

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Technology Transitions Policy Task Force)	
Regarding Potential Trials)	GN Docket No. 13-5
)	
Petition of US Telecomm Association for)	WC Docket No. 13-3
Declaratory Ruling That Incumbent Local Exchange)	
Carriers Are Non-Dominant in the Provision of)	
Switched Access Services)	
)	
Numbering Policies for Modern Communications)	WC Docket No. 13-97
)	
Petition of AT&T To Launch a Proceeding)	GN Docket No. 12-353
Concerning the Time-Division-Multiplexing)	
To Internet Protocol Transition)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
IP Enabled Services)	WC Docket No. 04-36
)	
Federal-State Joint Board on Universal Service)	CC Docket No. 96-45
)	
Application of Verizon New Jersey, Inc. and)	WC Docket No. 13-150
Verizon New York, Inc. to Discontinue Domestic)	
Telecommunications Services)	

**REPLY COMMENTS OF
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

The Pennsylvania Public Utility Commission (Pa. PUC) files these Reply Comments on Comments filed in the FCC's Public Notice in WC Docket No. 13-97 at DA 13-12126 issued on May 24, 2013 (the FCC Notice) and published in the Federal Register at 78 Fed. Reg. 31,542 (May 24, 2013). The FCC Technology Transitions Policy Task Force (FCC Task Force) seeks input on what to consider for real-world trials to obtain data that will be useful in setting the appropriate policies for promoting investment and innovation in modern networks, particularly Internet Protocol (IP), protecting consumers, promoting competition, and ensuring that all-IP

networks are resilient. The Comment and Reply Comment deadlines are July 8, 2013 and August 7, 2013, respectively.

The FCC Task Force seeks input on VoIP interconnection, Next Generation 911 (NG 911), replacing incumbent wireline facilities with wireless for voice and broadband, and more precise parameters on AT&T's proposed wire center trials for IP technology transition inclusive of regulatory treatment and the role of the states (IP Trials).

The Pa. PUC already filed Comments in related dockets addressing IP matters in WC Docket Nos. 13-3 (*USTA Petition to Declare ILECs as Non-Dominant Carriers in the provision of access services*) and GN 12-353 (*AT&T and National Telecom. Cooperative Association Petitions to Launch a TDM-to-IP Transition Proceedings*) on March 13, 2013. The Pa. PUC filed most recently in the *VoIP Direct Access to Numbering NPRM* at WC Docket No. 13-97. The Pa. PUC incorporates those filings and other related Pa. PUC filings as well in support of these Reply Comments.

As an initial matter, the Pa. PUC appreciates this opportunity to file Reply Comments. These Reply Comments should not be construed as binding on any matter pending before the Pa. PUC. The positions taken herein could change in response to later events, including developments in state or federal law and review of Comments, Reply Comments, or Ex Parte filings submitted in this or other dockets. Finally, the Pa. PUC's participation in this proceeding is without prejudice to the ongoing appellate litigation between the Pa. PUC and others currently pending in the 10th Circuit Court of Appeals at Docket Nos. 10-1099 *et seq.* that involves the FCC's November 18, 2011 *USF/ICC Transformation Order* at WC Docket No. 10-90 *et al.*

In addition, these Reply Comments reiterate the Pa. PUC positions set out in prior FCC proceedings. These proceedings include, among others, the National Broadband Plan, the Connect America Fund proceeding, various forbearance requests, intercarrier compensation matters, federal preemption, universal service, the ongoing ICC/USF Order, and ancillary proceedings such as the pending petitions on retirement of copper in the existing network and

the Triennial Regulatory Review Order (TRRO) proceedings.¹

The Pa. PUC urges the FCC to act in a way that: (1) preserves the structure of joint federal-state regulation premised on constitutional and cooperative federalism; (2) retains a modified form of common carriage on networks providing information to consumers regardless of the technology or provider; (3) promotes reasonable access to networks by incumbents and competitors on comparable terms regardless of technology so that consumers obtain the benefits of effective competition in the delivery of traditional and advanced services; and (4) ensures that networks providing information to consumers are safe, reliable, and provide good quality of service at reasonably comparable rates while supporting universal service, Telecommunications Relay Service, 911, and other important policy mandates of the states and the Congress.

¹ *In re: Verizon Petition for Forbearance In the Boston, New York, Philadelphia, Pittsburgh, Providence, and Virginia Beach Metropolitan Statistical Areas*, Docket No. 06-172, Pa. PUC Comments (March 6, 2007), Reply Comments (April 18, 2008); *In re: Petitions of Embarq and Verizon for Forbearance From Certain ARMIS Reporting Requirements*, Docket Nos. 07-204 and 7-273 (March 17, 2008); *In re: Petition of XO Communications for Rulemaking on ILEC Retirement of Copper Loops*, Docket No. RM 11358, Comments of the Pa. PUC (April 2, 2007); *In re: Federal-State Joint Board on Universal Service*, Docket No. 96-45 and WC 05-337, Comments of the Pa. PUC (April 27, 2008), *In re: Petition of AT&T For Waiver of ESP Exemption of Access Charges for VoIP Providers*, Docket No. 08-152, Comments of the Pa. PUC (August 21, 2008); *In re: Petition of AT&T For Declaratory Ruling and Limited Waivers*, Docket Nos. 08-152, Comments of the Pa. PUC (August 21, 2008); *Embarq Local Operating Companies and AT&T For Interim Limited Relief*, Docket Nos. 08-160 and 08-152, Reply Comments of the Pa. PUC (September 5, 2008); *In re: Universal Service Contribution Methodology* and *In re: Intercarrier Compensation Reform*, Docket Nos. 06-122 and 01-92, Reply Comments of the Pa. PUC (December 27, 2008); *In re: Deployment of Advanced Telecommunications to All Americans*, Docket Nos. 09-137 and 09-51, Comments of the Pa. PUC (September 4, 2009); *In re: National Broadband Plan Notice No. 25: Transition From Circuit-Switched to All-IP Network*, Comments of the Pa. PUC (December 21, 2009); *In re: Framework for Internet Service and Broadband National Plan For Our Future*, Docket Nos. 10-127 09-51, 07-52, Comments of the Pa. PUC (July 15, 2012) and Reply Comments (October 6, 2011); *In re: Issues in the Open Internet Proceeding, et al.*, Docket Nos. 10-127, 09-51, and 07-52, Further Comments of the Pa. PUC (October 12, 2010); *In re: Modernizing the FCC Form 477 Data Form*, Docket Nos. 11-10, 07-37, 08-190, and 10-132, Comments of the Pa. PUC (April 1, 2011); *In re: Connect America Fund et al.*, WC Docket No. 10-90 *et al.*, Reply Comments of the Pa. PUC (May 23, 2011); *In re: Connect America Fund et al.*, WC Docket No. 10-90 *et al.*, Further Comments and Legal Analysis Memorandum of the Pa. PUC (August 24, 2011) and Reply Comments of the Pa. PUC (September 6, 2011); *In re: Petition of Vaya Telecom, Inc. For Declaratory Ruling on LEC-to-LEC VoIP Traffic Exchanges*, Docket Nos. 01-92, 11-119, and 99-200, Comments of the Pa. PUC (October 6, 2011); *In re: Connect America Fund*, WC Docket No. 10-90 *et al.* (January 17 and January 18, 2012); *In re: Connect America Fund*, WC Docket No. 10-90 *et al.*, Reply Comments of the Pa. PUC (February 17, 2012), Comments of the Pa. PUC (March 9, 2012); *In re: Connect America Fund, NPRM*, WC Docket No. 10-90 *et al.*, Reply Comments of the Pa. PUC (February 17, 2012) and (March 9, 2012); *In re: Connect America Fund and Petition of Sprint for Declaratory Ruling Regarding Century Link's Access Tariff to VoIP Originated Traffic*, Reply Comments of the Pa. PUC (July 16, 2012); *In re: Petition of USTA To Declare That ILEC Carriers Are Non-Dominant, Dominant Carriers, Petition of AT&T To Launch A Proceeding Concerning TDM-to-IP Transition, NTCA Petition For a Rulemaking to Promote and Sustain the TDM-to-IP Evolution*, GN Docket Nos. 13-5, 12-353, Reply Comments of the Pa. PUC (March 12, 2013); *In re: Connect America Fund NPRM on Issues L-R*, WC Docket No. 10-90 *et al.*, Reply Comments of the Pa. PUC (March 30, 2012); *In re: Improving 911 Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS Docket Nos. 13-75 and 11-60, Comments of the Pa. PUC (May 13, 2013); *In re: Numbering Policies For Modern Communications*, WC Docket No. 13-97, Comments of the Pa. PUC (July 19, 2013).

