

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

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| <b>Ensuring Customer Premises Backup<br/>Power for Continuity of Communications</b>   | ) | <b>PS Docket No. 14-174</b> |
|   | ) |                             |
| <b>Technology Transitions</b>   | ) | <b>GN Docket No. 13-5</b>   |
|   | ) |                             |
| <b>Policies and Rules Governing Retirement<br/>of Copper Loops by Incumbent Local<br/>Exchange Carriers</b>   | ) | <b>RM-11358</b>             |
|   | ) |                             |
| <b>Special Access for Price Cap Local<br/>Exchange Carriers</b>   | ) | <b>WC Docket No. 05-25</b>  |
|   | ) |                             |
| <b>AT&amp;T Corporation Petition for Rulemaking<br/>to Reform Regulation of Incumbent Local<br/>Exchange Carrier Rates for Interstate<br/>Special Access Services</b> | ) | <b>RM-10593</b>             |
|   | ) |                             |

**RESPONSE TO PETITION**

TO THE COMMISSION:

NTCA–The Rural Broadband Association (NTCA)<sup>1</sup> hereby files this pleading in the above-captioned proceedings, in specific response to the Petition for Reconsideration of the National Association of State Utility Consumer Advocates (NASUCA), the Maine Office of the Public Advocate, the Maryland Office of the People’s Counsel, and the Utility Reform Network

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<sup>1</sup> NTCA represents more than 800 independent, community-based telecommunications companies. All NTCA members are full service local exchange carriers and broadband providers, and many of its members provide wireless, cable, satellite, and long distance and other competitive services to their communities.

(Petition).<sup>2</sup> Without addressing the specific requested outcomes set forth in the Petition, NTCA submits its agreement with NASUCA that rural call quality and interconnection must be considered within the above-captioned proceedings, and the Commission’s descriptions as set forth in the Appendix B of the applicable Order warrant reconsideration. At the outset of this discussion, NTCA notes that no party filed in opposition to the NASUCA petition.

NTCA submits that voice communications warrant a unique regulatory outlook as contrasted against data services, generally, or *other* data services where the voice service in question is an OTT offering. Historically, and with sound reason, voice quality of service (QoS) has consistently occupied an elevated consideration of regulatory oversight. This reflects the fact that “five nines of quality” are necessary for, *inter alia*, commercial and emergency communications. *Arguendo* standard (*i.e.*, non-commercial or non-emergency) consumer use could be conceived to tolerate compromised quality, only the boldest of authorities would presume to enable an environment in which electronically-enabled voice communications are rendered subject to latency, jitter, or other interruption. Voice QoS has occupied a defined space in the regulatory paradigm, and that should not be compromised as the technological underpinnings evolve.

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<sup>2</sup> *Ensuring Customer Premises Backup Power for Continuity of Communications* (Docket No. 14-174); *Technology Transitions* (Docket No. 13-5); *Policies and Rules Governing Retirement of Copper Loops by Incumbent Local Exchange Carriers* (RN-11358); *Special Access for Price Cap Local Exchange Carriers* (Docket No. 05-25); *AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services* (RM-10593); *Petition for Reconsideration of the National Association of State Utility Consumer Advocate, Maine Office of the Public Advocate, Maryland Office of the People’s Counsel, and the Utility Reform Network of Declaratory Ruling, Second Report and Order, and Order on Reconsideration* (Filed Oct. 11, 2016).

Unfortunately, the analytical construct that the Commission ordered in Appendix B appears to guide users to focus only upon the quality of access, which is but a segment of what is an end-to-end service issue. This hazard is exacerbated by the prospect of traffic traversing not only numerous miles, but distinct carriers and varying technologies, especially as calls in far-away rural areas are originated and terminated. The conundrum of rural call completion is but one notable example of what can happen in the absence of an end-to-end view of voice communications and expectations about the quality of call routing across the entirety of a call's path. NTCA therefore urges the Commission to recognize in its rulemaking and implementation that QoS governs the length of a voice call from end-to-end.

