

**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 )  
 )  
Framework for Next Generation 911 Deployment ) PS Docket No. 10-255

**COMMENTS OF APCO INTERNATIONAL**

The Association of Public-Safety Communications Officials-International, Inc. (“APCO”) hereby submits the following comments in response to the Commission’s *Notice of Proposed Rulemaking*, FCC 11-134 (released September 22, 2011) (“*NPRM*”), in the above-captioned proceedings regarding Next Generation 9-1-1 (“NG9-1-1”).

Founded in 1935, APCO is the nation’s oldest and largest public safety communications organization. Most APCO members are state or local government employees who manage and operate communications systems -- including Public Safety Answering Points (PSAPs), dispatch centers, radio networks, and information technology -- for law enforcement, fire, emergency medical, forestry conservation, highway maintenance, disaster relief, and other public safety agencies. APCO has long been involved in Commission proceedings regarding 9-1-1 capability and other aspects of public safety communications.

APCO applauds the Commission for moving forward to develop rules and policies to encourage the deployment of NG9-1-1 capabilities. Much of the *NPRM* focuses on the specific NG9-1-1 application of texting, as it is the “next generation” capability most immediately available to the general public. Text-to-9-1-1 is an especially important capability for persons

with disabilities and for the rare situations where voice communications are blocked or because a caller is unable to speak due to injury, danger, or other unusual factors. APCO encourages the development of near-term solutions to facilitate text-to-9-1-1 for persons with disabilities and those special circumstances. Short Message Service (SMS) is already available in virtually every cell phone and, therefore, is in all probability the most expedient path to provide that near-term capability.

However, as discussed below and in the *NPRM*, there are serious, inherent deficiencies in SMS as a 9-1-1 delivery mechanism. While SMS may be appropriate as a near-term solution for limited circumstances, it is not a long-term solution for the general public. Therefore, the telecommunications industry, public safety, and the FCC should focus the bulk of their resources and regulatory attention on longer-term text-to-9-1-1 solutions involving standardized Session Initiation Protocol (SIP)-based messaging and Real Time Text (RTT).

APCO also supports the Commission's proposal that telecommunications service providers give priority to 9-1-1 during periods of network congestion that would otherwise block or slow the delivery of such emergency calls.

The following discussion sets forth significant questions presented by the Commission in the *NPRM*, followed by APCO's responses.

**What should the FCC's role be in facilitating short-term text-to-9-1-1 using existing infrastructure?**

The FCC should encourage short-term solutions such as SMS for the limited circumstances of serving persons with disabilities and other special situations where voice communications are not possible. However, SMS for text-to-9-1-1 capability should not be mandated for wide-spread use by the general public in normal circumstances (*i.e.*, in the absence

of overloaded voice connections or unique emergency situations). The Commission's regulatory authority should instead focus on establishing long term and more effective text-to-9-1-1 solutions.

APCO participated in the ATIS INES (Interim Non-voice Emergency Services) Incubator process in an attempt to identify a short-term text-to-9-1-1 solution. The Incubator targeted June 2012 as a reasonable implementation time frame for candidate solutions to meet. The results of the Incubator lead to the conclusion that a national level IP or SMS Relay services were the only feasible candidate solutions that could be implemented by the target date. Relay solutions however are not practical for the use by the general public. Introducing a third party to interpret a 9-1-1 call increases the time it takes to handle the call and decreases the efficiency and ability of the PSAP call taker to ascertain critical information. Allowing the general public to access 9-1-1 via Relay would have negative impacts on all entities involved.

**What role, if any, should the FCC play in facilitating the long-term deployment of non-voice emergency messaging services, including IP-based messaging and RTT, as well as multimedia applications that support delivery of voice, text, photos, video, and other data?**

As an initial step, the FCC should establish an NG9-1-1 Technical Advisory group comprised of subject matter experts from the public and private sector to address the development of non-voice emergency messaging. Even after the FCC adopts specific NG9-1-1 requirements, an advisory group will be necessary to ensure that the Commission's rules take into consideration state-of-the art technology. Assuring that open NG9-1-1 standards and standards-based technologies continue to be developed in a timely manner requires consistent monitoring and oversight. It is critical that the FCC keep the focus upon industry to complete the necessary work for implementing standardized SIP-based messaging and RTT.

