

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Framework for Next Generation 911) PS Docket No. 10-255
Deployment)
)

REPLY COMMENTS OF AT&T INC.

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I. INTRODUCTION AND SUMMARY

AT&T Inc., on behalf of itself and its affiliates (“AT&T”), hereby submits reply comments in response to the Federal Communication’s (“FCC” or “Commission”) Notice of Inquiry (“*NOI*” or “*Notice*”) in the above-referenced proceeding.¹ The *Notice* initiates a comprehensive proceeding to address the transition to Next Generation 9-1-1 (“NG911”). The opening comments reveal overwhelming support for the Commission’s efforts to enhance E911 as part of the transition to IP networks. Indeed, over fifty commenters, representing views from a diverse group of telecommunications providers, public safety entities, state and local governments, and other interested parties express support for the Commission’s decision to look to the future of 911 in the United States.

Commenters broadly agree on a number of key issues. First, NG911 systems will require standardization and consistency before significant advanced services can be added. Commenters generally support past and current efforts aimed at developing standards for NG911 networks and systems. Second, the record supports designating voice communications as the only primary media type at the outset of NG911 deployment. Third, NG911 systems will require new forms

¹ *Framework for Next Generation 911 Deployment*, Notice of Inquiry, PS Docket 10-255, FCC 10-200 (2010) (“*Notice*”).

of liability protection. Fourth, the Commission must address funding, security, and privacy issues to ensure a coordinated, ubiquitous deployment of NG911. Fifth, the Commission should consider adopting a timetable for NG911 deployment, linked to the availability of sustainable funding for Public Safety Answering Points (“PSAPs”). Sixth, disability issues should be addressed by the Emergency Access Advisory Committee.

A small number of commenters offer untenable proposals that would harm the development of NG911 systems and services. Several commenters, for example, urge the Commission to adopt SMS for NG911 emergency communications and to prematurely classify untested non-voice communications as primary media types. At this time, the record reflects that the Commission should focus on ensuring consistency in NG911 systems across the country and refrain from adding non-voice services as primary media types until such services are built to mission critical standards. The Commission should also reject proposals to require Wi-Fi “hot-spot” providers, such as coffee shops and bookstores, to support location information for emergency calls originating on their networks. Additionally, the Commission should reject calls to revisit old interconnection disputes re-framed as NG911 proposals. The Commission’s policy of promoting competition among NG911 network providers requires no clarification.

II. THE INITIAL RECORD REVEALS A STRONG CONSENSUS IN SUPPORT OF AT&T’S KEY POSITIONS

Commenters agree that the Commission’s efforts to enhance E911 service in the United States through deployment of NG911 networks promise significant benefits for the public. At the same time, before “end-state” NG911 systems can be fully deployed, commenters emphasize that many challenges remain. AT&T submits that several threshold policy decisions, enumerated herein, will materially advance the transition to end-state NG911. The Commission should expeditiously resolve these issues as discussed below.

A. Commenters Widely Agree that NG911 Will Require a Standardized, Basic Infrastructure Before Additional Media Types Can Be Added

Commenters support AT&T's contention that a successful transition from legacy 911 to NG911 networks will require standardization and consistency in the NG911 network.² Without standardization, deployment of NG911 will result in ineffective emergency response and mass consumer confusion as the public struggles to determine what services are supported in which parts of the country. As Level 3 Communications, Inc. ("L3 Communications") explains, "a patchwork, laissez faire, or state-by-state approach will not work."³ Instead, a successful transition to NG911 "requires substantial changes to the entire 911 system."⁴ Indeed, the Center for Democracy & Technology urges the Commission to "promote an effective and technologically advanced emergency reporting and communications system, based on open technical standards."⁵

The record shows strong support for the efforts of standards development organizations that have been actively engaged in developing and harmonizing technical standards to support

² See, e.g., Comments of Level 3 Communications, LLC, PS Docket No. 10-255, at 22 (filed Feb. 28, 2011) ("L3 Comments"); Comments of the Voice on the Net Coalition, PS Docket No. 10-255, at 3 (filed Feb. 28, 2011) ("Voice on the Net Coalition Comments"); Joint Comments of the Texas Commission on State Emergency Communications and the Texas 9-1-1 Alliance, PS Docket No. 10-255, at 4 (filed Feb. 28, 2011) ("Texas 911 Agencies Comments"); Comments of the Rehabilitation Engineering Research Center on Telecommunications Access, PS Docket No. 10-255, at 5 (filed Feb. 28, 2011) ("RERC-TA Comments"); Comments of Sprint Nextel Corporation, PS Docket 10-255, at 2 (filed Feb. 28, 2011) ("Sprint Comments"); Comments of Qualcomm Incorporated, PS Docket 10-255, at 8 (filed Feb. 28, 2011) ("Qualcomm Comments"); Comments of The National Emergency Number Association, PS Docket No. 10-255, at 2 (filed Feb. 28, 2011) ("NENA Comments").