Summary of the Reply Comments

FCC Action Following Referral to the Joint Board. The best way to accomplish the parameters governing any IP Trials is by a referral to, and recommendations from, the Federal – State Joint Board on Universal Service (Joint Board). A referral should specifically require interaction with the states and stakeholders on the future approach to the promotion and deployment of VoIP and IP systems, networks, or services, including how to comply with the universal service mandates of Section 254, with information that is both sufficient and transparent for the public to evaluate. The recommendations that the Joint Board should address include but should not be limited to:

- Classifying physical facilities used to provide VoIP or IP networks, systems, or services as telecommunications or information service;
- Allocating jurisdictional oversight on IP Trials between the states and the FCC in the conduct of IP Trials over telecommunications networks, systems, and services; and
- States’ laws and rules on how to address the potential abandonment of wireline network facilities that may happen either concomitant with, or after, the contemplated IP Trials.

Before a referral, the FCC should identify additional issues and suggest resolutions for consideration. Also, the FCC should refer the matter to the Joint Board with sufficient flexibility that the Joint Board can examine and provide recommendations on other issues. This includes competitors’ access to VoIP and IP networks, systems, or services. It also includes the collection and dissemination of IP Trial data in real-time and at the conclusion so that stakeholders and the public can assess the results. This approach is consistent with the NTCA Comments stressing that more definition is needed for IP Trials and there is a need for clear “rules of the road” governing IP Trials.² However, the Pa. PUC disagrees that any current rules, particularly those of the states where IP Trials may occur, should be modified or waived without input and consent from the state.

² *In re: IP Transition*, GN Docket No. 13-5, Comments of NTCA (July 8, 2013), pp. 1-2 and 13-17.

FCC Action Without Referral To The Joint Board. If the FCC acts without a referral, the Pa. PUC supports those comments asking the FCC to address matters that need resolution prior to any IP Trials, notwithstanding the fact that difficult decisions sometimes engender the risk of judicial appeals.

First, the Pa. PUC supports comments asking the FCC to decide long-standing cases on matters at issue in any IP Trial. This includes, at a minimum, classifying VoIP and IP networks, systems, and services as telecommunications subject to the joint jurisdiction of the FCC and the states. Such a classification is an effective legal vehicle to end the current regulatory uncertainty and confusion on the legal classification of VoIP service. Of necessity and consistent with the principle of cooperative federalism, such a classification must respect state laws and not preempt them. At the same time, the FCC can and should act when a state cannot or will not act consistent with Section 253.

Second, a decision is required on the application of Section 251/252 to IP Interconnection. The FCC should apply Section 251/252 to IP interconnection, which would involve conventional interconnection agreements that are reviewed and approved by state commissions, commercial agreements, agreements among the parties, and Section 251/252 mediation and arbitrations that are carried out under the auspices of state commissions. The FCC and the states must retain their role in mediation and arbitration as a regulatory backstop to ensure that markets remain open and necessary consumer protections are addressed. This prevents carriers or providers from engaging in discriminatory or anticompetitive behavior such as potentially favoring their own unregulated affiliates or subsidiaries over competitors in IP-to-IP interconnection arrangements. This joint role of the FCC and the states follows from the determination that VoIP and IP networks, systems, and services are telecommunications and subject to joint jurisdictional oversight as opposed to the information services classification that may be subject only to the FCC's jurisdiction.

Regarding the IP Trial process, the Pa. PUC agrees that IP Trials should be transparent, optional to the consumers, involve the states, and be provided on a balanced basis between urban, rural, and remote locations in consultation with the states.³ In particular, the FCC should consult with, and obtain consent from, those states expressing an interest in participating in an IP Trial. The consenting states and the FCC must address how to reconcile the participating states' laws and regulations governing the potential abandonment of wireline service or facilities under state law with any IP Trials. A corollary to this must be full and informed consumer consent with a right of return to the incumbent carrier without obviating that incumbent carriers' carrier of last resort or universal service obligations. The Pa. PUC also agrees with the Joint Comments of the Minnesota Public Utilities Commission and Department of Commerce (Minnesota Comments) that reports and data for IP Trials should be required and publicly available.⁴

IP Interconnection should be subject to a mandate to support universal service, TRS, and 911. The same requirements applied to conventional telecommunications 911 networks should apply when it comes to reliability, back-up power requirements, security, dispute resolution, and location information for NG 911 networks. The evolution to a different technology does not change law and current law requires state mandates to be competitively neutral, preserve universal service, and promote competition wherever possible.

Extended Discussion

1. *FCC Action Should Follow A Joint Board Referral.* The Pa. PUC supports recently filed ex parte submissions and NARUC resolutions urging the FCC to conduct IP Trials following a referral to the Federal-State Joint Board on Universal Service and their recommendation. A referral ensures that the FCC obtains formal and reliable input from the states about FCC Task Force IP Trials, an important consideration given the universal service mandates set out in Section 254, 47 U.S.C.A. § 254, of the Telecommunications Act of 1996

³ *In re: IP Transition*, Docket GN No. 13-5, Comments of Bull's-eye Telecomm (July 8, 2013), p. 5; *In re: IP Transition*, Docket GN 13-3, Minnesota Comments (July 8, 2013), p. 2.

⁴ *In re: IP Transition*, Docket No. GN 13-5, Minnesota Comments, (July 3, 2011), pp. 1-3.

(TA-96).

The recommendations from the Joint Board should address, but not be limited to, classifying physical facilities used to provide VoIP or IP networks, systems, or services as telecommunications or information service. The Joint Board should submit recommendations on the allocation of jurisdictional oversight on IP Trials between the states and the FCC in the conduct of IP Trials over telecommunications networks, systems, and services. This requires a recommendation on how to implement VoIP-PSTN, VoIP-Wireless, and IP-to-IP interconnection under Sections 251/252, 47 U.S.C. §§ 251 and 251. The recommendation must also provide a way to identify those localities, states, regions, or tribal areas that can opt-in to participate in any IP Trials. However, those areas chosen for IP Trials should represent a balanced mix of urban, rural, and suburban areas that are geographically representative on a national basis. In addition, the recommendation should propose how to include 911⁵ and TRS providers in any IP Trials with a particular regard to NG 911 and IP TRS.

