

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Transition from TTY to Real-Time Text
Technology

CG Docket No. 16-145

Petition For Rulemaking To Update The
Commission's Rules For Access To
Support The Transition From TTY To
Real-Time Text Technology, And Petition
For Waiver Of Rules Requiring Support Of
TTY Technology

GN Docket No. 15-178

REPLY COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. (“T-Mobile”)¹ is committed to deploying real-time text (“RTT”) over IP-based networks to ensure that customers with hearing loss have access to text-based means of 911 and 711 calling. As the Commission moves forward to adopt rules codifying this commitment by T-Mobile and other carriers, however, T-Mobile encourages it to ensure its rules acknowledge the substantial evidence in the record regarding the feasibility of its timelines, are adopted with a readily achievable and achievable scope, and recognize the relatively limited role wireless carriers will play in any widespread migration away from TTY technology.

I. COMPLIANCE DEADLINES MUST ACKNOWLEDGE THE INTERDEPENDENCY OF WIRELESS CARRIERS AND HANDSET MANUFACTURERS IN MEETING OBLIGATIONS.

T-Mobile reminds the Commission that any timelines for compliance under its new rules must account for the need for the entire ecosystem to work together to ensure customer access to

¹ T-Mobile USA, Inc., is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly-traded company.

RTT. In particular, operational RTT is dependent not only upon network readiness, but also on the availability of RTT-capable handsets. T-Mobile also encourages the Commission to recognize that carriers' approach to RTT deployment will be specific to the architecture of each carriers' network. Thus, it is imperative for the Commission to support flexible RTT handset implementation, including both over-the-top ("OTT") and native solutions.

The record overwhelmingly supports flexibility in this regard.² As T-Mobile states in its initial comments, there are carriers for whom native implementation will be the only feasible means of deployment.³ For those carriers, an obligation to implement prior to the availability of widespread RTT-capable handsets could be viewed as the equivalent of a mandate to deploy via an OTT solution and would be arbitrary and capricious.⁴ T-Mobile reiterates that the FCC should preserve the option for carriers to deploy either natively *or* via an OTT solution—or both, if feasible.⁵ However, any RTT requirements must not result in a *de facto* OTT mandate by requiring carrier handset compliance before natively-enabled RTT handsets are made available to carriers.

² See, e.g., Comments of the Alliance for Telecomms. Industry Sols. at 6 ("ATIS Comments") (supporting the ability of carriers to meet their obligations using OTT apps); Comments of AT&T at 20 ("AT&T Comments") (urging the Commission to allow the use of OTT applications); Comments of CTIA at 17 ("CTIA Comments") (urging flexibility for carriers to deploy by OTT applications or natively); Comments of Verizon at 9 ("Verizon Comments") (urging flexible implementation that includes OTT solutions). Unless otherwise indicated, all comments referenced herein were filed on July 11, 2016 in CG Docket No. 16-145 and GN Docket No. 15-178.

³ Comments of T-Mobile USA, Inc. at 7 ("T-Mobile Comments"); see also CTIA Comments at 16-17 (arguing that OTT RTT may not be able to meet the proposed requirements); Verizon Comments at 7-8 (counseling against adoption of premature deadlines that would burden carriers who attempt to deploy native RTT).

⁴ *Nuvio Corp. v. Fed. Comm'ns Comm'n*, 473 F.3d 302, 303 (D.C. Cir. 2006); *All. for Cannabis Therapeutics v. Drug Enf't Admin.*, 930 F.2d 936, 940 (D.C. Cir. 1991).

⁵ See, e.g., ATIS Comments at 6; AT&T Comments at 20; CTIA Comments at 16; Comments of the Consumer Tech. Ass'n at 6 ("CTA Comments"); Verizon Comments at 9.

Similarly, T-Mobile urges the Commission to reject calls by TDI to make existing devices support RTT within 36 months.⁶ Over-the-air upgrades to enable RTT on all devices currently in the marketplace are not technically or economically feasible, and such a requirement would be inconsistent with the Commission's general disabilities access rules implementing Sections 255 and 716.⁷ A Commission obligation to upgrade existing devices would ignore the statutory limits on the Commission's authority to adopt only those obligations that are achievable and readily achievable.⁸

Finally, T-Mobile notes the widespread support in the record against obligations to implement additional features beyond the core functionalities of interoperability and backwards compatibility,⁹ particularly where such features are not included in the proposed safe harbor

⁶ Comments of Consumer Groups on Notice of Proposed Rulemaking to Transition from Text Telephone to Real-Time Text Tech. at 7 ("TDI Comments").