Ultimately, the FCC will need to adopt regulations requiring the NG9-1-1 deployment pursuant to appropriate standards and subject to conditions regarding state/local readiness. APCO strongly supports the development of standards and urges the FCC to advocate for standards, as appropriate, when addressing NG deployment.

**What efforts are needed to educate the public and minimize consumer confusion, and what role, if any, FCC should play in those efforts?**

The public's expectation of the nation's 9-1-1 system has been a challenge for all parties in the delivery of responsive service for many years. Many assume that dialing 9-1-1 provides the PSAP with an exact location of the caller, but that is only true for wireline calls originating on the PSTN. The implementation of wireless Phase I and II in addition to VoIP led to much confusion with regard to 9-1-1 location, and that confusion still persists today. NG9-1-1 and the capabilities for data and multimedia will require a focused and funded public education plan. Consumers must be made aware of the limitations of 9-1-1 location accuracy and they must be cognizant of the role that they need to play in "managing their emergency." It is likely that the ability to electronically transmit data such as images, video and medical history will result in the false assumption that callers need to do little, if anything, to provide additional critical information to PSAPs.

With regard to any interim 9-1-1 text solution, the public must be advised that accurate 9-1-1 location information will generally NOT be available. The public must also be advised that NG9-1-1 solutions may not be uniformly available in all regions.

**Short-Term Deployment of Text-to-9-1-1:**

The FCC needs to address short-term text solutions differently than solutions that will allow imagery, additional data and video to be transmitted to PSAPs. These topics are often

merged into the same *NPRM* questions. Data and imagery require more bandwidth in a network than standalone text such as SMS, and therefore impact and feasibility assessments are not equivalent. The equipment requirements on the public safety side for accepting and processing additional data and imagery are also different than for text.

Integrating SMS communication into PSAPs would improve 9-1-1 accessibility for people with disabilities. Despite the known technical challenges with SMS, it is recognized as a fairly reliable and commonly used method of non-verbal communication in our society. However, many PSAPs do not have the ability to receive text messages via their current call handling equipment and software. There would be significant costs involved to implement this capability.

There are a number of proprietary solutions available today to facilitate SMS text to 9-1-1. Many of these solutions are either registry-based or targeted to persons with disabilities. The time, effort and funding that would be required to develop and agree upon a standardized national level interim 9-1-1 text solution for use by the general public in normal circumstances would be better spent in facilitating the deployment of SIP-based messaging and RTT for 9-1-1.

**What, if any, costs will PSAPs incur to implement short-term text-to-9-1-1 solutions? Are there capacity limits on PSAPs' ability to accept texts to 9-1-1?**

There will be costs associated with updating the call handling/computer telephony, logging and recording, incident creation and dispatch systems at PSAPs to accommodate interim text solutions other than RELAY type services. The cost-benefit may not be identifiable for short term solutions that require upgrades at the PSAPs unless those upgrades can transition seamlessly to end stage i3.

As discussed below, call receipt and processing capacity limits become an issue insofar as responding to texts is likely to require significantly more time per “call,” especially in the early stages of text-to-9-1-1 capability. That will increase the likelihood of PSAPs hitting capacity limits, leading to slower response times.

**Does promoting short-term text-to-9-1-1 solutions accurately reflect current and evolving consumer expectations and the needs of PSAPs and first responders?**

The only reason that PSAPs may need text capability is to be able to communicate effectively with deaf, hard of hearing or speech impaired individuals or in rare circumstances where voice communications is not possible. Voice communications is a far superior means of handling nearly all emergency calls. Texts are valuable, however, for PSAPs to receive information from persons with disabilities for whom verbal communication is difficult, and in the rare situation where personal safety prevents a caller from communicating verbally. In those cases the public needs/expects to be able to use alternate methods of non-voice communication. There are also cases of network congestion during high volume call times when voice communication via CMRS is less than optimal. During several recent natural disasters, data communications such as via SMS remained viable when voice connectivity was not.

