

**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)	PS Docket No. 10-255
Deployment)	
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To: The Commission

**REPLY COMMENTS OF THE
BOULDER REGIONAL EMERGENCY TELEPHONE SERVICE AUTHORITY**

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Summary

BRETSA has previously filed a Petition for Rulemaking proposing rules that would require service providers to make certain customer and system information available to PSAPs and their agents by electronic access through Emergency Service Bureaus. Such Emergency Service Bureaus could reduce barriers to service providers and over-the-top message services providing text-to-9-1-1 by spreading costs of implementation and providing access to Wireless Phase I location information. However, BRETSA favors a more integrative approach for over-the-top messaging services by having them leverage the device operating system API for SMS text messaging. This would allow end users to use a messaging interface with which they are familiar, the location necessary for routing to be determined as with any SMS text-to-9-1-1 message, and also allow the PSAP personnel to use a standard messaging interface with which they are familiar.

The service providers actually argue that they should not be subject to any state regulation, they should not be liable for damages caused by their negligent, grossly negligent or intentional conduct, and the Commission should be responsible for educating *their* users regarding *their* services. For such powerful companies to make such demands is evidence that they have too long been sheltered from the regulations, liability and obligations that every other company faces. So-sheltering these companies may have been appropriate in their nascent years, but wireless companies and VoIP are rapidly replacing the multi-billion dollar wireline local exchange services and providers. The Commission should not seek to preempt state liability laws, which incent due care and make whole persons injured by the negligent or intentional conduct of others. The Commission does not have the authority to preempt these laws, and it would be unwise to do so in any event.

The service providers have been convincing legislators in state after state to deregulate IP-enabled services including NG9-1-1, including through specious claims that regulation of IP-enabled services have been federal preempted. While the Commission has recognized that such state deregulation is leaving a regulatory vacuum, the Commission's statements confirming state jurisdiction over IP-enabled services have been too sparse and too tepid. Experience in Colorado has shown that in the absence of regulation SSPs will hold a monopoly in the delivery of certain originating service provider's 9-1-1 traffic. Unless PSAPs are willing to refuse to accept 9-1-1 calls from SSPs offering unreasonable pricing, terms or insufficient reliability, 9-1-1 service will be come unaffordable and unreliable, and lives will be lost. The Commission must make clear the states' continuing jurisdiction over IP-enabled services or, alternatively, require service providers to be responsible for SSP charges for delivery of 9-1-1 calls to the PSAPs and liable for SSP failures. Only by re-coupling selection of the SSP with financial responsibility and liability for its performance can market forces be effective in supplanting regulation.

Service providers are responsible for educating *their* customers about *their* services. Service providers have many more "touches" with their customers; each an opportunity to educate the customers. Service providers supplying information regarding use of their services would also be much better received than generic educational messages from the Commission.

Arguments by TracFone that the current user-fee funding model for 9-1-1 services is inadequate, the current funding model works well and is sufficient to fund the transition to Next Generation 9-1-1; although some modifications are in order. First, TracFone and other prepaid wireless providers have effectively forced a point-of-sale fee collection program in many states, which makes thousands of large and small retailers responsible for collecting and remitting the user fees to fund 9-1-1 service. This program is cumbersome, expensive to administer and

expensive to enforce, and it is difficult to identify and collect the fees from Internet vendors as well as many “brick and mortar” vendors. A better solution which would result in all prepaid wireless customers paying their fair share of user fees would be for the Commission to establish a national pre-paid fee program, under which the pre-paid fees would be included in the wholesale cost of the minutes of use, and would be remitted to the Commission by the service providers when the minutes were activated. The service providers would also require the end user to identify a jurisdiction for fee-remittance purposes as a pre-condition to activating the minutes. The Commission would remit the fees to the appropriate jurisdiction.

