

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

In the Matter of

Facilitating the Deployment of Text-to-911 and
Other Next Generation 911 Applications;

Framework for Next Generation 911
Deployment

PS Docket No. 11-153

PS Docket No. 10-255

COMMENTS OF AT&T INC.

With the December 13, 2012 release of the Commission’s “Further Notice of Proposed Rulemaking” (*Notice*), the Commission takes its “first major step” in the transition to Next Generation 9-1-1 (NG911) communications by facilitating the provisioning of text-to-911 service.¹ The guiding principle for this transition is to reduce, if not eliminate, public confusion over the availability of text-to-911 and to educate end users needing emergency services on the proper use of and present limitations of the service. In order to reduce public confusion, the Commission must require *all providers of text messaging services*,² including those that provide service by means of so-called “over-the-top applications,” to provide an auto-reply or bounce-back message. The shortest path to public confusion over text-to-911 will be for the Commission to exclude upfront categories of providers actively competing in the interconnected text messaging service marketplace.

¹ *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications; etc.*, Further Notice of Proposed Rulemaking, PS Dockets 11-153, 10-255, FCC 12-149 (rel. Dec. 13, 2012) (*Notice*).

² Throughout these comments, the term “provider(s) of interconnected text messaging service” or its equivalence will refer to all providers of interconnected text messaging services, including CMRS providers (*e.g.*, AT&T Mobility and Verizon), device manufacturers (*e.g.* Apple’s iMessage service), and over-the-top service providers (*e.g.*, Text+, Text Me!, Text Free). *See also* definition of “interconnected text messaging applications.” *Notice* n2. We agree with the Commission that “those IP-based messaging applications that support communication with a defined set of users of compatible applications but do not support general communication with text-capable telephone numbers” should not be included among these providers. *Id.* They should, however, be required to inform users of their service of this texting limitation.

In hopes of promoting that principle, AT&T Inc. (AT&T) files these comments with respect to the Commission’s proposals set out in Section III.A of the *Notice*.³

A. Automated Return Message Proposal

1. The Commission should require all providers of interconnected text messaging services using IP-based protocols—including providers of “over-the-top” applications—to deliver an automated return message to end users attempting to text 911 when the service is unavailable.

One of the benefits of NG911 is that it will give end users alternatives to voice service that will best suit the end users’ needs when communicating with the public safety community. Text-to-911, for instance, can be a great tool for persons with speech or hearing disabilities or for persons needing to communicate silently. But the existing text messaging services that will be employed initially in this task have well documented shortcomings as an emergency communications option. For example, under the Carrier-NENA-APCO Agreement,⁴ AT&T Mobility will initially employ its short message service (SMS) texting service to provide the agreed-upon text-to-911 access.⁵ SMS texting was never intended for emergency communications and was not designed for that purpose. The service has a number of security vulnerabilities and, for emergency communications, will lack some of the features that the public associates with switched-circuit voice communications.⁶

³ The Commission bifurcated the comment and reply-comment cycles between two different parts of the *Notice*: Section III.A and Sections III.B and C. *Notice* ¶ 20.

⁴ 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). A copy of the Carrier-NENA-APCO Agreement is attached as Appendix C to the *Notice*.

⁵ The term “text” is a broad term that can be applied to different services, including SMS, instant messaging (IM), and other IP-based services. Most people are familiar with SMS texting, which is a store-and-forward, best-efforts texting service.

⁶ SMS texting lacks priority or other special handling of communications and is limited in message length to a specified number of characters, *etc.* See “Texting to 9-1-1: Examining the Design and Limitations of SMS,” 4G Americas (Oct. 2010): <http://www.4gamericas.org/documents/SMS%20to%20911%20White%20Paper%20Final%20October%202010.pdf>

Additionally, as text-to-911 is rolled out across America and made available to PSAPs, service will not initially be available to end users in all locations because, for various reasons, PSAPs will adopt the service at different times. Consequently, all concerned—the Commission, the public safety community, and providers—have recognized the need to provide end users with some sort of alert when access to emergency services via text messaging is unavailable. This is why NENA and APCO insisted on and the four largest wireless carriers (AT&T, Sprint-Nextel, T-Mobile, and Verizon) all agreed and committed to provide an auto-reply (or “bounce-back”) message as part of the recently executed Carrier-NENA-APCO Agreement. This commitment obligates these carriers to provide the bounce-back message by no later than June 30, 2013.