Consumers also expect that their location will be automatically relayed during any type of 9-1-1 call. Current indications are that a “coarse” location (*e.g.* Phase I) may be able to be provided with temporary solutions that allow text direct to PSAPs. This “coarse” location will fall far short of the accurate 9-1-1 location needed during an emergency. Relay-type solutions will rely on user-provided location or potentially on third party “over-the-top” smart phone applications to provide the approximate location of the calling device (though there are no mandates regarding the accuracy of such location information).

Meeting the consumer expectation will require a national level solution where text to 9-1-1 is available regardless of the region the call is being made from. It would be more effective to focus on the deployment of the long term RTT/SIP based messaging solution rather than defer resources to identify and implement an interim solution other than for persons with disabilities.

**What benefits, if any, could the short-term deployment of text-to-9-1-1 provide PSAPs and first responders? How do such benefits compare to the cost of short-term deployment of text-to-9-1-1?**

As stated above, the ability to text-to- 9-1-1 primarily benefits those with disabilities and consumers in other circumstances where voice communication is not possible. The larger benefit to PSAPs and public safety responders could be realized when additional data, images and real time text is made available. Text to 9-1-1 will not provide a medium for sending additional data such as medical history or vehicle telematics.

Short term text solutions that involve direct communication with 9-1-1 must be able to easily transition to the long term RTT/SIP solutions of the future or the costs involved may not be funds well spent. The following considerations need to be taken into account: Is the call handling software or hardware at the PSAP being modified for a specific short term text solution? Will the solution be able to be used for the long term solution when it becomes available? For temporary solutions such as those requiring registration or use of a short code, what intelligence will be available to identify areas that have implemented full NG9-1-1 and no longer require use of interim text solutions? If some type of gateway intelligence is not provided citizens may continue using the short term solution needlessly (i.e. contacting a relay center using a short code when they could have just communicated directly with a PSAP via 9-1-1).

As the FCC states, focusing on developing common solutions rather than developing specialized technologies solely for use by people with disabilities, will more likely spread the cost of such technology across all network users and providers and will enable economies of scale that lower such costs

**Would short-term implementation of text-to-9-1-1 increase the volume of 9-1-1 traffic or the time and resources required for PSAPs to process information as compared to handling voice calls?**

There is very little objective data in the United States to indicate how text will impact PSAP resources or call handling. It is generally accepted, however, that text calls will take longer to process than 9-1-1 voice calls for several reasons:

- PSAP personnel will not be able to listen to background audio or the callers' tone of voice, both of which can often be an indicator of the type of emergency taking place.
- Temporary solutions such as SMS are known to have delivery delay issues in some cases and "conversations" may take longer to complete.
- During an emergency, callers are often upset and it can be difficult to obtain information from them. Controlling an upset caller in a non-voice environment will be more challenging for PSAP call takers.
- There are no resources available as of yet to efficiently provide emergency medical instructions via text conversation.
- There are no commercial services as of yet available to assist the PSAP in handling non-English speaking text calls. Bilingual PSAP call takers may not possess written competency skills in the language being sent in the 9-1-1 text call.
- There is limited availability of accurate automatic location for text to 9-1-1 calls in any interim solutions explored by the ATIS INES incubator or via the current 9-1-1 text trials. Coarse location such as Phase I information can be provided with a call in some cases. Interim proprietary solutions that are able to access more accurate location information often require the caller to initiate a voice call to 9-1-1 which is then switched to text. Not all carriers support this methodology and some manufacturers do not allow data transmissions once a voice call to 9-1-1 has been placed. PSAPs must therefore rely on the caller to provide the location to which emergency resources must be dispatched.



- Interim solutions that involve third party RELAY services introduce additional latency into the call handling process.
- Interim solutions may not route text calls into the PSAP automatic call distribution system, or to their logging and recording systems. In some cases it may not be possible for management information systems to discern a text call from voice based 9-1-1 calls. The lack of standardization within interim text solutions will make it difficult for PSAPs to effectively analyze the impact that these calls are having.

Many PSAPs are mandated to answer 90% of their incoming 9-1-1 calls in 10 seconds or less to qualify for receipt of wireless surcharge and other 9-1-1 funds. It is unlikely that these local or State mandates will be modified to accommodate the additional time that interim solution based text calls may have on the PSAP's ability to meet these standards. Thus, there is a risk that implementing SMS text-to-9-1-1 may jeopardize some PSAPs eligibility for surcharge funds.