The referral should address the states' laws and rules on how to manage the potential abandonment of wireline network facilities that may happen either concomitant with, or after, the contemplated IP transition Trials. This is particularly important given that proponents of IP Trials seek to replace incumbent wireline facilities with wireless facilities, sometimes on a mandatory migration basis.⁶ This is critical in those areas where AT&T is the incumbent provider and seeks to conduct not only selected wire center IP transition Trials but also seeks to apply broad deregulatory proposals including the explicit or implicit use of federal preemption of the states.⁷

Finally, the FCC should refer the matter with sufficient flexibility that the Joint Board can examine and provide recommendations on other issues. This includes competitors' access to VoIP and IP networks, systems, or services. It also includes the collection and dissemination of IP Trial data in real-time and at the conclusion so that stakeholders and the public can assess

⁵ *In re: IP Transition*, GN Docket No. 13-5, Comments of NTCA, (July 8, 2013), pp. 15-17.

⁶ *In re: IP Transition*, GN Docket No. 13-5, AT&T Comments (July 8, 2013), p. 17.

⁷ *See generally In re: IP Transition*, GN Docket No. 13-5 and WC Docket No. 10-90, Initial Comments by State Members of the Federal-State Joint Board on Universal Service, (January 28, 2013), pp. 4-9. (State Members Comments).

the results. This approach is consistent with the NTCA Comments stressing that more definition is needed for IP Trials and there is a need for clear “rules of the road” governing IP Trials.⁸ However, the Pa. PUC disagrees that any current rules, particularly those of the states where IP Trials may occur, should be modified or waived without input and consent from the state.

The Pa. PUC believes that referral is supported by the Intergovernmental Advisory Committee (IAC) Comments stressing the importance of serious consumer concerns raised by IP Trials.⁹ The Pa. PUC shares the IAC’s concern about the need to address the negative impacts to public safety,¹⁰ economic development, and consumer affordability i.e., universal service, in what are essential services.

The Pa. PUC appreciates the IAC’s observation that consumer protections and affordability impact the states and local and tribal governments as consumers of technology systems that are the focus of any IP Trials.¹¹ That reality is independent of their responsibilities for services provided by carriers with Carrier of Last Resort (COLR) obligations tied to their state certificates.¹²

The Pa. PUC supports the IAC’s observation that if broadband and wireless are viewed as essential services, it follows that service providers should not be permitted to impose technologies that provide lesser service over the long term. However, there must be a limited

⁸ *In re: IP Transition*, GN Docket No. 13-5, Comments of NTCA (July 8, 2013), pp. 1-16, particularly 1-2 and 13-17.

⁹ *In re: IP Transition*, GN Docket No. 13-5, IAC Comments, pp. 1-3.

¹⁰ *In re: IP Transition*, GN Docket No. 13-5, IAC Comments, p. 1; Comments of Bexar Metro 911 (July 8, 2013 (Bexar Comments)). The Pa. PUC appreciates and commends Bexar’s willingness to participate in any Next Generation 911 (NG 911) trial. However, the IP Trials under consideration in this proceeding include, and are also more extensive than, NG 911, a complex subject already under consideration in Dockets Nos. PS 11-153, 10-255, 13-64 and, more recently, PS Docket Nos. 13-75 and 11-60 (the “Derecho Report and 911 reliability” proceedings). The Bexar Comments, however, underscore the need for a Joint Board referral and the classification of VoIP and IP systems and services. The Pa. PUC would expect the Joint Board and Bexar Metro 911 to address Bexar’s offer, likely with input from the Texas Public Utility Commission. The Pa. PUC also expects the FCC and Joint Board to draw upon the experience of California’s Governor’s Office of Emergency Services (CalOES), California Public Utility Commission, and the Indiana Regulatory Commission (IURC) with NG 911 in light of California’s experiences and trials as well as Indiana’s creation of a statewide emergency calling operation (IN911) in 2006 that is now using a full Emergency Service Internet Protocol Network (ESInet) in 19 Indiana county Public Safety Answering Points (PSAPs). Comments of the IURC (July 8, 2013), pp. 3-4. At a minimum, the IURC and California experience support a referral in order to closely consider IP systems and services for 911 with some recent industry conclusions that, at most, one to four IP interconnection points nationwide are all that is needed to provide wireless service.

¹¹ *In re: IP Transitions*, GN Docket No. 13-3, IAC Comments, p. 1 and n. 3.

¹² *In re: IP Transition*, GN Docket No. 13-5, Comments of the California Public Utility Commission, July 8, 2013, p. 10 (CPUC Comments).

exception when a telecommunications carrier or other service provider is responding to a natural or man-made disaster with temporary service arrangements that may require a lesser service in the short-term.¹³

Finally, the Pa. PUC agrees with IAC that local communities must consent to any IP Trials. Furthermore, the Pa. PUC would add that that consent must also come from the appropriate state regulators and agencies involved with 911 services. The involvement¹⁴ and consent of the state utility commissions and agencies involved with 911 services is consistent with other Comments and participation should be voluntary.¹⁵

A recommendation should address, at a minimum, the issues of public safety, consumer protections, network resiliency, and the identification of communities and states able and consenting to participate in IP Trials. There should also be a recommendation from the Joint Board on how the process should work. The Pa. PUC urges the FCC to take this route so that the states and others have time to examine and address the issues surrounding the implementation of IP Trials. This is particularly important as the Public Switched Telecommunications Network (PSTN) evolves into its successor Packet Sending Transmission Network (PSTN).

The Pa. PUC also supports the New York Public Service Commission (NY PSC) Comments (NY Comments) on gathering data and operation of IP Trials with the active involvement of the states in selecting the geographic locations.¹⁶ Those NY Comments reinforce the need for a referral. This is particularly important given the much-needed clarification in the NY Comments that the approval for a Verizon Voice Link fixed wireless service in New York after Hurricane Sandy on Fire Island is not a trial or a permission to permanently shut down existing networks but is a temporary approval in light of exigent

¹³ *In re: IP Transition*, GN Docket No. 13-5, IAC Comments, p. 1 and nn.4- 5.

¹⁴ *In re: IP Transition*, GN Docket No. 13-5, Comments of the New Jersey Ratepayer Advocate (July 8, 2013), p. 29; Public Service Commission of the District of Columbia (July 29, 2013), Ex Parte Notice of Cary Hinton, p. 1; IURC Comments (July 8, 2013), pp. 2-3; MDTC Comments (July 8, 2013), p. 7; Michigan Public Service Commission Comments (July 8, 2013), pp. 1, 5, 6-7 (MPSC Comments); New York Comments (July 8, 2013), pp. 2 and 4.

¹⁵ *In re: IP Transition*, GN Docket No. 13-5, CPUC Comments, p. 7; MDTC Comments, p. 7; MPSC Comments, p. 6; New York Comments, p. 3.

¹⁶ *In re: IP Trials*, Docket GN No. 13-5 (July 8, 2013), New York Comments (July 8, 2013), p. 4.

circumstances.¹⁷

New York's exigent circumstance approval does not stand for the proposition that trials are already underway, particularly any wireline-to-wireless service replacement on Fire Island.¹⁸ The New York Comments and those of the Massachusetts Department of Telecommunications and Cable (MDTC Comments), moreover, raise legitimate claims that the states must be involved as partners, service equivalency to current service must be required, reliable and continuous access to 911 must be ensured, and consumers should have the option to participate but only after full disclosure, consent, and an option to return to their former service.¹⁹

The MDTC Comments bolster a referral for other reasons as well. The MDTC Comments rightly conclude that the issue in IP Trials is not the co-existence of wireline and wireless networks but, rather, trials related to the discontinuation of legacy wireline services.²⁰ Moreover, the FCC's inaction on the legal classification of VoIP and IP systems and services requires proceedings to determine how, and under what legal rubric, IP interconnection can occur.²¹ The MDTC Comments conclude by stressing the importance of an active role for the state commissions and the collection of credible data.²² In this proceeding, the ways to best attain that would occur with a referral to and recommendation from the Joint Board on how to conduct these IP Trials while ensuring an active role for the state commissions.

