

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

In the Matter of	)	
	)	
	)	
Petition for Waiver of Rules Requiring	)	GN Docket No. 15-178
Support of TTY Technology	)	
	)	

**REPORT**

On November 13, 2015, the Commission granted Verizon’s request for a waiver of applicable TTY-related requirements for its IP-enabled wireless services.<sup>1</sup> In the *Verizon Waiver Order*, the Commission waived sections 6.5, 7.5, 14.20, 20.18(c), and 64.603 of the Commission’s rules “and any other Commission rules that require support of TTY technology as an accessible solution for VoIP networks,” and required progress reporting, among other requirements.<sup>2</sup> We provide Verizon’s next progress report, below.

Verizon remains committed to develop and deploy Real-Time Text (RTT) technology that will be accessible, interoperable with other RTT services and applications, and compatible with other providers’ networks, including users who may continue to rely on TTY technology in the future. We are on target to meet our year-end 2017 goals. This includes ongoing industry standards work, network development and testing, and continuing to push forward with our hardware, device, and operating system partners to deliver this nascent RTT capability.

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<sup>1</sup> *Petition for Waiver of Rules Requiring Support of TTY Technology*, Order, 30 FCC Rcd 12755, (2015) (“*Verizon Waiver Order*”).

<sup>2</sup> *Verizon Waiver Order*, ¶¶ 18-21, 25-26.

First, we are participating in ongoing standards development efforts at the Alliance for Telecommunications Industry Solutions (ATIS) to ensure that our solutions are interoperable. As we have previously noted, Verizon has implemented industry standard capabilities in its 4G LTE wireless network that it will use to support interoperable RTT solutions.<sup>3</sup> This includes industry standards such as the Internet Engineering Task Force (IETF) standard RFC 4103 that the Commission selected for use as a safe harbor in its RTT rules and is being used by other wireless carriers as they develop RTT capabilities.<sup>4</sup> This IETF standard provides a common transmission protocol for real-time text and has been incorporated as a part of several other industry standards for 4G LTE and emergency calling capabilities.<sup>5</sup> ATIS is also developing standards that will help define the interface and capabilities of RTT.<sup>6</sup> Verizon continues to build on its existing implementation of industry standards in its wireless network to support RTT transmissions.

Second, Verizon has conducted internal, third party, and emergency call interoperability testing. Verizon's internal testing includes various TTY and RTT calling use cases involving devices with prototype RTT functionality incorporated within the device and various devices that use traditional TTY devices over the public switched telephone network. Verizon is also working with some other national wireless providers to establish and conduct cooperative

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<sup>3</sup> See, e.g., Verizon Report, GN Docket No. 15-178, at 2-3 (Feb. 11, 2016).

<sup>4</sup> *Transition from TTY to Real-Time Text Technology*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 13568, ¶¶ 30-31 (2016) (“*RTT Rulemaking Order*”).

<sup>5</sup> *Id.*

<sup>6</sup> See Alliance for Telecommunications Industry Solutions, *Real Time Text Mobile Device Behavior*, Standard ATIS-0700029 (approved Jan. 30, 2017); see <https://sites.atis.org/insights/new-atis-standard-specifies-mobile-device-behavior-real-time-texting/>.

interoperability testing across networks to test calls made to and from other networks with various RTT and legacy TTY calling use cases. Our carrier-to-carrier interoperability testing has been very successful so far in helping to identify possible issues, including instances where RTT user experience may be diminished on certain calls between wireless carriers when LTE networks are not available or when full LTE IP interconnection is not yet in place. Conducting testing between carriers allows us and other carriers to track and implement solutions quickly as we prepare to make RTT available. Further, Verizon is conducting initial interoperability testing with a relay service operator to ensure interoperable TTY and RTT communications. Finally, Verizon has conducted coordinated testing of emergency 911 calls using a RTT-enabled device to test the interoperability and functionality of RTT calling to 911 legacy PSAP TTYs. These tests are guiding us toward effective interoperability – for both RTT to RTT communications and backward compatibility with TTY – using the standards built into Verizon’s wireless network.

Third, in addition to the development and testing work on its network, Verizon is also working to ensure a quality user experience for RTT, consistent with the industry standards described above. We continue to pursue a solution that includes RTT natively implemented in user devices, rather than initially providing RTT through a downloadable application. While Verizon has developed device requirements and continues to push forward with its partners and expects to meet its obligations, we remain dependent on our hardware, device, and operating system partners to incorporate the features and functions of RTT into a device by the end of this year. This effort by Verizon and its partners will pay dividends as we and others seek to deploy RTT broadly and quickly in the next few years.

In short, Verizon is deploying RTT technology to succeed TTY and ensure that accessible, interoperable RTT services will reliably function on new IP-based wireless networks.

Building on Verizon's implementation of industry standards-based technology in its network, Verizon's cross-functional expert team continues to actively work to ensure functionality, accessibility, and interoperability through the development and testing designed to meet objectives at the end of 2017. Verizon remains on track to provide RTT capability as set forth in the *Verizon Waiver Order* and *RTT Rulemaking Order*.

Respectfully submitted,

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