³ L3 Comments at 5.

⁴ Comments of T-Mobile USA, Inc., PS Docket No. 10-255, at 3 (filed Feb. 28, 2011) (T-Mobile Comments").

⁵ Comments of The Center for Democracy & Technology, PS Docket No. 10-255, at 1 (filed Feb. 28, 2011) ("Center for Democracy & Technology Comments").

the transition to IP-based NG911 systems.⁶ AT&T joins other commenters in highlighting the role that the National Emergency Number Association (“NENA”) has played in advancing the standardization of NG911 networks through the development of its i3 standard, which introduces the concept of an Emergency Services IP network (“ESInet”) that can be shared by all agencies in a multi-agency, multi-jurisdictional manner.⁷ While NENA itself notes that the i3 standard is not yet complete,⁸ commenters agree that the i3 standard will prove to be a useful stepping stone that will allow for timely and efficient deployment of NG911 networks.⁹

Standardization in basic NG911 infrastructure must precede deployment of additional advanced services, such as text-based communications, still images, or video.¹⁰ The deployment of advanced services will ultimately depend on the PSAP’s ability to receive information from different media types. As standards development organizations advance the capabilities of NG911 systems, additional capabilities and media types can be incorporated into the systems as

⁶ See, e.g., Comments of Motorola Solutions, Inc., PS Docket No. 10-255 at 2 (filed Feb. 28, 2011) (“Motorola Solutions Comments”); Comments of the Association of Public Safety Communications Officials-International, Inc., PS Docket No. 10-255, at 8 (filed Feb. 28, 2011) (“APCO Comments”); Comments of TeleCommunication Systems, Inc., PS Docket No. 10-255, at 10 (filed Feb. 28, 2011) (“TCS Comments”); NENA Comments at 2; Qualcomm Comments at 2; Sprint Comments at 2.

⁷ NENA Comments at 20. See also TCS Comments at 10-11.

⁸ In its initial comments, NENA notes that the “NENA i3 Solution is currently in draft status.” NENA Comments at 5. PlantCML also notes that the “NENA i3 is not yet fully complete.” Comments of PlantCML, PS Docket No. 10-255, at 1 (filed Feb. 28, 2011) (“PlantCML Comments”).

⁹ See PlantCML Comments at 1 (“PlantCML strongly recommends that the Commission work with NENA to accelerate the completion and adoption of NENA i3”); NENA Comments at 5 (“NENA’s draft i3 standard would minimize costs and compliance burdens”); Comments of TCS at 10 (“There are alternative standards efforts...that point to the NENA i3 standard as the future evolution of the NG911 architecture”); APCO Comments at 8 (“The NENA i3 architecture for NG911 provides for functional elements...that will replace conventional MSAG and ALI”).

¹⁰ Comments of AT&T Inc., PS Docket No. 10-255, at 2 (filed Feb. 28, 2011) (“AT&T Comments”).

they become available. The Alliance for Telecommunications Industry Solutions (“ATIS”), for example, points out that “such...services can be aligned...by using Common IMS as the framework.”¹¹ The Commission, however, should not shift its focus to new media types and capabilities until after such standards are fully developed and universally adopted. As the Texas 911 Agencies remark, “requiring service providers to make available these core components must coincide and be contingent upon the ability of 9-1-1 authorities to make use of such elements.”¹² Additionally, T-Mobile explains that “PSAPs need to have the equipment and operational procedures in place to receive and utilize NG911 data. PSAP readiness is especially crucial with respect to non-voice emergency communications as those functionalities generally do not exist in PSAPs today and would be new.”¹³

Similarly, commenters highlight that standardization will help ensure seamless interoperability.¹⁴ Development and promulgation of standards will ensure compatibility, so that PSAPs can receive and process voice, text, still image, video, and other digital information that is sent by the public—when such services are ready for emergency services use. The public expects interoperability and consistency between NG911 capabilities and services. As the Joint Initial Comments of the Texas 911 Agencies point out, managing interoperability consistent with

¹¹ Comments of Alliance for Telecommunications Industry Solutions, PS Docket No. 10-255, at 15 (filed Feb. 28, 2011) (“ATIS Comments”).

¹² Texas 911 Agencies Comments at 6.

¹³ T-Mobile Comments at 4; *see also* Qualcomm Comments at 9 (“If too many services are included in NG911, it increases the likelihood that PSAPs, network providers, and equipment suppliers will support different subsets, which will lead to fragmented deployments and interoperability issues.”).