It should come as no surprise, therefore, that we fully support the Commission’s proposal that all “CMRS providers and other providers of text messaging services should be required to automatically notify consumers attempting to use text-to-911 in areas where text-to-911 is not supported or in other instances where text cannot be transmitted to the PSAP.”⁷ The primary aims of the bounce-back message are to alert end users attempting to reach emergency services by text messaging that, for whatever reason, the applicable PSAP is unavailable by text and to advise the end user to employ other means, such as a voice call.⁸ These aims will be defeated unless *all* providers of interconnected text messaging services are included in the obligation. Failure to include all such providers in this requirement will inflame consumer confusion about whether and when text-to-911 is available and whether any particular text message may have reached the appropriate PSAP.

⁷ *Notice* ¶ 25.

⁸ We recommend that the bounce-back message not be described as an “error message” because the reasons for getting the message may have nothing to do with an error in processing the text-to-911 communication. Referring to the bounce-back message as an “error message” gives the end user the false impression that his or her provider is a fault for failing to deliver the message. As noted in the *Notice*, there is more than one non-error-related reason for receiving the bounce-back message (*e.g.*, the applicable PSAP hasn’t acquired the appropriate technology to receive and use the message, the 9-1-1 emergency router has reached capacity).

We further agree that this bounce-back message obligation should only apply “to situations where the provider (or the provider’s text-to-911 vendor) has direct control over the transmission of the text message and is unable to transmit the text message to the PSAP serving the texting party’s location.”⁹ For example, as the Commission properly noted, “a CMRS provider would not be required to provide automatic notification where the consumer uses a text application provided by a third party that the carrier does not control” or “where the provider is able to transmit the text to the PSAP, but a failure in the PSAP network results in the text not being delivered to a 911 operator.”¹⁰

In keeping with this reasoning, the Commission should make it clear that individual PSAPs are responsible for “courtesy messages” when the PSAP determines that, under the circumstances at the time, it is appropriate to suspend, in whole or in part, receipt of text-to-911 messages.¹¹ Just as it makes sense for the PSAP to manage initiating and lifting any such temporary suspension, the PSAP should also be responsible for notifying incoming text messengers that the PSAP is temporarily suspending, in whole or in part, text-to-911 communications by returning a courtesy message. There may be different ways for PSAPs to provide this courtesy message, depending on the mechanism and format they decide to deploy to handle text-to-911 communications.¹² Regardless of the mechanism, however, the PSAP is better situated to formulate and transmit the message associated with this sort of temporary suspension of service.

⁹ *Notice* ¶ 32.

¹⁰ *Id.*

¹¹ *Notice* n.70 (“During natural disasters and other large-scale emergencies, PSAPs may not be able to handle all incoming text messages.”). The example cited in the *Notice*—*i.e.*, “congestion caused by natural disasters or other large-scale emergencies”—is just one of any number of circumstances under which a PSAP might exercise this management decision. Here, AT&T uses the term “courtesy message” to distinguish it from the standard bounce-back message returned by the provider when the provider is unable to *transmit* the text message to the PSAP. In a courtesy message, the individual PSAP can tailor its message to the particular situation to reduce any possible confusion that the PSAP is generally unable to accept such texts.

¹² For example, in the Carrier-NENA-APCO Agreement, the parties recognize that “PSAPs will select the format for how messages are to be delivered.” *See* Carrier-NENA-APCO Agreement.

2. The Commission should encourage providers to work voluntarily with the public safety community to develop appropriate bounce-back messages to alert end users of the unavailability of text-to-911.

Everyone acknowledges that, for various reasons, text-to-911 service will not be universally available nationwide on the effective date of any Commission imposed obligation. What's more, once text-to-911 is implemented in any area, occasional outages—planned and unplanned, intentional and unintentional—may occur that might keep end users from reaching the PSAP. For these reasons, the Commission recognizes the need for providers generally to offer a bounce-back message alerting the end user to the unavailability of the service and directing the end user to use alternative means to reach the PSAP.