Similarly, it is difficult for 9-1-1 Authorities to even identify the VoIP providers with customers in their jurisdictions, let alone to verify that 9-1-1 fees are being paid. Charging the fees on the underlying broadband service per upstream bandwidth rather than on the services that might ride on that connection or devices which might use it, is much more practical and achievable, and questions of whether a service is a communications or an information service will be avoided. The 9-1-1 fees should be applied to wireline, wireless and broadband connections rather than to “services.” BRETSA’s Emergency Service Bureau proposal also provides for service providers to supply electronic access to summaries or statistics of customer information which would allow PSAPs to verify accurate remittance of 9-1-1 fees.

Many of the arguments against mandating text-messaging to 9-1-1 fall into the category that the Commission should not proceed until a perfect solution is available. The perfect cannot be the enemy of the good. The Commission should proceed with what is achievable now, and pursue improvements in text-to-9-1-1 as they become feasible.

Each PSAP should pick the means by which it will receive text-to-9-1-1 messages, without default options.

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**REPLY COMMENTS OF THE
BOULDER REGIONAL EMERGENCY TELEPHONE SERVICE AUTHORITY**

The Boulder Emergency Telephone Service Authority (“BRETSA”), by its attorney, hereby submits its Reply Comments on the Commission’s proposals in its December 13, 2012 Notice of Proposed Rulemaking in the above-referenced Docket (“NPRM”). BRETSA is a Colorado 9-1-1 Authority which establishes, collects and distributes the Colorado Emergency Telephone Surcharge to fund 9-1-1 Service in Boulder County, Colorado. The BRETSA Board includes the Boulder County Sheriff, the City of Boulder Police Chief, representatives of the Boulder County Firefighters Association and the City of Longmont Division of Public Safety. The fifth seat of the Board is filled by representatives of the smaller cities and towns in Boulder County, Colorado on a rotating basis. These Comments are thus intended to represent the perspective of the entity responsible for 9-1-1 operations, *and* of the agencies and authorities responsible for PSAP operations and overall public safety services.

I. BRETSA’s Proposal For Emergency Service Bureaus Would Provide Economies Of Scale For Service Providers Implementing Text-To-9-1-1.

The Commission’s piecemeal approach to 9-1-1 compliance has created a situation in which the Commission is constantly trying to play catch-up and require that communications services be retrofitted for 9-1-1. In many cases its retrofit does not fully meet the operational needs for public safety services. BRETSA recently proposed a solution to fill unmet needs of Public Safety through real-time electronic access to service provider system and customer information via Electronic Service Bureaus (“ESB”). ESBs may also provide a more efficient and achievable means to implement text-to-9-1-1.

A. The Commission Continues To Take A Piecemeal Approach To 9-1-1 Compliance.

A decade or more ago, in rulemaking comments relating to Wireless E9-1-1 Service, BRETSA noted that the Commission did not require CMRS licensees to route 9-1-1 calls to PSAPs until approximately *fifteen* years after commencement of commercial cellular telephone service. Cellular telephone service had been marketed as a security measure, and many subscribed to the service as such.

BRETSA submitted that rather than playing catch-up and requiring services be retrofitted for 9-1-1 compatibility, the Commission should require any party seeking an experimental authorization, proposing rules for a new communications service or providing a new communications service to provide 9-1-1 compatibility *ab initio*. The Commission and service providers are still playing catch-up.

B. Public Safety Face Ongoing Operational Challenges In Dealing With Newer Communications Technologies and Services.

Operational needs of public safety remain unmet by wireless and VoIP providers.

