97/} *Report to Congress* ¶¶ 39, 58, 60.

^{98/} Herb Kirchoff, *VoIP Advocates Urge States to Keep Hands Off*, COMMUNICATIONS DAILY (Sept. 9, 2003).

The tax implications for VoIP service depend heavily on how the service is classified by the federal and state regulators. State and federal law has exempted Internet access services from taxation, but telecommunications services remain subject to certain fees and taxes. States generally have the ability to tax “telecommunications services,” but not “information services.” At the state level, the tax classification of IP telephony services turns on how the state statutes and regulations define “telecommunications” or “telephone” services. Often, the definitions are broad enough to encompass the functionality provided to consumers via Internet telephony services.^{99/} If VoIP service is subject to taxation under a particular state’s law, the service could be subject to gross receipts taxes, sales and use taxes, or specific taxes imposed on telecommunications services.

Similarly, the federal taxation of VoIP services also depends on definitions at the federal level. A three percent federal excise tax is imposed on “general telephone service,” which is defined as “any telephone or radio telephone service furnished in connection with any fixed or mobile telephone or radio telephone stations which may be connected, directly or indirectly, to an exchange operated by a person engaged in the business of furnishing communication service, if by means of such connection communication may be established with any other fixed or mobile telephone or radio telephone service.”^{100/} If an IP telephony service fits within this definition, it may be subject to the federal excise tax.

If IP telephony is considered to fall within the definition of an “Internet access service” it would be deemed to be exempt from taxation under the Internet Tax Freedom Act (“ITFA”).^{101/} The ITFA imposes a moratorium on state and local governments’ imposition of any “taxes on Internet access” or “multiple or discriminatory taxes on electronic commerce.”^{102/} Under the ITFA, “Internet access” is defined as “a service that enables users to access content, information, electronic mail, or other services offered over the Internet, and may also include access to proprietary content, information, and other services as part of a package of services offered to users. Such term does not include telecommunications services.”^{103/}

^{99/} Under New York tax law, for example, “telecommunications services” are defined as “telephony or telegraphy, or telephone or telegraph service, including, but not limited to, any transmission of voice, image, data, information and paging, through the use of wire, cable, fiber-optic laser, microwave, radio wave, satellites, or similar media or any combination thereof and shall include services that are ancillary to the provision of telephone service (such as, but not limited to, dial tone, basic service, directory information, call forwarding, caller-identification, call-waiting and the like) and also include any equipment and services provided therewith. Provided, the definition of telecommunication services shall not apply to separately stated charges for any service which alters the substantive content of the message received by the recipient from that sent.” NY TAX § 186-e(1)(g).

^{100/} 26 C.F.R. § 49.4252.1(a).

^{101/} 112 Stat. 261-719, 2681-724-726, 57 U.S.C. § 151 note.

^{102/} ITFA § 1101(a). This moratorium was extended through November 1, 2003 and Congress is currently considering extending and expanding the moratorium. *See* Internet Tax Nondiscrimination Act, Pub. L. No. 107-75, 115 Stat. 703 (2001). It does not apply to taxes that were generally imposed and actually enforced prior to October 1, 1998.

^{103/} ITFA § 1104(5). In addition, in order to take advantage of the moratorium, Internet access providers must offer their customers screening software that limits access to material on the Internet that is harmful of children. ITFA § 1101(f).

In addition, the term “tax” means: “(i) any charge imposed by any governmental entity for the purpose of generating revenues for governmental purposes, and is not a fee imposed for a specific privilege, service, or benefit conferred; or (ii) the imposition on a seller of an obligation to collect and to remit to a governmental entity any sales or use tax imposed on a buyer by a governmental entity.”^{104/} However, the ITFA specifically excludes from the definition of “tax” franchise fees or other fees imposed by a state or local franchising authority pursuant under the Cable Act and any fees related to the obligations of telecommunications carriers under the Act.^{105/}

D. Potential Federal Regulation of VoIP Services

On the federal side, information service providers avoid access charges and universal service fees, as well as other federal surcharges, including the administration of the North American Numbering Plan, Local Number Portability administration, and the Telecommunications Relay Services Fund, all of which apply to providers of telecommunications services.^{106/} Federal privacy, access by individuals with disabilities, truth-in-billing, and Communications Assistance for Law Enforcement Act obligations also do not extend to information service providers.

^{104/} ITFA § 1104(8)(A).

^{105/} ITFA § 1104(8)(B).

^{106/} See, e.g., FCC Form 499-A, Telecommunications Reporting Worksheet, available at <http://www.fcc.gov/Forms/Form499-A/499a.pdf>.

1. Universal Service Fund (“USF”) Contributions

The concept of “universal service” has been in place nearly since the birth of local phone service.^{107/} In their simplest form, universal service programs are designed to ensure that low-income consumers have access to local phone service at reasonable rates.^{108/} The FCC’s universal service program also provides financial support to companies that provide telecommunications services, Internet access, and internal connections to schools, libraries, and rural health care providers and in areas of America where the cost of providing service is high.^{109/} In addition to the federal fund, many states have established or are establishing some type of state universal service funding mechanism.^{110/}

Federal universal service obligations apply to all telecommunications carriers that provide interstate telecommunications services with each carrier contributing “on an equitable and non-discriminatory basis.”^{111/} In addition, universal service obligations may be placed on “any other provider of interstate telecommunications” if the FCC believes the public interest would be served by doing so.^{112/} To fund universal service, all covered providers contribute a certain percentage of the amount billed to their residential and business customers for interstate and international telecommunications services into a central fund. The exact percentage that companies contribute is adjusted every quarter based on projected universal service demands.^{113/} States with universal service programs also have established contribution formulas.