In the *Notice*, the Commission does *not* propose requiring that “all text-to-911 providers to use the exact same wording for their automatic error messages to consumers.”¹³ We concur with the Commission's position. Providers of these services will need to develop messages appropriate to the services they offer. Imposing a “one size fits all” regime on the bounce-back messages will potentially make compliance more difficult and costly.¹⁴ Nevertheless, we believe that, in order to avoid confusion and to meet the needs of the public at large, providers should be encouraged to work with the public safety community as part of their message development process. A bounce-back message that includes input from the public safety community, but which meets the specifications of each individual text messaging service, will further the goal of reducing, if not eliminating, public confusion over the availability of text-to-911.

3. The Commission should adopt an aggressive deadline for remaining providers of interconnected text messaging services to provide a bounce-back message.

¹³ *Id.* ¶ 32.

¹⁴ For example, given the limitations on most text messaging services presently available for use today, many providers may need to adopt messages using no more than 160 characters. Other limitations may be appropriate, too.

The Commission seeks comment on the appropriate timeframe for “CMRS providers to implement a bounce back messaging capability” and, because the Commission also seeks to require “all providers of software applications that enable a consumer to send text messages to text-capable U.S. mobile telephone numbers” to implement text-to-911, there ought to be an appropriate timeframe applicable to them as well.¹⁵

Under the Carrier-NENA-APCO Agreement, the four largest CMRS carriers agreed to implement a bounce-back message by June 30, 2013. The period from the date of the agreement to the date of implementation is approximately seven months. We are of the opinion that the Commission should move equally aggressively to have all providers of text messaging services, including the remaining CMRS providers, follow suit, because the primary aim of the bounce-back message is to dispel confusion among end users of text messaging services about whether text-to-911 is available and whether the provider was unable to deliver any particular text-to-911 message due to transmission issues in the provider’s network.

Any bounce-back message regime will fail unless *all* interconnected text messaging service providers are required to provide a bounce-back message to texting subscribers. We believe it is imperative that either all providers of interconnected text messaging services provide a bounce-back message or none should. This is because, in a world where the bounce-back message exists, the subscriber will be unable to differentiate between providers that do and do not provide it. Without all providers equally obligated, end users may take the absence of a bounce-back message as an indication that the text-to-911 message was sent to and received by the appropriate PSAP. For the bounce-back message to dispel confusion (as opposed to contributing to it), it must be provided by *all* interconnected text messaging service providers. The Commission should use the Carrier-NENA-APCO Agreement timeframe as a template for requiring all interconnected text messaging service providers to implement the bounce-back message solution.

¹⁵ Notice. ¶¶ 28, 29.

B. Consumer Expectations and Education

While subscribers to text messaging services are familiar with texting *per se*, actual text-to-911 will be a different experience from making emergency voice calls. In addition to any inherent differences between speaking to another person and sending and receiving text messages (*e.g.*, the use of text messaging shorthand, the inability to hear background noise or multiple conversations, the absence of vocal inflection, *etc.*), the existing texting services were not built to mission-critical standards for use as a form of emergency communication. Consequently, the public will need to understand that text-to-911 will not be available in all locations, that text-to-911 has certain technical shortcomings—many of which will not be addressed until providers can offer next generation, standards-based “real time texting” services—and that for some consumers the existing voice options may still be the best and safest method of sending emergency communications.

1. The Commission should assume the primary, but not exclusive, responsibility for educating consumers on the limits to text-to-911.

In the *Notice*, the Commission asks “[w]ho should bear the primary responsibility for educating consumers on the limits of text-to-911?”¹⁶ In light of all the variables involved, we contend that the Commission itself should assume this obligation and take the lead in providing this service to the public, working cooperatively with the public safety community and providers of interconnected text messaging services. The assumption of the primary role should not limit the ability of others, including state and local agencies and service providers, from also contributing. Rather, it should in the long run assist them in their own voluntarily adopted education programs.

The Commission is well suited for this role because it has handled similar transitions to new emergency services in the past. For example, in the case of both wireless 9-1-1 service and interconnected voice over IP (VoIP) access to 9-1-1, the Commission has taken the lead in

¹⁶ *Id.* ¶ 41.

educating the public.¹⁷ One mechanism the Commission uses is the Commission's own web site. The site has been used in various educational campaigns. A similar strategy can be used for text-to-911.