The Indiana Utility Regulatory Commission (IURC) Comments further support referral. The IURC Comments detailed information on Indiana's experience with Next Generation 911 (NG 911) with the ESINet in Indiana that includes Public Safety Answering Points (PSAPS) in 19 counties. That real-world case refutes claims that one PSAP per state, or on a regional²³ basis, is perhaps the best way to attain NG 911 network functionalities.

The California Office of Emergency Service Comments reinforces the need for a referral.

¹⁷ Compare *New York Comments* at 2 with Comments of the Massachusetts Department of Telecommunications and Cable (MDTC Comments), (July 8, 2013), p. 5 and *CBeyond Comments* (July 8, 2013), PP. 4-5.

¹⁸ *In re: IP Transition*, GN Docket No. 13-5, Comments of *CBeyond*, et al. (July 8, 2013), pp. 4-5.

¹⁹ *In re: IP Trials*, Docket GN No. 13-5, *New York Comments*, pp. 1-3; *MDTC Comments* (July 8, 2013), pp. 1-2.

²⁰ *In re: IP Transition*, GN Docket No. 13-5, *MDTC Comments* (July 8, 2013), pp. 4-5.

²¹ *In re: IP Transition*, GN Docket No. 13-5, *Minnesota Comments* (July 8, 2013), pp. 3-4.

²² *In re: IP Transition*, GN Docket No. 13-5, *MDTC Comments* (July 8, 2013), pp. 6-10.

²³ *In re: IP Transition*, GN Docket No. 13-5, *Sprint Comments* (July 8, 2013), pp. 10-11.

Their “first in the nation” X/Y routing with Verizon Wireless for enhanced 911 (E911) alone involved 37 PSAPs in 13 counties and daily and week face-to-face meetings.²⁴ California has five NG911 trials. This underscores the recognition that multiple PSAPs may be needed and that a referral gives the FCC, the states, industry, and stakeholders time to evaluate the results.²⁵

A referral and recommendation approach is preferable to agency determinations that spring from the FCC based on formal comments and an almost certain deluge of subsequent ex parte filings that will address discrete legal, technological, and implementation concerns raised in the formal filings. However, the parties that dedicated scarce resources to submitting formal filings in the record often are unable to, or are unaware of, detailed ex parte filings that refute or modify the record because they lack the additional resources to continually monitor and respond.

Given that simple fact and these complex IP Trials, the Pa. PUC urges the FCC to reach a decision to seek a referral and recommendation based on the formal record filings. If, however, the FCC decides otherwise, the Pa. PUC provides alternative positions that should be taken into active consideration.

2. *FCC Action Without A Joint Board Referral.*

The Legal Classification of VoIP and IP Systems, Networks, and Services.

The Pa. PUC agrees with the Minnesota Public Utilities Commission (Minnesota Comments), U.S. Department of Defense and the Federal Executive Agencies (DOD/FEA Comments), and the CPUC Comments that the FCC should expeditiously classify Voice over Internet Protocol (VoIP) service as telecommunications subject to the joint jurisdiction of the FCC and the states.²⁶ The Minnesota Comments are especially instructive given Minnesota’s past experience with VoIP and its attempt to ensure that VoIP is subject to similar accountability, reliability, and public safety concerns that was required of other regulated wireline networks and their service providers. It was the FCC’s prior decision in the *Vonage*

²⁴ *In re: IP Transition*, GN Docket No. 13-5, CALOES Comments (July 8, 2013), p. 2-3.

²⁵ *In re: IP Transition*, GN Docket No. 13-5, CPUC Comments (July 8, 2013), p. 7. Equally important, the CPUC Comments discuss in detail the need to address the classification of VoIP and IP systems and services, a question long unanswered.

²⁶ *In re: IP Transition*, GN Docket No. 13-5, Minnesota Comments, p. 1; CPUC Comments, p. 11. .

Order (Docket No. 03-211, (November 12, 2004), *upheld Minnesota v. FCC*, 483 F.Supp. 570 (8th Cir. 2007)), involving the preemption of Minnesota law and a declaration that some, but not all, VoIP was “information service,” that created great uncertainty about interconnection rights, access to numbers, and protection of consumers for practices such as slamming as outlined in the Comments.²⁷

As an example, the VoIP Numbering NPRM arose because those petitioners enjoying the benefit of the *Vonage Order*'s preemption from state laws governing certification were denied the benefit of direct access to numbering resources because they lacked the state certificate granted under the state law due to the preemption.²⁸ The Pa. PUC shares the aptly expressed concern in the Minnesota Comments about the potentially negative impacts if VoIP is comprehensively classified as an “information” service compared to “telecommunications” or “telecommunications service” under TA-96.²⁹

The Pa. PUC is aware that many commentators here and elsewhere typically use prosaic terms such as broadband, wireless broadband, voice, data, or Internet service when discussing VoIP or IP networks and services under state and federal law. These attractive terms are irrelevant in deciding how to classify VoIP and IP networks and services under federal and state law, particularly when they appear to reflect a desire to “rewrite federal law” by the FCC.³⁰

The FCC must address the classification of VoIP and other related issues based on the definitions set out in the federal statute governing the scope of the FCC and states' authority. On that issue, statutory definitions do not exist for terms like “broadband” or “wireless broadband” and “voice” or “data” or “internet service.” 47 U.S.C.A. § 153. This does not mean that the goal of the Minnesota Comments and CPUC Comments on the need to classify VoIP and IP systems and services cannot be accomplished. It can. VoIP and IP systems and services that are directly at issue in IP Trials are “telecommunications” or “information service.” Those

²⁷ *In re: IP Transition*, GN Docket No. 13-5, Minnesota Comments, pp. 3-4; CPUC Comments, pp. 10-11; MPSC Comments, p. 4.

²⁸ *In re: Petition of Vonage Holding For A Limited Waiver*, Docket No. 99-200, Comments of the Pa. PUC (October 11, 2011), pp. 1-6.

²⁹ *In re: IP Transition*, Docket No. GN 13-5 (July 3, 2011), pp. 3-5. *In re: Petition of Vonage Holding For A Limited Waiver*, Docket No. 99-200, Comments of the Pa. PUC (October 11, 2011), pp. 1-6.

³⁰ *In re: IP Transition*, GN Docket No. 13-5, CPUC Comments, pp. 3-4.

definitional terms in the statute rely on “information” as the touchstone for classifying “telecommunications service” and “information service.” Telecommunications is the provisioning of information without a change in protocol. Information service is the provisioning of information with a change in protocol except when the change is part of the management, control, or operation of a telecommunications system or the management of a telecommunications service. In that case, it becomes telecommunications.

Given these definitions, the classification of VoIP and IP systems or services cannot be made using prosaic and attractive words like “voice” or “voice service” or “broadband” or “broadband service.” As in other filings, the Pa. PUC urges the FCC to classify VoIP and IP systems or services based on statutorily-defined terms contained in federal law without preempting state law.³¹ For that reason, the Pa. PUC agrees with Cox Cable’s Comments urging the FCC to look to the requirements of the Act and the underlying legal and policy considerations.³²

Other comments support the classification of VoIP and IP networks, systems, and

³¹ *In re: Broadband Internet Service and A National Broadband Plan For Our Future*, Docket Nos. 10-127, 07-52 and 09-51, Comments of the Pa. PUC (July 15, 2010) and (October 12, 2010); *In re: Intercarrier Compensation*, WC Docket No. 01-92 (*Missoula Plan*), Pa. PUC Comments (November 26, 2008), p. 32.