**What is the prospective impact of text messaging on PSAP operations and emergency response during large-scale disasters, with particular emphasis on experiences of overload-induced 9-1-1 failures?**

There would be improvements to 9-1-1 during network overload scenarios where data, but not voice, calls can be delivered. Overload scenarios, however, typically occur only during some type of disaster or major incident. PSAPs are overloaded in any event during these times. It is logical to assume that PSAPs would experience similar overload from non-voice initiated calls.

The ability of a PSAP to send non-voice alerts out to the general public would make a significant difference, especially if they are able to identify wireless devices that are active in a particular geographic area and push messages out to those devices. This type of emergency alerting requires agreements between the PSAP and all wireless carriers in their jurisdiction and also requires them to possess the in-house technology to do this.

### **Ongoing Text to 9-1-1 Trials:**

APCO supports text-to-9-1-1 trials and looks forward to lessons learned as a result. However, there is a concern that the general public will become aware of these trials and will wrongly assume that text-to-9-1-1 service is available throughout the United States. Therefore, those conducting trials, the FCC, and other interested parties should provide clear, consistent educational messages that these are only trials and that nationwide text-to-9-1-1 is not yet available.

There also needs to be a recognition of the different approaches and methodologies involved when non-standardized solutions are deployed in tests. Lessons learned in these specific cases may not produce insights that can be universally applied to all PSAPs. Not all PSAPs have best practices in place for analyzing the impact of non-voice calls. Non-voice calls will require differing skill sets and may not arrive at the PSAP via the same automatic call distribution (ACD) system as other 9-1-1 voice calls. In such cases, non-voice calls may not be accounted for in the PSAPs call answering analysis processes and the true impact may be difficult to quantify. APCO is currently working to research lessons learned in this regard to identify what best practices can be applied in these scenarios.

### **Should PSAPs, providers, and vendors have the option to implement SMS-to-9-1-1 as a short-term alternative?**

PSAPs, providers and vendors should have the option to implement SMS-to-9-1-1 as a short term alternative. This is taking place now and should be allowed to continue. The number of proprietary products being offered and the number of PSAPs or regions expressing interest in implementing them is a solid gage that there are benefits to SMS-to-9-1-1 in at least limited

circumstances. Along with any implementation of SMS-to-9-1-1, a wide spread public education effort would need to be put in place.

### **Should there be a national short code for SMS-to-9-1-1?**

In general, text-to-9-1-1 should involve the digits “9-1-1” and not a different short code. The technical effort to implement a standardized national short code for SMS would require resources to be refocused from development of the long term SIP/RTT solution. Any short code other than 9-1-1 will eventually need to be phased out as regions are able to accept text solutions direct to the PSAPs via NG9-1-1. The short code system would also require associated intelligence to transition automatically to NG9-1-1 so as not to burden or confuse the consumer when reporting an emergency.

### **What are the issues related to smartphone applications for NG9-1-1 capabilities?**

Lack of standards or certification for 9-1-1 related smart phone applications (short or long term) is likely to have a negative impact on NG9-1-1 implementations and PSAP operations. There are two areas of concern with these applications: Location functionality and additional data capabilities.

As to location, there are a number of smart phone applications that are advertised as being able to provide accurate location of the caller’s device. These applications do not fall under any FCC mandates for 9-1-1 location accuracy. Further research into the reliability of these applications is needed if the applications are to be used for 9-1-1 call routing or to provide PSAPs with calling device location. The E9-1-1 Technical Advisory Group (ETAG) recommended by CSRIC work group 4C or a broader scoped NG9-1-1 Technical Advisory

Group should be chartered and funded to address issues such as location from non-regulated applications. We await action of the FCC on this matter.

As to additional data capabilities, there are numerous smart phone applications touting the ability to collect and share data about phone subscribers and their family members. There are currently no mandates for standardization of this information and no mandates for how this information is classified or presented. There is also questionable reliability of consumer provided medical data which may not match official medical records. PSAPs cannot be reasonably expected to assimilate and react to volumes of subjective, non-standardized data sets provided via unregulated third party applications.