1. Collection And Verification Of 9-1-1 Fees.

9-1-1 Services are funded by surcharges, fees or taxes on telephone services (“9-1-1 Fees”) in most or all states. 9-1-1 Authorities cannot even identify all of the VoIP service providers supplying service within their jurisdictions, however, let alone confirm that they are remitting appropriate 9-1-1 Fees. Even aside from VoIP providers, given the number, size and scope of service providers currently providing telephone services in many jurisdictions, and the relatively small amount of the 9-1-1 Fees compared to the costs of conducting audits, it is impractical for 9-1-1 Authorities to verify that service providers are remitting appropriate fees.¹

2. Data For Emergency Notification Service Databases.

Even though 9-1-1 Authorities pay SSPs or ANI/ALI providers to compile and maintain the ANI/ALI database for legacy 9-1-1 service; the SSPs and ANI/ALI providers claim intellectual property rights in those databases and charge for the database extracts required to populate Emergency Notification Service (“ENS”) databases with accurate end-user numbers and associated service addresses.² VoIP and wireless service providers which route 9-1-1 calls using p-ANIs do not provide customer locations for inclusion in the 9-1-1 ANI/ALI database; therefore their customers’ telephone numbers and service locations are not included in the ANI/ALI extracts used to populate the ENS databases. Campaigns to get individuals to manually register their address and VoIP or wireless phone numbers for ENS service through a web-page have captured only a fraction of the data for these users.

¹ Service providers in Colorado have admitted that the number of lines or customers they identify on remittance reports is determined by dividing the amount remitted by the amount of the 9-1-1 Fee; and thus that they do not provide a proper accounting.

² It is often said that with Next Generation 9-1-1 (NG9-1-1), the “ANI/ALI” database will go away. However such a database is particularly efficient for identifying the location of services provided at fixed locations, and will likely continue to be used in the provision of NG9-1-1 service. Some have suggested that the ANI/ALI database may become much smaller as each carrier or its contractor would maintain its own ANI/ALI database for purposes of providing location information to an NG9-1-1 SSP, with the SSP using an ANI/ALI type function to steer location queries to the service provider or its contractor. This would complicate and increase the cost of acquiring end user information for ENS databases.

In Colorado, one VoIP service provider has begun making its customers' ANI/ALI information available to 9-1-1 Authorities, but also charges a fee for that information. Given the number of wireless and VoIP providers; if each were to charge similar fees to provide its customers' ENS data, public safety budgets would be significantly impacted.

It has been reported that the VoIP provider who does provide customer information for ENS services had customers in areas which were swept by some of 2012's devastating Colorado wildfires. It is likely that there were customers of other VoIP providers, and customers of wireless providers who had "cut the cord," in those same areas who did not receive ENS evacuation warnings because their providers do not supply number and location data for ENS databases. In addition, as large numbers of consumers continue to "cut the cord," terminating wireline service in favor of VoIP services or opting for wireless-only service, their telephone numbers and service locations (primary service locations in the case of wireless services) drop out of the ENS databases.

The maintenance of complete and accurate ENS databases is thus an ongoing and increasing challenge for public safety authorities, and can have life or death consequences in areas subject to wildfires, tornados, flooding, hurricanes and other such disasters. Colorado public safety agencies have also used ENS systems to provide targeted warnings and instructions or seek information in cases of chemical releases, barricaded gunmen, missing children, and similar incidents.

3. Real-Time Information For Emergency Response.

BRETSA-associated PSAPs have also faced situations where suicidal callers from wireless phones, who were driving around town, terminated calls. To locate these callers, PSAP personnel had to complete a paper form requesting the caller's current location and fax it to the

caller's wireless carrier. The wireless carrier would then identify the disconnected caller's location by identifying the cell-site to which it was located or other means. It is inconceivable that completion and faxing of a paper form is required to request such information is required in 2013, rather than electronic access being provided, including automated access through a CAD terminal, to obtain such information as a disconnected caller's location.³

4. Location Information For Routing Of Text Messages To 9-1-1.

Commenters in this Docket have stated that additional wireless providers could have been included in text-to-9-1-1 demonstration projects if they had provided access to system information necessary to determine the "caller's" location. This would be the Wireless E9-1-1 Phase I information, the system antenna to which the wireless device was connected. It has become clear in the course of the proceeding that there are alternatives for transmitting text-to-9-1-1 messages to the PSAP, if the "caller's" location can be determined.

C. BRETSA's November 21, 2012 Petition For Rulemaking Proposed Emergency Service Bureaus To Meet The Needs Of Public Safety.

