

**Before the Federal Communications Commission**

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*IN RE*

FACILITATING THE DEPLOYMENT OF TEXT-TO-9-1-1  
AND OTHER NEXT GENERATION 9-1-1 APPLICATIONS

FRAMEWORK FOR NEXT GENERATION 9-1-1 DEPLOYMENT

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*ON FURTHER NOTICE OF PROPOSED RULEMAKING*

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**COMMENTS OF THE  
NATIONAL EMERGENCY NUMBER ASSOCIATION**

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## COMMENTS OF THE NATIONAL EMERGENCY NUMBER ASSOCIATION

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The National Emergency Number Association (“NENA”) respectfully submits the following comments in response to the *Further Notice of Proposed Rulemaking* released by the Commission on December 12<sup>th</sup>, 2012.

### COMMENTS

NENA is pleased that the Commission has moved aggressively to begin aligning the available means of emergency communications in the United States with those means preferred by consumers in their everyday communications. The deployment of transitional text-to-9-1-1 capabilities by integrated<sup>1</sup> text messaging service providers is

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<sup>1</sup> For clarity, NENA will refer to text messaging service provided by a single entity acting as access network provider and originating service provider as “integrated,” and will refer to text

an important milestone on the road to full deployment of NG9-1-1 service, representing the first time a new technology that is not inextricably tied to audio telephony service will have become available. Consistent with NENA's role as the principal broker of the agreement among the four largest wireless carriers, joined by APCO, we propose regulatory actions that largely mirror its tenets and timelines.

**I. The benefits of implementing bounce-back messaging clearly outweigh the costs.**

As NENA and others have previously noted, even in the absence of regulatory mandates or cooperative agreements, several national carriers had already chosen to implement bounce-back messaging for subscribers who attempt to text 9-1-1. Those deployments of bounce-back messaging by carriers and other service providers indicate that such deployments are competitively efficient and would likely be undertaken by all carriers eventually, even in the absence of an agreement or regulatory mandate. The focus of the Commission's cost-benefit analysis, then, must be on the relative costs and benefits of compelling nation-wide deployment on a shorter timeframe than would otherwise naturally occur, rather than on the overall costs of implementing bounce-back messaging.

NENA believes the potential benefits of implementing bounce-back messaging are enormous because doing so would serve to dispel widespread consumer confusion about the availability of text-to-9-1-1 *now*, while setting the stage for effective text-to-9-1-1 service in the future. Additionally, the relative additional cost of implementing bounce-back messaging now as compared with sometime in the future will be small, limited to the time value of capital expenditures required to implement bounce-back messaging over the period between the effective date of a

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messaging services described in § III.A.1(¶29) of the *FNPRM* as “interconnected.”

potential mandate and the date on which deployment would have otherwise occurred. Because bounce-back messaging capabilities are already on offer from competitive commercial solution providers in both the integrated and interconnected text messaging markets,<sup>2</sup> NENA believes that the relevant time period is short and the relevant aggregate capital amounts are small. Taken together, NENA believes that the large benefits and small additional costs of implementing bounce-back messaging sooner rather than later militate in favor of imposing a requirement that providers of integrated or interconnected text messaging service begin offering bounce-back messaging service to consumers on reasonable and appropriate timeframes.

1. *Many interconnected text providers already implement 9-1-1 capability warnings for bundled voice services.*

In the course of researching available interconnected text messaging services, NENA conducted tests with at least three highly-popular applications available on each of the two major smartphone operating systems, Android and iOS. In every case, we were pleased to receive immediate disclaimers to the effect that the application under test did not support 9-1-1. However, nearly every app tested also supported VoIP-based calling of some form, so it was unclear whether these disclaimers referred to voice calling, text messaging, or both. Consequently, we also attempted to originate both voice calls and text messages from each app to 9-1-1.

On the voice side, the outcome was clear: Every combination voice/text app successfully produced an error message when we attempted to *call* 9-1-1. On the text

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<sup>2</sup> Integrated service providers have access to, for example, advanced Short Message Service Center capabilities with in-built bounce-back capabilities, while interconnected service providers have access to robust Application Programming Interfaces for user notification and alerting.

side, however, results were less promising: virtually none of the apps produced an explicit message when we attempted to *text* 9-1-1. Instead, some apps refused to open a new conversation because “9-1-1” could not be identified as a contact, while others gave the appearance that a conversation had been established before showing (in some cases subtly) that our test message could not be delivered. These test results are somewhat puzzling, given the apparent ease with which each app we tested used common interface elements such as pop-up notifications to alert users to the limitations of voice service. NENA considers it likely, however, that this discrepancy can be explained by the comparative rarity of 9-1-1 text messaging capabilities outside a few test markets in previous years as well as the lack of any prior FCC rules concerning 9-1-1 obligations of interconnected text messaging providers. Given the high-level nature of notification systems in modern mobile device operating systems and the apparent ubiquity of their implementation for the delivery of user notifications concerning the 9-1-1 capabilities of voice applications (or voice capabilities of combined applications), NENA is convinced that implementing bounce-back messaging (or its equivalent) will be straightforward and inexpensive for interconnected text messaging service providers.