¹⁴ *See, e.g.*, ATIS Comments at 17; L3 Communications Comments at 22; Voice on the Net Coalition Comments at 3; Texas 911 Agencies Comments at 10; RERC-TA Comments at 5; TCS Comments at 11; T-Mobile Comments at 6; Sprint Comments at 6; Motorola Solutions Comments at 4.

meeting consumer expectations “is a growing significant challenge that can only have a chance of being satisfied if appropriate standards-based solutions are broadly deployed and followed.”¹⁵

B. Commenters Support Limiting Additional Media Types in NG911 at this Time

Commenters urge the Commission to limit NG911 roll-out to a core group of basic media types.¹⁶ Qualcomm, for example, points out that inclusion of additional media types at the outset of NG911 deployment will result in fragmented deployments.¹⁷ The Voice on the Net Coalition supports limiting NG911 to basic media types in order to ensure interoperability.¹⁸ Limiting basic media types will reduce backwards compatibility issues with legacy and existing E911 systems and prevent mass confusion that would result from pushing ahead with new media types before they have been integrated into every handset and standards have been completed.¹⁹ Indeed, until a media type is built to mission critical standards, it should not be used for emergency communications.

The record developed in this proceeding indicates that only voice currently meets this standard. SMS, by contrast, suffers from significant limitations and should not be used for emergency communications.²⁰ Several commenters, however, recognize the benefits of

¹⁵ Texas 911 Agencies Comments at 11.

¹⁶ *See, e.g.*, Comments of Techamerica, PS Docket No. 10-255, at 4 (filed Feb. 28, 2011); Voice on the Net Coalition Comments at 4; Qualcomm Comments at 9; NENA Comments at 6.

¹⁷ Qualcomm Comments at 9.

¹⁸ Voice on the Net Coalition Comments at 3.

¹⁹ *See* AT&T Comments at 4-5.

²⁰ *See, e.g.*, Comments of the Telecommunications Industry Association, PS Docket No. 10-255, at 7 (filed Feb. 28, 2011) (“TIA Comments”); Comments of the Consumer Electronics Association, PS Docket No. 10-255, at 4 (filed Feb. 28, 2011) (“CEA Comments”); ATIS Comments at 5; T-Mobile Comments at 8; Sprint Comments at 3; Qualcomm Comments at 9.

alternative text-based technologies under investigation in the 3 GPP Non-Voice Emergency Services (“NOVES”) Standards, such as Real Time Text (“RTT”) and Instant Messaging (“IM”).²¹ AT&T joins commenters in supporting use of RTT, conforming to NOVES standards for emergency communications. RTT or other alternatives from the NOVES standard built to mission-critical standards have the potential to provide the hearing-disabled community with an alternative to dated Teletypewriter (“TTY”) technology.

All commenters recognize that the Commission must plan for the effective roll-out of additional media types now. As Motorola Solutions, Inc. (“Motorola Solutions”) notes, PSAPs will need extensive training to ensure a safe and orderly roll-out of new media types, and the public will need to be educated on new capabilities before they can be included in NG911 systems.²² Commenters broadly agree that training will be essential to ensure that PSAPs are not overwhelmed by new information flows.²³ Consumer education efforts also will be critical to ensuring that citizens understand the benefits and limitations of the new emergency communications system.

C. The Record Confirms that NG911 Systems Will Require New Forms of Liability Protection

Commenters stress that the deployment of NG911 networks and the addition of new media types into emergency communications will create unique liability issues that require

²¹ See, e.g., NENA Comments at 8; Qualcomm Comments at 9; Texas 911 Agencies Comments at 6.

²² Motorola Solutions Comments at 5.

²³ Currently, 911 call-takers are not trained to handle multiple messages and conversations over a variety of media types at the same time. Additional media types risk confusing 911 call takers and compromising effective emergency response. See AT&T Comments at 6. See also Comments of CTIA – The Wireless Association, PS Docket 10-255, at 16 (filed Feb. 28, 2011) (“CTIA Comments”); Motorola Solutions Comments at 5.

additional liability protections through federal or state statutes.²⁴ TCS, for example, notes that current protections are too “‘voice-centric’ for the services discussed in the *Notice*.”²⁵ PlantCML adds that the “potential for liability issues to arise in the NG911 environment, as well as the complexity of those issues, will increase with the complexity of the NG911 service delivery environment.”²⁶ AT&T agrees with other commenters that urge Congress to modify existing 911 laws or pass a new law providing full legal protection for carriers and PSAPs for their actions relating to NG911.²⁷ As NENA points out, “congressional action may...be required to insulate participants that are currently beyond the Commission’s jurisdictional reach.”²⁸ The Texas 911 Agencies add that federal law “should be clearly interpreted to cover most NG911 related matters for operating service providers, persons, PSAPs, PSAP vendors, PSAP agents, and 911 administrative or governmental authorities.”²⁹ Finally, as provided by both L3 Communications

²⁴ Comments of St Louis Emergency Communications Commission, PS Docket No. 10-255, at 8 (filed Feb. 28, 2011) (“St. Louis ECC Comments”). Sprint adds that “the current regulatory model is not equipped to address the liability issues that may arise when data is originated by a source not regulated by the Commission.” Sprint Comments at 8. Motorola provides that “the variety of different technologies and media with which NG911 systems may be able to interface creates a host of new liability concerns. Motorola Solutions Comments at 12.