Using its own website, the Commission can provide the public an easily accessible source of information about this service. The information on the site can be incorporated into any additional educational programs offered by public safety associations (like NENA and APCO), by state and local public safety agencies, and by providers. In addition to providing any additional information that they believe may be uniquely critical to their local constituents or customers, these entities can always include a hyperlink to the Commission's web site on the topic giving interested persons access to more general information on text-to-911.

The Commission's website can incorporate much of the information that the Commission already recognizes will be important as the public learns of texting to 911. For example, in the *Notice*, the Commission recognizes the problem with roll out of text-to-911 with access varying from area to area.¹⁸ And the Commission acknowledges the existing limitations of text-to-911 and that public education should include a directive that, for persons other than those with speech or hearing disabilities or for persons needing to communicate silently, the better choice might well be to use voice services.¹⁹ These issues, as well as others, can be dealt with in depth on the Commission's website. And the public may very well see information on these topics coming from the Commission in a different light than the same information coming from providers, which may be viewed suspiciously as self-serving.

As noted in the *Notice*, the four largest carriers have committed to "work with APCO, NENA, and the FCC to develop an outreach effort to set and manage consumer expectations regarding the availability/limitations of the Text-to-9-1-1 service (including roaming) and the

¹⁷ See: <http://www.fcc.gov/guides/wireless-911-services> and <http://www.fcc.gov/guides/voip-and-911-service>.

¹⁸ *Notice* ¶ 36.

¹⁹ *Id.* ¶ 37.

benefits of using voice calls to 9-1-1 whenever possible, and support APCO and NENA’s effort to educate PSAPs on Text-to-9-1-1 generally.”²⁰ But this commitment was not intended to displace the Commission’s traditional role in educating the public and the Commission should assume the lead in this endeavor.²¹

2. The Commission should *not* mandate testing of text-to-911 services employing customer-generated non-emergency text messages.

We oppose any plan to allow customer-generated text-to-911 testing, because any such plan would require either routing the messages to actual PSAPs or to a dummy test site (*e.g.*, 911test)—both options raise serious concerns. In the case of the former, PSAPs could potentially be swamped with non-emergency texts, putting a strain on their staffing and systems and interfering with receipt of actual emergency texts.²² In the case of the later, a test text to a dummy location would only indicate that the subscriber has a working text messaging service, not that an actual emergency text-to-911 message would be routed to, delivered, or responded to by the appropriate PSAP.²³

The purported rationales for allowing customer-generated text-to-911 testing—verifying the availability of text-to-911 and familiarizing subscribers with using text-to-911—don’t stand up to scrutiny. *First*, with respect to verifying the availability of text-to-911, that is the function of both the bounce-back message and public education. Testing will not accomplish that end because, among other things, in many cases the real emergency text will be sent while the

²⁰ *See* Carrier-NENA-APCO Agreement.

²¹ We believe that Bandwidth.com’s suggestion to create a national database, which could be “used to automatically generate up-to-date consumer-facing maps of where text-to-911 is available,” has potential merit and deserves further study. *See Notice* ¶ 41. Access to any such database could be made possible through the Commission’s own website.

²² Providers will not be able to filter out test messages from actual emergency texts, nor should they be required to. As a result, the burden will fall on the PSAP to handle both emergency and non-emergency texts, distinguish between them, and respond to them accordingly.

²³ The proposed dummy short code test proposal would also fail to inform the subscriber about whether the appropriate PSAP is text-to-911 capable, further adding to consumer confusion.

subscriber is mobile and not necessarily in his or her “home PSAP’s area.” Consequently, the subscriber will not be any more informed as to the availability of text-to-911 than he was before. *Second*, with respect to familiarizing subscribers with using text-to-911, subscribers are already familiar with using text messaging services. In most, if not all, cases, the subscriber will need only to punch out three digits (911) on his or her keypad, type the message, and then hit “send.” This doesn’t require extensive testing or familiarity. A test text to 911 will not familiarize the subscriber with the critical part of the emergency texting session: interacting by text with the PSAP’s service representative during an emergency situation. Allowing the subscriber to “ping” a dummy location will not provide any value to the subscriber or the PSAP operations. On the whole, when one balances the efficacy of testing with its burdens and costs, as well as the risks to public safety, the testing regime proposal cannot be justified.

Respectfully submitted,

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