2. *The Commission should keep abreast of changing text messaging technology and consumer expectations.*

NENA agrees, for now, with the Commission’s assessment that “it is less likely that consumers will expect such [closed-community, IP-based] applications to support emergency communications.” Consumers, however, have shown increasing willingness to rely on IP-based communications platforms (e.g., Facebook), even when they are restricted to closed communities of users. NENA’s architecture for NG9-1-1 expressly contemplates accepting messages from such services, but stops short of assuming that such services will be compelled to support emergency “calling” functions. NENA hopes that free or cheap and

straightforward access to such functions will entice originating service providers to offer consumers emergency communications services for competitive reasons. However, NENA's hopes along similar lines have been disappointed in the past, so we believe that the Commission should be fully prepared to address a market failure, should it occur: If current or future originating services do not deploy 9-1-1 functionalities based on market forces, the Commission should compel their deployment. We therefore urge the Commission to be mindful of the consumer-driven trend of disaggregation of access networks and originating services as it prepares rules for the transition to and operation of NG9-1-1 systems.

***B. In light of the voluntary commitments of integrated text messaging service providers, deadlines for implementation should be generous, but firm.***

NENA is pleased that our negotiations with the nation's four largest wireless carriers led to an agreement, joined by APCO, which sets out a short timeframe for the implementation of bounce-back messaging. Particularly considering NENA's own experience with PSAPs in smaller or more rural communities, however, we are sensitive to the unique geographic, technical, and financial constraints under which small and rural carriers must operate. Nonetheless, as stated in our joint filing, the four largest carriers have committed to implementing bounce-back messaging by June 30<sup>th</sup>, 2013. NENA believes that this timeframe is appropriate, and that the Commission should adopt it as the baseline regulatory timeframe for deployment of mandatory bounce-back messaging capabilities. To ensure that carriers meet this deadline, NENA recommends that the Commission establish, at the outset, a process for requesting and receiving no more than a 60-day extension.

***C. A PSAP safe-harbor is critical to the success of text-to-9-1-1 deployment.***

NENA agrees with the Commission's proposal to require the provisioning of text admission control capabilities in bounce-back messaging systems to rate-limit or halt the ingress of text messages during natural disasters and other large-scale emergencies. As with other mass-calling events, NENA believes that having coordinated, prepared, and effectively-engineered PSAP systems and carrier networks is necessary to ensure that public safety assets are made available during an emergency to the largest number of individuals who can be served. The ability for PSAPs to ensure that *some* calls and texts can get through even under crushing loads is a critical tool, and NENA looks forward to working with carriers and interconnected text messaging providers to establish standard protocols and interfaces for triggering these mechanisms.

**II. Bounce-back messages should use consistent and concise language that meets the needs of consumers and public safety agencies.**

As part of NENA's ongoing work with consumer groups and disability rights advocates, our Accessibility, Public Education, and PSAP Operations Committees have collectively devoted considerable time to developing model bounce-back language. The language developed by those groups meets four key criteria: First, it provides consumers with an unambiguous message that text messaging is not available. Second, it instructs consumers to place a voice call to 9-1-1. Third, it reminds consumers who may be unable to conduct a voice call of alternative means of accessing 9-1-1. Finally, at 94 characters the proposed message leaves ample payload space for carrier-specific text such as carrier identification or an indication that the bounce-back message was provided at no cost to the consumer. The standardized text is as follows: "Please make a voice or relay call to 9-1-1. Text-to-9-1-1 service is not available at this time." In NENA's view, this or substantially similar text should be provided at the beginning of

any bounce-back message, with other carrier-specific payloads placed *after* the standard notices. NENA also believes that the Commission should require carriers to adopt a single standard notice, based on NENA's proposal, so as to ease the conduct of training and public education campaigns related to text-to-9-1-1 deployment. Should the Commission determine that further development work is required before approving a model bounce-back message, NENA believes that that work should be performed by a sub-committee of the Emergency Accessibility Advisory Committee (EAAC), and completed before June 1<sup>st</sup>, 2013. Alternatively, should the Commission prefer not to prescribe a single standard bounce-back message, it should at least require that any bounce-back message used by a carrier or interconnected text message service provider to meet the four criteria enumerated above.

### **III. Public Education efforts should be conducted jointly by the major text messaging stakeholders.**

Because public safety organizations, consumer groups, carriers, the Commission, and the National 9-1-1 Office each have access to unique and complimentary tools for educating the public, NENA believes that a joint public education effort will best satisfy the critical need to inform consumers about the capabilities and limitations of text-to-9-1-1 service. Already, NENA's Public Education, and Accessibility Committees have developed key messaging points that members of a joint public education working group could press into service. For example, NENA developed the tag line "Call if you can, text if you can't," and the following key message points:

- Text messaging to 9-1-1 on current platforms is an interim solution that cannot provide 9-1-1 centers with the same level of location information as a voice call.
- The first things 9-1-1 needs to know are a consumer's location and the type of help needed.

