

**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.

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December 12, 2011

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I. INTRODUCTION AND SUMMARY

AT&T applauds the Commission's efforts to move emergency communications services into the 21st Century. That effort, however, must recognize that next generation emergency communications need to be cost-effective, built to mission-critical standards, and evolve in such a way that public safety is not jeopardized. By working cooperatively with PSAPs, providers, and others, the Commission can use its leadership position to help lead the way to next generation emergency services that meet these goals.

The Commission has expressed an interest in developing an interim solution for text-to-911. In pursuit of this solution, the Commission must not get ahead of the work of standards-setting bodies, like INES Incubator. Moreover, if the Swedish experience is any indication, the Commission must recognize that even an interim solution can take years to develop and may only produce results that fall well short of the goals set for truly next generation emergency communications. By working with standards-setting bodies and awaiting the results of well conducted trials, the Commission will minimize any risks to public safety inherently involved in an interim solution.

The Commission should discard its proposal to prioritize 911 calls because prioritization will not address the essential problem with reaching emergency service personnel during a sudden, unexpected natural or man-made disaster, like an earthquake or terrorist attack. The critical bottleneck in reaching emergency personnel during such events is the local PSAP operations, which cannot handle unexpected demand levels. Additionally, the concept of prioritization is fundamentally flawed because it fails to recognize the public value of emergency calls not directed to PSAPs, such as calls to loved ones, care givers, non-governmental relief agencies, as well as calls generated by alarms, crash-detection and healthcare systems. And prioritization might interfere with or compromise the Wireless Priority Service used by emergency personnel. The Commission should focus its attention on developing best practices for consumer use of different technologies during such emergencies and fostering public education.

In order to facilitate the long-term development of text and multimedia applications for use in emergency communications, the Commission should focus on assisting the parties in working on a migration plan to bridge legacy services and next generation services. In addition to any technical and standards-based issues, funding for and provisioning of next generation services will inevitably mean that the availability of these services will be staggered—*i.e.*, available in some areas before others. A migration plan will be critical for insuring that public safety is not jeopardized until deployment is truly universal.

As for facilitating development of any interim text-to-911 solution, the Commission should consider encouraging deployment of a national clearinghouse and relay center. This mechanism would guarantee that emergency texts directed to PSAPs are properly routed to text-ready or, in the alternative, to non-text-ready PSAPs via relay centers. For long-term next generation services, the Commission should encourage the creation of Advanced Regional 911 Centers. Such centers would expedite deployment, cut costs, and protect public safety by making it easier on and less expensive for providers to quickly and logically provision and ultimately route next generation text and multimedia emergency communications in a manner required by local authorities and make sure that consumers aren't put in peril and left wondering whether their communications made it to the correct emergency service provider. The Commission will also need to develop a mechanism similar to the existing CMRS Phase I and Phase II rules in order to make sure that states or regional centers are next-generation-ready before providers are obligated to provision next generation emergency service facilities. Any such mechanism must make it clear, however, that providers are not responsible for resolving any turf wars between and among PSAPs.

Today, the Commission's authority to impose mandates is strictly limited. The Commission can point to some yet undeveloped authority under the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA) to improve access to emergency services for persons with disabilities. Outside of that, however, the Commission has failed to articulate either direct or ancillary jurisdiction over next generation 911 services. AT&T

recommends that the Commission proceed cautiously in this area and seek to work cooperatively with all parties connected with making NG911 possible. AT&T also recommends that the Commission work with Congress to provide statutory liability protection for these same parties that is national, unambiguous, and comprehensive.

II. DISCUSSION

A. Facilitating the Short-Term Deployment of Text-to-911

In its *NG911 NOI* comments, AT&T advocated that the Commission not seek to develop SMS-based systems for use in NG911 networks but rather that it foster the work of industry groups—such as NENA, ATIS, and 3GPP—to develop standards for NOVES for next generation networks that include *non-SMS text-based messaging options*.¹ This advocacy was based on the significant limitations of SMS for emergency communications —limitations that AT&T and others have detailed for the Commission as part of their responses to the *NG911 NOI*.² In spite of these concerns, the Commission now seeks comments on ways that, potentially using SMS, it can “encourage development of *interim* text-to-911 solutions.”³ AT&T urges caution and encourages the Commission to wait for the recommendation of the Interim Non-voice Emergency Services ATIS Incubator Group (INES Incubator). That group was chartered by the industry and is consulting with consumer advocacy groups to ensure an interim solution that would both meet the needs for non-voice emergency communications and allow for an implementation timeframe for mid-2012. And once the INES Incubator results are fully developed and complete, the Commission should also consider data from reputable trials. Getting ahead of the standards-setting bodies and the work of the text-to-911 trials will risk the value of any interim solution the Commission might seek to propose.

- 1. The Commission should not seek to develop an interim solution for text-to-911 in advance of the work of standards-setting groups, such as INES Incubator, and the comprehensive data derived from text-to-911 trials.***

¹ Comments of AT&T Inc. (AT&T Comments), p. 11.

² AT&T Comments, pp. 11-13; Alliance of Telecommunications Industry Solutions (ATIS), p. 5; Consumer Electronics Association (CEA), p. 4; Qualcomm Incorporated (Qualcomm), pp. 9-10; Sprint Nextel Corporation (Sprint), p. 3; T-Mobile USA, Inc. (T-Mobile), pp. 8-13; and, Telecommunications Industry Association (TIA), p. 7. See also Reply Comments of Verizon and Verizon Wireless (Verizon), pp. 5-8.

