

Holland & Knight

800 17th Street N.W., Suite 1100 | Washington, DC 20006 | T 202.955.3000 | F 202.955.5564
Holland & Knight LLP | www.hklaw.com

Peter M. Connolly
+1 202-862-5989
peter.connolly@hklaw.com

June 22, 2020

Via ECFS

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12 Street, SW
Washington, D.C. 20554

Re: CG Docket No. 16-145, GN Docket No. 15-178

Dear Ms. Dortch:

Transmitted herewith, pursuant to Section 1.3 of the FCC's Rules, on behalf of United States Cellular Corporation ("U.S. Cellular"), is "Request For Waiver and Extension of Time" in the above-referenced dockets. The request is submitted in redacted form as it contains material which should be withheld from public inspection for which confidential treatment is being requested.

U.S. Cellular notes that it is submitting its unredacted "Request For Waiver and Extension of Time" under separate cover in accordance with the FCC's procedures regarding the submission of confidential material, including a request for confidential treatment under Section 0.459 of the FCC's Rules. The unredacted request will be filed with the Office of the Secretary.

Please contact the undersigned with any questions regarding this submission.

Sincerely yours,

HOLLAND & KNIGHT LLP



Peter M. Connolly

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of)

Waiver of Sections)
9.10(c), 64.603, and 67.2 of the)
FCC's Rules, 47 C.F.R.)
9.10 (c), 64.603 and 67.2.)

CG Docket No. 16-145
GN Docket No. 15-178

REQUEST FOR WAIVER AND EXTENSION OF TIME

United States Cellular Corporation ("U.S. Cellular") hereby, in accordance with Section 1.3 of the FCC's Rules, seeks a waiver of the above-captioned rules and an extension of time from June 30, 2020, the present deadline for compliance, until December 31, 2020 to come into compliance with those rules and any other rules mandating the provision of Real Time Text (RTT) communications using IP technologies to deaf, hard of hearing, speech disabled, and "deaf-blind" persons. U.S. Cellular will describe below its efforts to comply with the FCC's RTT rules within the time provided, which justify the requested waiver and the necessary extension of time to come into compliance with the rules.

Background:

In December 2016, the FCC released a Report and Order and Further Notice of Proposed Rulemaking adopting amendments to its rules to facilitate a transition from outdated text telephone technology (TTY) to RTT for the benefit of the text-reliant users referred to above.¹

¹ In the Matter of Transition from TTY to Real-Time Text Technology; Petition For Rulemaking to Update the Commission's Rules for Access to Real-Time Text Technology, and Petition For Waiver of Rules Requiring Support of TTY Technology, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd. 13568 (2016) (Order).

The Order's basic provisions with respect to wireless carriers were as follows:

The FCC amended Section 20.18(c) [now Section 9.10(c)] of its rules to allow CMRS providers to support RTT in lieu of TTY technology for communications using wireless IP based voice services and Part 64 of its rules to allow wireless communications support for Telephone Relay Service (TRS) access, including access via 711 abbreviated dialing, through RTT communications, in lieu of support through existing TTY technology.

The FCC relieved wireless service providers of all TTY support obligations, including TTY support on legacy wireless networks, to the extent they supported RTT on IP facilities in accordance with the Commission's rules. The FCC established the following criteria defining what constitutes "support" for RTT:

RTT communications must be interoperable across networks and devices, and this may be achieved through adherence to "RFC 4103" as a "safe harbor" standard for RTT;

RTT communications must be backward compatible with TTY technology; and

RTT must support 911 communication.