³² *In re: IP Interconnection*, GN Docket No. 13-5, Comments of Cox Cable (July 8, 2013), p. 6. However, precedent does not support Cox’s claim that the existing statute and regulatory requirements are competitively neutral. States retain regulatory oversight for intrastate telecommunications carrier operational certification and 911 but the scope of the FCC’s preemption of that authority in the *Vonage Decision*, Docket No. 03-211 (November 12, 2004) *upheld Minnesota v. FCC*, 483 F.Supp 570 (8th Cir. 2007), is unresolved. Compare Cox Comments (July 8, 2013), p. 5 with *Comcast IP Phone v. Missouri Public Service Commission*, Case No. 06-4233-CV-C-NKL (W.D. MO January 28, 2007) (Vonage preemption of Minnesota law did not include fixed VoIP) and *In re: ATT Petition*, Docket No. 12-353, Verizon Ex Parte (January 16, 2013), p. 3 (declare all VoIP inherently interstate) and *In re: IP Enabled Services and Intercarrier Compensation*, Docket Nos. 04-36 and 01-92, AT&T, CTIA, and Von Coalition et al., Ex Parte (August 6, 2008), p. 3 (extend Vonage to all VoIP services). The Unbundled network elements (UNE) rules applied to wireline telecommunications networks are not resolved when it comes to IP-to-IP interconnection. UNEs are imposed on certain categories of telecommunications networks with a limited quasi-UNE access on advanced services limited to 64 kbps for voice which some carriers now want to end, e.g., wholesale access to retail fiber optic facilities or services. Compare *In re: Section 251 Unbundling Obligations*, Docket No. 01-338, Order on Reconsideration (August 23, 2003) (*Triennial Review Order (TRRO) corrected by Errata*, 18 FCC Rcd 19020 (September 21, 2003) (*TRRO Errata*), vacated and remanded in part, affirmed in part, *United States Telecom Ass’n v. FCC*, 359 F.3d 554, 584 (D.C. Cir. 2004) (*USTA II*)) (the FCC’s decision not to require Fiber to the Home (FTTH) unbundling upheld) and *In re: Section 251 Unbundling Obligations*, Docket No. 01-338 (October 18, 2004), paragraphs 14, 23, and 34 (TRRO holding on FTTH unbundling extended to Fiber to the Curb (FTTC)) with *In re: IP Transition*, GN Docket No. 13-5, Comments of XO (July 8, 2013), pp. i and 17-20 and *In re: ATT Petition*, Docket No. 13-353, Verizon Ex Parte (January 16, 2013), p. 3 (the 64 kbps channel requirement should be abandoned). IP-to-IP interconnection remains controversial. See *In re: IP Transition*, Comptel Comments (July 17, 2011), pp. 4-14 (IP-to-IP interconnection should be subject to Sections 251/252); *In re: IP Transition*, ACA Comments (July 8, 2013), p. 1 (apply 251/252 to IP-to-IP interconnection).

services as telecommunications. The Pa. PUC supports the CBeyond Comments, which quote the Acting Director of the FCC Task Force, Sean Lev, that “[i]t is not appropriate to simply assume that a change in network protocols or the deployment of new physical infrastructure . . . negates the need for an FCC role.”³³ The Pa. PUC would add that classification as telecommunications and application of Section 251/252 must include the states given that changes in technological protocols do not alter the law.³⁴

The Western Telecommunications Alliance Comments also support the need to answer this legal classification issue. This is one of the biggest, if not the biggest, regulatory issues that must be considered, negotiated, and resolved on an industry-wide basis³⁵ and not in IP Trials. These Comments are instructive given their recognition that change is occurring, particularly the replacement of traditional TDM switches with integrated IP/TDM network platforms that are capable of processing and switching both TDM and VoIP calls.³⁶ But, again, as the Pa. PUC has pointed out, technological innovation is no basis for ignoring existing law.³⁷

The FCC should address the issues of access to all last-mile facilities on a wholesale basis for competitors regardless of technology. This is supported by those comments outlining several business practices that appear to rely on the FCC’s selective application of mandates to VoIP and IP compared to traditional wireline networks. This in turn has apparently triggered conduct that may be anticompetitive, if not outright illegal. The FCC itself has acknowledged that the carriage of VoIP, IP, and information services traffic over network facilities constitutes wholesale telecommunications.³⁸ Furthermore, current and prospective telecommunications

³³ *IP Transition*, GN Docket No. 13-5, CBeyond Comments, (July 8, 2013), p. 5.

³⁴ *In re: Framework for Broadband Internet Service*, Docket No. 10-127, *In re: A Broadband Plan For Our Future*, Docket No. 09-51, *In re: Open Internet Proceeding*, Docket No. 07-52, Reply Comments of the Pa. PUC (October 12, 2010), p. 4; *In re: Intercarrier Compensation (ABC Plan)*, Docket Nos. 10-90, 07-135, 05-337, 03-109, 01-92, 96-45, and 09-51, Comments of the Pa. PUC (August 24, 2011). Pp. 4-5; *In re: Intercarrier Compensation*, Docket No. 01-92 (*Missoula Plan*), Comments of the Pa. PUC (November 26, 2008), p. 32.

³⁵ *In re: IP Transition*, GN Docket No. 13-5, Western Telecommunications Alliance (WTA) Comments, (July 8, 2013), p. 3.

³⁶ *In re: IP Transition*, GN Docket No. 13-5, WTA Comments, (July 8, 2013), p. 1.

³⁷ *In re: Connect America Fund*, Docket No. 10-90, Further Comments of the Pa. PUC, Accompanying Legal Memorandum (August 24, 2011), pp. 4-5.

³⁸ *In re Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers*, WC Docket No. 06-55 (FCC March 1, 2007), Memorandum Opinion and Order, DA-07-709, *slip op.*, ¶ 17, at 11 (*Time Warner* wholesale traffic carriage is telecommunications subject to intercarrier compensation); *DQE v. North Pittsburgh Telephone Company*, File No. EB-05-MD-0277 (February 2, 2007); *In re: Fiber*

network facilities are intermixed and cannot be differentiated into “legacy PSTN” and “modern IP-based broadband,” i.e., a telecommunications fiber optic transmission facility is totally agnostic as to what types of traffic and of what protocols it carries.³⁹

Section 251/252 and IP Interconnection

The Pa. PUC reiterates an earlier conclusion that some form of modified common carriage stemming from the classification of VoIP and IP systems, networks, and service as telecommunications is necessary. Such a classification is an effective legal vehicle to end the current regulatory uncertainty and confusion on the proper legal classification of VoIP service.

Consistent with the principles of cooperative federalism noted in the Comments and extensively addressed in the pending appeal of the FCC’s November 18, 2011, *USF/ICC Transformation Order*, the FCC can establish minimum classification criteria applicable to VoIP and IP-enabled services *without* engaging in the federal preemption of the states. The FCC can act unilaterally if and when an individual state cannot meet its lawful obligations under Section 253 regarding the creation of artificial barriers to competitive market entry by service providers.