²⁵ TCS Comments at 17.

²⁶ PlantCML Comments at 3.

²⁷ *See, e.g.*, Comments of L.R. Kimball, PS Docket No. 10-255, at 20 (filed Feb. 28, 2011) (“L.R. Kimball Comments”); L3 Comments at 25; Voice on the Net Coalition Comments at 5; Texas Agencies Comments at 3; TCS Comments at 3; Sprint Comments at 8; PlantCML comments at 3; NENA Comments at 31.

²⁸ NENA Comments at 31.

²⁹ Texas 911 Agencies Comments at 8.

and TCS, the Commission must “champion improved and expanded liability protection for all entities involved in the provision of NG911 services.”³⁰

Some commenters favor charging a working group with evaluating and ultimately establishing liability protections.³¹ AT&T generally supports any mechanism that will guarantee liability protection for carriers, but requires additional information regarding the composition of the working group and how it would operate before supporting working group proposals.

D. Commenters Agree that Deployment of NG911 will Require New Funding Sources

The record reflects serious concerns about funding for NG911 deployment. In its initial comments, AT&T noted that today 911 is typically funded by subscriber fees on telephone services.³² Commenters recognize, however, that current funding approaches will be insufficient in the future.³³ CTIA, for example, argues that current funding models “do not account for new services that may be required to offer emergency communications in a NG911 system.”³⁴

³⁰ TCS Comments at 3. *See also* L3 Comments at 25.

³¹ APCO, for example, suggests a working group to address liability issues. APCO Comments at 9. Similarly, the St. Louis Emergency Communications Commission calls for an advisory group to identify and classify liability issues. St. Louis ECC Comments at 8.

³² AT&T Comments at 27.

³³ APCO, for example, states that “current 911 funding mechanisms in most jurisdictions will be grossly inadequate.” APCO Comments at 2. *See also* Comments of the Public Safety Communications Office of the California Technology Agency, PS Docket No. 10-255, at 4 (filed Feb. 28, 2011) (“PSCO Comments”); CTIA Comments at 13; NENA Comments at 27; Voice on the Net Coalition Comments at 2; Sprint Comments at 9; Qualcomm Comments at 2; Comments of Motorola Solutions at 9; TIA Comments at 4.

³⁴ CTIA Comments at 14.

Additionally, NENA notes that many areas of the country are already experiencing a decline in 911 revenues.³⁵

The Commission should adopt the recommendation to form a blue ribbon panel to address the funding issues related to the deployment of NG911.³⁶ As Motorola Solutions notes, sufficient funding for the transition to NG911 “needs to be identified to support the myriad hardware, software, training, and operational upgrades that the NG911 transition will require.”³⁷ Further, in light of widespread recognition of the need for new funding techniques for NG911 deployment, AT&T submits again that funding for NG911 services should come from general taxes, as opposed to placing the expense of NG911 services on a customer bill. The provision of emergency services benefits every citizen equally, and the individual placing an emergency 911 call is often not the individual that benefits most from the call itself.

E. Commenters Overwhelmingly Agree that Security and Privacy Concerns Must be Addressed in the NG911 Network

The record reflects widespread opposition to including auxiliary personal and medical information in NG911 systems until security and privacy concerns are addressed. As commenters explain, the transmission of this kind of sensitive information over the NG911 network presents significant privacy and security issues that must be resolved before this data is

³⁵ See National Emergency Number Association, *A Policy Maker Blueprint for Transitioning to the Next Generation 911 System*, September 2008, p.11, available at http://www.nena.org/sites/default/files/NG9-1-1PolicyMakerBlueprintTransitionGuide-Final_0.pdf.

³⁶ *Id.* at 28. See also CSRIC Working Group 4B Final Report, *Transition to Next Generation 911*, at 137 (March 2011) (“*Transition to Next Generation 911 Final Report*”).