The FCC found that RTT is an "electronic messaging service" that is subject to the performance objectives of Parts 6, 7, and 14 of the Commission's rules dealing with service to the disabled, if such objectives are considered "readily achievable," or unless these objectives are considered "not achievable," as applicable;

The FCC established that support for RTT includes support for the ability to initiate and receive calls with the same telephone numbers as are used for voice communications and to support simultaneous voice and text communications in the same call session. In addition, the FCC has recognized that: (1) the provision of "accessible indicators," such as a "visual soundbar" for call answering and activity; (2) appropriate latency and error rates; and (3) a pre-

installed default functionality on end user “text capable” devices can facilitate making RTT service functionally equivalent to voice communications;

The FCC amended Part 6, 7, 14 and 20 of its rules to permit service providers, to the extent they are responsible for the accessibility of end user devices, to ensure that devices which have the ability to send, receive and display text also include RTT capability in lieu of supporting TTY technology, subject to the “readily achievable” and “achievable” limitations set out in Parts 6, 7 and 14 of the FCC’s Rules, as applicable.²

By June 30, 2020, under current rules, Tier II wireless carriers such as U.S. Cellular choosing to support RTT in lieu of TTY over IP facilities must support RTT either (i) through a downloadable RTT application or plug-in that supports RTT; or by (ii) implementing “native” RTT functionality into its core network; and offering at least one handset model that supports RTT, and by including in the requirement to support RTT in future design specifications for all authorized user devices specified on or after that date.³ Providers will be subject to this timeline except to the extent it is not achievable for a particular manufacturer to support RTT on that carrier's network. The carrier “may rely on a manufacturer's representation in that regard.”⁴

U.S. Cellular is currently providing service to text-reliant customers using legacy TTY technology, not its IP network, pursuant to the waiver granted to member companies of the Competitive Carriers Association (“CCA”), to which U.S. Cellular belongs.⁵ The CCA Waiver, which permits CCA member companies not to have to use their IP-based wireless services to

² Ibid., Paragraph 6.

³ Ibid., Paragraph 66.

⁴ Ibid., Paragraph 6.

⁵ See, In the Matter of Petition For Waiver of Rules Requiring Support of TTY Technology of Competitive Carriers Association, Order, 31 FCC Rcd. 3778 (CCB, PSHSB, WTB, WCB 2016) (CCA Waiver).

support TTY technology, allows until June 30, 2020 for CCA members to develop RTT solutions as a substitute for TTY.⁶

However after June 30, in the absence of the waiver sought herein, U.S. Cellular would in theory be subject to existing requirements to support TTY through IP-based wireless service. That would not be a rational outcome, given that no reliable technology exists to do that, and given U.S. Cellular's good faith attempt to deploy RTT, to be described below.

I. U.S. Cellular Has Moved Forward In its RTT Deployment, While Hampered by Unforeseeable Delays

A. Network Development.

U.S. Cellular has taken the option of deploying RTT within its core network and has made considerable progress in its deployment of RTT. Throughout 2019, the U.S. Cellular Architecture Team held meetings with vendors to investigate the available RTT solutions. That team reviewed the options and then adopted the RTT recommendations which would be the best "fit" for the U.S. Cellular network. Following that evaluation of RTT technologies, U.S. Cellular selected its RTT vendor in September 2019 and began its deployment efforts in October 2019. On December 12, 2019, U.S. Cellular's Enterprise Program Management ("EPM") team formally approved RTT deployment as a project. The U.S. Cellular Advanced Engineering Team ("ASEP") completed its high-level RTT design on Jan. 20, 2020.

In January 2020, the RTT project team determined that U.S. Cellular's launch of RTT was dependent on a Home Subscription Services ("HSS") upgrade from Generation 8 to Generation 10 of U.S. Cellular's "blade servers," [REDACTED]. The HSS is part of U.S. Cellular's core network dealing with customer accounts. These servers are connected to U.S. Cellular's engineering laboratory and support the IP-based components of the call/session

⁶ Ibid, Paragraphs 20-21; Order, Paragraph 6.

processing essential to RTT. They must be in place before RTT testing can begin. The internal U.S. Cellular RTT project team worked [REDACTED] and the U.S. Cellular HSS Upgrade Project Team to prioritize the U.S. Cellular engineering lab to be the first to get the necessary blade server upgrade [REDACTED] in order to minimize any delay in the RTT timeline.