⁷ See *Transition from TTY to Real-Time Text Tech.*, Notice of Proposed Rulemaking, FCC No. 16-53, CG Docket No. 16-145 and GN Docket No. 15-178, ¶ 29 n.92 (rel. Apr. 29, 2016) ("*NPRM*") (noting that "[r]ules governing telecommunications and ACS accessibility do not require manufacturers of equipment to recall or retrofit equipment already in their inventories or in the field. In addition, cosmetic changes to a product or service do not trigger the need for a manufacturer or service provider to reassess their devices for accessibility under these sections." (citing *Implementation of Sections 716 and 717 of the Commc 'ns Act of 1934, as Enacted by the Twenty-First Century Commc 'ns and Video Accessibility Act of 2010, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd. 14557, ¶ 126 (2011); *Implementation of Sections 255 and 251(a)(2) of the Commc 'ns Act of 1934, as enacted by the Telecomms. Act of 1996, Access to Telecomms. Service, Telecomms. Equip. and Customer Premises Equip. by Persons with Disabilities*, Report and Order and Further Notice of Inquiry, 16 FCC Rcd. 6417, ¶ 73 (1999))).

⁸ See *id.*; see also T-Mobile Comments at 3-4.

⁹ See ATIS Comments at 6; AT&T Comments at 9, 21 ("Service providers and manufacturers will develop RTT technology as needed to meet basic functions but should otherwise be allowed to introduce innovative features for use with RTT and reach industry consensus on the best manner in which to implement . . ."); CTIA Comments at 9-11 (arguing for a basic performance objective ensuring users' access to core functions and features and allowing other features and functionalities to develop in response to consumer demand); CTA Comments at 5-6 (arguing that the Commission must have reasonable expectations for RTT capabilities and refrain from mandating advanced features); see also Comments of the

standard.¹⁰ Adoption of such features is not feasible within the current deployment deadline established for Tier I carriers. Moreover, a requirement to implement additional features will detract from efforts to make available, as quickly as possible, RTT that can be used to reach 911 and 711 services.

II. THE SCOPE OF THE NEW RTT RULES SHOULD BE LIMITED TO ENSURE FEASIBILITY.

T-Mobile is pleased that the record supports reasonable limitations on the RTT obligation. As TIA notes, while the proposed RTT rules are important for ensuring that text-based communications with TTY for 911 and 711 continue to be possible in IP-based networks, RTT is not the be-all, end-all for accessible communications.¹¹ If the Commission approaches this proceeding with that misconception, it not only risks creating an expectation by the public that simply cannot be met, but it also risks arbitrary and capricious rulemaking, by adopting an “if we mandate it, they will invent it” posture.¹²

Crucially, the record reflects consensus that the RTT-TTY backwards compatibility obligation should be limited to critical calls, such as those to 911 and 711-based relay services.¹³

Telecomms. Indus. Ass’n at 10 (“TIA Comments”) (noting that certain features proposed may reduce usability on some devices); Verizon Comments at 8.

¹⁰ See ATIS Comments at 6-7.

¹¹ TIA Comments at 13.

¹² See T-Mobile Comments at 4; see also *Nuvio*, 473 F.3d at 303; *All. for Cannabis Therapeutics.*, 930 F.2d at 940.

¹³ See ATIS Comments at 5 (noting the technical limits on providing backwards compatibility for all calls); Comments of the Rehab. Eng’g Research Ctr. on Tech. for the Deaf and Hard of Hearing, the Rehab. Eng’g Research Center on Universal Interface and IT Access, and Omnitor at 41 (“RERC/Omnitor Comments”) (“Another concern is that gateway resources should not be wasted on calls where there is no likelihood for the need for this interoperability function.”); see also CTA Comments at 1 (noting that a primary benefit of the proposed RTT rules is improved access to 911 and 711); TIA Comments at 12 (the Commission should limit RTT mandates to entities, devices, and services currently required to provide support for TTY); cf. CTIA Comments at 6 & n.15 (noting that backwards compatibility may be necessary in the near-term to facilitate 911 calls but that other services

One notable commenter that appears to support a long-term and broad backwards compatibility obligation¹⁴ offers no technical solution that is feasible to accomplish this broad obligation. In contrast, other comments acknowledge the technical impediments to such support,¹⁵ and the policy rationale for limiting backwards compatibility to critical calls.¹⁶

Because backwards compatibility requires reservation of a transcoder for every single incoming circuit-switched call to an RTT-enabled device, a requirement to support backwards compatibility for all calls could quickly result in no available transcoders for critical (*e.g.*, emergency) calls.¹⁷ Transcoders are a limited network resource and it is not possible to deploy transcoders in sufficient numbers to accommodate all incoming circuit-switched calls. Thus, T-Mobile continues to encourage the FCC to require backwards compatibility only for calls to 911 and 711-based relay services.¹⁸

may provide better access to emergency services by people with hearing loss; noting also that the ability to support backwards compatibility will depend on network architectures).

¹⁴ TDI Comments at 12.

¹⁵ *See* ATIS Comments at 5.

¹⁶ *See* RERC/Omnitor Comments at 41 (“Another concern is that gateway resources should not be wasted on calls where there is no likelihood for the need for this interoperability function.”).