³⁷ Motorola Solutions Comments at 9.

integrated into the NG911 system.³⁸ Although some commenters urge the Commission to rely on auxiliary data that would include relevant information about a person's medical condition and particular treatment needs, as well as other private information,³⁹ the majority of commenters stress that carriers should not be required to maintain or transmit auxiliary data of this type. The person associated with such medical data may or may not be the subscriber or the user of the telecommunications device.⁴⁰ Before auxiliary personal and medical data can be part of any NG911 systems, the person who is associated with such data must be required to provide opt-in consent consistent with evolving privacy standards.

F. AT&T Supports a Timetable for Deployment of NG911, Linked to the Availability of Sustainable Funding for PSAPs

AT&T supports NENA's proposal to create an NG9-1-1 deployment plan.⁴¹ NENA envisions the development of transition milestones to track NG911 deployment, and proposes a number of primary milestones for the Commission's consideration.⁴² NENA also assumes secondary milestones that would include implementation of NG911-capable PSAP features. AT&T supports the creation of a NG911 deployment timetable but emphasizes that the timetable must be tied to adequate—and ongoing—funding support for PSAPs. As NENA explains,

³⁸ See L.R. Kimball Comments at 3; Motorola Solutions Comments at 13; Sprint Comments at 4; NENA Comments at 21; CTIA Comments at 13; ATIS Comments at 12.

³⁹ See Comments of GreatCall, Inc., PS Docket 10-255, at 3 (filed Feb. 28, 2011).

⁴⁰ AT&T Comments at 6.

⁴¹ NENA Comments at 24.

⁴² *Id.* at 26.

adequate PSAP funding is a “necessary prerequisite to the imposition of mandatory milestone due dates.”⁴³ Absent adequate funding, the NG911 network will not come to fruition.

G. AT&T Supports Recommendations to Have Disability Issues Addressed by the Emergency Access Advisory Committee

AT&T supports the Telecommunications Industry Association’s (“TIA”) proposal to have disability access issues arising from the transition to NG911 addressed by the Commission’s EAAC.⁴⁴ The EAAC already is addressing disability access issues arising from the transition to IP-networks in its implementation of the 21st Century Communications and Video Accessibility Act of 2010.⁴⁵ NG911 disability access issues are closely related. Under its current mandate, the EAAC is undertaking surveys to collect information to “determine the most effective and efficient technologies and methods by which to enable access to emergency services by individuals.”⁴⁶ This effort logically encompasses the transition to NG911. In order to reduce conflicting or duplicative efforts, the Commission should add disability access issues arising from NG911 to EAAC’s mandate.

III. A NUMBER OF PROPOSALS ADVANCED IN OPENING ROUND COMMENTS WOULD HARM OR DELAY THE TRANSITION TO NG911 AND SHOULD BE REJECTED

Several commenters offer untenable proposals that would harm the development of NG911 systems and services. For example, some commenters urge the Commission to adopt SMS for NG911 emergency communications and to prematurely expand NG911 to incorporate untested non-voice communications as primary media types. These proposals should be rejected.

⁴³ *Id.* at 27.

⁴⁴ TIA Comments at 10.

⁴⁵ *See Notice* at ¶ 11.

⁴⁶ TIA Comments at 10. *See also* Pub. L. No. 111-260 § 106(c).

The Commission should also reject proposals to require Wi-Fi “hot-spot” providers to provide location information for emergency calls originating on their networks. Finally, the Commission should reject proposals to revisit interconnection disputes concerning legacy networks. Such proposals have no logical relationship to the NG911 transition.

A. SMS Should Not Be a Part of the NG911 Network

The record shows that relying on SMS for text-based emergency communications—either temporarily or permanently—is dangerous, highly impractical, and would divert funds away from newer and better text-based solutions on which the industry should be focusing. Some commenters urge the Commission to incorporate SMS texting-to-911 capabilities into the NG911 network.⁴⁷ SMS, however, is not a real-time communications service, but a best-effort, store-and-forward service that makes SMS unreliable and prone to unacceptable delays for purposes of emergency communications.⁴⁸ This is supported by a recently published white paper of 4G Americas, a wireless industry trade association representing the 3GPP family of technologies.⁴⁹ Even Text2Them—a major proponent of integrating SMS into NG911

⁴⁷ Intrado Inc. and Intrado Communications Inc., for example, proposes that “SMS is a viable, reliable, interim solution for situations in which those who are in emergencies are not in a position to place a voice call to 9-1-1.” Comments of Intrado Inc. and Intrado Communications Inc., PS Docket No. 10-255, at 13 (filed Feb. 28, 2011) (“Intrado Comments”). As explained further below, such proposals must be rejected.

⁴⁸ Because these SMS limitations are tied to the fundamental design of the SMS system, they are present regardless of whether a communication is mobile-to-mobile or mobile-to-fixed.