In its 1997 *Universal Service Order*, the FCC found that Internet access services do not fall within the definition of “telecommunications service” and therefore ISPs were not required to make contributions to the universal service fund.^{114/} The FCC reasoned that, because Internet

^{107/} 47 U.S.C. § 151 (describing the obligation to provide service to all citizens of the United States). The FCC has found that “universal service historically consisted of high-cost loop support, which provides support to eligible carriers serving high-cost areas, and Lifeline/LinkUp, which provides support to low-income consumers for telephone service and installation. Section 254 of the Act also directed the Commission to create the schools and libraries program and the rural health care program, which both provide support to schools, libraries, and rural health care providers, respectively, for telecommunications services and Internet access. All of these mechanisms are referred to collectively as ‘universal service.’” *Wireline Broadband NPRM* at n.115.

^{108/} *Report to Congress* ¶ 7 (stating that before the passage of the Telecommunications Act of 1996, “charges to long distance carriers and rates for certain intrastate services provided to carriers and to end users were priced above costs, which enabled local telephone companies to keep rates for basic local telephone service at affordable levels throughout the country”). In the Telecommunications Act of 1996, Congress codified this commitment to universal service and directed that “[c]onsumers . . . in rural, insular, and high cost areas, should have access to telecommunications and information services . . . that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to [those] in urban areas.” 47 U.S.C. § 254(b)(3).

^{109/} 47 U.S.C. § 254.

^{110/} National Exch. Carrier Association State Universal Service Fund Summaries, at <http://www.neca.org/susfsum.pdf> (Aug. 24, 2000).

^{111/} 47 U.S.C. § 254(d).

^{112/} *Id.*

^{113/} For example, for the second quarter of 2003, the universal service contribution factor is 9.1 percent.

^{114/} *Federal-State Joint Board on Universal Service*, 12 FCC Rcd. 8776, ¶ 789 (1997) (“*Universal Service Order*”).

access services “alter the format of information through computer processing applications such as protocol conversion and interaction with stored data,” they are information services for purposes of universal service and not subject to contribution obligations.^{115/}

The FCC currently is considering whether “the accelerating development of new technologies like ‘voice over Internet’ increases the strain on regulatory distinctions such as interstate/intrastate and telecommunications/non-telecommunications, and may reduce the overall amount of assessable revenue reported under the current system.”^{116/}

2. Intercarrier Compensation

“Access charges” are the payments that long distance carriers make to local exchange carriers to originate and terminate long-distance calls over local carrier facilities. “Reciprocal compensation” is paid by one local exchange carrier to another for the transport and termination of all other calls not subject to access charges.^{117/} As a general matter, FCC rules govern access charges for interstate long distance calls; state rules govern intrastate access charges.^{118/} The FCC has jurisdiction over reciprocal compensation required by Section 251(b)(5) of the Act,^{119/} but state commissions also have a role through their oversight of interconnection agreements between incumbent and competitive local exchange carriers, which generally establish the specific rates and terms for reciprocal compensation.^{120/}

Using a similar analysis to that employed in the *Universal Service Order*, the FCC also decided to exempt ISPs from the payment of access charges. In its 1997 *Access Charge Reform Order*, the FCC concluded that ISPs are not subject to the existing access charge system because an ISP’s use of the local telephone network is more akin to the manner in which the typical phone customer or “end user” makes use of the local telephone network, as opposed to the manner in which a long distance provider uses the network.^{121/} As a result, ISPs could purchase

^{115/} *Universal Service Order* ¶ 789; see also *Report to Congress* ¶¶ 73–82 (discussing additional reasons to classify Internet access as an “information service,” e.g., Internet access providers do not offer a “pure transmission path,” but conceding that Internet access involves data transport elements).

^{116/} *Universal Service NPRM* ¶ 13; see also United States General Accounting Office, *Federal and State Universal Service Programs and Challenges to Funding*, GAO-02-187, at 21-23 (rel. Feb. 2002) (“IP Telephony may not be an immediate threat to federal funding of universal service but may threaten its long-term viability.”); See also *Report to Congress* ¶4 (“[O]ur duty and intention [is] to ensure that financial support for federal universal service support mechanisms is maintained”); *Wireline Broadband NPRM*, ¶65 (the Commission will continue to pursue and protect the core objectives of universal service).

^{117/} Section 251(b)(5) of the Act purports extends reciprocal compensation to all “telecommunications,” subject to certain exceptions. See *ISP Order* ¶ 34.

^{118/} 47 U.S.C. § 152.

^{119/} 47 U.S.C. § 251(b); *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366 (1999) (upholding the FCC’s general rulemaking authority to enact rules dealing with the local competition provisions added by the Telecommunications Act of 1996).

^{120/} 47 U.S.C. § 252.