The Commission itself concluded that customers “expect that any adequate replacement for a wireline legacy voice service will be available in the same coverage area, will allow customers to make and receive high quality calls consistently, and support applications and functionalities on which they rely.”<sup>3</sup> However, by not addressing voice interconnection, the Commission enables a gap that could prove a stumbling point on the path toward ensuring the type of replacement service to which the Commission expresses its commitment. Sound public policy should not rely upon “best efforts” public Internet networks to ensure mission-critical and latency-sensitive traffic.

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<sup>3</sup> *Technology Transitions; USTelecom Petition for Declaratory Ruling that Incumbent Local Exchange Carriers are Non-Dominant in the Provision of Switched Access Services; Policies and Rules Governing Retirement of Copper Loops by Incumbent Local Exchange Carriers: Declaratory Ruling, Second Report and Order, and Order on Reconsideration*, Dockets. 13-5, 13-5, RM-1358, FCC 16-90, at para. 90 (2016) (Technology Transitions Order).

To be sure, and as the Commission recognized in the “back-up power” proceeding, some manner of supplemental regulatory oversight may be necessary to account for technological differences that might be revealed in a TDM-to-IP transition. To be certain, as well, IP-enabled services can offer capabilities that are not enabled by TDM. Nevertheless, the core functions and QoS of TDM – reliability, absence of latency, and lack of jitter – must be maintained to meet reasonable expectations for replacement services. It is at this juncture that this specific aspect of the *Technology Transitions Order* falls short of the target.

Specifically, Appendix B avers that it is intended to guide users through protocols that will “measur[e] network performance, specifically, latency and data loss.”<sup>4</sup> NASUCA submits, however, that the protocols envisioned by Appendix B are more appropriately tailored toward measuring broadband performance than voice quality, particularly when aimed at determining whether a VoIP offering is an adequate replacement for a TDM service. As explained at length in the accompanying “Malfara Declaration,” the TDM PSTN enjoys “virtually no signal loss, delay limited to the length of time that it takes photons to transit optical fiber and no variance in that delay thanks to the stringent synchronization requirements of Time Division Multiplexing . . . .”<sup>5</sup> And, yet, NASUCA notes that the service environment as represented in Appendix B does not cover all signal conversions that occur in an IP voice call.<sup>6</sup> Moreover, the testing as envisioned

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<sup>4</sup> Technology Transitions Order, Appendix B at para. 2.

<sup>5</sup> Declaration of David J. Malfara, Sr., PSTN Operation Quality Standards (submitted as an attachment to the NASUCA Petition), at para. 40 (Malfara Declaration).

<sup>6</sup> Malfara Declaration at para. 80.

by Appendix B does not contemplate *intercarrier* connections, which Malfara describes as comprising “four separate signal conversions.”<sup>7</sup> It is this aspect of the guidance to which NTCA turns its attention, and urges Commission correction or clarification.

There is little room to debate the Commission’s commitment to quality voice services that are consistent with Universal Service principles, specifically, rural users’ statutory rights to obtain service that is reasonably comparable in quality and price to that which is available in urban areas. Additionally, and as the *Technology Transitions Order* establishes, QoS remains an abiding concern of the Commission as services transition to new technological platforms. However, the NASUCA petition highlights critical issues, specifically, whether potential degradation of voice service via substandard routing practices and processes will be tolerated or even encouraged as part of a technology transition. The public Internet model of “best efforts” leaves too much variance for QoS. The best efforts model neither guarantees nor offers adequate assurance of dedicated efforts to elevate QoS commitments for voice traffic. This factor is exacerbated by two conditions: (1) the relatively low (10 percent) margin of managed VoIP traffic,<sup>8</sup> and (2) the lack of sufficient oversight of and standardization with respect to IP interconnection.

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<sup>7</sup> Malfara Declaration at para. 81.

<sup>8</sup> *See*, Local Telephone Competition: Status as of December 31, 2013, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, October 2014, Figure 5 Interconnected VoIP Subscribership by Reported Service Features, page 7. A.