Additional data also encompasses critical information about the 9-1-1 call itself such as the type of service delivery, device owner's name and emergency contact information for the access provider/service provider responsible for delivering the call to the PSAP or respective Emergency Service IP Network (ESInet). The FCC should work with APCO, NENA and public safety stakeholders to identify critical NG9-1-1 additional data elements and to consider whether or not there should be future mandates to provide this data.

PSAPs will realize additional costs to their call handling and incident creation software (commonly referred to as CPE and CAD). These PSAP software applications will need to provide advanced human/machine interface and data aggregation/classification capabilities. For instance, smart phone applications that allow tracking of both personal and property related data have no mandates to classify this information into a logical or standardized format. PSAPs may receive the bulk of this information as unformatted text. It is unrealistic to expect that a PSAP call-taker will be able to discern specific applicable items in these cases, yet the public is likely to assume that the PSAP is acting on the information. The Commission has also requested

comment on the feasibility of translating text messages to TTY-based messaging for PSAPs that do not have access to broadband connectivity. There are known quality of service issues with the use of ASCII and Baudot based TTY. Converting text from over-the-top applications to TTY format is therefore potentially unreliable. There have also been no studies conducted to assess impact should TTY modules be allocated for use outside their intended purpose. Using TTY to receive text from the general public could tie up these modules and prevent persons with disabilities from reaching 9-1-1.

Establishing and funding an NG9-1-1 Technical Advisory group would enable the FCC to continue to research how to best address the open market applications that will impact 9-1-1 centers.

**What are the benefits of long-term NG9-1-1 applications, particularly with respect to improving 9-1-1 accessibility for people with disabilities, meeting consumer expectations, providing PSAPs with valuable additional information, and increasing reliability and resiliency?**

IP connectivity and the ability to transmit additional data and multimedia with 9-1-1 calls will benefit the consumer and public safety. Additional data, if provided in a timely and standardized format, will allow PSAPs to integrate critical information such as medical conditions, vehicle crash severity, and building floor plans into the call handling process when they are making decisions on what type of emergency response is required. The additional data will also assist police, fire and EMS responders in identifying the best course of action for an incident. As an example, the CDC-funded National Study on the Costs and Outcomes of Trauma showed a 25% reduction in deaths for severely injured patients who receive care at a Level 1 trauma center rather than at a non-trauma center. Vehicle telematics data such as

advanced automatic crash notification can alert paramedics to the potential for severe injury such as this.

**What are the benefits of providing additional information to PSAPs, particularly if supported by data, for example on the incidence of fraudulent calls, or descriptions of emergency incidents where multimedia information could have been helpful.**

Multimedia information will be helpful in assessing a reported emergency incident prior to dispatching responders and prior to those resources arriving on scene because it can provide a visual indication of exactly what is taking place. Multimedia can also augment a criminal investigation by providing visual evidence that could later be admissible in court. Consideration will need to be given to the ability of the PSAP to accurately discern details within a multimedia stream as there are no standards governing the quality of video or images that may be sent by citizens. There also needs to be consideration of determining the authenticity of an image or video that is transmitted to a PSAP especially before they take action based on the media being received.

**How will PSAPs process and sort through such information? What additional resources, if any, will they need to be able to do so?**

Software and hardware used by PSAPs to handle calls and create incidents will need to incorporate text and video recognition capabilities that can assist in assessing the content of additional multimedia data. PSAP personnel are not trained to process graphic imagery that may depict violence or sexually explicit activity. There is a probability that a percentage of call-takers will have difficulty viewing this type of media and this difficulty could affect the PSAP's ability to retain employees. Without advanced tools and appropriate training on image and video interpretation, PSAP personnel and management will face significant challenges. Intelligent

filtering of information as well as intelligent aggregation of additional data will also be necessary.

An NG9-1-1 call could arrive with multiple sources of additional data for a single call. Because there are no standards in place for how this additional data should be formatted and classified, telecommunicators may be faced with trying to “sort it out” at the time the call is received. Data that is received regarding the location of fire and burglary alarm panels in a residence, for example, has little pertinence if a person is calling to report a heart attack. The telecommunicator must be able to quickly and efficiently “find” the applicable type of additional data or it will be of little value.