On November 21, 2012, BRETSA filed with the Commission a Petition for Rulemaking proposing rules that would require (i) VoIP providers to collect customer service addresses for inclusion in ENS databases, (ii) wireless providers to collect customer residential addresses and business or educational addresses, if any, for inclusion in ENS databases (collectively "Customer Data"), and (iii) VoIP and wireless service providers to establish ESBs through which real-time secure electronic access would be provided to Customer Data and system information. The service providers would initially be required to provide electronic access to such information through a manual system, such as a secure browser interface. Automated electronic access would

³ BRETSA respects that privacy and Constitutional considerations, as well as interests of service providers in avoiding disclosure of proprietary customer information, warrants certain protections. However such protections can be effectively implemented with electronic access.

subsequently be required, so that information queries could be submitted through a CAD system, for example.

Under BRETSA's proposal, PSAPs or their agents would be provided real-time access to customer and system data for purposes of (i) locating devices used to send text messages or place calls to 9-1-1 for purposes of routing the message to the correct PSAP, (ii) identifying and locating disconnected callers, (iii) providing Emergency Response to 9-1-1 Calls, (iv) interdicting and prosecuting perpetrators of Hoax Calls, (v) investigations and prosecutions in response to 9-1-1 Calls, (vi) populating ANI/ALI and ENS databases, and (vii) extracting statistics and summaries of data for auditing remittance of 9-1-1 fees, surcharges or taxes, or management or planning purposes.⁴

BRETSA's vision is that service providers would establish a non-profit corporation to establish and operate the ESBs, as this would allow them to minimize costs through cost-sharing, and to implement the security measures they deem appropriate and necessary to protect their proprietary customer and system information.

D. Emergency Service Bureaus Can Support Over-The-Top Text Messaging Applications.

ESBs as proposed by BRETSA are intended to, *inter alia*, support routing of text messages to 9-1-1 by providing third-party service providers access to system data to retrieve location information for routing purposes, and to provide the location to the PSAP. Such third-party providers could also retrieve location information for routing of an over-the-top ("OTT") messaging service message to 9-1-1, for a fee charged by the ESB, or on the condition that the OTT service provider was a member of the non-profit corporation operating the ESB.

⁴ BRETSA also noted that the automated access could also support a single interface for an e-warrant system for location or tracking of suspects, or pursuant to the Communications Assistance for Law Enforcement Act (CALEA).

BRETSA understands that developers of OTT messaging services, including original services and their many clone services, wish to compete with the messaging services of the wireless providers and siphon away wireless provider revenues for their own benefit, using the wireless providers' own facilities and with minimal investment or concern for customer expectations.⁵ BRETSA recognizes that most industries involve some cost for regulatory compliance, and sees no reason why OTT messaging services should be an exception.

An ESB operated by a non-profit formed by the service providers would also be an ideal entity to maintain the national forest guide and database of PSAP preferences for receipt of messages.

II. The Commission Should Pursue An Integrative Approach To Over-The-Top Text Message Service Providers.

Voice calls are the most efficient means for an individual to convey to a PSAP the nature and location of an emergency. This is the minimum information necessary for dispatch of First Responders. However BRETSA also recognizes the importance of text messaging to 9-1-1 to meet the needs of the speech- and hearing-impaired community. Text messaging to 9-1-1 can meet people's needs in silent call situations, and persons located beyond the range of wireless systems for voice calls but within the range for SMS messaging.⁶ BRETSA thus supports deployment of text messaging to 9-1-1 for these purposes, with general use of text messaging to 9-1-1 to be discouraged.

⁵ In its Comments, TechAmerica argues within the span of three sentences that consumers do, and do not, expect that OTT texting applications will connect them to emergency services: "It is not likely that consumers currently expect that their OTT texting application will connect them to emergency services. TechAmerica wholeheartedly supports the Commission's educational efforts to inform consumers about the lack of ability to contact a PSAP via an OTT texting application. Currently, users may believe that most or all PSAPs are equipped to receive and respond to messages, when they are not." TechAmerica March 11, 2013 Comments at 12. Note that TechAmerica would also foist off on the Commission the responsibility of application developers to properly inform customers of the capabilities of the application developers' messaging services.