³ *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications; etc.*, Notice of Proposed Rulemaking, FCC 11-134, para. 5 (rel. Sept. 22, 2011) (*NG911 Notice*).

The Commission's interest in an interim solution arises primarily from the perceived benefits of text-to-911. The Commission suggests that these benefits include (1) improving accessibility to 911 services, especially for persons with disabilities; (2) meeting consumer expectations; (3) enhancing the ability of PSAPs to respond to emergencies through increased information derived from texts, photos, and videos; and (4) dissipating the risk of overload or congestion on legacy landline and mobile networks.⁴

Some of these perceived benefits may not actually pertain to any *interim* solution for text-to-911, however. For example, the ability of PSAPs generally to receive and process multimedia files and the alleged ability of PSAPs to "filter text messages by incident" may be many years in the offing due to funding issues, as well as possible technical barriers. What's more, outside of the disabled community, present "consumer expectations" most assuredly are that, while text-to-911 would be desirable, it is presently unavailable.⁵ Consumers may not be fully informed about the risks of using SMS texting to access 911 emergency services; consequently, their alleged expectations should not be the basis for regulatory action, especially if that action would lead to the adoption of risky interim services. If consumers were fully apprised of the limitations of existing texting services, especially as compared with legacy voice access to 911 emergency services, then consumer expectations towards text-to-911 service might be significantly different.

Some of these "benefits" may be addressed by the work of standards-setting groups, allowing the Commission to reap most of them, if not all. In short, AT&T contends that any proposed interim solution should be developed based on the recommendations of the INES Incubator and that the Commission shouldn't seek to divert industry resources away from

⁴ *NG911 Notice*, paras. 36-41.

⁵ AT&T understands the disabled community's interest in a text-to-911 service and agrees that a text-to-911 service built to mission-critical standards would be a significant improvement over TTY. But cobbling together an interim solution based on the existing SMS service, which is a best effort, store-and-forward service, would ultimately delay the day that a proper text-to-911 service is available.

developing a long-term, Multimedia Emergency Services (MMES, formerly known as NOVES) solution in favor of a riskier interim solution.

2. The Commission should seek to minimize the risks any text-to-911 solution may pose to public safety by not rushing ahead of the work done by standards-setting bodies and local trials, as well as exploring the use of Advanced Regional 911 Centers.

AT&T contends that the transition from legacy voice 911 to NG911's text-to-911 could benefit from the deployment of Advanced Regional 911 Centers, a concept raised in AT&T's comments filed in the *NG911 NOI* proceeding.⁶ Employing Advanced Regional 911 Centers that act both as clearinghouses and relay centers for NG911 emergency messages would provide an expedited, structured, and more reliable rollout of the NG911 text-to-911 service.⁷ Likewise, if the Commission were to find that an interim solution for text-to-911 was in the public interest, then the Advanced Regional 911 Centers may be able to play a role there, too. Whether that proves to be the case, however, will depend largely on the results of text-to-911 trials and the work of standards-setting groups, because those results will help define if and how any interim solution might be rolled out.

This consideration should deter the Commission from getting out in front of the work of these trials and standards-setting groups, such as NENA, ATIS, and 3GPP, as well as the EAAC. As previously noted, AT&T favors encouraging the work of these industry groups to develop standards for next generation networks that include *non-SMS text-based messaging options* as opposed to expending resources on trying to retrofit as a stopgap measure existing texting services, which are seriously flawed for providing emergency services access. But even apart from these concerns, the Commission should act cautiously by letting the existing trials and standards-setting work come to fruition before examining any possible interim solutions to text-to-911.

⁶ AT&T Comments, p. 29. See also, *NG911 Notice*, para. 101.

⁷ See section D (2) below for further discussion of this concept.

In the *NG911 Notice*, the Commission identified a few text-to-911 trials being conducted.⁸ These are largely on-going. While this is a good development, not all text-to-911 trials are of equal value. Some examples cited in the *NG911 Notice* appear to be little more than “what have we got to lose” efforts, without real trial criteria or articulated goals. AT&T supports efforts by the public safety community and communications providers to work together to explore next generation technologies. Yet, most, if not all, of the trials identified in the *NG911 Notice* are not scalable to a national solution. For example, they usually involve a single PSAP organization in a limited geographic area and don’t address the issues of PSAP selection and routing. Some trials, like the Marion County, FL example, don’t use a dedicated short code, like 911 or 9-1-1, and, on the contrary, require the end users to program a special number into their devices. Other trials don’t even use text *per se* but rely on alternative messaging arrangements.⁹ These trials, while interesting, won’t produce useable data unless the designs they test are applicable to the needs of PSAPs and providers on a national scale.

In addition to those concerns, an interim text-to-911 solution must still be built to mission-critical standards when lives are on the line. This requirement introduces additional complexity, which translates into considerable time and money. Sweden is an example of this. Sweden began testing “text-to-911” in 2006, but does not appear to have gone fully “online” until January 2010—a span of four years. The *initial* trial alone lasted two years and still required “certain [post-initial trial] adjustments . . . to the design of the system and in the routines for working with it in practice.”¹⁰ Even then, when this text-to-911 solution was finally inaugurated, the program was subject to serious limitations and deficiencies. For example, the

⁸ *NG911 Notice*, paras. 42-46.

⁹ For example, the trial in Sacramento, CA, requires participants to send emails to a pager address.

