

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20553**

In the Matter of)	
)	
General Motors Holding LLC)	
Petition for Partial Waiver of)	GN Docket No. 15-178
Real-Time Text Minimum Functionality)	
Requirements)	

To: Chief, Consumer and Governmental Affairs Bureau

Reply Comments of General Motors Holding LLC

General Motors Holding LLC (“GM”)¹ is motivated by a future of zero crashes, zero emissions, and zero congestion and believes that autonomous vehicles will help realize this zero, zero, zero vision. GM strives to design cars and features that improves mobility and accessibility for more people. As noted in our Petition for Waiver,² GM is working to design, manufacture and roll out the world’s first scalable autonomous vehicle (“AV”). Accordingly, GM has closely coordinated with stakeholders within the accessibility community to discuss the importance of and types of features that would result in production of accessible AVs, and GM continues to work with and seek input from such groups.

The AV is not yet publicly-available and is currently being tested and evaluated in California, Arizona and Michigan. Even in this early stage, however, GM is pleased to report to

¹ For purposes of this proceeding, GM includes all of its affiliates and subsidiaries, which include GM Cruise Holdings LLC and all of its subsidiaries.

² See Petition for Waiver of General Motors LLC, GN Docket No. 15-178 (filed Dec.11, 2018) (“Petition”); *see also* Consumer and Governmental Affairs Bureau Invites Comment on a Petition Filed by General Motors Holding LLC for Partial Waiver of Real-Time Text Minimum Functionality Requirements, GN Docket No. 15-178, Public Notice DA 18-1301, (rel. Dec. 26, 2018).

the Federal Communications Commission (“Commission” or “FCC”) that the company’s self-driving vehicle, known as the “Cruise AV,” will incorporate customer support features that account for and effectively address the challenges that may face deaf or hard-of-hearing AV passengers.

Accordingly, the instant reply comments first provide background context and additional details regarding the current plans for the company’s AV ride-hailing service and its customer support function. Next, the reply comments clarify that: the Cruise AV customer support function: (1) will be an integral part of the Cruise AV; (2) will operate as a telematics service; (3) does not implicate the Commission’s Real-Time Text (“RTT”) rules; and (4) will nonetheless incorporate meaningful accessible communication.

Introduction and background. The Petition requests partial waiver of certain minimum functionality RTT requirements as they pertain to the forthcoming Cruise AV ride-hailing service, which, as noted above, is currently in testing and development and not available to the public. Specifically, the Petition seeks waiver for the rules pertaining to RTT-RTT interoperability; RTT-TTY interoperability; transmission and receipt of RTT communications from PSAPs; and simultaneous voice and text.³

At the outset, GM wishes to extend its gratitude to the Samuelson-Glushko Technology Law & Policy Clinic, which filed comments on behalf of Telecommunications for the Deaf and Hard of Hearing, Inc. and others.⁴ The Clinic Comments thoughtfully question the need for the Petition and expressly conclude that the Petition does not explain “how or why” the Cruise AV

³ See Petition at 9.

⁴ See Comments of Telecommunications for the Deaf and Hard-of-Hearing, Inc., Nat’l Ass’n of the Deaf, *et al.*, GN Docket No. 15-178 (filed Jan. 30, 2019) (“Clinic Comments”).

customer service function implicates the Commission's RTT rules.⁵ GM therefore has elected to focus these reply comments on clarifying the implications of the Commission's RTT rules to the Cruise AV's customer service function.

Customer support functionality will be an integral component of the Cruise AV. GM is continuously evaluating and innovating in an effort to create the best possible Cruise AV passenger experience. Indeed, given the excitement about and high expectations for AV transportation, GM's engineers frequently reevaluate technical and other designs in an effort to continuously improve upon prior plans.

While a passenger's opinion of a Cruise AV ride-hailed trip will be formed mostly by the event itself, from GM's perspective, the passenger's experience begins with a desire to ride and ends only when the passenger has safely exited the vehicle at the correct destination. Therefore, the customer support service will be an integral part of the AV experience and, as such, would ensure that those journeying have seamless access to customer support personnel throughout the trip—from start to finish.

Accordingly, GM clarifies that the customer support function will be an integral component of the Cruise AV. In addition, once the vehicles are deployed, riders will enjoy the flexibility to use the customer support function to reach support personnel using either their personal smartphones, from within the vehicle, or a combination of the two. GM will design both options to be functionally equivalent; meaning that both would enable 24-7, 365 communication experiences.

⁵ See Clinic Comments at 2, 4 & 8.

The Cruise AV customer support function will operate as a telematics service. Next, GM clarifies that the customer support function will not touch the interconnected public switched telecommunications network.⁶ Rather, the function will employ OnStar to operate as a non-interconnected telematics service⁷—using a single transceiver to transmit communication *only* between AV riders and customer support personnel.⁸ This means that the customer support function, will enable RTT (and voice calls) to reach *only* customer support personnel.⁹ Thus, the AV customer support function operate as a non-interconnected telematics service.