⁶ See section II.D. below.

Notwithstanding BRETSA's discussion of the ability of ESBs to provide location information for proper routing of text messages from OTT messaging services as well as identifying the sender's location to the PSAP; BRETSA submits that integration of OTT text messages to 9-1-1 with native SMS text messaging services is the preferred method for handling OTT text messages to 9-1-1.

A. The Commission Has Jurisdiction Over Interconnected Message Service Providers.

Several parties challenge the Commission's authority to require the proper handling of text messages to 9-1-1 by, and of application of its proposed text messaging rules to, OTT messaging service providers. Other parties suggest that the Commission should rely on voluntary agreements by service providers for implementation of text messaging to 9-1-1, that the Commission's objectives are unachievable, or that service providers may refuse to comply. These arguments are without merit.

TechAmerica suggests that the voluntary agreement between the top four wireless providers and NENA and APCO, demonstrate that government mandates are unnecessary. TechAmerica Comments, at 3. If the Commission were to rely on voluntary agreements, however, not only would there be no text messaging to 9-1-1 absent regulatory intervention, there would probably be no wireless calling to 9-1-1 either. That is, the Commission would not have had to adopt requirements for routing of wireless 9-1-1 *calls* to PSAPs almost *15 years* after cellular telephone service was introduced. It has been demonstrated in this docket that SMS text messaging to 9-1-1 is currently achievable, yet it is not generally provided even by CMRS providers.

Moreover, the current agreement by the four national wireless carriers is likely intended to delay implementation of text-to-9-1-1 for approximately two years; a goal the agreement

accomplishes. It has been stated and is generally recognized that the wireless providers would prefer to defer implementation of text-to-9-1-1 until they have fully implemented LTE and are operating in a full IP environment. Previous comments in this proceeding advocating text-to-9-1-1 using Real Time Text rather than SMS text-to-9-1-1 appear to validate this. Wireless providers are already upgrading their networks to LTE, and through the voluntary agreement, the carriers appear to have delayed implementation until they will have progressed in this deployment. Providers will have until May 2014 to make text-to-9-1-1 available, and an additional six months to comply with any valid PSAP request for text-to-9-1-1.

The Voice On The Net Coalition (“VON”) makes the surprising argument that because many IP-enabled applications are developed for a global market, and not all software developers may be aware of regulatory obligations imposed by the Commission, the Commission should not act. VON Comments, at 12-13. This would turn on its head the maxim that ignorance of the law is no excuse, and reduce law and regulation to the lowest common international denominator, and surrender U.S. sovereignty to commercial interests. Any vendor in any industry which desires to compete in the lucrative U.S. market knows that it must comply with applicable U.S. laws and regulations, just as it must comply with the laws and regulations of other nations in which it competes. The lowest common denominator result urged by VON would establish a precedent that, for example, a manufacturer in some third-world nation not prohibited by local law from using lead-based paints on teething rings would be entitled to sell those same toxic teething rings in this country.

Almost as astonishing, VON claims that OTT text-messaging to 9-1-1 is unachievable due to “the technical difficulties providers have in identifying and transmitting the location of their users and the appropriate PSAP,” when developers are today providing and introducing

location aware applications for the specific purpose of communicating with PSAPs. VON Comments, at 9. Moreover BRETSA’s proposed solution of deploying Emergency Service Bureaus which would provide a means of acquiring a user’s location apart from a devices GPS chipset, WiFi mapping or other common method.