¹⁰ European Emergency Number Association publication: “SMS 112 in Sweden.” See, http://www.eena.org/ressource/static/files/SMS_112_Systembeskrivning_EN_pdf20101102.pdf?mfb=129473574046442485803 (SMS 112 in Sweden).

service is subject to “somewhat longer turnaround times and lower reliability than [originally] estimated.”¹¹ What’s more, the system’s limitations or conditions include the following:

- All users must register, and users are limited to the deaf and persons with hearing or speech impediments;¹²
- The system does not test mobile phones to check whether they work for the texting service;
- The service doesn’t work for non-service initialized (NSI) devices;
- Under certain conditions, end-user devices may have problems receiving return text messages (*e.g.*, memory is full);
- Registered users have placed unnecessary loads on the system by sending text messages just to test it;
- Non-registered users who attempt to send emergency text messages do not receive any response message;
- Location information is limited to acquiring the “subscriber’s MSISDN” [Mobile Station ISDN Number];
- The only way that the emergency operator can determine whether communications have “broken off” is if no further text messages come in;
- System outages can make resumption of communications between the caller and the public safety representative extremely difficult.¹³

To make the Swedish system work at all requires the use of two special workstations, which function similarly to the Advanced Regional 911 Centers discussed in AT&T’s comments. Even then, this design of the system is facilitated by the fact that Sweden only has 18 “SOS”

¹¹ *Id.*, “Background” Section, “Results,” at 4.

¹² Interestingly, of the estimated 20,000 potential users, as of September 2010, only nine percent have actually registered.

¹³ SMS 112 in Sweden, *passim*. Swedish officials keep a “spare mobile phone” handy to try to resume interrupted communications.

centers, compared to over 6,800 PSAPs in the United States.¹⁴ The bottom line is that the Swedish system took years to develop, is subject to serious limitations, and has a surprisingly low participation rate. If the Commission seeks to avoid similar results, it should encourage a thoughtful and detailed examination of the challenges to text-to-911 and not rush ahead of the work being done in standard-based groups or make decisions on limited or incomplete trials.

B. 911 Prioritization in Major Emergencies

The Commission seeks comments on the value and efficacy of prioritizing 911 calls during large-scale natural or man-made disasters, like an earthquake or terrorist activity.¹⁵ Recent events on the East Coast have focused the Commission's attention on perceived consumer frustration when "concentrated demands on the capacity of commercial communications networks during and immediately after emergencies can hinder the ability . . . to make voice calls."¹⁶ Regardless of the capacity of the various networks to handle a sudden and unexpected surge in demand, the problem of handling voice calls to PSAPs during a disaster cannot be addressed through prioritization, because the critical bottleneck that impacts consumers access to public safety the most is found in the PSAP operations themselves, and not in the networks. The Commission should consider alternatives to prioritization, a proposal which won't address the critical bottleneck and will deprive consumers of the ability to make other non-911 emergency calls.

- 1. The Commission should not require prioritization of 911 calls because it would not address the problem of access to emergency personnel when the primary bottleneck is at the PSAP operations level.*

¹⁴ The Commission should also note that Sweden is much smaller in size and population and much less ethnically diverse than the United States. Sweden is only 173,732 sq. miles in size, 22% of which is water. In 2009, Sweden had a population of only 9.3 million—85% were ethnically Swedes. The United States, on the other hand, is 3,717,813 sq. miles in size, of which only 5% is water. In 2010, the population of the United States exceeded 308 million.

¹⁵ *NG911 Notice*, para. 60.

¹⁶ *NG911 Notice*, para. 60.

As a practical matter, PSAP operations cannot be equipped or staffed on a daily basis to handle an unexpected surge in demand. Local budgets cannot sustain that level of preparedness, and both equipment and staff would be vastly underutilized during the large periods of normal demand. Consequently, when truly sudden and unexpected events arise, such as an earthquake or a terrorist event, the critical bottleneck to reaching emergency service personnel is found at the PSAP level itself.¹⁷ Prioritizing calls to the PSAP operations would not address this bottleneck.

It is equally true that networks are not generally engineered to handle every contingency either.¹⁸ Network providers monitor network use and engineer their networks to handle both the expected level of usage as well as some reasonable deviation from the norm. No network, however, is engineered for all potential users to go “off hook” simultaneously.¹⁹ But as long as the PSAP operations themselves are the primary bottleneck to access to emergency service personnel, prioritizing calls in the various networks will not make access any better. In fact, as prioritization may theoretically direct some additional level of calls to PSAP operations, the result of prioritization may be to create an even bigger bottleneck and further enflame consumer frustrations. In brief, prioritization will not solve the problem the Commission seeks to address but rather may exacerbate it.

¹⁷ Logically, if the event is not sudden and unexpected (*e.g.*, a hurricane), PSAPs can prepare for higher demand. It is also true, however, that calling patterns are different as well. While an earthquake might cause a sudden, brief spike in calling, a hurricane will most likely generate calls stretched out over a longer period. And, in the case of hurricanes, some calls that might have been made in response to an unexpected disaster might not get made at all (*e.g.*, calls involving warnings).

¹⁸ Anecdotal accounts aside, the wireless networks implicated in the 2011 East Coast earthquake actually performed well and were not subject to unusual disruptions.

¹⁹ Naturally, different networks handle surges in usage in different ways. The reference to going “off hook” implies the use of the wireline PSTN. But wireless networks and IP-based networks involve different engineering. Assuming for sake of argument that IP networks are the most flexible in regard to handling “surges” because of the way IP traffic is routed around blockages in the network, the existence of the IP network only underscores the fact that the most important bottleneck is found at the PSAP operations level.