¹⁷ *See* ATIS Comments at 5. Specifically, in order to enable backwards compatibility, TTY analog “baudot tones” must be decoded and recoded as RTT packets, on a per call basis, by a dedicated network element in the gateway to the circuit-switched (or analog) network. Because incoming TTY calls are not distinguished from voice calls by the analog network, the IP-based network must assume that all incoming calls (including voice calls) from the analog network to an RTT-enabled device require the reservation of a transcoder. The transcoder itself is a limited network resource—carriers cannot make available a transcoder for every incoming call—meaning that a mandate to enable backwards compatibility for all incoming TTY calls could result in all transcoders being reserved and calls to RTT-enabled devices being blocked.

¹⁸ *See* T-Mobile Comments at 5. In addition, T-Mobile cautions the FCC from adopting the position advocated by some commenters that backwards compatibility must be maintained until the PSTN is retired. *See* RERC/Omnitor Comments at 43; *see also* TDI Comments at 12 (calling for a gradual sunset of the obligation to support backwards compatibility).

Finally, T-Mobile agrees with AT&T that RTT support for non-service initialized (“NSI”) callers should not be required.¹⁹ NSI support for text-to-911 is not required; the FCC’s RTT rules should mirror text-to-911 in that respect. Additionally, attempts to accommodate NSI calls to 911 via RTT presents a security risk, by creating an open data connection that can be easily exploited. As noted by CTA, this rulemaking should not be used to expand the scope of carriers’ 911 service obligations.²⁰ In any event, the FCC is reviewing its NSI rules now;²¹ any decisions about NSI requirements going forward should be addressed in that proceeding, not this one.

III. ALL STAKEHOLDERS MUST PARTICIPATE IN THE MIGRATION TO END-TO-END RTT.

T-Mobile reiterates the importance of recognizing that wireless carriers alone cannot make a full end-to-end RTT transition occur. The Commission should instead focus its efforts on achievable solutions in support of more timely and reliable deployment of RTT communications.

In this regard, calls by Omnitor for the adoption of “total conversation” services ignore the limited scope of this proceeding.²² Wireless carriers have no ability to affect how text is transmitted in wireline networks, received by PSAPs or others, or even how consumers use RTT. T-Mobile welcomes the opportunity to engage with other stakeholders on these issues in a way

Omnitor, in fact, produces technology that enables backwards compatibility of RTT with TTY, and thus it has a vested interest in a long-term obligation by carriers to support backwards compatibility.

¹⁹ See AT&T Comments at 12-13.

²⁰ See CTA Comments at 2-3.

²¹ See *911 Call-Forwarding Requirements for Non-Service-Initialized Phones*, Notice of Proposed Rulemaking, FCC No. 15-43, PS Docket No. 08-51 (rel. Apr. 1, 2015).

²² See RERC/Omnitor Comments at 57.

that accounts for the limits of its role in the broader context. However, this proceeding is not the appropriate venue for that type of conversation.

Even within the scope of this proceeding, the record reflects a lack of understanding of what carriers can and cannot accomplish. In particular, calls for shifting certain burdens to carriers from public safety²³ are shortsighted. T-Mobile acknowledges that public safety is in a difficult position—the lack of funding for technology upgrades can create impediments to adoption of new and better services.²⁴ Indeed, this is one reason T-Mobile supports a limited-term backwards compatibility requirement for 911 and 711 services. But the Commission must keep in mind that wireless carriers represent only one portion of the ecosystem responsible for facilitating a successful end-to-end deployment of RTT technology. Thus, though RTT deployment will use gateways for RTT-to-TTY conversion to support legacy PSAPs, these gateways will be placed either at the PSAP/ESInet connection point or at the border with the legacy network selective router—in other words, at interworking points that are not within the control of wireless carriers, but are instead controlled by various government agencies or their vendors.²⁵

²³ See Comments of the Nat'l Emergency No. Ass'n at 8 (proposing that carriers be obligated to ensure their gateways perform certain functions); Initial Comments of Texas 9-1-1 Entities at 4-5 (proposing that carriers be obligated to cease providing backwards compatible service upon a request from the PSAP).

²⁴ Cf. Comments of APCO at 2, 4 (arguing that the RTT rules should not impose additional costs on PSAPs and noting the limited funding for PSAPs); Comments of the Nat'l Ass'n of State 911 Adm'rs at 2.

²⁵ For additional detailed information on the processing of emergency calls, see NENA, STA-010.2 (2015) and ATIS Standard for Implementation of 3GPP Common IMS Emergency Procedures for IMS Origination and ESInet/Legacy Selective Router Termination, ATIS-0700015 (2015).

The plain fact is that, whether for migration away from TTY to RTT or from existing systems to NG911 systems, public safety will need to determine how best to fund those transitions, as well as determine how the technical implementation on the PSAP side will work. Making wireless carriers bear the obligation for compliance, therefore, would be arbitrary and capricious.

IV. CONCLUSION

T-Mobile continues to encourage the Commission to ensure its rules implementing RTT obligations are grounded in feasibility, give carriers the necessary flexibility to deploy RTT, and acknowledge the role of numerous stakeholders, including public safety, in successful RTT implementation. By avoiding rules that effectively mandate infeasible solutions, the Commission can avoid the risk that those rules would be found to be arbitrary and capricious.

Respectfully submitted,



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