⁴⁹ See 4G Americas Texting to 9-1-1, Examining the Design and Limitations of SMS (Oct. 2010), available at <http://www.4gamericas.org/documents/SMS%20to%20911%20White%20Paper%20Final%20October%202010.pdf>, (“4G Americas Texting to 911 White Paper”). The 4G Americas Texting to 911 White Paper is referenced by a number of commenters. See T-Mobile Comments at 9; Sprint Comments at 4; ATIS Comments at 5.

systems—states that “there is on average a 20-60 second delay in receiving text messages.”⁵⁰

Without any kind of guaranteed delivery or service baseline, it would be impossible to maintain session continuity across messages and ensure the kind of two-way communication that is necessary for emergency communications.⁵¹

Claims that SMS and MMS capability can immediately be integrated into NG911 systems are simply false. Text2Them claims that it can integrate such capabilities into NG911 systems immediately for SMS, and, within six months, for MMS.⁵² The record, however, makes clear that modifying SMS to provide real-time, two-way communications would require significant re-engineering over a long period of time.⁵³ Such re-engineering would take as long as creating Next Generation Messaging in LTE and would require the redesign of mobile devices to accommodate the revised SMS functionality. Industry effort is better spent on developing a text-based solution, conforming to NOVES standards, for 4G architecture. Text2Them acknowledges that “no studies have been conducted” that support its proposals to offer SMS NG911 capabilities immediately.⁵⁴ In contrast, the Transportation Safety Advancement Group

⁵⁰ Comments of Text2Them, PS Docket No. 10-255, at 6 (filed Dec. 27, 2010) (“Text2Them Comments”).

⁵¹ Further, the existing short code system is not a feasible mechanism for routing SMS emergency messages to PSAPs. For example, one national short code would be challenged in routing because location of the caller would not be available. Meanwhile, dedicating a short code to each PSAP would require over 6,000 short codes, and would place an unacceptable burden on 911 callers to determine which short code to use to contact the PSAP in their current location.

⁵² Text2Them Comments at 3 (“911 texting can be deployed immediately to current law enforcement by adding Text2Them two-way chat system to current law enforcement ‘text tip lines.’ MMS can be added shortly (within six months) with Text2Them enhancements.”).

⁵³ See T-Mobile Comments at 2; Sprint Comments at 3; ATIS Comments at 7; AT&T Comments at 13.

⁵⁴ Text2Them Comments at 5.

(“TSAG”) has performed testing on the general technical aspects of SMS messaging to PSAPs and found that significant operational gaps remain.⁵⁵ Text2Them’s proposal also is problematic because it would require callers to enter identification numbers to facilitate appropriate routing of text communications. Requiring user-supplied codes to initiate emergency communications risks delay and error—potentially impairing or frustrating emergency response.

Intrado also argues that SMS should be incorporated into NG911 systems. In support of its proposal, Intrado cites its experience providing SMS for 911 service in Black Hawk County.⁵⁶ But the Black Hawk County experiment resulted in mass confusion among wireless users.⁵⁷ As Blackhawk County residents learned, only residents who were enrolled with i wireless, a T-Mobile affiliate, were able to make use of the service. Other area residents who tried to use the service simply received an SMS message instructing them to call 911 instead, or simply that 911 was an invalid number for SMS. Further, because the text messages could not carry location information, users were prompted to enter their zip codes before their message was forwarded to the 911 text services. If the caller was in an area not served by i wireless, they were again instructed to call 911. Confusion in Black Hawk County, Iowa spread throughout the country.⁵⁸

⁵⁵ “Issues such as SMS origin location and routing; or message-receipt and message-end verification, and perhaps even ‘language’ conventions remain to be addressed, both through technical refinements and through ‘operational’ policies, including institutional and legal/regulatory and liability questions.” Comments of the Transportation Safety Advancement Group, PS Docket No. 10-255, at 1 (filed Feb. 28, 2011) (“TSAG Comments”).

⁵⁶ Specifically, Intrado argues that its experience providing SMS for 911 service in Black Hawk County is “instructive” and shows that “SMS is a viable, reliable, interim solution.” Intrado Comments at 13.

⁵⁷ Eric M. Zeman, “Black Hawk County, Iowa, First to Accept 911 Texts,” (Aug. 6, 2009), *available at* <http://www.phonescoop.com/news/item.php?n=4678>.

⁵⁸ *See* AT&T Comments at 16.