More to the point, VON alleges that the Commission lacks authority to adopt rules applicable to OTT messaging services in a legacy 9-1-1 environment because (i) the CVAA directed the Commission toward implementation of 9-1-1 solutions in conjunction with an NG9-1-1 IP-enabled network, and (ii) claiming ancillary authority to implement 9-1-1 solutions on the legacy 9-1-1 network would be contrary to Congressional intent.⁷

47 USC 615c(a) establishes the Emergency Access Advisory Committee (“EAAC”), and section 615c(c) directs the EAAC to, *inter alia*, “determine the most effective and efficient technologies and methods by which to enable access to emergency services by individuals with disabilities and shall develop and submit to the Commission recommendations to implement such technologies and methods....” The specific areas in which the EAAC is to make recommendations include:

- (1) with respect to what actions are necessary as a part of the migration to a national Internet protocol-enabled network to achieve reliable, interoperable communication transmitted over such network that will ensure access to emergency services by individuals with disabilities;
 - (2) for protocols, technical capabilities, and technical requirements to ensure the reliability and interoperability necessary to ensure access to emergency services by individuals with disabilities;
- * * *
- (4) for relevant technical standards and requirements for communication devices and equipment and technologies to enable the use of reliable emergency access;

⁷ VON Comments at 2-3, 8-9. *See also, e.g.*, CTIA Comments at 3-7, 10-11, TIA Comments at 5-6.

(5) for procedures to be followed by IP-enabled network providers to ensure that such providers do not install features, functions, or capabilities that would conflict with technical standards;

* * *

(7) for the establishment of rules to update the Commission's rules with respect to 9-1-1 services and E-911 services (as defined in section 942 of this title), for users of telecommunications relay services as new technologies and methods for providing such relay services are adopted by providers of such relay services....

47 USC §615c(c)(1)-(7).

Further, 47 USC §615c(g) is a specific grant of authority to the Commission by

Congress:

(g) Implementing recommendations.

The Commission *shall have the authority* to promulgate regulations to implement the recommendations proposed by the Advisory Committee, *as well as any other regulations, technical standards, protocols, and procedures as are necessary* to achieve reliable, interoperable communication that ensures access by individuals with disabilities to an Internet protocol-enabled emergency network, where achievable and technically feasible.

Emphasis added.

First, the Commission is specifically authorized by Congress to adopt regulations to implement the EAAC regulations. Only two of the listed areas in which the EAAC is to make recommendations concern IP-enabled networks; those in subsection (1) concerning migration to an IP-enabled network, and subsection (5) concerning procedures to be taken by IP-enabled network providers. The other subsections do not reference IP networks. The exclusion of reference to IP networks from the other subsections when such a reference was included in subsections (1) and (5) indicates that Congress did not intend the other sections to be limited in application to IP networks.

Section (g) includes two specific grants of authorization to the Commission. The first is to adopt regulations to implement the EAAC recommendations. The second grant of authority is

to adopt other regulations, standards, protocols, and procedures; those necessary to provide disabled individuals with access to an IP-enabled emergency network.

Accordingly, the Commission is directly authorized to adopt recommendations of the EAAC, some of which relate to access to IP-enabled emergency networks and some which are simply related to improving access to “emergency services.” The Commission has the jurisdiction and authority to adopt regulations to provide improved access for individuals with disabilities to emergency services, *not solely* to provide improved access to emergency services via IP-enabled networks.

In addition, the recommendations to be provided by the EAAC and for which the Commission is expressly authorized to adopt enabling recommendations include *migration* to an IP-enabled network. An issue with which the Commission has expressed specific concern is consumer confusion regarding the availability of text messaging to 9-1-1 from jurisdiction-to-jurisdiction during the transition to NG9-1-1. This is important given that a “flash-cut” transition to NG9-1-1 is impractical and the transition will take a period of years. Moreover, the ability to provide text-messaging in a legacy environment reduces the pressure for transition to NG9-1-1 and allows the cost of the transition to be spread over a number of years.