The completion of lab testing was required before implementing any upgrades to the servers at U.S. Cellular's four Regional Connectivity Centers ("RCCs"). And RCC upgrades must be completed before U.S. Cellular can deploy RTT throughout its network. However, the necessary HSS upgrade delayed the start of lab testing to mid-March. Trying to ensure compliance with the June 30 deadline, the RTT project team decreased the amount of time to complete each RCC upgrade from 4 weeks to 3 weeks. U.S. Cellular was able to complete its first RCC upgrade by May 1.

The RTT Application Server (RTT - AS) is an additional server which had to be added to U.S. Cellular's network to facilitate RTT deployment. [REDACTED]. Testing of the RTT - AS began in early April 2020. During that testing the project team discovered that the [REDACTED] RTT-AS could not process RTT-to-RTT calls without causing U.S Cellular's Telephony Application Server (TAS), which supports the call routing functions of call/session processing, to send them to voicemail. [REDACTED]. However the "fix" caused RTT – RTT call failures that affected U.S. Cellular's Robocall Initial Filter Criteria(iFC). The TAS was not recognizing the headers for robocalls and would fail when the RTT-AS tried to terminate the call. This required another patch [REDACTED] which delayed the beginning of device testing until May 6.

In order to resolve the RTT-to-RTT issue, U.S. Cellular also had to upgrade its [REDACTED] [REDACTED], another server which supports the call routing components of call/session processing. The [REDACTED] required additional capacity to route RTT

calls away from the originating RTT-AS. The changes required implementation in two phases, using two overnight maintenance windows for each RCC to complete. During the implementation of these changes in the first RCC on the night of May 5, a spike in Key Performance Indicators ("KPIs") resulted in halting all work on that RCC and preventing U.S. Cellular from meeting the May 6 date for starting device testing. [REDACTED] was a syntax error in the Services Field Entry [REDACTED]. [REDACTED]. DNS is a crucial function in implementing RTT, as it is involved in "translating" IP addresses to other forms of address. [REDACTED] a permanent software fix in early June 2020. U.S. Cellular, [REDACTED], also pursued successful "work around" efforts in order to try to meet the deadline. It provided one of its RCCs with the necessary testing capacity by checking the Services Field Entry itself and validating the correct syntax. U.S. Cellular now anticipates that all four RCCs will be "completed" by June 26, 2020.

However, the foregoing demonstrates both U.S. Cellular's due diligence in its RTT development efforts and the progress that has been made. We now anticipate that U.S. Cellular's network will be RTT - compliant on or about June 30, 2020.

B. Device Development

As noted in the above discussion of RTT requirements, wireless RTT providers must deploy at least one RTT-compliant handset model by June 30. U.S. Cellular has worked closely with [REDACTED]. [REDACTED] 90 days to test a new software "binary" before delivery to U.S. Cellular for completing U.S. Cellular's own device testing validation. [REDACTED] both changes in TOPS, U.S. Cellular's central Information Systems (IS) billing system used for provisioning devices, and complete network readiness (i.e., upgrading of all four RCCs) to begin device

testing of a new “binary.” In February 2020, the RTT project team discovered that the necessary TOPS changes would require a Major Release, [REDACTED]. Moreover, this release could not be implemented until June 7, 2020. However, U.S. Cellular's then anticipated internal "Network Ready Date" for all four RCCs was June 10. Given these developments, [REDACTED] would not have been able to complete its requisite 90 days of testing until about September 10. However the RTT project team, [REDACTED], was able to manually provision test devices prior to the TOPS changes being implemented. Thus U.S. Cellular was able to start device testing on May 1, after the first RCC upgrade was completed, rather than waiting for all four RCCs to be upgraded. [REDACTED]

[REDACTED]

[REDACTED] These adjustments were made despite the Covid-19 pandemic, which imposed travel restrictions on both U.S. Cellular [REDACTED] after mid-March [REDACTED]

[REDACTED]

However, given that timing and given U.S. Cellular's own need to test the modified devices, RTT compliant [REDACTED] devices cannot be available to the public by June 30, but should be available by September 30, 2020.