2. *The Commission should not mandate the prioritization of 911 traffic because it places an undue burden on network providers without any real benefit to the public.*

Even apart from the issue of the PSAP bottleneck, prioritization has other shortcomings because there are significant costs associated with the underlying methodologies. If the wireless network has signaling to support prioritization, there are several methods that might allow for prioritization of 911 calls in wireless networks; two of the more obvious methods are (1) bandwidth reservation and (2) selective call barring. By reserving bandwidth, which is a valuable and limited resource, it is made unavailable for everyday use. In many urban areas, demand at many cell sites is already too high, and reserving bandwidth for the rare, unexpected, and sudden emergency wastes valuable bandwidth for the vast majority of the time in expectation that a sudden unexpected disaster might occur. Additionally, no one knows how much bandwidth should be reserved. No matter how much bandwidth is reserved, the demands on emergency dialing can always exceed the reserved bandwidth depending on a multitude of factors that cannot be predetermined.

Likewise, with selective call barring, the network would have to block all calls other than 911 calls during some period of time after a qualifying event. In addition to the bottleneck problem at the PSAP operations level, this form of prioritizing presumes that calls other than 911 calls during a disaster lack societal value. Not all emergency calls are made to PSAPs and not all calls to PSAPs are emergency calls.²⁰ Some calls are directed to loved ones, care givers, or agencies that provide disaster assistance. Restricting the public's ability to make these types of calls during sudden unexpected disasters might lead to a greater degree of panic or confusion since people could not find out about the safety of loved ones or offer other assistance. Similarly, some critical systems—such as alarm, automotive crash-detection, and healthcare systems—use the cellular network either as the primary or backup network. Restricting the

²⁰ AT&T understands that some calls to PSAPs during these sorts of events are made solely to obtain information and not to seek emergency assistance.

ability of these systems to communicate critical data may also pose significant risks to life and property.

Prioritization could potentially interfere or compete with Wireless Priority Service (WPS), which is intended to give certain emergency personnel—*i.e.*, emergency first responders and other Government Emergency Telecommunications (GETS) users—access to telecommunications networks during times of crisis. Because WPS relies on queuing up WPS users for available voice slots up to a certain network capacity, prioritizing all 911 calls might jeopardize WPS calls by flooding the networks with other prioritized calls from the general public. At a minimum, considerable analysis should be undertaken before risking the WPS program.

The Commission seeks comments on the ability of existing networks to support prioritization of 911 calls. Legacy communications networks were not designed with 911 prioritization in mind, and adding these capabilities would involve major and costly redesign of the networks. In addition, redesigning legacy networks to support prioritization will likely take money away from implementation of NG911 features that may very well be capable of alleviating network overload situations. While potential capabilities exist that would allow for the prioritization of 911 calls in LTE and IMS networks, they have not been exploited to provide prioritization yet. Additional work and associated costs would be necessary to allow prioritization in even these more cutting edge networks. Absent detailed studies, it is not possible to provide the Commission with comprehensive and reliable data on either implementation time lines or projected costs.

Regardless, until the issue of PSAP level congestion is addressed, prioritizing 911 traffic will do very little in terms of improving the ability of the public to reach a 911 operator. This means that, were the Commission to adopt a prioritization requirement, the Commission would be pushing network providers to adopt new, yet untested, and most likely expensive technologies to address a problem that arises only rarely and, most critically, wouldn't be resolved by the mandated technologies. As long as the essential bottleneck is at the PSAP operations level,

mandating changes in the various networks won't achieve the intended results (*i.e.*, more certain access to emergency service personnel).

3. The Commission should promote education of best practices and not require prioritization of 911 calls because prioritization would interfere with other emergency calls.

As alluded to above, another shortcoming of prioritization is that it frustrates the consumers' legitimate desire to make other emergency calls, such as to family members and other loved ones, care givers, and disaster-relief agencies. The Commission shouldn't presume that the only emergency calls of value to the public involve calls to PSAPs. In sudden, unexpected disasters, people are naturally concerned about the welfare of their loved ones. During these calls, critical information can be conveyed—such as a party's location and condition or instructions to or for children, the aged, and incapacitated. Depriving consumers of the ability to make such calls would deny them the opportunity to acquire information and to make informed choices that could just as critical to their safety or the safety of others as any call to emergency personnel. Besides, prioritization would in all likelihood interfere with calls to non-governmental disaster relief agencies and consequently prevent the dissemination of information or the offering of voluntary assistance to them.

What's more, in light of the fact that the primary bottleneck to access to emergency personnel lies at the PSAP operations level, the prioritization of some calls over others would not pass the reasonable discrimination test. That is, if prioritization of some calls over others does not really address the problem, then it can hardly be said that such prioritization is reasonable, making the discrimination in favor of some calling parties over others unlawful under section 202(a) of the Act.²¹

In light of this, the Commission's efforts may be best directed to consumer education. The Commission could play various roles in educating the public. For example, through seminars and other public forums, the Commission could facilitate the development of "best

²¹ 47 U.S.C. § 202(a).

practices” for consumer use of different technologies (*e.g.*, wireline phones, mobile phones, email, text messaging) during emergencies. And the Commission could sponsor a multimedia webpage accessible to the public providing the best practices and demonstrating their application. The Commission could encourage education at the local and state level, as well, or seek voluntary public service notifications from broadcasters. In sum, there are numerous ways that the Commission can use its offices to educate the public on how best to use various technologies during a sudden and unexpected disaster—all of which would be more efficacious than trying to prioritize emergency calling.

