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 9-1-1 Deployment	)	PS Docket No. 10-255
	)	
	)	

COMMENTS OF

TELECOMMUNICATION SYSTEMS, INC.

Kim Robert Scovill
Senior Director Government Affairs
TeleCommunication Systems, Inc.
275 West Street – Suite 400
Annapolis, MD 21401

H. Russell Frisby, Jr.
Counsel
Stinson Morrison Hecker LLP
1775 Pennsylvania Ave., NW, Suite 800
Washington, DC 20006-4605

Table of Contents

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TELECOMMUNICATION SYSTEMS, INC.

TeleCommunication Systems, Inc. ("TCS") hereby submits its 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.[1] Through the Notice, the Commission seeks comments and information so that it can, ". . . propose rules that will enable Americans to send text messages to 911 (text-to-911) and that will educate and inform consumers regarding the future availability and appropriate use of text-to-911."[2] As a key reference for its Notice, the Commission cites the December 6, 2012 voluntary agreement ("Agreement") among APCO, NENA, Sprint Nextel, AT&T, T-Mobile, and Verizon, whereby each of the four major carriers will make available text-to-911 service by May 15, 2014, and to implement a bounce-back message when text-to-911 service is unavailable no later than June 30, 2013.[3] While a voluntary agreement is often preferred by industry and has the advantage of speed to deployment, and some parties have questioned the Commission's authority in this arena, legal liability and intellectual property protection may require, in this case, a minimal regulatory framework to be effective. Nonetheless, TCS has previously announced its support of the voluntary Agreement.[4]

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[1] 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 9-1-1 Deployment,* PS Docket No. 10-255 (Released December 13, 2012)(FCC 12-149) ("Notice").

[2] Notice at Para. 2.

[3] *See* Letter from Terry Hall, APCO International, Barbara Jaeger, NENA, Charles W. McKee, Sprint Nextel, Robert W. Quinn, Jr, AT&T, Kathleen O'Brien Ham, T-Mobile USA, and Kathleen Grillo, Verizon, to Julius Genachowski, Chairman, Federal Communications Commission, and Commissioners McDowell, Clyburn, Rosenworcel and Pai; PS Docket 11-153, PS Docket No. 10-255 (Dec. 6, 2012). (Carrier-NENA-APCO Agreement)

[4] *TeleCommunication Systems, Inc. Announces Support for FCC, Carriers' Commitment to Implement Text to 9-1-1 Technology Nationwide*, Press Release of TeleCommunication Systems, Inc. (December 18, 2012). TCS's concern in no way diminishes the exemplary progress demonstrated by the voluntary agreement, but only highlights the

TCS's unique combination of experiences and expertise in text-messaging, location based technologies, and public safety dates from the earliest days of the wireless industry and provides a sound experiential foundation for its comments. Currently TCS processes almost one trillion text messages per year.[5] Since deploying the first U.S. wireless non-call associated signaling E9-1-1 solution in 1997, TCS has been leading the development and implementation of public safety products for wireless E9-1-1, 9-1-1 for VoIP, Next Generation ("NG") 9-1-1, and E1-1-2.[6] TCS also has as much or more contemporary practical experience with designing, installing, and managing NG9-1-1 systems as any other public safety vendor including, for example, our contemporaneous NG9-1-1 operations in Tennessee[7], Iowa[8], and Texas[9] represent leading edge operations in this space. In response to the general areas of inquiry and specific questions in the Notice, TCS offers the following comments.

SUMMARY

TCS believes that the launch of a vibrant universal text-to-911 service is a vital first step to introduction of Next Generation 9-1-1 services, in particular for the deaf and hearing impaired communities, and that all CMRS providers can comply with a June 30, 2013 bounce-back message (indicating the carrier / application is not offering the service at this time) implementation compliance date. Based on TCS's experience, many if not most text / messaging applications should be able to meet this date as well. When text-to-911 is not provided by the CMRS carrier, or in any other non-delivery scenario, TCS believes a jointly

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practical and unavoidable role that regulation may play to protect all industry participants and the public from unintended consequences with the availability of text-to-911 services.