Specifically, unlike a telematics unit that includes a wireless telecommunications capability, this first-generation customer support function would provide only telematics service. As such, the AV customer support function will not and cannot transmit or receive commercial wireless telecommunications. Rather, the communication would be limited only to that between the rider and customer support personnel.¹⁰

As a telematics service, the Cruise AV customer support function falls outside of the Commission’s RTT requirements. Next, GM clarifies that, as a telematics service, the Cruise AV

⁶ See *Revision of the Commission’s Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems*, Order, 18 FCC Rcd 21531 (2003) (“FCC OnStar Telematics Order”).

⁷ See FCC Telematics Order at 18 FCC Rcd 21535 at ¶ 17 (in which the Commission recognized that telematics units “provide only a telematics service that uses underlying wireless service to directly connect to the call center of the telematics service provider, but does not use the interconnected public switched network ... [and thus] cannot transmit and receive commercial wireless calls between the [driver] and other wireline or wireless end users”). In addition, we observe that the Petition does not contain support for the conclusion that the customer support service is classified as an Advanced Communications Service. See Petition at 2.

⁸ See *id.*, 18 FCC Rcd at 21533 ¶ 8.

⁹ To the extent that passengers that elect to utilize the customer support service through their personal smartphones, they will also have the ability to access and use telecommunications services provided by their personal telecommunications providers.

¹⁰ See FCC OnStar Telematics Order at 18 FCC Rcd 21535 ¶ 17, 21537 ¶ 23.

customer support function will not implicate the Commission's RTT requirements.¹¹ In this regard, we agree with the Clinic Comments.

First, as to RTT-to-RTT or RTT-to-TTY interoperability, as noted above, the Commission has determined that telematics service is not telecommunications and therefore is technically incapable of enabling interoperable communication. Given its technical limitations, the customer support function cannot provide interoperable telecommunications between the AV riders and parties other than customer support personnel. Thus, GM agrees with the conclusion set forth in the Clinic Comments: the Cruise AV customer support function is not subject to the Commission's RTT obligations.¹²

Although a telematics service, the Cruise AV customer support function will nonetheless facilitate meaningful accessible communication. As noted above, once deployed to the general public, riders in the Cruise AV would have the flexibility to access the customer support function (and reach customer support personnel) through either their own smartphones or the devices integral to and located within the AV. A non-interoperable telecommunications system, the customer support function operates as a telematics service. As such, the function would offer RTT and voice capabilities to connect Cruise AV riders directly to customer support personnel in all instances. Thus, the customer support function would facilitate meaningful accessible communication.

¹¹ See *id.*, 18 FCC Rcd at 2135 ¶ 17 (stating that telematics services that are not capable of providing wireless calling service thus are not subject to the Commission's E911 requirements).

¹² See *supra* at n.5&7.

First, GM clarifies that the Cruise AV telematics customer support function will support RTT-to-RTT, which will enable direct real-time text communication between riders, including those that are deaf or hard-of-hearing, and customer support personnel.¹³

Next, GM clarifies that the Cruise AV customer support function will enable RTT and voice communication between AV passengers and customer support, which would afford deaf and hard-of-hearing (and blind or low-vision) AV passengers the ability to communicate with public safety. Prior to roll-out, customer support personnel will have completed the necessary training and thus will have the knowledge to and ability to directly connect AV passengers with public safety. And, the Commission has determined that where persons in vehicles equipped with a telematics service have the ability to directly contact telematics service-provisioned customer support, which in turn reaches the local public safety entity, is a permissible alternative to a direct communication between the driver and a public safety entity.¹⁴

Finally, regarding the simultaneous voice and text requirement, GM clarifies that the Cruise AV customer support function will enable simultaneous voice and text capability between AV passengers and customer support personnel. For instance, a deaf or hard-of-hearing rider would have the ability to communicate by RTT with customer support personnel at the same time that a second rider is communicating with customer support personnel by voice.

As set forth above, the Cruise AV customer support function would satisfy the requirements for: RTT to RTT communication (as between AV riders and customer support

¹³ We note that the Commission's rules exempt all wireless communication services from the RTT-TTY interoperability requirement. See 47 CFR § 6.3(b)(5).

¹⁴ See FCC OnStar Telematics Order, 21 FCC Rcd at 21539 ¶¶ 28-29.

personnel); transmission and receipt of RTT communication from public safety entities (with immediate intervention and assistance from customer support personnel, a process upon which the Commission has favorably passed); and simultaneous voice and RTT communication (as between AV passengers and customer support personnel).

Conclusion. GM has a long and distinguished record of identifying and incorporating accessibility solutions into its vehicles and related products. While the Cruise AV customer support function is a telematics service and thus does not implicate the Commission's RTT requirements, as discussed here, the function will incorporate customer support features that account for and effectively address challenges that may face deaf or hard-of-hearing AV passengers.

The company looks forward to continuing to coordinate closely with the Commission and interested parties within the accessibility community as plans for the Cruise AV come to fruition.

Respectfully submitted,

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