

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

In the Matter of)	
)	
Facilitating the Deployment of Text-to-911 and)	PS Docket No. 11-153
Other Next Generation 911 Applications)	
)	PS Docket No. 10-255
Framework for Next Generation 911)	
Deployment)	

**COMMENTS OF THE ALLIANCE FOR
TELECOMMUNICATIONS INDUSTRY SOLUTIONS**

The Alliance for Telecommunications Industry Solutions (ATIS) submits these comments in response to the *Second Further Notice of Proposed Rulemaking (FNPRM)* released January 31, 2014, in the above-referenced dockets. In the *FNPRM*, the Federal Communications Commission (Commission) seeks comments on the implementation of text-to-911 functionality, including “over-the-top” (OTT) text-to-911 message delivery models, location accuracy issues, and technical issues related to text-to-911 roaming. ATIS’ comments explain that there are technical issues that need to be resolved related to text-to-911 from Wi-Fi locations and that additional study is needed before more detailed feedback can be provided on the message delivery models proposed in the *FNPRM*. ATIS also recommends in these comments that, while industry work is underway to address text-to-911 technical issues, the Commission should not adopt rules that would have the effect of directing resources away from ongoing industry efforts to enhance consumers’ ability to communicate with emergency service providers.

I. BACKGROUND

ATIS is a global standards development and technical planning organization that leads, develops and promotes worldwide technical and operations standards for information, entertainment, and communications technologies. ATIS' diverse membership includes key stakeholders from the Information and Communications Technologies (ICT) industry – wireless and wireline service providers, equipment manufacturers, broadband providers, software developers, consumer electronics companies, public safety agencies, digital rights management companies, and internet service providers. Nearly 600 industry subject matter experts work collaboratively in ATIS' open industry committees and incubator solutions programs.

ATIS has a number of initiatives directed at facilitating access to existing and emerging emergency communications services and systems. ATIS' Emergency Services Interconnection Forum (ESIF), for example, develops standards for the interconnection of emergency services networks through a collaborative process involving service providers and equipment manufacturers, as well as governmental, standards, and public safety organizations. ESIF's Next Generation Emergency Services (NGES) Subcommittee develops standards that focus on Next Generation emergency services architectures, functions, and interfaces for communications networks. In addition, ATIS' Wireless Technologies and Systems Committee (WTSC) works on key emergency service-related initiatives, including Short Message Service (SMS) to 9-1-1, push-to-talk (PTT), and interference issues. Work on emergency communications services and systems is also progressed through ATIS' role as the North American Organizational Partner in the Third Generation Partnership Project (3GPP), which develops 4G wireless specifications, including Long Term Evolution (LTE) standards.

ATIS leads a joint collaborative effort with the Telecommunications Industry Association (TIA) to develop standards related to SMS to 9-1-1 communications. This project,

"JSMS911", has published crucial industry standards and guidelines, including *Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification* (J-STD-110) and *Joint ATIS/TIA Implementation Guideline for J-STD-110, Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification* (J-STD-110.01).¹

II. COMMENTS

A. Timeframe for Interconnected OTT Text Providers

In the *FNPRM*, the Commission acknowledges that there are technical complexities surrounding the implementation of text-to-911 functionality by interconnected text providers including issues related to the routing of texts from Wi-Fi locations. However, the Commission notes that these issues need not be resolved at this time because it is not requiring the routing of texts from Wi-Fi locations as part of the initial text-to-911 implementation.²

ATIS agrees that there are technical issues that need to be resolved related to text-to-911 from Wi-Fi locations. The technical impacts of the different data connections being used by devices (*e.g.*, cellular data, Wi-Fi) must be understood so that decision can be made regarding OTT message delivery models for text-to-911. ATIS further notes that it is important that the industry begin its technical evaluation quickly as users today already connect to Commercial Mobile Radio Service (CMRS) cellular networks and Wi-Fi networks at the same time (and to Wi-Fi only) to run a myriad of SMS-like applications (including texting-only applications and sophisticated applications that incorporate texting with other multimedia capabilities). ATIS is examining the impacts of multiple data connection types on the OTT message delivery models

¹ *Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification* (J-STD-110), Approved March 2013, *ATIS/TIA Supplement A to J-STD-110, Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification* (J-STD-110.a), Approved November 2013, and *Joint ATIS/TIA Implementation Guideline for J-STD-110, Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification* (J-STD-110.01), Approved November 2013. All published ATIS standards are publically available from the ATIS document center at <https://www.atis.org/docstore/default.aspx>.

² *FNPRM* at ¶20.

for text-to-911.

B. OTT Text-to-911 Message Delivery Models

The Commission also seeks input in the *FNPRM* on the architectural approaches that interconnected text providers might take to deliver text-to-911 functionality. Among the four models that are discussed are ones in which the OTT text application:

- (1) recognizes that the user is sending a text message to 911 and invokes the wireless device's native SMS application programming interface (API);
- (2) routes the text to the OTT provider, which receives the text at its server and passes the originating telephone number and message to a third party Text Control Center (TCC), which in turns draws the location from a commercial location service;
- (3) invokes a system call on the API, obtains the phone number and conveys the number via the protocol message sent to the OTT provider's server; and
- (4) includes GPS-based location information with the text contact and routes the text through its server to the TCC.³

While ATIS believes that additional study is needed before more detailed feedback can be provided on these models' technical feasibility, ATIS provides the following high-level input regarding the models.