C. Facilitating the Long-Term Development of NG911 Text and Multimedia Applications

To facilitate deployment of NG911, the Commission will need to participate in developing the plan for migrating from today’s legacy systems to tomorrow’s emergency texting and multimedia applications. The industry, working with both standards-setting bodies and the Commission’s advisory committees, has sought to define end-to-end capabilities for an interim text-to-911 solution for persons with disabilities and for next generation emergency communications that incorporate both texting and multimedia access. Generally, standards-setting bodies should complete their work defining these end-to-end capabilities for an interim text-to-911 solution by mid-2012; while development of the Multimedia Emergency Services (MMES) standards for LTE networks will take much longer—three or more years. Actual deployment of any subsequent NG911 services based on those standards, of course, will depend on the availability of funding at the PSAP level. The Commission’s efforts in the interim, therefore, should be directed at working with the public safety community and industry to develop a migration plan that brings about this transition from the legacy 911/E911 systems to the next generation systems both smoothly and without imperiling public safety.

As previously noted, the scope of the INES Incubator is to identify a *near-term*, non-voice emergency-services solution for persons with disabilities. Multimedia Emergency Services (MMES), on the other hand, refers to the standards under development by the

telecommunications industry for next generation emergency services utilizing multimedia capabilities to address both the non-voice emergency service needs of the general public, as well as the *long term* emergency services needs of persons with disabilities. MMES will have significant impacts on the entire next generation 911 system—from end-user devices to the networks they use. The evolution of these devices and networks will eventually put pressure on PSAP operations and the systems they use, making upgrades to the PSAP systems inevitable. Because not all of these elements—devices, networks, and PSAP systems—will be upgraded at the same time, the Commission, the public safety community, and industry need to develop a plan to assist in a transition from one to the other that is seamless to consumers and doesn't adversely affect their access to emergency services.

Implementation of the INES Incubator solution is presently targeted for the middle of 2012. The long-term MMES solution standards under development now are not expected for at least another three or four more years. Even after MMES becomes available, however, it will only be available in certain service areas and, where it is available, it may not provide full multimedia services for some time. It may take a significant amount of time before full deployment of MMES can be accomplished. During this time of transition, emergency callers may encounter a variety of emergency service capabilities—from legacy voice 911 emergency calling to limited non-voice INES Incubator capability to some degree of MMES capability to full MMES capability. Development of the transition strategy must be given careful thought by all stakeholders and must effectively be conveyed to all consumers, who will be dependent on these 911 emergency services throughout the transition period.

D. The Commission's Role in Expediting Deployment of Text-to-911 and Other NG911 Applications

Because of the perceived benefits of wide-spread deployment of NG911, the Commission seeks input on the role it can play in expediting deployment of both short-term text-to-911 and long-term next generation text and multimedia solutions.²² While network providers have

²² *NG911 Notice*, para. 87.

emphasized the necessary technical standards-setting work essential to developing both short-term and long-term solutions for next generation communications, the public safety community has voiced its impatience with delay and seeks to expedite deployment of text-to-911 to address perceived consumer expectations.²³ Amid this push-and-pull of competing interests, the Commission must focus on what is best for public safety. On the one hand, if the Commission gets ahead of the technical standards or pushes deployment of solutions before PSAPs are widely capable of using them, the general public may pay the price with interoperability problems and confusion over the availability of services; on the other hand, delay of deployment is perceived as depriving the public of the cutting edge benefits of new technology. Any solution—short-term or long-term—should be built around agreed upon industry standards, meet mission-critical criteria, and not cause consumer confusion as to what next generation 911 services are available and where.

For these reasons, if the Commission decides to pursue an interim SMS-based text-to-911 solution for the disabled community, then the Commission should consider encouraging the use of a national clearinghouse that would both expedite deployment of the service and alleviate some (albeit not all) of the serious shortcomings associated with using SMS for emergency communications. As for the long-term next generation text and multimedia solutions, the Commission should consider ways to encourage development of regional or state-wide command-and-control centers or Advanced Regional 911 Centers (Regional Centers) as a way of expediting deployment, cutting costs, and preserving public safety.

1. Should the Commission decide to promote development of an interim SMS-based text-to-911 solution for the disabled community, the Commission should consider encouraging the use of a national clearinghouse for message handling.

If the Commission decides to proceed with an interim SMS-based text-to-911 solution for the disabled community, the rollout of the service could cause considerable consumer confusion

²³ *NG911 Notice*, para. 88, citing to Comments of AT&T and Sprint Nextel, as well as the NENA Reply Comments.

and thereby jeopardize public safety.²⁴ As the service is deployed, most PSAPs will not be text-ready and, due to budgetary constraints or other factors, may not become text-ready for some time. Potential customers of the service may either expect the service to work everywhere and use it when it is unavailable, or be fearful that it is unavailable and be reluctant to use it even when it is available. A national clearinghouse and relay center system can address these issues.

Under this proposal, the Commission will need to establish and reserve a standardized SMS short code to access the system. It makes sense to use some variation of the present abbreviated dialing pattern 9-1-1 for this purpose (*e.g.*, 911, 911ME, 91163, *etc.*). The Commission should consult industry groups for recommendations for a short code that would be the easiest, quickest, and least expensive to use. For each text message, the individual provider's SMS center would route the message to a national clearinghouse for handling and, depending on whether the message was delivered successfully or not, return a message to the texting party (*e.g.*, "Message was delivered to National Server; if you get no response, call 9-1-1" or "Your message could not be delivered; call 9-1-1 now"). Presumably, this would require one, standard SMPP-based interface between each provider and the clearinghouse.²⁵

For its part, the clearinghouse would be responsible for (1) obtaining appropriate location information, (2) using that location information to identify the appropriate PSAP, and (3) determining whether that PSAP has the capability of receiving text messages directly. If the PSAP is "text-ready," the clearinghouse would route the text messages directly to the PSAP for handling. If not, then the clearinghouse would route the text message to a relay center, which

²⁴ AT&T maintains its skepticism about using SMS for emergency communications—even during the interim before the long-term solution to deployment of next generation text and multimedia emergency communications. In addition to the fact that SMS is unreliable as an emergency messaging service because it is a best effort, store-and-forward service, deployment of even an interim solution will divert energies and resources AT&T believes are best directed at developing a long-term solution that will be flexible enough to reliably serve the needs of the public safety community and consumers well into the future. See, AT&T Comments, pp. 11-13.