The Michigan Public Service Commission (MPSC) Comments reinforce the wisdom of this modified common carriage approach because, under Michigan laws, the exclusion of interconnected VoIP from the list of services regulated by the MI PSC does not affect the authority of a provider or the Michigan commission to act pursuant to or enforce Sections 251 and 252 related to wholesale rights, including interconnection.⁴⁰ This approach is consistent with Pennsylvania law reflected in the VoIP Freedom Act, 73 Pa.C.S. § 2251.1 et seq. This approach is also consistent with precedent retaining Pa. PUC jurisdiction over carrier access rates or other intercarrier compensation for VoIP or IP. *RTCC v. Pa. PUC*, 941 A.2d 751, 758-759 (Pa. Cmwlth. 2008) (holding that wholesale transmission service is telecommunications

Technologies v. North Pittsburgh Telephone Company, File No. EB-05-MD-014 (February 23, 2007). *Accord Rural Tel. Co. Coalitions v. Pa. PUC* 941 A.2d 751, 758-59 (Pa. Cmwlth. 2008)..

³⁹ *In re: AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, Docket No. GN 12-353 and *In re: Connect America Fund*, Docket No. 10-90, Initial Comments of State Members of the Federal-State Joint Board on Universal Service (January 28, 2013), pp. 12-13. .

⁴⁰ *In re: IP Interconnection*, GN Docket No. 13-5, MI PSC Comments, p. 3 citing MCL § 484.2401(3)(a).

irrespective of the protocol of the traffic being carried by particular telecommunications network facilities.)⁴¹

The wholesale telecommunications and related interconnection right relied on by Pennsylvania in its recent Global NAPS litigation⁴² is directly attributable to the classification of the service in question as wholesale telecommunications. Thus, if the FCC determines that VoIP is telecommunications service, the standards for negotiation and interconnection under Sections 251 and 252 apply to IP interconnection. In fact, some cable competitors are particularly concerned about the need for Sections 251/252 due to the market power of large incumbent carriers when it comes to interconnection negotiations, including the managed VoIP services that would be impacted by the IP Trials.⁴³

This approach addresses that concern in a way that is consistent with the Comcast comment that IP Trials should not limit providers' freedom to experiment with various interconnection arrangements.⁴⁴ This is also consistent with the service level agreements with meaningful rights and remedies discussed in the California OES comments.⁴⁵ It is particularly relevant to commercial agreements between parties. However, based on the Pa. PUC's experience, there will be cases where parties, particularly competitors in wholesale telecommunications, cannot reach an agreement. In those instances, especially when cutting-edge VoIP or IP systems, networks or services are involved, there will be a need for some arbitration and mediation – a fact recognized by the Michigan legislature.⁴⁶ This remains especially relevant if the FCC proceeds to IP Trials without a referral.

The Pa. PUC agrees with Comptel that IP-to-IP interconnection should be subject to

⁴¹ See generally *Palmerton Tel. Co. v. Global NAPs South, Inc., et al.*, Docket No. C-2009-2093336, (Pa. PUC, Order entered March 16, 2010) (citing *Time Warner; In re Fiber Technologies Networks, L.L.C. v. North Pittsburgh Tel. Co.*, File No. EB-05-MD-014, (FCC, Rel. February 23, 2007), DA-07-486, *slip op.*, ¶¶ 11-16, at 5-7; *In re DQE Communications Network Services, LLC v. North Pittsburgh Tel. Co.*, File No. EB-05-MD-027, (FCC, Rel. February 2, 2007), DA-07-472, *slip op.*, ¶¶ 11-13, at 5-6).

⁴² *Palmerton Tel. Co. v. Global NAPs*, Docket No. C-2009-2093336 (Pa. PUC, March 16, 2010) pp. 10-14 citing *In re Time Warner*, Docket No. 06-55 (March 1, 2007)

⁴³ *In re: IP Transition*, GN Docket No. 13-5, Comments of the American Cable Association, (July 8, 2013), pp. 2 and 4.

⁴⁴ *In re: IP Transition*, GN Docket No. 13-5, Comcast Comments (July 8, 2013), pp. 1-2.

⁴⁵ *IP Transition*, GN Docket No. 13-5, CAL OES Comments (July 8, 2013), p. 3.

⁴⁶ *IP Transition*, GN Docket No. 13-5, MI PSC Comments (July 8, 2013), p. 3.

Sections 251/252,⁴⁷ although the Pa. PUC would add that, as telecommunications, this should be applicable to any networks, systems, and services under state or federal law and that it should be done before any IP Trials. This approach makes Comptel' s position consistent with the Pa. PUC' s earlier support for IP interconnection under federal law⁴⁸ and its far earlier recognition that IP packets for voice are different from IP packets for other IP services; the concept that those IP packets are different from the public Internet is not a new or novel idea.⁴⁹

The Pa. PUC shares the concern in the Peerless Network comments identifying some negative impacts attributed to the absence of a legal backstop like IP interconnection under Sections 251/252. Peerless Networks makes a credible claim that the absence of Section 251/252 IP interconnection constrains their ability to exchange traffic at lower costs because the ILECs do not offer nondiscriminatory Session Initiated Protocol (SIP) interconnection and require competitors to interconnect to most (if not all) tandem switches in a LATA before agreeing to route traffic.⁵⁰

The Pa. PUC agrees with CenturyLink that trials may be appropriate and that reliance on commercially-negotiated arrangements, similar to those governing transit and peering on the public internet, are an efficient and useful way to accomplish IP interconnection.⁵¹ This, however, is no substitute for Section 251/252 IP interconnection subject to the joint jurisdiction of the FCC and the states as a necessary regulatory backstop, and commercial agreements must abide by the non-discriminatory principles of the Section 251/252 interconnection requirements.

The Pa. PUC disagrees with CenturyLink and others that the nation does not need a “regulatory backstop” or that Section 251/252 arbitration and mediation provisions are

⁴⁷ *In re: IP Transition*, GN Docket No. 3-13, Comptel Comments (July 8, 2013), pp. 1-6 and 9-24.

⁴⁸ *In re: Intercarrier Compensation (ABC Plan NPRM Issues A-K)*, Docket Nos. 10-90 and 01-92, Reply Comments of the Pa. PUC (February 17, 2012), pp. 9-10.

⁴⁹ *Compare In re: IP Transition*, GN Docket No. 3-13, Comptel Comments (July 8, 2013), p. 19 n. 55 citing NRRRI white paper entitled “The Transition to an All-IP Network: A Primer on the Architectural Components of IP interconnection” with *In re: Framework for Broadband Internet Service*, Docket No. 10-127, *In re: A Broadband Plan For Our Future*, Docket No. 09-51, *In re: Open Internet Proceeding*, Docket No. 07-52, Further Comments of the Pa. PUC (October 12, 2010), pp. 4-11; *In re: Framework for Broadband Internet Service*, Docket No. 10-127, *In re: A Broadband Plan For Our Future*, Docket No. 09-51, Pa. PUC Comments (July 15, 2010); *In re: High-Cost Universal Service Support and Federal-State Joint Board*, Docket Nos. 05-337 and 96-45 (April 17, 2008), pp. 1-23, particularly p. 22.

⁵⁰ *In re: IP Transition*, GN Docket No. 3-13, Comments of Peerless Networks (July 8, 2013), pp. 1-3 (Peerless Comments).