^{121/} *Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing, and End User Common Line Charges*, 12 FCC Rcd. 15982, ¶¶ 344–48 (1997) (“*Access Charge Reform Order*”), *aff’d* by *Southwestern Bell Tel. Co. v. FCC*, 153 F.3d 523 (8th Cir. 1998). The FCC

telephone lines in the same manner and at the same prices as a typical business customer, permitting the ISP to use local telephone networks to link their customers to the Internet at no additional cost for local network access.^{122/}

Despite the exemption for ISPs and the FCC's statements in the 1998 *Report to Congress*, the FCC continued to ponder whether to impose access charges on providers of long distance IP telephony. Eighteen months after the *Report to Congress*, in the *Advanced Services Remand Order*, the FCC reiterated that providers of phone-to-phone IP telephony might become subject to access charges in the future.^{123/} The majority of VoIP providers used these statements and the exemption for ISPs to argue that VoIP services were not subject to access charges.

The FCC's 2001 decision regarding compensation for the termination of ISP-bound traffic may also be instructive as to the FCC's likelihood of imposing access charges or other intercarrier compensation regimes on VoIP traffic. The FCC refused to permit carriers to recover costs for ISP-bound traffic terminated on their networks if the carrier was not terminating such traffic prior to the issuance of the FCC's decision.^{124/} The FCC, in essence, established a "bill-and-keep"^{125/} regime for all carriers not yet terminating ISP-bound traffic. In the *Inter-carrier Compensation NPRM*, the FCC suggested moving to a unified bill-and-keep regime for all intercarrier compensation payments. The FCC noted that a unified scheme was necessary to avoid opportunities for regulatory arbitrage, including the advantage IP telephony providers obtained by being exempt from access charges when traditional interexchange carriers

concluded that ISPs are not subject to the existing access charge system because they use the local telephone network in a manner analogous to other "end users," rather than in the manner that interexchange carriers ("IXCs") use the network. As a result, ISPs were allowed to use the same state-tariffed business services and pay the same federal charges, including subscriber line charges, as other end users. ISPs (and by extension their customers) do not pay any interexchange carrier access charges. See *Access Charge Reform Order* ¶¶ 344–48. The FCC reaffirmed this conclusion in *ISP Order* and *Inter-carrier Compensation NPRM*. See *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Inter-carrier Compensation for ISP-Bound Traffic*, 16 FCC Rcd 9151, ¶ 11 (2001) ("*ISP Order*"), remanded, *WorldCom, Inc. v. FCC*, 288 F.3d 429 (D.C. Cir. 2002) (remanding, but not vacating, the *ISP Order* because the FCC had no basis to rely on Section 251(g) for its determinations), *petition for reh'g and reh'g en banc denied* (Sept. 24, 2002), *cert. denied sub nom*, 123 S. Ct. 1927 (2003); *Developing a Unified Inter-carrier Compensation Regime*, 16 FCC Rcd 9610 ¶ 6 (2001) ("*Inter-carrier Compensation NPRM*").

^{122/} Similarly, the FCC has said that computer-to-computer IP telephony is not a telecommunications service, primarily because vendors who sell the software and hardware needed to make IP voice calls with a computer are merely selling customer premises equipment ("CPE"), not the transmission capacity contemplated in the Act's definition of "telecommunications service." Likewise, the FCC has reasoned that ISPs generally have no way of knowing whether their customers are using Internet access services to make computer-to-computer voice calls or simply to surf the web. See *Report to Congress* ¶¶ 77, 87.

^{123/} *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 15 FCC Rcd 385, ¶¶ 37–38 (1999) (subsequent history omitted).

^{124/} *ISP Order* ¶ 81.

^{125/} *ISP Order* ¶ 2, n.6. Bill and keep is defined as "an arrangement in which neither of two interconnecting networks charges the other for terminating traffic that originates on the other network. Instead, each network recovers from its own end-users the cost of both originating traffic that it delivers to the other network and terminating traffic that it receives from the other network. . . . Bill and keep does not, however, preclude intercarrier charges for transport of traffic between carriers' networks." *Id.*

were not.^{126/} However, the FCC may still be reluctant to impose intercarrier compensation requirements where no exchange of compensation currently exists (e.g., information services, VoIP service).^{127/}

The FCC has been pondering how to proceed with respect to intercarrier compensation for more than two years. In the meantime, the incumbent LECs have sought to extend compensation obligations to third-party telecommunications service providers through their direct relationship with connecting carriers. For example, incumbent LECs Verizon and SBC have initiated court proceedings challenging how carriers they interconnect with route traffic originated by third parties.^{128/} Specifically, Verizon and SBC claim that certain carriers, including VoIP carriers, improperly route traffic to change the jurisdictional nature of traffic in an effort to avoid access charges. In addition, the incumbent LECs are now including provisions in their interconnection agreements with connecting carriers that would make the connecting carrier liable for all charges associated with traffic originated by a third-party at rates the incumbent LEC determines, which in most cases appears to be access charges.^{129/} These legal challenges, incumbent LEC efforts to define regulatory policy through contractual relationships, and the FCC's continued inaction on a unified compensation regime for all carriers, could have implications for the way in which VoIP providers are required to compensate other carriers for the exchange of traffic in the future.