C. 911 Deployment.

An additional “gating item” for the deployment of RTT is the capability to provide 911 service using RTT. U.S. Cellular [REDACTED]. [REDACTED]. However, a software code issue occurred which caused the system to be unstable, [REDACTED]. [REDACTED].

[REDACTED]

Given the need to implement the software fix, complete the device certification process and conduct necessary testing with the PSAP, and given that 911 capability is an essential component of RTT, it is necessary to request an extension until December 31, 2020 to make RTT commercially available on U.S. Cellular's network.

Moreover, it should be noted that pursuant to Section 9.10(q)(10) (ii) of the FCC's Rules "text providers" must route all 911 text messages to a PSAP within six months of a "valid request" for "text-to-911 service," with "valid request" being defined in part as the requesting PSAP being "technically ready" to receive 911 text messages. See Section 9.10(q)(10)(iii) of the FCC's Rules. A PSAP cannot be considered "technically ready" to receive messages until necessary testing has taken place. Testing and technical readiness are dependent on each other. Again, U.S believes that by December 31, 2020 it will be able to deliver 911 text messages to that PSAP and other requesting PSAPs within the time allowed under the rule.

II. U.S. Cellular Has Provided Ample Justification for a Waiver

Earlier in this proceeding⁷ the FCC stated succinctly the grounds for a rule waiver in RTT/TTY context:

"A Commission rule may be waived for 'good cause shown.' In particular, a waiver is appropriate where the particular facts make strict compliance inconsistent with the public interest. In addition, we may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis. Such a waiver is appropriate if special circumstances warrant a deviation from the general rule and such a deviation will serve the public interest. Applicants for waivers of TTY support rules must describe the wireless services they provide, explain the difficulties of supporting TTY technology over wireless IP networks, and state their expectations as to the deployment of accessible text alternatives to TTY technology, as well as a commitment to achieving compliance with the reporting requirements and other specified conditions."⁸ (citations omitted)

U.S. Cellular has certainly demonstrated its compliance with this waiver standard. As shown above, despite some difficulties, U.S. Cellular is in (and has mostly completed) the process of deploying a more efficient text alternative to TTY technology over its IP network. It has been a complicated and expensive process. Neither U.S. Cellular nor any other carrier has the capacity to provide reliable TTY technology over IP-based wireless networks. U.S. Cellular will continue to serve its text-reliant customers with TTY provisioned as it is at present until its RTT deployment is completed later this year. Thus those customers will continue to be served as they have been in the past until their service can be upgraded. In these circumstances a waiver grant would certainly be a 'more effective implementation of overall policy on an individual basis' and is eminently justified.

⁷ In the Matter of Petition For Waiver of Rules Requiring Support of TTY Technology; Comcast Corporation, Order, 33 FCC Rcd. 682 (CGAB 2018)

⁸ Ibid., Paragraph 5.

Conclusion

U.S. Cellular has sought diligently to achieve compliance with RTT requirements by the June 30, 2020 deadline. It believes that working in conjunction with its vendors it will be able to do so by December 31, 2020 and asks the necessary waiver and extension to do so without being considered in violation of an outdated rule.

Respectfully submitted

UNITED STATES CELLULAR CORPORATION

/s/Grant B. Spellmeyer

Grant B. Spellmeyer
Vice President
Federal Affairs and Public Policy
United States Cellular Corporation
500 North Capitol Street, NW
Washington, D.C.

/s/ Peter M. Connolly

Peter M. Connolly
Holland & Knight LLP
800 17th Street NW
Suite 1100
Washington, D.C. 20006

Dated: June 22, 2020

Declaration

I, Jeffrey Baenke, am U.S. Cellular's Vice President of Technology Development. I have reviewed the foregoing "Request For Waiver and Extension of Time." I hereby declare under penalty of perjury that the facts asserted therein are true and correct.

6/19/2020
Date



Jeffrey Baenke