[5] http://www.telecomsys.com/products/messaging/default.aspx

[6] "1-1-2" is the universal emergency call number for the European Union.

[7] http://phx.corporate-ir.net/phoenix.zhtml?c=123361&p=irol-news&t=Search&nyo=1

[8] http://www.iowahomelandsecurity.org/

[9] http://phx.corporate-ir.net/phoenix.zhtml?c=123361&p=irol-news&t=Search&nyo=1

developed single uniform bounce-back message will work best for all constituents. Consumer education regarding text-to-911 is paramount and the list of voluntary participants should include not only industry trade associations, but handset manufacturers, NENA[10], APCO[11], solution providers, and disability advocacy groups as well as CMRS carriers in an effort coordinated by the Commission. Test text-to-911 messages are possible and, if made available, should be part of all educational programs. Lastly, TCS again advises the Commission of unresolved intellectual property issues that threaten all public safety innovations. The Commission has the authority and must act to dispose of these issues before more permanent harm as occurred.

I. Automated Error Messages for Failed Text-to-911 Attempts, and Consumer Expectations and Education

A. TCS believes it is feasible for all CMRS providers, even those that cannot provide the underlying text-to-911 service, to provide their customers with an automatic notification for failed text-to-911 attempts by the June 30, 2013 date specified in the Carrier-NENA-APCO Agreement.

As noted above and acknowledged by the Commission, TCS has extensive experience with text-to-911. In addition to its announced public installations, TCS has demonstrated a deployable commercial grade carrier integrated text-to-911 system at the Commission on several occasions[12] and this system included automated bounce-back notification. TCS has also instituted a hosted notification process that would allow any CMRS carrier to send an automated message back to the sender attempting a text-to-911 message when the service is not offered. Therefore, TCS believes there are no technical impediments to the deployment of automated message notification for integrated text-to-911 systems by every CMRS carrier by the announced voluntary deadline, if not before.

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[10] National Emergency Number Association (NENA); www.NENA.org
[11] Association of Public-Safety Communications Officials (APCO); www.APCOINTL.org
[12] The most recent demonstration of a launch-ready SMS-to-911 system was November 7, 2012, at the Commission. http://apps.fcc.gov/ecfs/document/view?id=7022039103

B. Any messaging application that purports to be a general "anyone to anyone" communications system should support, at least, automated bounce-back notification when text-to-911 capability is not available.

There are no doubt specialized closed circle messaging systems that users would naturally assume they could not use to reach emergency services. For example, services that define very limited recipients (ex., only for family members), or that only communicated with devices (ex., home thermostat). However, for a text messaging system that provides general open communications capability, the vendor should be subject to, at least, providing a no service available bounce-back message, and where possible to integrate messaging-to-911 capabilities.[13] TCS advocates this position because its experience has been that there are relatively few messaging systems that could not be integrated with the carrier sufficiently to provide text-to-911 or, in the alternative, trigger a bounce-back message.[14] Given the opportunity to avoid consumer confusion, many applications that otherwise would not need to comply may also voluntarily enable a bounce-back message.

C. As noted herein, TCS does not believe there are significant feasibility or time frame issues for third-party providers to implement the automatic notification requirement by June 30, 2013.

TCS's response is detailed in other questions. In summary, third-party providers can and should voluntarily comply with the Commission's proposal.

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[13] For example, it is unlikely that the public would have a text-to-911 expectation for a messaging application that had a high fee, required extensive sign up procedures, or made obvious the closed or specialized nature of its clientele. However, a free message application that did not require the sender to know if the recipient was also a subscriber might be required to, at least, offer the bounce-back message.

[14] While the Commission has inquired about the expense of compliance and TCS has not engaged in an exhaustive cost survey or study, it is TCS's opinion that instituting a bounce-back message would not be a significant economic barrier for such services.

D. Except as noted herein, TCS agrees that the requirement for automatic notification to consumers would only apply when the CMRS carrier or application provider has information to justify the message.