3. Privacy

Under Section 222 of the Communications Act, telecommunications carriers are obligated to protect the privacy of the customer proprietary network information ("CPNI") of their subscribers.^{130/} In its 1998 *Report to Congress*, the FCC acknowledged that IP telephony

^{126/} *Inter-carrier Compensation NPRM* ¶¶ 2, 12.

^{127/} Even if intercarrier compensation rules were extended to IP telephony providers, the obligation of providers to pay compensation to local exchange carriers would depend upon whether and the extent to which, they use the facilities of local exchange carriers to terminate calls. Generally, IP telephony providers would have to interconnect with local exchange carriers in order to terminate calls on the public switched telephone network.

^{128/} See, e.g., Stephen Labaton, *MCI Faces Inquiry For Fraud On Fees For Long Distance*, N.Y. TIMES, July 27, 2003, at 1.

^{129/} See, e.g., Verizon Multistate Template Agreement at Section 8.3, at http://newscenter.verizon.com/policy/nj/appendixh/tab_0001.pdf?PROACTIVE_ID=cecec7ccc6cecfcdc9c5cecfcfcc5cececdc8cbcecccbcf6c5cf (Sept. 22, 2003) ("For any traffic originating with a third party carrier and delivered by ***CLEC Acronym TXT*** to Verizon, ***CLEC Acronym TXT*** shall pay Verizon the same amount that such third party carrier would have been obligated to pay Verizon for termination of that traffic at the location the traffic is delivered to Verizon by ***CLEC Acronym TXT***").

^{130/} 47 U.S.C. § 222; *Implementation of the Telecommunications Act of 1996; Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information; Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended*, 13 FCC Rcd 8061 (1998), *vacated in part*, *US West Inc. v. FCC*, 182 F.3d 1224 (10th Cir. 1999), *cert. denied*, 530 U.S. 1213 (2000); *Implementation of the Telecommunications Act of 1996; Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information; Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended*, 16 FCC Rcd 16506 (2001); *Implementation of the Telecommunications Act of 1996; Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information; Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended*, 17 FCC Rcd 14860 (2002).

might be subject to the FCC's CPNI requirements because it so closely resembles a telecommunications service.^{131/} In another rulemaking examining the use of IP-based telecommunications relay services ("IP Relay"), the FCC likewise sought comment on the extent to which an end-user's proprietary information would remain secure in the IP environment and how the FCC could best protect the privacy of calls made by IP Relay users and the caller profiles of those users.^{132/}

Many consumer protection advocates would be concerned with the privacy ramifications of a move to IP-based telephony because IP telephony networks place all data on a single line, which makes monitoring and surveillance much easier.^{133/} These consumer advocates have therefore urged IP telephony providers to integrate encryption technologies into their service to protect the privacy of IP telephony calls.^{134/}

4. Access by Individuals with Disabilities

Section 255 of the Communications Act requires providers of telecommunications services to ensure that their services are accessible and usable by individuals with disabilities.^{135/} While the Act limits this obligation to telecommunications service providers, the FCC has broadly interpreted this provision to include "all entities that make telecommunications services available,"^{136/} and has used its ancillary jurisdiction to extend Section 255 to providers of voicemail and interactive menu services, which are considered to be information services.^{137/}

The FCC in 2002 issued a Further Notice of Inquiry seeking comment on the application of Section 255 to IP telephony services.^{138/} In the *Further NOI*, the FCC asked about the status of industry efforts to develop accessible IP telephony equipment, especially given the extent to

^{131/} *Report to Congress* ¶ 91, n.189.

^{132/} *Consumer Information Bureau Seeks Additional Comment on the Provision of Improved Telecomm. Relay Service*, Public Notice, 16 FCC Rcd 13100 (2001).

^{133/} *See, e.g., Cost Savings Drive New Web Phone System*, IRISH TIMES, Oct. 20, 2000, at 60; James Gifford, *Is Your VoIP Secure?*, COMPUTER TELEPHONY, Sept. 1, 1999, at 99; Anthony Sawas, *VoIP Net Privacy Threat*, COMPUTER WEEKLY, Nov. 18, 1999, at 4.

^{134/} James Gifford, *Is Your VoIP Secure?*, COMPUTER TELEPHONY, Sept. 1, 1999, at 99.

^{135/} 47 U.S.C. § 255(c).

^{136/} *Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996; Access to Telecommunications Services, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities*, 16 FCC Rcd 6417, ¶ 80 (1999) ("Section 255 Order" and "Further NOI").

^{137/} *Id.* ¶ 93. Notably, however, Chairman Powell issued a separate statement, expressing his "grave concerns" over the FCC's use of ancillary jurisdiction to reach these services given Congress's apparent intent to limit Section 255 to telecommunications services.