As a result, King County, Washington found it necessary to educate residents that they should not rely on texting-to-911 in place of calling 911.⁵⁹

B. The Commission Should Reject Proposals to Classify Non-Voice Communications as Primary Media Types

Limiting primary media types at the outset of NG911 deployment will significantly decrease complexity and confusion, and facilitate backwards compatibility with legacy and existing systems.⁶⁰ Until a media type is built to mission-critical standards and permits reliable two-way, real-time conversations between the 911 caller and the PSAP, it should not be used for emergency communications. Currently, only voice meets this standard. Certain commenters ignore these limitations, and ask the Commission to declare other media types—including SMS, video, telemetry, and device-initiated services—primary media types.⁶¹ These proposals are premature and should be rejected by the Commission.

For the reasons discussed above, SMS should not be incorporated into the NG911 network, let alone serve as a primary media type. SMS is not a real-time communications service, but a best-effort, store-and-forward service that is prone to unacceptable delays for purposes of emergency communications. SMS was never designed nor deployed to provide any

⁵⁹ See Enhanced 911 Program Office, “E-911 Public Education,” *available at* <http://www.kingcounty.gov/safety/E911/PublicEducation.aspx>.

⁶⁰ 911 call takers also will require training to effectively handle additional media types.

⁶¹ See, e.g., Comments of Sorenson Communications, Inc., PS Docket No. 10-255, at 6 (filed Feb. 28, 2011) (“Sorenson Comments”); Comments of Shotspotter, PS Docket No. 10-255, at 11 (filed Feb. 28, 2011) (“Shotspotter Comments”); Comments of Shadow Me Security, PS Docket No. 10-255, at 3 (filed Feb. 28, 2011) (“Shadow Me Security Comments”); Comments of Rave Mobile Security, PS Docket No. 10-255, at 2 (filed Feb. 28, 2011) (“Rave Mobile Comments”); Comments of West Wireless Health Institute, PS Docket No. 10-255, at 2 (filed Feb. 28, 2011) (“West Wireless Health Institute Comments”); GreatCall Comments at 3; Comments of RERC-TA at 2; TCS Comments at 3; Sprint Comments at 3; Text2Them Comments at 3; Intrado Comments at 13; L.R. Kimball Comments at 5-6; NENA Comments at 13.

time-sensitive, mission critical service. Moreover, there is no guarantee of delivery—immediate or otherwise—of an SMS message, whether for commercial or emergency purposes. Similarly, no acknowledgments of sent, delivered, or read SMS messages are provided to the sender. Although other text services—like RTT—may ultimately become viable primary media types in the future, SMS should not.

Video also should not be a primary media type at this time. NENA argues that live video should be a primary medium, asserting that “video calling has finally evolved from a novelty service into a common feature in consumer electronics such as smart phones, laptops, tablet computers, televisions, and game consoles.”⁶² While it is true that video use is growing, this fact, by itself, does not justify designating video as a primary media type at the outset of NG911 deployment. Video requires significantly more development and standardization before it can be used for real-time, two-way communications in mission-critical situations. Additionally, mandating video as a primary media type now—before standards have been completed—will only add to the confusion already surrounding 911 capabilities.⁶³

Similarly, the Commission should reject NENA’s assertion that device-initiated calls are ready to be incorporated into NG911 at this time.⁶⁴ Looking to the future, the IP-based network architectures that support NG911 systems likely will be capable of supporting a variety of

⁶² NENA Comments at 13.

⁶³ The NG911 community will need to explore and understand how two-way, real-time video will be used in the real world. For example, in the case of two-way, real-time video, the community will need to consider if the 911 caller will see the PSAP representative. There may be several reasons why this would be inappropriate, such as security or privacy concerns.

⁶⁴ NENA asserts that “[w]ith the development of nanotechnology for use in sensors and the increased capabilities and use of machine-to-machine communications, NG9-1-1 centers must be designed to receive and process device-initiated service requests. NENA’s NG9-1-1 design will facilitate device initiated emergency service requests by establishing uniform protocols for accessing PSAPs based on open standards.” NENA Comments at 19.

automatically triggered emergency calls made by devices.⁶⁵ In fact, device-initiated calls are already assumed in much of NENA’s work, and may also be addressed in future versions of the NOVES standards. That said, the record evidence shows that directly connecting device-initiated calls to PSAPS during the initial stages of NG911 service will “overwhelm” PSAPs and potentially trigger dangerous “shut downs” in the NG911 network, making it impossible to respond to legitimate emergencies.⁶⁶ Further development work is needed before device-initiated communications should be primary media types, or directly linked to NG911 systems.⁶⁷ For these reasons, the Commission should not adopt West Wireless Health Institute’s proposal to include telemetry as a primary media type.⁶⁸ Currently available telemetry services and devices do not meet mission-critical standards applicable to emergency communications.

⁶⁵ Examples of such devices include environmental sensors capable of detecting chemicals, highway cameras, security cameras, alarms, personal medical devices, telematics, and consumer electronics in automobiles.