- Consumers should text 9-1-1 using full words, not abbreviations or text slang.
- Consumers should be prepared to answer questions and follow instructions given by the 9-1-1 call taker.
- Like any other text, a text to 9-1-1 may not be received immediately or, in some cases, at all.

Particularly in light of the voluntary commitments made by the four largest wireless carriers, NENA believes that a successful, cooperative public education campaign is possible, and looks forward to working with all parties to implement it. Importantly, NENA believes that existing public education assets such as lesson plans and curriculum for 9-1-1 education in primary and secondary schools can be easily adapted to incorporate the message points above. Additionally, important online assets such as [www.911.gov](http://www.911.gov), the Commission's website, and the websites of public safety organizations, consumer groups, and carriers can be leveraged to broaden the impact of education tools by providing easy access to those tools throughout the country.

***A. The Commission can facilitate consumer education about text-to-9-1-1 by acting as a “force multiplier.”***

The Commission can play at least three key roles in the development and dissemination of educational materials relating to text-to-9-1-1 capabilities: First, because the Commission's Consumer and Governmental Affairs Bureau routinely works with consumer groups and disability rights advocates to produce accessible content, the Commission can act as translator-in-chief, producing accessible versions of original content developed by consumer and public safety groups or carriers. This would radically reduce the costs of implementing the education campaign by eliminating redundant translations (e.g., to braille or American Sign Language) of campaign materials by individual implementers. Second, the Commission can act as a clearinghouse for materials that have been developed

jointly by the groups discussed above, thereby reducing duplications of effort and increasing the consistency of the overall educational messaging. Finally, the Commission can also provide considerable technical and operational expertise as campaign materials are developed and disseminated.

***B. If competitive pressures fail to make compatible-device information available to consumers, then the Commission should require carriers to provide it.***

Based on our discussions with large and small wireless carriers, NENA believes that information about wireless devices that are compatible with text-to-9-1-1 will be made available to consumers on a widespread basis due to natural competitive forces and voluntary commitments. However, NENA encourages the Commission to monitor the availability of such information from carriers, and to stand ready to require the identification of compatible devices offered for sale by a carrier if such information is not made accessible within a reasonable time for at least a subset of popular subscriber equipment offered for sale by the carrier. NENA believes that this approach would best encourage a robust and competitive market for text-to-9-1-1 capable devices while providing for the possibility of a regulatory backstop should that market fail to function efficiently.

***C. Though favored by consumers, testing capabilities could prove costly for carriers and disruptive to PSAPs.***

NENA is cognizant of consumer group preferences that support providing a testing function that would allow consumers to verify the availability of text-to-9-1-1 service from their service provider or local PSAP. We are concerned, however, that implementing such a service would be technically complex for carriers and other service providers, confusing to consumers, and potentially harmful to public safety. For example, requiring or allowing the han-

ding of test messages could inundate PSAPs or service providers if mal-formed test messages are not effectively screened out, and could expose service providers or PSAPs to liability if non-test messages accidentally are screened out. Additionally, consumers who conduct a successful test in one location may be led to believe that text-to-9-1-1 service is available throughout their carrier's network or throughout their home territory when in fact it is not. NENA therefore believes that providing a test capability may not be best way to provide consumers with information about the availability of text-to-9-1-1 service. Consequently, NENA recommends that the Commission direct Sub-committee One of the EAAC to evaluate the desirability and feasibility of a consumer-activated testing mechanism from the standpoint of consumers, public safety agencies, carriers, and text solution vendors.

***D. Text availability mapping may provide an alternative to testing that meets the needs of consumers.***

In order to provide an alternative to consumer testing, NENA believes that making available a text-to-9-1-1 mapping tool that shows where text-to-9-1-1 service is available is appropriate. This approach could be based either on the boundaries of PSAP service areas if a PSAP-by-PSAP approach is adopted, or on a county-by-county basis (for the sake of simplicity) if counties are allowed or required to adopt a coordinated plan for text-to-9-1-1 deployments at PSAPs within their borders. An online map that shows which counties (and which carriers operating within those counties) support text-to-9-1-1 (whether via individual PSAPs or a default text PSAP) could be easily compiled from existing PSAP databases maintained by NENA, the FCC, or others coupled with carrier- and county-supplied data about the availability of text-to-9-1-1 service. With a single, embeddable map base, carriers could easily make available on their public websites information about the geographic availability of text-to-9-1-1 service. NENA believes that such an approach could

provide the lowest cost of disclosure of such information for all parties, and encourages the Commission to create or support the creation of such a map base. As above, NENA recommends that the Commission consult EAAC Sub-committee One as to the relative cost and desirability of a text mapping platform as compared with a consumer-facing test capability.

### CONCLUSION

The Commission should adopt a bounce-back messaging requirement for integrated and interconnected text messaging services with a primary implementation deadline of June 30<sup>th</sup>, 2013, and a small-or-rural-carrier deadline of August 31<sup>st</sup>, 2013.

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