^{138/} In addition, the FCC issued a declaratory ruling and second further notice of proposed rulemaking regarding how Internet Protocol Telecommunications Relay Service calls should be classified for compensation purposes. *See generally Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities Petition for Clarification of WorldCom, Inc.*, 17 FCC Rcd 7779 (2002).

which IP telephony would become an effective substitute for traditional circuit-switched technology.^{139/} Chairman Powell stated that the FCC would continue to focus on accommodating special needs, especially in areas the market would not address effectively.^{140/} The FCC favors voluntary industry action in this regard over government regulation, and recognized the Voice on the Net (“VON”) Coalition’s voluntary commitment to ensure that IP telephony services are accessible to individuals with disabilities and that access needs are taken into account in the development of new products and services.^{141/}

There is no uniform standard for the assistive technologies (“ATs”) used by those with hearing disabilities and, therefore, ATs may not be compatible with the new technologies being deployed. As a result, the industry, along with the FCC’s Technology Advisory Council, continues to look at these issues and at possible solutions, such as creating “patches and adaptors” to allow new technologies to work with old AT or migrating persons with disabilities to new AT that may be more compatible with VoIP technology.^{142/}

5. Truth-in-Billing

Under the FCC’s rules, telecommunications common carriers have certain consumer protection obligations, including providing truthful, non-misleading telephone bills to their subscribers.^{143/} These rules require that consumer telephone bills be clearly organized, identify the service provider, contain full and non-misleading descriptions of service offerings, and provide contact information for each service provider on the bill.^{144/} The FCC has described its “truth-in-billing” rules as “fundamental statements of fair and reasonable practices,” and, while it rejected the idea that certain carriers should be wholly exempted from them “solely because competition exists in the markets in which they operate,” it declined to impose the full panoply of truth-in-billing rules on the wireless industry given the lack of consumer complaints about their billing practices.^{145/}

^{139/} Section 255 Order and Further NOI ¶¶ 179–82. The FCC also asked for information regarding a new IP telephony service being used by several carriers to provide relay services to persons with disabilities. See, e.g., *Consumer Information Bureau Seeks Additional Comment on the Provision of Improved Telecomm. Relay Service*, Public Notice, 16 FCC Rcd 13100 (2001); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, 15 FCC Rcd 5140 (2000).

^{140/} FCC Chairman Michael Powell, Remarks Before the Federal Communications Bar Ass’n, available at <http://www.fcc.gov/Speeches/Powell/2001/spmkp105.html> (Jun. 21, 2001).

^{141/} Section 255 Order and Further NOI ¶ 176; see also Letter from Bruce D. Jacobs, Counsel to the VON Coalition, to Magalie R. Salas, Secretary, Federal Communications Commission, WT Docket No. 96-198 (July 7, 1999) (available at <http://www.fcc.gov/e-file/ecfs.html>). The VON Coalition, a trade association with member companies involved in the development of voice services using data networks, including the Internet, included service providers such as Delta Three, IDT, ITXC, and USA Global LINK, and their suppliers, including Cisco, Intel, Microsoft, Netspeak, and Vocaltec.

^{142/} John Spofford, *Voice-Over-IP Deployment*, COMMUNICATIONS DAILY, Sept. 19, 2002, at 6.

^{143/} 47 C.F.R. §§ 64.2400-01.

^{144/} 47 C.F.R. § 64.2401.

^{145/} *Truth-in-Billing and Billing Format*, 14 FCC Rcd 7492, ¶¶ 13-14 (1999).

Even before IP telephony providers become a significant source of competition for traditional local exchange carriers, they may find themselves subject to these or other similar consumer protection obligations either because they are held to be common carriers or because the FCC asserts ancillary jurisdiction to extend these obligations to them. Moreover, if states perceive a void in this area, they may attempt to impose consumer protection requirements of their own on providers of IP telephony.^{146/} The FCC’s truth-in-billing rules specifically state that they do not “preempt the adoption or enforcement of consistent truth-in-billing requirements by the states.”^{147/}

6. Communications Assistance for Law Enforcement Act (CALEA)

Congress enacted CALEA to ensure that law enforcement officials with proper authorization are able to conduct electronic surveillance effectively and efficiently in the face of rapid advances in telecommunications technology.^{148/} CALEA applies only to “telecommunications carriers,” which are defined under CALEA to include any “person or entity engaged in the transmission or switching of wire or electronic communications as a common carrier for hire.”^{149/}

The FCC, in its 1999 order implementing CALEA, found that facilities that are used to provide both telecommunications and information services are subject to CALEA, but facilities “used solely to provide” information services are not.^{150/} The FCC indicated that it did so in order to reach only those “services or facilities that provide a customer or subscriber with the ability to originate, terminate or direct communications.”^{151/} A finding that IP telephony is an information service therefore would not necessarily relieve providers from complying with CALEA.

Moreover, the FCC has authority under CALEA to reach any provider of “wire or electronic communication switching or transmission service to the extent that . . . such service is a replacement for a substantial portion of the local telephone exchange service.”^{152/} This

^{146/} See, e.g., *Rulemaking on the Commission’s Own Motion to Establish Consumer Rights and Consumer Protection Rules Applicable to All Telecomm. Utilities*, Interim Opinion Adopting Interim Rules Governing the Inclusion of Non-communications-Related Charges in Telephone Bills, 212 P.U.R.4th 282 (Cal. P.U.C. July 12, 2001) (establishing rules to implement billing safeguards for non-communications related products and services in telephone bills).

^{147/} 47 C.F.R. § 64.2400(c).

^{148/} 47 U.S.C. §§ 1001–21.

^{149/} 47 U.S.C. § 1001(8).

^{150/} *Communications Assistance of Law Enforcement Act*, 15 FCC Rcd 7105, ¶ 27 (1999) (“*CALEA Second Report and Order*”).