⁶⁶ A joint filing by national public safety organizations highlighted several problems with incorporating device-initiated calls into NG911 at this time, including: (1) the “direct transmission of alarm signals from off-the shelf devices to PSAPs could overwhelm state and local emergency response capabilities”; (2) “[d]irect alarm signals can flood a PSAP, making it impossible to respond to legitimate emergencies”; (3) [a]llowing direct connection of all IP enabled alarm devices to PSAPs would expose public safety to “autodialer” problems”; and (4) “[f]alse signals could effectively shut down PSAPS, if unscreened alarm signaling is allowed.” Joint Comments of the International Association of Chiefs of Police, the International Association of Fire Chiefs, and the National Sheriffs’ Association, PS Docket No. 10-255, at 4 (filed Feb. 28, 2011) (“IAFP, IAFC, and NSA Comments”); *see also* Comments of The Alarm Industry Communications Committee, PS Docket No. 10-255, at 6 (filed Feb. 28, 2011) (“AICC Comments”) (“Responding to false alarms can place a significant burden on PSAPs and first responders.”).

⁶⁷ Existing laws, regulations, and tariffs must be modified, however, to ensure that device-initiated emergency services have access to the NG911 network.

⁶⁸ West Wireless Health Institute Comments at 2.

C. Wi-Fi “Hot-Spot” Providers Should Not be Required to Support Location Information for Emergency Calls

The Commission should reject proposals to require that “hot-spot” providers to support location information for emergency calls placed through hot-spots.⁶⁹ AT&T is unaware of any location technology designed to provide the location of emergency calls originated on Wi-Fi networks. Additionally, imposing location requirements on hot-spot providers would expose these entities to significant legal and financial risks that outweigh the marginal benefits of offering Wi-Fi as a secondary service to customers.⁷⁰ As the Commission acknowledges, the types of entities that operate hot-spots include coffee shops, hotels, and fast food restaurants. These entities are not sophisticated telecommunications providers, nor are they versed in FCC rules and policy. Even if hot-spot providers were aware of a regulatory requirement to support location information, the significant cost of re-configuring their networks to provide such capability might well exceed the benefits of offering broadband access to the public, particularly where it is offered for free. Forcing hot-spot providers to support location information would hinder Wi-Fi deployment and, in turn, broadband access.

D. The Commission Should Reject Proposals to Revisit Interconnection Disputes Reframed as a NG911 Issue

AT&T supports competition in the NG911 marketplace and recognizes that the availability of competing networks will accelerate the NG911 transition.⁷¹ Already, many state

⁶⁹ APCO’s comments appear to assume that hot-spot providers will be required to participate in NG911. Specifically, APCO asserts that “NG911 location determination will, to a degree, be dependent on these non-traditional entities providing this location information to the proper authority.” APCO Comments at 5.

⁷⁰ The Commission asks if “hot-spot providers that are not traditional communications providers, such as coffee shops, hotels, bus lines, and public parks [should] be expected to play a role in the deployment of NG911.” *Notice* at ¶ 53.

⁷¹ See Motorola Comments at 29.

and local PSAPs are addressing the question of competition by publicizing requests for proposals that define minimal acceptable solutions and seek competitive bids.⁷² However, the Commission should reject Time Warner’s proposal to revisit interconnection disputes pertaining to legacy networks in order to promote competition in the NG911 marketplace.⁷³ While Time Warner maintains that revisiting these disputes is necessary to clarify the Commission’s policy of promoting competition among NG911 platforms, that policy is clear and has not been challenged in this proceeding despite the Commission’s explicitly raising the issue in the NOI.⁷⁴ There is no logical relationship between the interconnection disputes raised by Time Warner and the NG911 transition. Accordingly, Time Warner’s proposal should be rejected.

IV. CONCLUSION

Commenters strongly support the Commission’s broad inquiry into the development of NG911. Commenters also agree that significant work remains to ensure a successful transition from legacy 911 systems to NG911 systems. A regulatory approach undertaken consistent with the framework discussed above will advance the objective of delivering to all Americans a truly modern emergency services communications system.

⁷² *Id.*

⁷³ Comments of Time Warner Cable, Inc., PS Docket No. 10-255, at 9 (filed Feb. 28, 2011) (“Time Warner Cable Comments”) (The Commission should “use this proceeding to reaffirm the availability and importance of third-party 911 solutions and to make clear that competitive service providers must be allowed to take advantage of them in order to comply with their 911 and E911 obligations.”); *id.* at 3 (explaining that “existing interconnection agreements may include similarly outmoded language that, at a minimum, raises questions as to whether third-party, non-ILEC 911 options are permissible”).

⁷⁴ *Notice* at ¶ 67.

Respectfully submitted,

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