Text-to-911 systems will always be based on a "best efforts" store and forward process and messages may not complete for a number of reasons, many of which should not be considered as errors in the system.[15] A CMRS carrier, or its text-to-911 vendor, can only react to a network messaging failure based on technical integration of the underlying network with the messaging system (i.e., network acknowledgement of message delivery or failure). That relationship usually does not exist between the CMRS network and the PSAP network. Therefore, TCS agrees that notification should not be required where the network or application provider is unable to discern a failure. Whatever notification scheme is ultimately adopted, notification should be provided in a consistent manner to inform the 'texter' that service is currently unavailable in that area.

E. TCS suggests that public safety organizations and consumer organizations, including disability organizations, must be part of the conversation in the development of a single uniform automatic error messages to consumers.

It is TCS's opinion that a single uniform bounce-back message is preferable to unique messages. A standardized message would avoid confusion and simplify public education efforts. Also, a message developed in consultation with disability organizations, via coordination by the Commission, would yield the simplest effective message for all user communities. For example, a message that directed the texter to make a "voice call" may be inappropriate for deaf / hearing impaired users, one of the important user populations for text-to-911, and alternative language should be used in the notification message.

[15] For example, if the receiving system is turned off, delivery cannot be made, but this is not an error.

F. TCS offers these suggestions as to consumer education for text-to-911 deployment programs.

Aside from educating the public about the availability of text-to-911, education is also imperative to inform the public about the capabilities and limitations of text-to-911 and the circumstances under which texting 911 is or is not preferable to making a 911 voice call. The networking and interfaces available for the initial deployment of text-to-911 are different from those available for wireless 9-1-1. When a carrier offers text-to-911, the initial deployment of the service will use the best available location information for determining if the text is originating from the area serviced by a PSAP providing text-to-911 service. The public needs to be aware that texting to emergency services may not provide all of the features and functionalities associated with voice 9-1-1 service.

Similarly, while sending an emergency text may be preferred in instances where the sender is unable to communicate by voice (e.g., due to a speech or hearing disability, or in a hostage or abuse situation where voice calling could be dangerous to the caller), in most other instances, placing a voice call to 911 will continue to be the most effective means of communicating with emergency responders, and therefore will remain the strongly preferable option even where text-to-911 is available.

G. CMRS carriers and interconnected text providers, in conjunction with handset manufacturers, public safety, and industry associations, should provide voluntary best effort educational information to their subscribers about the availability and use of text-to-911, including specific wireless devices that operate on their networks.

It is TCS's experience that CMRS carriers are eager to educate their customers and the public about the proper use and application of text-to-911. The natural expansion of this concept

would be to include handset manufacturers[16] and trade associations, such as CTIA-The Wireless Association® in the process. For example, it has been TCS's experience that the CTIA has exceptional multi-media and social media public educational skills that would be particularly helpful as a media collaborator for such a project. NENA and APCO would be natural platforms for developing standardized materials for public and PSAP education. Text application providers can assist by, at a minimum, educating their existing and prospective customers about text-to-911 on their platforms. In short, as coordinated through the Commission, both manufacturers and trade associations could be engaged on a "best efforts" voluntary basis to provide educational materials and outreach.[17]

H. It is feasible to provide consumers with the ability to test text-to-911 functionality in their devices.

TCS believes it is feasible to provide mobile users a "test" for text-to-911 services.[18] The preferred system would require a special short code that is not "9-1-1" or the code assigned for actual calls.[19] The simplest version of the test would return a "message successful" text verifying that the message sent by the texting party from the current location would have been completed or the bounce-back message if it would not have completed.[20] It may be prudent to standardize the success and failure messages. However, it must be noted that the success of a

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[16] Handsets are typically manufactured for worldwide distribution and there are approximately 15 European Union member countries that use SMS to 112, or some variation, for emergency services. Therefore, some handset manufacturers may already have text-to-112 or similar information available for their products. Information regarding the deployment of text-to-112 services in the EU is available at www.eena.org.

[17] The Commission has already acknowledged that, due to the special impact on their constituents, many areas of text-to-911 services must involve consultation with the deaf / hearing impaired communities.

[18] TCS is describing network-based testing in this response. The ability, or lack thereof, of a particular handset to provide text-to-911 would be managed by the carrier or manufacturer.