^{151/} *CALEA Second Report and Order* ¶ 11. For example, the FCC included an “illustrative” list of providers subject to CALEA, including LECs, long distance providers, competitive access providers, cellular carriers, PCS providers, satellite-based service providers, cable operators, and electric and other utilities that provide telecommunications services for hire to the public, and any other wireline or wireless service for hire to the public. *Id.* ¶ 10.

^{152/} 47 U.S.C. § 1001(8)(B)(ii) (2000).

provision arguably provides the FCC with authority to reach providers of IP telephony, and the FCC may decide to exercise such authority at the behest of the FBI or other law enforcement agencies once IP telephony becomes more widespread.^{153/} In this vein, the FBI and Department of Justice filed comments with the FCC in 2003 noting the importance of the FCC's broadband proceedings to CALEA. Specifically, the FBI and DOJ argued that "if certain broadband telecommunications carriers fail to comply with CALEA due to a misunderstanding of their regulatory status, criminals may exploit the opportunity to evade lawful electronic surveillance."^{154/} In addition, the FBI and DOJ have asked the FCC to rule that wireline and cable modem Internet access providers are telecommunications carriers subject to CALEA but have no CALEA obligations insofar as they are engaged in providing information services.^{155/}

The application of CALEA requirements to VoIP becomes of greater importance in a time of increased homeland security. Some in the industry predicted in 2002 that the FBI's stricter enforcement of CALEA requirements would "eliminate the ability to deploy VoIP networks" given that CALEA is an integral part of homeland security.^{156/} Recognizing the inherent difficulties in VoIP networks meeting CALEA's requirements, the industry is working together "to create [an] interoperable IP network capable of replacing today's circuit switched network." Despite these voluntary efforts, after the September 11th attacks, it may be difficult to convince regulators that VoIP networks are not required to comply with CALEA obligations. As one industry expert stated, "Security is the voice over IP showstopper."^{157/}

7. Access to Numbers

Verizon, Qwest, and BellSouth (the "BOCs") submitted a White Paper in 2002 to the North American Numbering Council regarding the implications of IP telephony on the FCC's number allocation policies,^{158/} claiming VoIP providers threatened to exhaust the pool of telephone numbers. The companies urged the FCC to consider how numbers get distributed to VoIP providers. The provision of foreign exchange services (*i.e.*, customers in California having telephone numbers with New York area codes) was the primary concern raised in the paper. In

^{153/} See, e.g., *Communications Assistance of Law Enforcement Act*, 14 FCC Rcd 16794, ¶ 55 (1999) (asking TIA to study CALEA solutions for packet-mode technology); *vacated in part and remanded, United States Telecomm. Ass'n v. FCC*, 227 F.3d 450 (D.C. Cir. 2000). The applicability of CALEA to packet-switched communications generally remains unsettled. See *Communications Assistance for Law Enforcement Act*, 16 FCC Rcd 17397 (2001).

^{154/} Comments of Federal Bureau of Investigation and Department of Justice, WC Docket No. 03-45 (filed Mar. 14, 2003).

^{155/} *Ex Parte* Presentation of Federal Bureau of Investigation and Department of Justice, CC Docket Nos. 02-33, 95-20, 98-10, CS Docket No. 02-52 (filed July 11, 2003).

^{156/} John Spofford, *Regulation and Security to Shape VoIP Standards, Experts Say*, COMMUNICATIONS DAILY, Aug. 14, 2002, at 2-3.

^{157/} *Id.*

^{158/} BellSouth, Qwest and Verizon, *VoIP Numbering Issues* (Nov. 12, 2002) (White Paper presented to the North American Numbering Council ("NANC") at the NANC Nov. 19-20, 2002 Meeting), available at http://www.nanc-chair.org/docs/Nov/Nov02_VoIP_White_Paper.doc.

response, AT&T submitted a paper questioning whether VoIP numbering issues were “much ado about nothing” and recommended against any changes in the current guidelines.^{159/}

The BOCs asked whether the number assignment rules should apply to VoIP providers. These rules do not apply to IP telephony providers because VoIP providers do not have an independent right to obtain numbers. Arguably, if the numbering rules are to be applied to VoIP providers, they should also be given direct access to numbers.

E. Possible State Regulation of VoIP Services

On the state side, proposed local VoIP services appear to offer a service that provides customers with a service that originates and terminates in the state.^{160/} The application of this technology for the provision of local exchange services raises a host of new issues beyond universal service, access charges, and other federal obligations identified above. These include whether providers of local IP telephony services should be subject to the same basic local exchange service requirements that traditional local exchange carriers are subject to, such as the requirement to provide 911 emergency services; equal access to long distance carriers; state entry regulation; tariffing and other regulatory compliance obligations including miscellaneous surcharges; number portability; resale; and interconnection.

1. 911 Emergency Services

Most states require local exchange carriers to provide access to public safety and emergency services as a requirement for offering service in the state.^{161/} Such requirements are usually imposed on all providers of local exchange service, regardless of the technology used to provide that service. Providing access to 911 emergency services over IP-based networks appeared to be technically feasible as of 2001.^{162/}

^{159/} AT&T, *VoIP Numbering Issues - Much Ado About Nothing?* (Jan. 22, 2003) (White Paper presented to the North American Numbering Council (“NANC”) at the NANC Jan. 22, 2003 Meeting), at <http://www.nanc-chair.org/docs/documents.html>.