²⁵ By "provider," AT&T includes the providers of third-party or over-the-top text-messaging applications as opposed to just network provider-supplied SMS texting services (*e.g.*, Free SMS, TextNow, iMessage, *etc.*).

would be responsible for contacting the appropriate non-text-ready PSAP directly and relaying the texting party's messages orally. Under both circumstances, the clearinghouse would maintain the session with the texting party so that all of the messages flow from the texting party through the clearinghouse and then either to the appropriate PSAP in text format or to the relay center for oral delivery to the appropriate PSAP.

States and local 911 authorities, and not text-messaging providers or others, must be responsible for keeping the national clearinghouse current on the status of PSAPs, including, but not limited to, whether a PSAP is text-ready or whether a new PSAP has come online or whether the jurisdiction of a PSAP has changed (*i.e.*, grown, shrunk, or been eliminated). The providers of the service should not be obligated to keep the national clearinghouse apprised of these issues and should not be embroiled in "turf wars" between PSAPs.²⁶

In addition to the obvious steps necessary to create and connect to a national clearinghouse, an essential element to make any next generation emergency communications system function, including any interim SMS-based text-to-911 solution, is unambiguous liability protection for all persons involved in any aspect of handling the communication, including, but not limited to, network providers. The failure to provide comprehensive and unambiguous liability protection across the board for everyone in the chain necessary to create and support the offering will jeopardize the deployment of the service, because necessary parties may be reluctant to participate if they are exposed or may be exposed to liability. What's more, as any IP-based next generation emergency communications system will arguably be jurisdictionally interstate in nature and as it addresses a national problem, any liability protection should not rely on the vagaries of the individual states and localities, but rather should be national in nature.²⁷

²⁶ By turf war, AT&T means disputes between PSAPs over the extent of their respective jurisdictions and duties. This issue of turf wars is discussed further below.

²⁷ *IP-Enables Services, Notice of Proposed Rulemaking*, 19 FCC Rcd 4863, 4890-92 (2004) ("We seek comment on the appropriate basis or bases for asserting federal jurisdiction over the various categories of IP-enabled services. Specifically, we request comment on whether the Commission should extend the findings made in our *Pulver Declaratory Ruling* to other IP-enabled services.")

Providers should not be subject to 51 or more standards of liability protection—*i.e.*, one problem, one solution, one standard.

2. For a long-term solution to next generation text and multimedia emergency communications, the Commission should encourage creation and use of Regional Centers to expedite deployment, cut costs, and protect public safety.

The Commission should consider cooperative mechanisms, and not mandates, to expedite creation of next generation communications systems.²⁸ That said, if the Commission were to decide that mandates on regulated providers were necessary, any such mandates should not get ahead of the work of standards-setting bodies and available technology. For their part, providers seek a rational and systemic deployment of next generation emergency services. The “build it and they will come” concept is not rational when there are no guarantees that sufficient numbers of state and local governments will be willing to make the necessary capital investments for next generation communications and to levy taxes to pay for them and when providers cannot be sure of a return on their investments. Indeed, widespread deployment of next generation emergency services is more likely to be delayed by state and local budgetary constraints and the wholesale aversion to levying taxes than by the process of developing industry-wide standards.

For these reasons among others, the Commission should defer regulatory action, if any, until the industry standards supporting next generation text and multimedia emergency communications are adopted. In the interim, the Commission should use its resources to get quick and certain action by industry standards-setting bodies. The Commission’s participation in the various groups addressing these next generation communications issues would be warmly received and may promote resolution of issues arising in these standards-setting bodies. The ultimate aim of these bodies must be the protection of public safety at a reasonable cost, and the Commission should play a non-regulatory role at first to facilitate that process.

²⁸ AT&T discusses the issue of the Commission’s authority in this area below.

Ultimately, however, the Commission may need to find non-regulation-based ways of encouraging deployment, because the Commission has no regulatory authority over the public safety community.²⁹ With the public safety community, the Commission may need to find more creative solutions to encourage development of new systems to handle incoming next generation emergency communications (*e.g.*, deployment of state-wide or regional “Advanced 911 Centers” or “Regional Centers”³⁰). For NG911 to enjoy a rational and systematic deployment the Commission will have to promote a national plan that cannot simply be left up to whims of individual communities.

Central to any rational deployment of next generation systems will be a shift away from the legacy model of Balkanized PSAP operations to a next generation regional or state-wide or even multi-state system. To be clear up front, AT&T doesn’t foresee the new model displacing local PSAP operations but rather sees it supporting them, especially during periods of transition. For the next generation model, the Commission should consider encouraging the development of regional or state-wide Advanced 911 Centers (Regional Centers), which should help to expedite deployment by making it easier on and less expensive for providers to quickly and logically provision and ultimately route next generation text and multimedia emergency communications in a manner required by local authorities and make sure that consumers aren’t put in peril and

²⁹ If regulatory mandates are ultimately deemed necessary, they should be limited to requiring regulated providers to meet certain standards in the delivery of emergency text and/or multimedia communications. Once industry standards are agreed upon, the actual technology used by any one provider should be entirely up to the provider as long as it otherwise allows the provider to meet the Commission’s regulatory goals.