[19] TCS hopes that commenters in this docket have provided definitive information regarding the network and handset practicality of using the three-digit short code of "9-1-1" as the universal text-to-911 standard.

[20] TCS's version of a testing service would not, unless requested by the PSAP, burden the PSAP with receiving an actual test text message. Text message completion could either be simulated, or processed by automated software in the PSAP that would confirm the test message but not require a call center agent to generate the response. Other tests are possible, such as putting in the carrier and a remote area code to validate service in another area.

test message is not a guarantee of the success of an emergency text-to-911 message at another time. The availability and proper use of test messaging, if available, should be part of all educational programs. TCS is not aware that any standards organization or trade association has reviewed text-to-911 test messages, but these would be logical forums should the Commission wish to explore this topic beyond the brief comments in this docket.

II. Intellectual Property Rights

Though not cited specifically in the Notice, the issue of Intellectual Property Rights ("IPR") is essential to this inquiry. Companies subject to the FCC's jurisdiction and others may own, control, or develop IPR, such as patents that are directly relevant to the introduction and provision of text-to-911, especially as to requirements and standards. Text-to-911 services are dependent upon cooperation among carriers, vendors, and public safety. As such, IPRs play an indispensible role in the success of text-to-911 and, therefore, NG9-1-1.

TCS has previously filed a Petition for Rulemaking with the Commission on this issue[21] ("Petition") and incorporates by reference its Petition to these Comments. The FCC's desire to issue mandatory text-to-911 requirements, even if in a minimal framework, will create an inadvertent arbitrage opportunity for litigation-focused patent assertion entities, sometimes called "patent trolls,"[22] that use the FCC's rules to force carriers and their vendors into licensing agreements or face crippling litigation expenses. While the direct effect of such actions is delayed or modified compliance with FCC directives, or a potential injunction forcing a vendor

[21] In the Matter of Reasonable and Nondiscriminatory Licensing of Patents Essential to Implementation of Mandatory E911 FCC Rules and Standards, GN Docket No. 11-117, WC Docket No. 05-196, PS Docket No. 11-153, PS Docket No. 10-255 (Filed July 24, 2012)

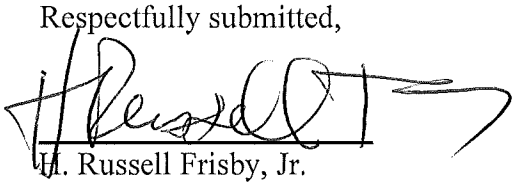
[22] http://en.wikipedia.org/wiki/Patent_troll

or carrier to immediately cease operations,[23] the chilling effect on future compliance and/or technological advancement is even more damaging to first responders and the public's safety. The Commission has an historic opportunity to act on TCS's Petition in this docket and redirect the foreseeable avalanche of litigation that will surround text-to-911 if nothing is done.

Conclusion

In summary, TCS urges the Commission to act in accordance with its comments herein, and further encourages the Commission to resolve the additional open question regarding IPR highlighted by this Notice and TCS's Petition.

Respectfully submitted,



H. Russell Frisby, Jr.
Counsel
Stinson Morrison Hecker LLP
1775 Pennsylvania Ave., NW, Suite 800
Washington, DC 20006-4605

Kim Robert Scovill
Senior Director Government Affairs
TeleCommunication Systems, Inc.
275 West Street – Suite 400
Annapolis, MD 21401

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[23] Section 283 of the Patent Act provides for granting injunctive relief at the district court "in accordance with the principles of equity". . . "The several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent violation of any right secured by patent, on such terms as the court deems reasonable." U.S.C. Courts may grant preliminary injunctions and/or permanent injunctions under § 283. In 2006, the Supreme Court clarified that an injunction should not be denied simply on the basis that the patent owner does not practice the patented invention. *EBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006). Rather, the court must determine whether the patent owner has demonstrated entitlement to a permanent injunction under a four-factor test: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. *Id.* Since the 2006 ruling in eBay, numerous courts have employed the four-factor test and still granted injunctive relief.