

**Before The  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of	)	
	)	
Facilitating the Deployment of Text-to-911 and Other Next Generation Applications	)	PS Docket 11-153
	)	
Framework for Next Generation 911 Deployment	)	PS Docket No. 10-255
	)	

**REPLY OF  
TELECOMMUNICATION SYSTEMS, INC.**

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## SUMMARY

TeleCommunication Systems, Inc. (TCS) unique real world experiences with the installation of text-to-TTY applications leads it to call for caution, particularly if the Commission is considering a mandate of TTY as the universal text-to-911 delivery system. TTY is not currently consistent enough for such a conclusion, and PSAPs need the flexibility to determine if TTY delivery makes sense in their unique circumstances.

TCS's experience also leads it to believe there is insufficient justification for treating carriers' SMS services differently than major over-the-top (OTT) providers. Both should be managed equally regarding text-to-911 obligations, whatever those might be, if any.

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**REPLY  
OF  
TELECOMMUNICATION SYSTEMS, INC.**

TeleCommunication Systems, Inc. ("TCS") hereby submits its Reply comments in response to the Further Notice of Proposed Rulemaking ("Notice") released by the Federal Communications Commission ("Commission" or "FCC") in the above-referenced proceedings.<sup>1</sup>

**A. TCS' Real World Experience With Text-to-911 Messaging Supports a Cautious Approach to Text-to-TTY Implementation**

TCS has several commercial text-to-911 installations in progress. The quantitative data that we have gathered initially points to caution in mandating text-to-TTY as a medium for communicating emergency text messages to Public Safety Answering Points ("PSAP"). Based on our observations, TTY delivery of text-to-911 messages routed and delivered as TTY should not be mandated and should only be at the discretion of the relevant qualifying PSAP. These observations are predicated on the findings below:

- 1) Text-to-TTY requires a large amount of testing to achieve communications. Extensive network testing and adjustment come at a cost in time, resources, and money to the PSAP over and above a normal wireless TTY implementation. TTY messages can be affected by the echo cancelling components of the telephone network. There is no guarantee that all TTY-related transmission issues can be resolved to a carrier-grade level for every

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<sup>1</sup> Further Notice of Proposed Rulemaking, *Facilitating the Deployment of Text-to-911 and Other Next Generation Applications*, PS Docket 11-153; *In the Matter of Framework for Next Generation 911 Deployment*, PS Docket No. 10-255 (Released December 13, 2012)(FCC 12-149) ("Notice"). The Commission requested Comments to Section III. A in advance of comments to the remaining sections. TCS filed its initial Comments on January 29, 2013, additional Comments on March 11, 2013, and incorporates by reference those filings herein.

PSAP, and no guarantee that the service will always achieve less than the 1% error rate needed for reliable communication.

- 2) Text-to-TTY messaging requires configuration changes to the PSAP-to-selective router trunking, and may require additional trunks from the selective router to the PSAP. If SMS/Text to TTY traffic replaces current Wireless TTY or VRS from mobile traffic, there should be no impact to the number of trunks required by the PSAP. However, in TCS' experience, SMS/Text traffic is additive, which may mean more call takers and trunks are required. This may eventually mean increased call taker resources at the PSAP.
  
- 3) While the J-STD-110 standard describes the technical end-to-end call flow for text-to-TTY, there is no standard implementation practice to determine demarcation of responsibility between the individual wireless carrier and public safety. Either the wireless carrier or PSAP may be disadvantaged based upon the implementation architecture. Because text-to-TTY messages are a new call type, and we know that the text is transformed to audio, we need to know if the implementation practice will mean connectivity from the text-to-TTY router to the PSAP, or if the practice will mean the implementation of a Selective Router to text-to-TTY router connectivity. Therefore, cost assignment and recovery are unclear and there may be a lack of tariff support for the necessary facilities. Existing TTY calls originate from the circuit switched network. However, text-to-TTY sessions are not originated in the circuit switched network, but instead are converted from text into a TTY call. It is possible that PSAPs may need to

implement trunks to connect from their PSAPs to a new text-to-TTY Selective router for call completion.

In summary, as these technical limitations highlight, a PSAP should both affirmatively request and demonstrate the capability to process 911 emergency text messages delivered as TTY before a carrier should be expected to deliver them.

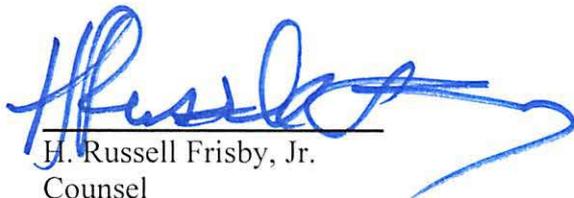
**B. Application Developers Deemed To Provide Text-to-911 Service Should Promptly Comply**

TCS is supportive of commenters advocating that over-the-top providers have a responsibility to support text to 911. When a communication method like SMS becomes pervasive, the user community will develop an expectation for the ability to contact 911 via the application. TCS encourages the Commission to apply the need for bounce-back messages and other requirements, if any, consistently among SMS and application providers to support text-to-911.

**Conclusion**

In summary, TCS urges the Commission to act in accordance with its comments herein.

Respectfully submitted,



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