^{160/} See, e.g., COMMUNICATIONS DAILY, *Top MSOs Wait Till Next Year for VoIP Launches*, Mar. 13, 2003 (noting that Cox engineers and marketers would hold technical and field trials in preparation for service introductions in 2004); COMMUNICATIONS DAILY, *VoIP's Triumph Coming, But Ver-r-r-ry Slowly, AT&T Labs Says*, Mar. 13, 2003 (recognizing that local VoIP services are evitable); COMMUNICATIONS DAILY, July 23, 2002 (explaining that Comcast hoped to roll out VoIP in parts of Philadelphia in the second quarter of 2003).

^{161/} See, e.g., *Proceeding on Motion of the Commission to Examine Issues Related to the Continuing Provision of Universal Service and to Develop a Regulatory Framework for the Transition to Competition in the Local Exchange Market*, Case 94-C-0095, Opinion and Order Adopting Regulatory Framework, at 13, Opinion No. 96-13 (N.Y. P.S.C. May 22, 1996).

^{162/} See, e.g., *Stalking the IP Golden Egg*, CED MAGAZINE, available at <http://www.cedmagazine.com/ced/0004/0004b1.htm> (Apr. 2000) (stating that both Telecordia and Cisco have developed IP software with 911 capabilities); *PROGNOSIS IP Telephony Manager - Overview*, INTEGRATED RESEARCH, at <http://www.ir.com/avvid2.asp?Id=225> (last visited July 12, 2001) (advertising IP telephony management software that includes 911 applications).

While state law generally governs local 911 service, the FCC has recognized its importance for all telecommunications end-users,^{163/} and the FCC has investigated whether to apply some form of 911 requirements to VoIP services.^{164/} The FCC acknowledged that the use of VoIP technology raised significant technical issues in relation to the provision of callback and location information to the relevant PSAP.^{165/} Because the selective routers that handle E911 calls have difficulty processing the protocols associated with VoIP, an additional network element might be needed to accomplish the necessary protocol conversion.

Given the federal and state interest in ensuring access to emergency services for all Americans, providers of IP-based local telephone services may be required to provide access to 911 services for their customers. Even if IP telephony is marketed as a “secondary” or “no frills” offering, regulators may not be willing to tolerate the possibility that the inability to reach an emergency service provider over an IP line could lead to death or serious injury.

A greater challenge for IP telephony providers, however, may be ensuring that customers can complete calls in an emergency. The electricity that comes in over the phone line, which allows phones to continue to operate even during a power outage, powers most conventional single line phones.^{166/} Because packet-switched networks do not have the same built-in power source that circuit-switched networks do, they are far more likely to be subject to service outages.^{167/} To address similar reliability concerns, many states currently require cable operators that provide telecommunications services to supply a backup power source or a “network reliability unit.”^{168/} IP telephony providers may be subjected to similar backup power requirements as they become more prevalent substitutes for circuit-switched services.^{169/}

^{163/} Providing non-discriminatory access to 911 services to new entrants is a prerequisite for Bell operating companies seeking FCC authorization to provide interLATA service under Section 271. 47 U.S.C. § 271(c)(2)(B)(vii). In fact, Ameritech’s failure to provide such access contributed to the dismissal of its application to provide interLATA service in Michigan. *See Application of Ameritech Mich., Pursuant to Section 271 of the Comm. Act of 1934, as amended, to Provide In-Region, InterLATA Services in Michigan*, 12 FCC Rcd 20543, ¶ 5 (1997) (rejecting application for failure to provide nondiscriminatory access to operations support system, interconnection, and 911 and E911 services). The FCC also requires wireless carriers to provide access to emergency services for their subscribers. *See* 47 C.F.R. § 20.18

^{164/} *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 17 FCC Rcd 25576, ¶ 113 (2002) (“911 NPRM”).

^{165/} 911 NPRM ¶ 113.

^{166/} NEWTON’S TELECOM DICTIONARY 19 (15th ed. 1999). If the AC power fails, the telephone system can still operate by switching to a backup battery power supply, often called an uninterruptible power supply. *Id.* at 618.

^{167/} David Wallace, *Using the Internet to Cut Phone Calls Down to Size*, N.Y. TIMES, July 19, 2001.

^{168/} *See, e.g., DPUC Investigation into CoxCom, Inc. D/B/A Cox Comm. Conn.’s Installation of Ground-Mounted Back-Up Generators*, Docket No. 00-03-09, Decision (Conn. D.P.U.C. Feb. 7, 2001).

^{169/} *See, e.g.,* Press Release, American Power Conversion, American Power Conversion Offers Industry’s First Power Protection Solution Designed for Cable Telephony and Fixed Wireless Comm., at <http://www.apcc.com/corporate/press-room/> (July 27, 1999) (announcing “PowerShield” which supplies eight to ten hours of battery backup for communication services during power outages); Product Introduction, *CyberFone Appliance*, at <http://www.cyberfone.com/products.html> (2001) (offering a “telephony appliance” that offers at least 30 minutes of backup power).