⁵¹ *In re: IP Transition*, GN Docket No. 13-5, CenturyLink Comments (July 8, 2013), pp. 1-3.

inapplicable to IP interconnection. The Pa. PUC makes this observation given Comptel's comments, and prior Pa. PUC filings, drawing a clear distinction between transit, peering and settlements on the public Internet with the real-time packet needs for VoIP and, now, VoIP management on the PSTN.⁵²

The Pa. PUC is concerned about claims that major carriers are misusing their regulated and unregulated affiliate operations by, in some instances, requiring competitors to purchase certain services as a precondition to exchanging local traffic with wireless affiliates.⁵³ The FCC needs to address these allegations before implementing IP Trials for several reasons.

First, the Pa. PUC's legal mandate under the Pennsylvania Public Utility Code is to promote and encourage the provision of competitive services by a variety of providers and to ensure that rates for protected services do not subsidize the competitive ventures of competitive telecommunications services. 66 Pa.C.S. § 3011(4) and (8). Federal law contains a similar prohibition on cross subsidization. 47 C.F.R. § 202. The Pa. PUC could well transgress state and federal law by participating in an IP Trials if such practices were condoned.

Second, the FCC's current rules expect competing carriers seeking physical interconnection to compensate an incumbent for additional costs incurred to provide interconnection. *In re: Implementation of the 1996 Act*, Docket No. 96-98, *First Interconnection Order*, (August 8, 1996), paragraph 209. The issue of compensation, however, is markedly different from claims that carriers are leveraging regulated and unregulated affiliates in a way to extract something other than reasonable intercarrier compensation.

The Pa. PUC agrees with Verizon and Verizon Wireless that technological change is underway and that regulation should not deter voluntary, negotiated outcomes when it comes to

⁵² Compare, *In re: IP Transition*, GN Docket No. 13-5, Comments of CenturyLink (July 8, 2013), pp. 1-8 with Comptel Comments (July 8, 2013), pp. 2-4 and 6-10 and *In re: Open Internet Proceeding*, Docket No. 09-51, 10-127, 07-52, Further Comments of the Pa. PUC (October 12, 2010), pp. 4-11; *In re: Framework for Broadband Internet Service* and *In re: A Broadband Plan For Our Future*, Docket Nos. 09-51, 10-127, 07-52, Pa. PUC Comments (July 15, 2010).

⁵³ *In re: IP Transition*, GN Docket No. 3-13, Peerless Comments (July 8, 2013), p. 3; CBeyond Comments (July 8, 2013), pp. 7-8.

IP interconnection. However, parties competing to provide service to end-users do not, and reasonably cannot, be expected to agree on all terms and conditions. Consequently, Section 251/252 IP interconnection must apply to resolve the inevitable disputes between competitors

The Pa. PUC's support for telecommunications classification for IP networks, systems, and service plus application of Section 251/251 seek to provide legal predictability and a regulatory backstop in those cases where the marketplace or carriers cannot reach an agreement. The Pa. PUC support for telecommunications classification and Section 251/252 reflect the Pa. PUC's experience and the reality that technological change does not drive the law. Legal and regulatory predictability, however, create an ecosystem where technological change can occur. The Pa. PUC position seeks to do just that while preserving its laws i.e., Chapter 30, 66 Pa.C.S. § 3011 et seq. and the VoIP Freedom Act, 73 Pa.C.S. § 2251.1 et seq., which address the regulation of telecommunications services and traffic be it TDM-based or IP and VoIP

IP Interconnection and Reliability.

The Pa. PUC agrees with AT&T that IP networks may be more versatile and efficient than single-purpose networks like the TDM-based PSTN.⁵⁴ This statement, however, does not account for the redundancy and reliability issues on the fiber component of IP networks. These issues were evident in the FCC's observations in the recent 911 Reliability NPRM about the vulnerabilities and reliability of 911 networks in the wake of a derecho. Those observations underscore the importance of physical diversity for telecommunications networks, irrespective of technologies used (e.g., mix of fiber optic and copper transmission and distribution network facilities), or traffic protocols that are utilized (e.g., TDM and IP).

Under generally accepted definitions, physical diversity means that two circuits follow different paths separated by some physical distance so that a single failure such as a power outage, equipment failure, or cable cut will not result in both circuits failing. However, two

⁵⁴ *In re: IP Transition*, GN Docket No. 13-5, AT&T Comments (July 8, 2013), p. 1. *But Compare* AT&T Comments (July 8, 2013), pp. 16-20, 28, 28 and 23 with APCO Comments (July 8, 2013), pp. 4, 4, 4-6, and 5-6, respectively below.

circuits riding over the same fiber optic cable are not physically diverse, even though they utilize different fibers in that cable and may be logically diverse for purposes of transmitting data.⁵⁵

Based on the FCC's observation and the APCO Comments, IP networks that are now being used to provide voice, data and/or video service, need far greater physical redundancy and reliability than what exists today. The APCO Comments succinctly undermine the position that classification, or the application of Section 251/252, is inappropriate based on APCO's concerns that there is not enough experience and with the very real limitations of IP and IP networks when it comes to reliability, powering networks, security, packet congestion, peering disputes, and location information.⁵⁶ These concerns bolster the Pa. PUC position on the proper legal classification of VoIP service and whether Section 251/252 is applicable to IP Interconnection.

On reliability, APCO notes that current conventional telecommunications networks that largely handle TDM-based traffic have a 99.999% reliability mandate, whereas an IP network of the type on which ATT seeks to conduct its "all-IP" trial are not built to the same standards. This suggests that "best practices" on the public Internet for over-the-top voice (OTT voice), Internet peering, settlements, and packet congestion are no substitute for the real-world activities that PSAPs must address. In other words, a "best effort" standard, which may be currently applicable for the completion of ordinary OTT voice calls or the public internet, is clearly insufficient for the required completion of life saving 911/E911 calls.

On powering networks and security, AT&T's commitment to "support its PSAP customers in any future trial" is no substitute for the APCO Comments. APCO emphasizes that attacks on IP networks are more easily perpetrated on an IP-based system compared to the presently secure "closed loop" features of the current conventional telecommunications 911 system. Moreover, the Pa. PUC is concerned about network reliability, to the extent that current

⁵⁵ *In re: Improving 911 Reliability and Reliability of Communications Networks, Including Broadband NPRM*, Docket Nos. 13-75 and 11-60 (March 20, 2013), para. 13.

⁵⁶ *In re: IP Transitions*, GN Docket No. 13-5, APCO Comments (July 8, 2013), pp. 1-7, particularly pp. 4-6.

wireless and IP networks increasingly rely on power from the commercial electric grid, making them more susceptible to commercial power outages.

On congestion, AT&T's position that it is "fully engaged in the development of the National Emergency Numbering Association (NENA) i3 standard that established the foundations for NG911" is not a substitute for APCO comments noting that IP networks for wireless and wired technology are susceptible to congestion, packet collision, and quality of service concerns that are easily solved on conventional telecommunications networks through dedicated trunking. This is consistent with the Pa. PUC's earlier comments addressing the important distinctions between packets for voice compared to data and video, particularly as it relates to public safety packets compared to others.

AT&T reliance on "unregulated peering and transit arrangements (over which millions of over-the-top VoIP calls are exchanged every day) have succeeded for twenty years in propelling the phenomenal growth of the Internet" to support making "wireless IP services . . . the *only* option for some AT&T customers" and "[m]igrating some customers – on a mandatory basis— to a robust LTE [wireless long term evolution] product" do not resolve APCO's concern that unregulated peering disputes simply cannot interrupt service. In a perfect world, that may occur but competition in the telecommunications and IP world is far from that.