³⁰ The Advanced 911 Center can support emergency services on either a state-wide basis or on a regional basis within a state or even on a multi-state basis. For simplicity’s sake, they are referred to a “Regional Centers” in these Comments. The question of what would constitute a “region” will need to be worked out among the interested parties. In some cases (*e.g.*, Delaware), it may make more sense for the Advanced 911 Centers to be a state-wide operation; in others (*e.g.*, California), a state-wide center may be too cumbersome or otherwise unworkable. In the end, however, a region ought to be large enough for providers to enjoy the benefits of pooling resources.

left wondering whether their communications made it to the correct emergency service provider.³¹

From the provider's perspective, the regional or state-wide concept creates economies of scale that make deployment easier, less expensive, quicker, and more flexible. Preferably, the Commission would not require deployment of NG911 facilities until an entire region or state has deployed an ESInet.³² Supporting multiple trunk groups to multiple separate selective routers in areas where only one or two PSAPs have deployed NG911 will be difficult and costly.³³ This is true across the board for all platforms.

This concept works equally well for consumers, too. As will be discussed in more detail below, the Regional Center concept will take the risk out of next generation communications to PSAPs by making sure the communication is properly routed to a facility that can handle the message or, in the alternative, alert the consumer that he or she needs to use a more conventional service, such as voice. While consumers may know generally that some areas in a state are ready to handle next generation emergency communications, they may not know whether any

³¹ It may be the case that local PSAPs will not want access to certain information even if they are technically capable of receiving it. For example, some local PSAPs may not want to receive, handle, or store medical information or advanced communications from the scene (pictures of the crime scene, video-supplied information, *etc.*). The Regional Center could elect to maintain databases for management of subtending PSAPs housing information on hospitals and police cars equipped with advanced communications (LTE) and standing orders on where to direct information that the local PSAP would prefer not to handle. These sorts of options could be implemented at the local level through procedural changes rather than having PSAPs meet new technical requirements.

³² As the Commission noted in its *NG911 Notice*, ESInets “will enable PSAPs to receive the full range of IP-based traffic, including voice, text, photos, video, and data.” *NG911 Notice*, para. 8. Deployment of ESInets should be seen as only the first step in and the bare minimum for making PSAPs ready for full-scale next generation text and multimedia communications.

³³ As the Commission is aware, Mobile Switching Centers don't align with PSAP boundaries. To expedite deployment and to keep costs down, it would make sense that NG911 be provisioned at a minimum at or greater than the switching center level. Among the advantages of this arrangement would be the ability to cut over entire switching areas, regions, or states. This arrangement would help from a consumer educational perspective, as well, since a consumer might know generally that the state was converting over to support next generation emergency communications, *i.e.*, text or video, but not have the slightest idea if the any particular area within the state had already converted.

particular community is or whether their present location is within the boundaries of such a next-generation-ready community. The Regional Center concept addresses this concern.

3. The Commission may need to adopt rules similar to the CMRS Phase I and Phase II rules, but adapt them to the special needs of the NG911 environment to expedite deployment, make NG911 services cost effective, and protect public safety.

The Commission is interested in knowing whether it ought to adopt rules for the deployment of next generation emergency communications offerings similar to those already in place for CMRS Phase I and Phase II rollouts³⁴ and what “specific showing should a PSAP be required to make to establish its ability to receive text and other media types.”³⁵ Under a Regional Center model, the state-wide or the regional center would be responsible for any showing of readiness. This model makes the most sense because of the cost and logistical advantages discussed above. Plus it will require larger levels of readiness than the one-on-one process developed for CMRS Phase I and Phase II. Said another way, in addition to showing that the PSAP has met the bare minimum of deploying ESInet, the Regional Centers model should require a specific percentage of PSAPs within the state or region, depending on how “region” is defined, as being next-generation-ready.³⁶ The Commission should examine the question of cost-effectiveness; that is, the Commission should have some basis on which to conclude that a certain level of readiness makes it cost effective for provisioning next generation emergency services to a state or region.

Also, as mentioned above, any plan concerning next-generation-readiness should make it clear that the individual states must resolve turf-war disputes between and among various PSAPs *before* any certificate of readiness is proffered by the state-wide or regional center. Providers should not be embroiled in any such disputes at any level. AT&T notes that, due to such turf

³⁴ 47 C.F.R. § 20.18.

³⁵ *NG911 Notice*, para. 91.

³⁶ The certificates could be staggered allowing the PSAPs to certify to the ability to handle different advanced capabilities as they become available—*e.g.*, the ability to accept text messages before video and certify to video at a later date.

wars, providers recently have had to defend against claims at the Commission by PSAPs that those providers were not meeting their CMRS Phase I and Phase II obligations.³⁷ These disputes must be resolved by the individual states and should never involve the providers or be settled at the Commission.

If the Commission determines that the adoption of rules similar to those adopted for the deployment of CMRS Phase I and Phase II rollouts, which include a provider certification regarding PSAP readiness issues are necessary, it should draft appropriate rules and submit them for comment.

E. Legal Authority

1. The Commission has not yet articulated direct or ancillary jurisdiction over NG911 and should proceed cautiously before seeking to expand its authority in this arena

In its Comments filed last February, AT&T suggested that, given the undetermined extent, if any, of the Commission's authority over broadband access providers and other providers of cutting edge technology, "the Commission should proceed cautiously before extending its reach over these types of entities"—even in support of a worthy goal like expanding next generation communications to the public safety community.³⁸ At present, the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA) gives the Commission some not yet fully developed authority to implement plans to improve access to emergency services for persons with disabilities.³⁹ Beyond that, however, the Commission's authority to impose regulations to secure wide-spread deployment of NG911 is highly suspect, especially as it might apply to messaging and video conferencing services.