As is the case with conventional wireline telephone service, state regulators of providers of local IP telephony may impose a 911 requirement. Even without such requirement, IP telephony providers may face civil liability for failure to connect emergency calls if death or injury results. Providers may attempt to reduce their liability in emergencies by conspicuously disclosing the limitations of their service to prospective customers, but such disclosures are unlikely to prevent lawsuits. The risk of liability will remain as long as there is a possibility that customers will not be able to complete calls in an emergency, and may increase if IP providers market their services as seamless substitutes for traditional phone service. Compliance with 911 regulations made applicable to IP telephony may be the most effective protection against such lawsuits.^{170/}

2. Equal Access to Long Distance Carriers

Local exchange carriers providing wireline services must provide their subscribers with equal access to long distance providers under the FCC's rules.^{171/} Equal access allows end users to access the facilities of the long distance carrier of their choice by dialing "1" or a five-digit access code (10XXX).^{172/} CLECs have offered subscribers equal access, in large part, because state regulations require them to,^{173/} although their obligation to do so under federal law has been unclear.^{174/} The FCC did not even propose to apply equal access obligations to all wireless carriers until 1994, twelve years after the first cellular licenses were awarded.^{175/} It may be likely to be hesitant to apply equal access requirements to other emerging technologies like IP

^{170/} Cf. Pub. L. No. 106-81, § 4 (giving wireless carriers the same protection from liability as landline carriers in processing emergency calls).

^{171/} 47 U.S.C. § 251(g); see also *MTS and WATS Market Structure Phase III*, 100 F.C.C.2d 860, 862 (1985).

^{172/} *Investigation of Access and Divestiture Related Tariffs*, 101 F.C.C.2d 911, ¶ 1 (1985).

^{173/} See generally Case Nos. 00-C-0897, 00-C-0188, *Complaint of AT&T Comm. of N.Y., Inc. Against Bell Atl.-N.Y. Concerning Bell Atl.-N.Y.'s Mgmt. of the Primary Interexchange Carrier (PIC) Program, Proceeding on Motion of the Commission to Examine the Migration of Customers Between Local Carriers*, Notice Inviting Comments, (N.Y.P.S.C. Dec. 28, 2000) (investigating the development of a system for freeze administration that will address the alleged shortfalls of the presubscription system); Docket No. 00-11-08 *Application of Verizon N.Y. to Introduce Rates and Regulations for Unauthorized ISP PIC Changes*, Decision, (Conn. D.P.U.C. Dec. 27, 2000) (approving Verizon's tariff for rates and regulations for unauthorized ISP PIC changes so that the charges will be assessed to the alleged unauthorized ISP carrier).

^{174/} Compare 47 U.S.C. § 251(g) (requiring "each local exchange carrier" to provide equal access) with *Universal Service Order* ¶ 79 (explaining that statutory and policy considerations prevent the extension of "symmetrical" equal access obligations to all carriers receiving universal service support); see also *Notice of Inquiry Concerning a Review of the Equal Access and Nondiscrimination Obligations Applicable to Local Exchange Carriers*, 17 FCC Rcd 4015 (2002) (examining whether CLECs should be subject to equal access obligations).

^{175/} *Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Services*, 9 FCC Rcd 5408, 5412-50 (1994). These equal access requirements were later repealed with respect to wireless carriers. 47 U.S.C. § 251(g) (applying equal access obligations to local exchange carriers providing wireline services).

telephony.^{176/} The related ban on unauthorized changes of a subscriber's carrier selection, or "slamming," also applies to all telecommunications carriers except CMRS providers.^{177/}

3. Entry Regulation, Resale, Number Portability, and Interconnection

State commissions vary radically in their application of entry regulations. Most states continue to require any entity engaged in the provision of intrastate telecommunications services to seek authority prior to providing such services, and in many instances, these requirements apply to carriers providing only dedicated services or even resold services.^{178/} Consequently, if phone-to-phone IP telephony services were determined to be intrastate telecommunications services, the provision of such services by a new entrant might be subject to entry regulations.

Once such services are deemed to be telecommunications services the provider becomes subject to all local exchange carrier requirements of the Act, including number portability, resale and interconnection obligations.^{179/} These obligations may pose special problems for local VoIP providers utilizing new technologies to offer their services. Alternatively, where such services are not determined to be telecommunications services and VoIP providers are not recognized carriers, these providers have no legal right to interconnect with other carriers^{180/} or right to obtain telephone number resources. Both of these components are critical to a successful local voice service offering and could pose a practical barrier to entering or sustaining a position in the local marketplace.

^{176/} *But see Provision of Directory Listing Information Under the Communications Act of 1934, as Amended; The Use of N11 Codes and Other Abbreviated Dialing Arrangements; Administration of the North American Numbering Plan*, 17 FCC Rcd. 1164, ¶ 15 (2002) (seeking comment on whether to apply equal access requirements to 411 service).

^{177/} 47 C.F.R. §§ 64.1100–90.

^{178/} *See, e.g.*, 16 CONN. GEN. STAT. 247(a)(1); NY CLS PUB SER § 99.

^{179/} 47 U.S.C. § 251(b) (outlining the obligations of all local exchange carriers).

^{180/} *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, 11 FCC Rcd 15499, ¶ 995 (1996) (subsequent history omitted).