As with many other NG9-1-1 resources needed at the PSAP level, there are serious questions as to the available funding sources to pay for those resources.

### **PSAP-Based Triggers for Providers to Provide NG9-1-1 Solutions for Non-Voice Emergency Messaging to 9-1-1:**

It would not be unreasonable for requirements that service providers deliver NG9-1-1 capability to be conditioned on PSAPs and appropriate government authorities taking necessary steps to facilitate and implement NG9-1-1 at the state and local level. At minimum, PSAPs will need to deploy a functioning ESInet with broadband capability. There are open issues, however, as to how such a regulatory condition would apply if some, but not all, of the PSAPs in a particular state or region have met the requirement. During the transition to NG9-1-1, provisions are made within the i3 architecture to incorporate legacy network gateways and legacy PSAP gateways to address this type of inconsistency. There are also a number of protocol interwork functions being defined to address this type of hybrid migration at a State or

regional level. Further discussion and analysis is needed to occur before such conditions can be further defined. CSRIC Working Group 1 is currently exploring these and related issues.

Deploying SMS to 9-1-1 during transition to fully featured i3 may need to be considered on a PSAP by PSAP basis as that does not require full featured NG9-1-1.

### **State and Local Legal/Regulatory Barriers**

The CSRIC 4B report concluded that “States should be analyzing their existing 9-1-1 enabling legislation and subsequent rules, interpreting their 9-1-1 statute to ensure that it properly addresses a transition to NG9-1-1 and development of model legislation should be encouraged.” There are numerous legal and regulatory barriers resident in current legacy state and local laws. Existing E9-1-1 interconnection agreements must also be analyzed for language that would pose a barrier to deploying NG9-1-1 or IP based call delivery in each locality.

States or regions should demonstrate that regulatory barriers have been removed and that current legislation/interconnection agreements support this transition. The difficult question, however, is how to define the degree to which a state regulation is in fact a roadblock. Further Commission inquiry on this issue may be necessary. The Commission must also be sensitive to the states’ prerogatives to regulate certain intrastate issues.

### **Should the FCC address interconnection disputes and the registration and certification of NG9-1-1 System Service Providers (SSPs)?**

The Commission should resolve such disputes to the maximum extent permitted under its statutory authority. In some cases there is no place else for jurisdictions to turn for assistance in resolving disputes.



**What entities should be involved in educational programs? What role should FCC, other federal agencies, state and local entities, and those in the public and private sectors play?**

Fully featured NG9-1-1 provides government and public safety an opportunity to re-educate the consumer and reset their expectations regarding emergency communications. Callers often fail to realize the critical role that they play in the medical chain of survival (*e.g.* following medical pre-arrival instructions provided by the PSAP), protecting property and preventing crime. Fulfilling their role in the public safety system is often dependent however on efficient and effective communication between the caller and the PSAP. Consumers must possess a similar baseline understanding of what they should expect when communicating with a PSAP.

As stated above, the public and private sector must unite to provide a national campaign targeted at public education of NG 9-1-1 as it becomes available. All forms of television, radio and internet based media should be engaged. The FCC should address how the federal government can assist in providing funding for consumer education. APCO has a long history of providing standards based training for PSAPs and public safety and should play a key role in helping to craft and disseminate an agreed upon curriculum.

**What are the advantages and disadvantages of various approaches to consumer education?**

Local educational campaigns are effective but can lead to confusion if the caller does not remain in the same area when they have an emergency. Relying solely on local education also involves the risk of mixed messages being provided to the public as the educational approaches will be different. Educational materials that are provided in conjunction with the purchase of a calling device (or a monthly bill) would be effective if done in conjunction with a larger news media effort. However, this type information is often not read or understood by the buying public. Educational programs that require the consumer to look up information such as where

text to 9-1-1 is supported provides little benefit. A national level media campaign would be effective if it is targeted at high level issues that are of universal impact. There are several topical areas that could be effectively addressed in a national level campaign:

- **9-1-1 Location** – Unless consumers are calling from a legacy landline phone, PSAPs do not automatically know the callers exact location. Callers must provide their location to the PSAP. Consumers need to be aware of the limitations of today’s location technology and the similar limitations that will persist in NG9-1-1.
- **9-1-1 Additional Data** – There are systems available today that provide PSAPs and emergency personnel with additional data about callers and about specific locations. As more of these systems come into the market and consumers are able to provide increasing amounts of additional data it is critical that they do so with the proper expectations. Additional data is designed to “supplement” the information that a caller provides when they contact 9-1-1. The public cannot assume that since additional data is available that they do not need to provide this information at the time of their call.
- **9-1-1 Multimedia** – Consumers need to avoid unnecessary abbreviations and shortcuts in text conversations to PSAPs. Pictures can be a tremendous asset when provided however the caller should not assume that the picture alone will provide the PSAP with all of the required information.

**Should providers be required to disclose limitations on the availability of NG9-1-1 applications?**

Limitations on capabilities that are related to specific products or specific calling devices should be disclosed by the provider. In situations where a consumer attempts to text 9-1-1 in an area that does not support this technology, a standardized auto message should be immediately returned indicating how to contact the PSAP and/or that a voice call is required. The Commission is urged to work with APCO, NENA and NASNA to develop best practices and model responses.

**Should the Commission incorporate the EAAC’s recommendations into the record in this proceeding?**

APCO strongly supports incorporating the Emergency Access Advisory Committee recommendations into this proceeding for the reasons set forth in the *NPRM*.

**What are the benefits of video communications for people with disabilities who have come to rely on this mode of communication on a daily basis, such as persons who use American Sign Language.**

It is important for the FCC to realize that video capability at a PSAP or within an NG9-1-1 system does not imply that the telecommunicator will be able to interpret sign language.

Absent wide-spread sign language training, calls will need to be relayed to a third-party location to provide translation, which adds considerable delay and the potential for misinterpretation..

**What type of NG9-1-1 Standards are Needed?**

APCO has endorsed the architecture of Next Generation 9-1-1 as described in the “Detailed Functional and Interface Standards for the NENA i3 Solution.” We also support the development and implementation of geospatial, policy-based 9-1-1 call routing as described in the Emergency Call Routing Function and Emergency Service Routing Proxy within NENA i3. APCO understands that the i3 Stage 3 architecture is not yet a build-to specification and that development efforts will continue to evolve as has been the case with other complex, open standard communication’s architectures. It is critical that the design of future NG 9-1-1 systems be based upon open standards that will allow for multimedia, non-voice emergency service capabilities.

APCO believes that the current method of static location validation via legacy MSAG and ALI databases must be replaced by more sophisticated concepts such as the Location Validation Function (LVF) and Location Information Server (LIS) functionality within the NENA i3 architecture. The move will be a great advantage to the public and to public safety. It is critical that NG9-1-1 location validation and location acquisition take into account the dynamic nature of mobile IP devices.

APCO is also cognizant that some regions may opt to consider transitional implementation of alternative IP-based emergency communication systems such as described in the Alliance for Telecommunications Industry Solutions (ATIS) Request For Assistance Interface (RFAI) standard before they migrate to a fully featured NG9-1-1.

**Should 9-1-1 calls be given priority by existing and future networks.**

APCO has long supported prioritization for 9-1-1 calls. When major emergencies strike, it is absolutely essential that 9-1-1 calls go through to PSAPs in a timely manner notwithstanding network congestion. Just as emergency vehicles are given right-of-way, so too must 9-1-1 calls be given “a clear lane” to the PSAP. Prioritization should be a requirement, not merely something that the FCC encourages service providers to offer. It should also be a permanent, real time capability, not simply a temporary emergency provision. Network congestion and other events that might otherwise slow delivery of 9-1-1 calls are unpredictable. Finally, the priority requirements should apply to both legacy and next generation broadband networks as a caller’s ability to obtain emergency assistance should not be a function of the type or generation of their service provider’s technology.

## CONCLUSION

APCO urges the Commission to proceed to adopt appropriate policies, rules, and further proceedings consistent with the comments set forth above regarding NG9-1-1 and related issues.

Respectfully submitted,

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