The importance of voice service is recognized by the Commission, and governing laws and regulation must (a) ensure those services remain available and (b) proscribe actions that may compromise such availability. The Commission affirmed the primacy of voice service, and the focus on functionality, rather than the underlying technology, when it stated, “Given that consumers are increasingly obtaining voice services over broadband networks as well as over traditional circuit switched telephone networks, we agree with commenters that urge the Commission to *focus on the functionality offered, not the specific technology used* to provide the supported service.”<sup>9</sup> As Congress recognized the need to interconnect for telecommunications services, there is no reasoned basis to infer that its treatment would differ depending on the technical protocols beneath it.

Parties who seek to exclude interconnection from the purview of any oversight based solely upon the technology choices within underlying networks portend hazard for consumers whose ability to obtain sufficient QoS (and at reasonably comparable rates) could be compromised if commercially-negotiated interconnection agreements without a regulatory backstop become the standard. One might wonder whether network technology might become an excuse, for example, in failing or even steadfastly refusing to deliver calls to certain locations, such as rural areas. Interconnection policy may recognize differences between “best-effort” and

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<sup>9</sup> *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17850, para. 77 (2011) (*Transformation Order*) (emphasis added), *aff’d sub nom.*, *In re: FCC 11-161*, 753 F.3d 1015 (10th Cir. 2014).

“managed services,” but public policy should ensure two outcomes: (1) universal consumer access to quality service, and (2) carrier access to quality interconnection on reasonable terms.

Sound telecommunications policy may be defined accurately as ensuring the promotion of policies aimed at bettering the public interest. Toward this end, certain natural market incentives and tendencies may discourage certain voluntary actions in the marketplace. Where access to services of a defined quality is identified as a core public interest, however, a regulatory process is necessary to help craft the marketplace where natural incentives will not result in outcomes that are best suited to the recognized public interest. There is no compelling reason to believe that a change in the underlying protocol from TDM to IP would affect the incentives of various participants and encourage negotiations that result naturally in agreements which promote public interest policies.<sup>10</sup> The current vacuum of regulatory oversight over IP interconnection gives rise to an imperative of the highest order to ensure that if the “manufacturing” process is not

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<sup>10</sup> Although in some circumstances, and perhaps after some further development of the marketplace and technology, the universe may evolve to a form in which solely voluntary agreements are sufficient, in the immediate term the methodologies set forth by the Act are appropriate. These methodologies blend the best of several interests – they begin with an opportunity for voluntary negotiations, and are attended by a process to “fall back” to arbitration if negotiations fail; the statute also sets discernible standards that balance the various interests of marketplace competition with the real situation of small rural carriers, and permit those closest to the parties (the state commissions) authority to adjudge the agreements. Finally, these processes are both time- and litigation-tested, so that the parameters of the process, *without regard to the technical protocols underlying the agreements*, are known and can inform well the market transition to an all IP environment. If as that transition occurs the invocation of mediation and/or arbitration diminishes and that process becomes a dusty, unused relic, then the law may conclude that voluntary agreements are sufficient. However, until experience and a well-formed evidentiary record present otherwise, IP interconnection should remain subject to the existing standards and processes of sections 251 and 252 of the Act.

overseen, then the quality of the “finished product” be tested thoroughly in order to ensure that it is, in fact, an adequate replacement service.

WHEREFORE the reasons stated above, NTCA urges the Commission to ensure that all protocols and guidance that are established to judge the adequacy of replacement services recognize all components of the end-to-end service and ensure that end-to-end QoS for all users across the Nation is preserved.

Respectfully submitted,



By:  
/s/ Joshua Seidemann  
Joshua Seidemann  
Vice President of Policy

4121 Wilson Boulevard, Suite 1000  
Arlington, VA 22203  
[jseidemann@ntca@ntca.org](mailto:jseidemann@ntca@ntca.org)  
703-351-2000 (Tel)

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