

Before the
Federal Communications Commission
Washington, DC

In the Matter of)	
)	
Petition for Rulemaking to Update the Commission's)	GN Docket No. 15-178
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)	
)	
)	
Facilitating the Deployment of Text-to-911 and Other)	PS Docket No. 11-153
Next Generation 911 Applications)	
)	
)	
Framework for Next Generation 911 Deployment)	PS Docket No. 10-255
)	
)	
IP-Enabled Services)	WC Docket No. 04-36
)	
)	
Telecommunications Relay Services and Speech-to-)	
Speech Services for Individuals with Hearing and)	CG Docket No. 03-123
Speech Disabilities)	
)	
)	
Implementation of Sections 716 and 717 of the)	
Communications Act of 1934, et al.)	CG Docket No. 10-213
)	
)	

**COMMENTS OF OMNITOR AB ON PETITION OF AT&T REGARDING THE SUBSTITUTION
OF REAL-TIME TEXT FOR TEXT TELEPHONY TECHNOLOGY**

via electronic filing

August 24, 2015

Gunnar Hellström

Omnitor AB

gunnar.hellstrom@omnitor.se

+46 708 204 288

Contact: Gunnar Hellström., gunnar.hellstrom@omnitor.se

Senior advisor, Omnitor AB, Virkesvägen 2A, 120 30 Stockholm, Sweden

+1 708204288

www.omnitor.se

Summary

Omnitor AB (Hereafter called Omnitor or we) respectfully submits the following Comments regarding the Petition for Rulemaking¹ and Petition for Waiver² (called the “Petitions” below) filed by AT&T Services, Inc. (AT&T).

Omnitor provides expertise and services in the accessible communication field and has in that role participated in standardisation and implementation of many accessible real-time personal communication services.

Omnitor answers positively the questions from the FCC on the petition for rulemaking from AT&T. However we clarify our position that the referenced regulations already allow implementation of RTT products in wireless devices and networks as long as they are able to interoperate with TTYs remotely. To this effect, a clarification of the rules that RTT is an allowed solution already today under specific conditions should be provided as soon as possible, so that implementations can proceed.

We also point out some conditions that would be of importance to be included in new regulations.

It is extremely important that the conditions of the waiver encourage the provision of early, even partial but usable implementations of RTT, to users.

Comments on the petition for rulemaking

A rapid determination without rule change is sufficient to start RTT implementation.

The petition for rulemaking is a good initiative and we suggest that it shall be supported. One request in the petition is that FCC determines if it would be allowed to deploy wireless products with RTT functionality already under current regulation 47 CFR 20.18(c) and 64.603.

The petition for rulemaking says: "In particular, the Commission should determine that RTT is an acceptable mechanism to comply with two specific regulations: (1) Rule Section 20.18(c), which requires commercial mobile radio service (CMRS) providers to transmit 911 calls through means other than the mobile radio handset, e.g. TTY, the only current means to meet this requirement; and (2) Rule Section 64.603, which requires common carriers, including VoIP providers, to support toll-free dialing to all relay services, including TTY, via the “711” dialing code. More broadly, the Commission should modify all TTY specific rules, such as the compatibility requirements under the Commission’s rules implementing Sections 255 and 716 of the Communications Act."

¹ See Petition of AT&T Services, Inc. for Rulemaking, PS Docket Nos. 11-153, 10-255, WC Docket No. 04-36, CG Docket Nos. 03-123, 10-213 (filed June 12, 2015) (Petition for Rulemaking).

² See Petition of AT&T Services, Inc. for Waiver, PS Docket Nos. 11-153, 10-255, WC Docket No. 04-36, CG Docket Nos. 03-123, 10-213 (filed June 12, 2015) (Petition for Waiver).

That indicates that AT&T assumes that 20.18(c) and 64.603 can allow RTT as a replacement for TTY in the terminal devices under the conditions they explain, and just want a confirmation on that conclusion.

The difference between a determination and a full rulemaking can be years, so there is a lot to gain by realizing that a determination is sufficient for going ahead with implementation.

Adjustment of the regulation to clearly say that RTT is allowed and required will eventually be needed, but the clarification that RTT is an allowed solution already today under specific conditions should be provided to AT&T as soon as possible. That will make it possible to start rapid implementation of RTT and deploy it together with the other wireless services that AT&T want to deploy. Waiting for regulation changes will not be needed.

Explanation why RTT in wireless devices is allowed under current regulation.

AT&T refers to regulation 47 CFR 20.18(c) and FCC regulation 64.603 as possible obstacles for deploying RTT in wireless communication devices.

47 CFR 20.18(c) requires that wireless providers "*must be capable of transmitting 911 calls from individuals with speech or hearing disabilities through means other than mobile radio handsets, e.g., through the use of Text Telephone Devices (TTY)*".

TTY is only mentioned as an example. Equally well motivated and allowed would be an external keyboard of the type that is commonly supported by today's smartphones and tablets. It is also evident that as long as the device has the ability to connect to the external keyboard for RTT calls, it is also allowed to have a possibility to perform the calls with only internal means in the device.

It is likely that the rulemakers once upon a time inserted "e.g." in front of the TTY to be forward looking and have a preparation for something better.