AT&T's reference to these unregulated peering and transit arrangements to refute concerns about competitive access and reliability illustrate the linguistic confusion on IP Trials and IP Interconnection detailed in the Comptel Comments.⁵⁷ The comments continually conflate Internet peering and settlements on the public Internet (which is not at issue), IP interconnection (at issue in any VoIP Interconnection Trial), IP interconnection under Sections 251/252 of TA-96 (which AT&T and others oppose but Comptel and others support), managed IP networks (such as Verizon's FiOS and AT&T's UVerse which are not part of the public

⁵⁷ Compare *In re: IP Transition*, GN Docket No. 13-5, Comptel Comments (July 8, 2013), pp. 3-4, 8, 10-14, 19, and 21 with AT&T Comments (July 8, 2013), pp. 20-21.

Internet), and TDM-based voice service (which is subject to Sections 251/252 and joint jurisdiction although that is now under appeal given recent FCC action).

IP Trial Process.

The Pa. PUC agrees that IP Trials should be transparent, optional to the consumers, involve the states, and be provided on a balanced basis between urban, rural, and remote locations in consultation with the states.⁵⁸ The Pa. PUC also agrees with the Minnesota Comments that reports and data pertaining to IP Trials should be required and publicly available.⁵⁹

In those instances where states have deregulated retail and/or wholesale telecommunications and/or VoIP/ IP services, Section 252(e)(5) would sustain FCC action and ensure compliance with federal minimums established by the FCC. To minimize states' inaction, the FCC federal minimums must allow states to supplement the requirements where they participate in, monitor, and provide feedback on those IP Trials to which they consent. This should include a mandate to support universal service, TRS, 911, and other policies.

The Pa. PUC believes that the Hypercube approach may be workable so long as it is competitively neutral and ameliorates state concerns when conducted in those states consenting to IP Trials.⁶⁰ Under this approach, the FCC would have two rounds of trials, with Tier One ILEC wire center trials and a Tier Two round involving rural ILECs. There must be an urban and suburban central office in each Regional Bell Operating Company (RBOC) with the public having an opportunity to propose alternative or supplemental office for trials that would last one year.⁶¹ The Pa. PUC would add that it should be limited to telecommunications providers. There should be an additional mandate that state commissions be involved with, and approve, the trial locations in consultation with the FCC and IP Trial proponents.

⁵⁸ *In re: IP Transition*, Docket No. 13-5, Comments of Bull's-eye Telecomm (July 8, 2013), pp. 5-7; MDTC Comments (July 8, 2013), pp. 2-3; New Jersey Ratepayer Advocate Comments (July 8, 2013), p. 29, IAC Comments (July 8, 2013), p. 2.

⁵⁹ *In re: IP Transition*, Docket No. GN 13-5, Minnesota Comments (July 3, 2011), pp.1-3; New Jersey Ratepayer Advocate Comments (July 8, 2013), p. ii and 6..

⁶⁰ *In re: IP Transition*, GN Docket No. 13-5, Hypercube Comments (July 8, 2013), pp. 1-27, especially pp. i-ii.

⁶¹ *In re: IP Transition*, GN Docket No. 13-5, Hypercube Comments (July 8, 2013), p. ii.

This approach could also be conducted in two rounds, with the first round being in the urban and rural central offices of each former Regional Bell Operating Company (RBOC). The Pa. PUC would modify this to mandate inclusion of at least one suburban exchange as well as an exchange from every exchange classification of the RBOC in the state where the trial is conducted. For example, Verizon Pennsylvania has four density cells; if Pennsylvania were chosen, at a minimum, a trial should be conducted in each of the four density cells.

The Pa. PUC would add that the existing laws and regulations of the states where the trial is conducted must be applicable during any trial, including consumer protections, reliability, and public policy mandates like universal service, TRS, and public safety. Regarding public safety, the same requirements applied to conventional telecommunications 911 networks should apply when it comes to reliability, back-up power requirements, security, dispute resolution, and location information for NG 911 networks. The regulations currently applicable to any end-user on the existing network should apply to all end-user consumers with a right of return to the incumbent's network and service. Continuation of the current regulations imposed on incumbent wireline networks is particularly important for rural and tribal areas.⁶²

The Pa. PUC submits that the trial should last at least a year. The Pa. PUC would add that all data, information, and experiences during the trial should be provided in real-time and at the conclusion of the trial to the state commission of the state where the trial is conducted. Thereafter, that state commission should be provided an opportunity to comment and provide recommendations on lessons learned as well as possible solutions to any issues that arose during the trial.

The Pa. PUC disagrees with Hypercube that trials be limited to a provider exchanging the equivalent of four T-1s or that only those providers should be entitled to direct interconnection. The Pa. PUC would not limit direct interconnection to a discrete class as Hypercube suggests because such a practice may contravene the Section 253 mandate for competitive neutrality.

⁶² See generally *In re: IP Transition*, GN Docket No. 13-5, Comments of Rural Broadband Policy Group (July 8, 2013), pp. 1-7; IAC Comments (July 8, 2013), pp. 1-3; New Jersey Ratepayer Advocate Comments (July 8, 2013), pp. i-ii; Minnesota Comments (July 8, 2013), pp. 1-2; New York Public Service Commission Comments (July 8, 2013), p. 2.

The Pa. PUC also disagrees with Hypercube that call signaling and data base “best practices” be developed by industry for IP Trials in light of Comptel’ s observation that the existing SS7 system and local exchange routing guide (LERG) can be configured in such a way as to support VoIP interconnection for existing PSTN services and traffic.⁶³ The FCC should decide the reconsideration petitions on call signal information in the ICC/USF proceeding and issue an order on the NPRM on issues A-K, which includes call signaling issues,⁶⁴ before IP Trials occur.

The FCC should solicit 911 and NG911 service provider input and consent to participate in any of these IP Trials. The Pa. PUC agrees with the Intrado Comments that NG911 Trials be limited to “greenfield” areas, a designation Intrado gives to the introduction of new NG911 services or capabilities to replace legacy 911 services.⁶⁵ The Pa. PUC would add, however, that state commissions and public safety providers in the states where any “greenfield” trial is conducted should be involved in identifying, and consenting to, those “greenfield” locations. The Pa. PUC would also add, moreover, that the costs for conducting a greenfield 911 trial be borne completely by the proponents; since local governments or legacy 911 providers already have severe budgetary constraints. They should not be required to assume additional costs as a precondition to participating in any “greenfield” NG911 experiments.

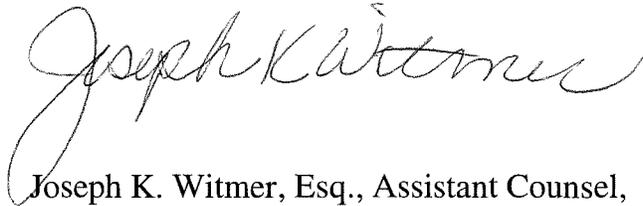
⁶³ Compare In re: IP Transition, GN Docket No. 13-5, Comments of Hypercube (July 8, 2013), pp. i and 7-14 with Comptel Comments (July 8, 2013), p. 23.

⁶⁴ See In re: Connect America Fund, Docket No. 10-90, Pa. PUC Reply Comments (February 17, 2012), p. 10; NECA Petition for Reconsideration (December 29, 2012), pp. 35-36.

⁶⁵ In re: IP Transition, GN Docket No. 13-5, Intrado Comments (July 8, 2013), p. 3.

The Pa. PUC thanks the FCC for providing this opportunity to file Reply Comments asking that the IP Petitions be denied and that the FCC maintain the existing status quo which preserves the states jurisdictional role and interests.

Respectfully Submitted On Behalf Of,
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