Access CMRS Messaging Platform via API. ATIS believes that there are unknown and unresolved issues associated with this model. For example, there are a number of applications that combine various types of messaging techniques using a single User Interface (*e.g.*, Apple iMessage). Users with these applications may not understand which underlying text transmission technology is being used at any given point and the associated constraints imposed by that technology. Furthermore, there are applications (*e.g.*, Motorola Connect) that enable remote access of SMS messaging through a web client on a PC. When these types of applications are used, the device may not be collocated with the user. This can cause an incorrect location to be reported to the Public Safety Answering Points (PSAPs). ATIS believes

³ *FNPRM* at ¶¶24-33.

therefore that is important that the term “interconnect” be clearly defined in this context and notes that the industry will provide additional input regarding this issue.

ATIS notes that work is underway jointly within several of its committees to study how the location information can be acquired and conveyed to OTT Voice over Internet Protocol (VoIP) applications.⁴ As part of this activity, ATIS is considering issues related to this messaging scenario, as well as solutions and standards to enable this feature.

Server-Based Models. For models (2), (3) and (4), additional information is needed regarding, for example, whether and how the TCC receives all the necessary data in order to perform its function properly. Furthermore, ATIS notes that devices that are only connected via Wi-Fi may present particular technical challenges that may prevent appropriate text-to-911 functionality under these models. While additional study is warranted regarding technical feasibility, particularly with regard to devices connected via Wi-Fi, ATIS notes that the industry is committed to examining these issues and to identifying possible technical solutions.

C. Enhanced Location for Covered Text Providers

In the *FNPRM*, the Commission requests input regarding the capability of providing Phase II-comparable location information in conjunction with text-to-911.⁵

ATIS notes that, as explained in the *Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architectural Specification* (J-STD-110.a),⁶ coarse location information is currently the

⁴ ATIS ESIF, Packet Technologies and Systems Committee (PTSC) and Next Generation Interconnection Interoperability Forum (NGIIF) have an on-going work item related to Automating Location Acquisition for Non-Operator-Managed Over-the-Top VoIP Emergency Services Calls that is targeted for completion in 2014.

⁵ *FNPRM* at ¶¶41-44. ATIS does not believe that the reference to Phase II location accuracy is appropriate in this context since Phase II location accuracy is a term associated with the Commission’s Enhanced 911 (E911) rules for voice calls to 911, which have different location determination capabilities than those of devices which are being used for non-voice communications.

⁶ *Joint ATIS/TIA Native SMS to 9-1-1 Requirements & Architecture Specification* (J-STD-110.a), Approved November 2013.

initial location information that a PSAP will receive with a text-to-911 message. However, this standard does not restrict PSAPs from requesting enhanced location information. To get enhanced location information after receiving the initial coarse location information, a PSAP could “rebid” (*i.e.*, re-inquire or re-solicit) location information, which could result in either receipt of the same coarse location (if that data is all that is available) or updated, enhanced information with a more precise location estimate. Further study is underway to document the expected use of enhanced/updated location information upon a rebid by the PSAP, with the understanding that this “best available” location is likely to be the equivalent of the location provided by commercial location-based services and not equivalent to the location information obtained for voice emergency calls.

ATIS notes that the industry supports a long-term solution that would provide enhanced location information for all emergency communications with PSAPs (*e.g.*, text, voice, pics, video) and notes that it is currently defining such a solution. This solution – IMS-based Multimedia Emergency Services (MMES) for NG9-1-1 – will allow the enhanced location information to be provided. ATIS urges the Commission not to adopt rules that would redirect resources from ongoing efforts to develop and deploy the multimedia capabilities of MMES.

D. Text-to-911 Roaming

Finally, ATIS notes that the *FNPRM* seeks feedback regarding text-to-911 roaming issues. While acknowledging the industry’s concerns that a roaming obligation is not technically feasible and noting that additional technical issues may require resolution,⁷ the Commission notes that, as a policy matter, access to 911 via text is critical for consumers who

⁷ *FNPRM* at ¶46, 51.

are roaming.⁸

While ATIS agrees that providing non-voice access to 911 is an important goal, it does not believe that establishing an SMS-based solution is warranted given the continuing evolution of the network and future deployment of MMES. Instead of diverting industry resources towards changes to legacy SMS-related systems and standards, the industry should be encouraged to focus its resources on the continued deployment of new technologies, such as MMES, IMS, and LTE, which enable new levels of access to emergency communications for consumers.

III. CONCLUSION

ATIS appreciates the opportunity to provide its input in response to the *FNPRM*. As demonstrated in these comments, the industry is working diligently to deploy new technologies and services that will facilitate multimedia emergency communications with public safety agencies. ATIS urges the Commission not adopt rules that would siphon resources from ongoing efforts to develop and deploy new multimedia emergency capabilities.

Respectfully submitted,



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⁸ *FNPRM* at ¶48.