What is clearly required though, is that 9-1-1 calls must be possible with the current TTY equipment in the 9-1-1 centers. So, while the wireless device end may use RTT, there must be conversion between RTT and TTY technologies in the network for performing the calls with TTYs.

The title of 47 CFR 20.18(c) is "TTY Access to 911 Services". That means for us that 911 has an access form suitable for TTY signaling. So any product composition for user communication that is TTY signal compatible in the 911 end can use these services. The RTT terminals combined with the RTT/TTY interworking functions in the network provide such TTY signal compatibility in the 911 end and are suitable for 911 calling. It does not change the picture that the terminal makes use of RTT signaling. It is still the TTY access of 911 that is used.

FCC rule 64.603 requires that calls with 711 TTY relay services shall be possible. This requirement would also be fulfilled by an RTT implementation including an RTT/TTY interworking function in the network, and routing of calls with number 711.

47 CFR §6.3(b) etc. also referenced by the petition for rulemaking defines compatibility of various kinds and introduces requirements. It differentiates between TTY connectability and TTY signal compatibility.

" (3) TTY connectability. Products which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. It shall also be possible for the user to easily turn any microphone on and off to allow the user to intermix speech with TTY use.

(4) TTY signal compatibility. Products, including those providing voice communication functionality, shall support use of all cross-manufacturer non-proprietary standard signals used by TTYs."

First TTY connectability (meaning the ability to hook up a TTY to the user terminal) is not needed because the RTT implementation can be planned to provide a TTY functionality itself, by the combination of RTT in the terminal and conversion to TTY in the network. The product is the terminal with that network functionality and together they perform the TTY functionality so that TTY calls can be made.

Secondly, the RTT implementation provides the required TTY signal compatibility because the product, consisting of the user terminal using RTT and the TTY interoperability function in the network support use of the TTY standard signals in the calls with TTYs.

The requirements for TTY connectability on the wireless device itself is valid only if the product does not have TTY functionality included. Since the RTT functionality in the terminal device combined with the RTT/TTY interoperability is the provided product, it has TTY functionality included and does not need to provide TTY connectability. It also enables use of TTYs in remote calls, and therefore provides the required TTY signal compatibility.

This analysis of the regulation should allow AT&T to move on and implement RTT as described in the petition for rulemaking, including the TTY interoperability and interoperability with RTT in other networks. A rapid confirmation from FCC that this is allowable would however be suitable.

To consider when amending the regulation

Even if implementation can be done according to current regulation, there are still reasons to amend the rules. When amending the regulations, there are some points to consider. Some of them are mentioned in the petition for rulemaking, while some are from other sources.

1. Require that products providing RTT functionality and voice communication shall provide interworking in both RTT and voice in the same call.

2. Avoid as far as possible bad effects by the functional limitations in TTY technology. The RTT users may in many cases not be accustomed to the severe functional limitations of the TTY. Require therefore support for limiting adverse effects on the call performance by these limitations to be implemented in the RTT/TTY interworking function and in the RTT terminal. The limitations that require support by such procedures are:
 - a. Limitations in simultaneity of text in both directions.
 - b. Limitations in support of audio and text simultaneously
 - c. Limitations in character set and case.

Suitable procedures are documented in the following documents:

*Emergency Access Advisory Committee (EAAC) Report on TTY Transition*³

*Proposed procedures for the TTY as a text terminal in legacy 9-1-1 PSAPs without IP connection*⁴

3. Add to the relay service requirements so that RTT terminals can use RTT based text relay services directly in RTT mode and make one-step dialed calls with 10-digit numbers.

Impact on deployment of RTT

FCC asks for comments on how recognition of RTT would affect its deployment. It is likely that it will have a very positive influence. RTT has been discussed as a possible replacement for TTY for a long time, but uncertainty about its legality as a replacement has held back deployment. With the legality clarified, any hesitation to deploy RTT in a good and interoperable way can be dropped.

Impact on advancement of text-to-9-1-1

FCC asks for comments on how recognition of RTT would affect advancement of text-to-9-1-1.

Text-to-9-1-1 is now under deployment as an SMS service. This is very important because of the wide use of SMS, but SMS has severe limitations that make it cumbersome to use as a terminal for emergency service conversations. Long delays appear because of the time it takes to compose whole sentences. Persons who can use voice to some degree but need text occasionally have no support for that mode of operation by SMS. Deployment of RTT would enable currently unsupported modes in emergency calls in a good way, especially when NG9-1-1 deployment gets up to speed, because the NG9-1-1 plans contain the same standards for RTT as AT&T describes support for in the rulemaking petition. The move from

³ <https://www.fcc.gov/document/emergency-access-advisory-committee-eaac-report-tty-transition>

⁴ https://apps.fcc.gov/edocs_public/attachmatch/DOC-321704A1.pdf

messaging-oriented SMS to conversational RTT text implies an enormous improvement in usability of the emergency service dialogue resulting in good lifesaving opportunities.

Comments on the petition for waiver

It would be unfortunate to let the users be without support of good accessible services.

Therefore FCC is advised to create conditions for a waiver if it is acknowledged, that awards early and even partial deployment of RTT to users while the work goes on towards full deployment. A good definition of what full deployment would mean is also essential for successful end of the waiver period.

FCC asks if all carriers should have the same conditions as the waiver provides if it is granted. The answer is yes. Equal conditions would encourage rapid fulfillment of the waiver conditions.