³⁷ Recent disputes have arisen involving the Cities of Middleton, WI, and Dane County, WI; and the City of Muskego, WI, and Waukesha County, WI. The disputes have led to matters being filed with the Commission against different carriers.

³⁸ AT&T Comments, pp. 35-6.

³⁹ Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. No. 111-260, 124 Stat. 2751 (CVAA) (amending sections 3, 255, 303, 503, 330, 710, and 713 of the Communications Act, and adding sections 615c and 715-19, codified at 47 U.S.C. §§ 153, 225, 303, 330, 503, 610, 613, 615c, 616-20).

In the *NG911 Notice*, the Commission asserts that it has broad authority under Title III to facilitate the availability of text-to-911 and other next generation emergency communications capabilities to consumers. In particular the Commission cites to its authority over spectrum licensees under Sections 151, 301, and 303 of the Act.⁴⁰ Yet, these sections of the Act do not explicitly support this position.

Section 151, for example, is a broad policy statement and, as such, it is merely a congressional guide to the way the Commission should exercise its positive grants of authority and not a specific grant of authority itself. The contention that Section 151 provides the Commission with broad grants of authority was flatly rejected in the *Comcast* decision.⁴¹ Because section 151 is a statement of policy and not a delegation of authority, the Commission can rely on it to proceed generally with next generation emergency communications regulations.

Likewise, Sections 301 and 303(r) are of no avail. The jurisdiction bestowed under Section 301 is limited to the specific activities for which authority is granted in Title III and elsewhere in the Act; and Section 303(r) only confers upon the Commission authority to take actions necessary and proper to discharge its duties enumerated in the Act—*i.e.*, it does not allow the Commission *to take just any action* the Commission may deem necessary and proper. The *NG911 Notice* does not tie the proposed exercise of authority to any duty enumerated in Title III or elsewhere in the Act. Consequently, the Commission has yet to demonstrate the requisite authority to implement next generation communications systems through regulation.

Similarly, the Commission has failed to identify any positive grant of authority to impose NG911 regulations to which its proposed assertion of jurisdiction over “broadband access providers, System Service Providers (SSPs), network operators, and other entities involved in the provision of broadband Internet access and other network services” would be reasonably

⁴⁰ NG Notice, para. 117.

⁴¹ *Comcast Corp. v. FCC*, 600 F.3d 642, 654 (D.C. Cir. 2010) (“Policy statements are just that—statements of policy. They are not delegations of regulatory authority.”) (*Comcast*).

ancillary.⁴² The Section 151 policy statement regarding the protection of life and safety is not such a positive grant of authority, and the *NG911 Notice* identifies no other such grant. If the Commission wants to make the case for ancillary jurisdiction, then it must meet the two-part test articulated in *Comcast*. Under that test, the Commission must show: “(1) the Commission’s general jurisdictional grant under Title I [of the Communications Act] covers the regulated subject and (2) *the regulations are reasonably ancillary to the Commission’s effective performance of its statutorily mandated responsibilities.*”⁴³ Even if the Commission had identified a positive grant of authority in the Act, the Commission has yet to demonstrate “substantial evidence” that the exercise of ancillary jurisdiction is *reasonably ancillary* to the Commission’s effective performance of that grant of authority.

Besides, for there to be an analysis under this standard, the Commission would first have to propose actual regulations. Interested persons cannot comment on whether a regulation is *reasonably ancillary* if they don’t have the regulation before them to consider. It may be that interested persons could articulate an alternative method of achieving the Commission’s goal that does not involve the exercise of ancillary jurisdiction. Consequently, the Commission should first propose specific regulations before parties can support or challenge any claim to ancillary jurisdiction.

2. *Before NG911 can become a reality, the Commission should work with Congress to develop national, comprehensive, and standardized liability protection for all parties reasonably necessary in the provisioning chain*

For next generation emergency communications to become reality, all participants that are reasonably necessary to make such communications possible will need the same level of liability protection. The liability protection presently provided under the NET 911 Act is insufficient because it is tied to the protection afforded under various state laws and, often, a local exchange carrier’s tariff.⁴⁴ First, there ought to be one standard of protection applicable to

⁴² *NG911 Notice*, para. 119.

⁴³ *Id.* at p. 646 (emphasis supplied).

⁴⁴ 47 U.S.C. § 615a(a).

all persons involved in providing access to emergency services. Second, that standard ought to apply everywhere in the United States—from Bangor, Maine to San Diego, California. Third, as tariffs state and federal levels disappear in favor of contractual arrangements, tying liability protection to tariffs provisions is no longer an option.

The question of liability protection needs clarification and certainty. That will only be achieved through the use of a national standard clearly applicable to all parties involved in providing NG911. The Commission seeks comment on whether it is able to provide this protection to entities involved in provisioning NG911 services or whether any such protection must await congressional action.⁴⁵ Given the questions raised concerning the Commission's authority in this area, AT&T believes that the Commission should work with Congress to develop appropriate statutory, national, comprehensive protection and thereby eliminate any risk that the Commission might lack jurisdiction to do the job.

III. CONCLUSION

AT&T respectfully requests that the Commission consider these comments in its deliberations on this proposed rulemaking proceeding.

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December 12, 2011

⁴⁵ *NG911 Notice*, para. 120.