B. Interconnected Message Services Should Process Messages To 9-1-1 Through Use Of “Native” Messaging Systems.

BRETSA recognizes that the vast majority of PSAPs are staffed by fewer than five call-takers and/or dispatchers, and indeed probably fewer than three call-takers/dispatchers. The typical dispatcher is a high school graduate with very good multi-tasking skills, ordinary typing skills, the personality for the job and to handle the stress of the job, and the ability to pass a criminal background check and a lie detector test that includes questions about recent drug use. BRETSA’s experience of fewer than one percent of applicants for PSAP positions qualifying for

the job, and half of those hired dropping out of the training program after being hired, is typical for PSAPs nationwide.

Given the number of original and copycat applications of every type which have been developed for smartphones, it is reasonable to expect hundreds of applications to be developed in the public safety area promising to connect the user to a PSAP or deliver user information to a PSAP. These public safety applications will be in addition to panoply of general purpose text-messaging services available to smartphone users. OTT text messaging applications may require that both parties to the a communication have the same application, and some smartphone applications developed to convey information to PSAPs require that the PSAP have a corresponding application to receive and display the information.

Just as it would be counterproductive to put end users of telecommunications services in the position of using a new and unfamiliar interface when they need to contact 9-1-1, it would make no sense to place PSAP personnel in the position of using new and unfamiliar interfaces when receiving a 9-1-1 communication. The potential for mishandling the communication can only be increased, to the detriment of the end user or the individual(s) on whose behalf the end user is contacting the PSAP. It would also be impractical and unreasonable for PSAPs to acquire multiple applications to be able to receive messages from an application a consumer may be using.

In the NPRM, the Commission noted the option for interconnected text message or OTT text message providers to leverage the SMS API of the smartphone operating system installed on devices for the transmission of text-to-9-1-1 messages.⁸ Application developers have advised representatives of BRETSA that a smartphone application could access location information

⁸ *In the Matter of Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Docket Nos. 11-153 and 10-255, Further Notice of Proposed Rulemaking, FCC 12-149, at 40, ¶ 96 (rel. Dec. 13, 2012) (“*FNPRM*”)

from a smartphone GPS chipset and automatically insert the coordinates in the header of an SMS text message or as the beginning of an SMS text message for routing or response purposes.

BRETSA believes that leveraging the smartphone SMS API is the preferred approach for OTT text messaging applications to transmit text messages to 9-1-1. The same would hold true with RTT text messaging in an IP or LTE-IMS environment. This would allow the end user to use the messaging application with which the user is familiar, route the text message to the PSAP using the established and customary method for handling text messages, and permit the PSAP personnel to also view and use the text messages in a familiar format. It would also avoid the need for PSAPs to acquire multiple applications, and PSAP personnel to attempt to become familiar with multiple application interfaces. It would allow technology to serve the needs of the users rather than requiring users to adapt to the technology.

C. The Commission Should Adopt Standards Or Specifications For Emergency Communications Formats.

NG9-1-1 is promoted as permitting transmission of text messages, video messages, photographic and video attachments and other data to the PSAP. Many public safety professionals believe text messages, photos, videos and other data will be counterproductive, as it will take PSAP personnel longer to determine the nature and location of the incident, have grave emotional impacts on PSAP personnel, and provide no corresponding benefit in the ordinary case. In the ordinary case, an individual at the scene can most quickly advise the PSAP of the nature and location of the emergency by telephone, and First Responders take with them the equipment which might be required to meet any exigency they are likely to encounter. Any equipment First Responders might need to deal with a specific call but would not already have with them, would not likely be readily available in any event. Additional units will not typically be dispatched until a public safety professional is on scene and has evaluated the situation.

While photos, videos and other data will not ordinarily assist the PSAP in determining the nature and location of the emergency and dispatching First Responders; they may be useful for investigative and prosecutorial purposes. It would thus be beneficial if such content could be separated from text messages or the voice portion of video messages or a video call to 9-1-1 (in the case of a video call, without converting a duplex call into a simplex call). Separating such content would permit it to be stored at the NG9-1-1 data complex and selectively downloaded to the PSAP or other location, at a later date, at reduced data rates, and/or over alternative facilities. This could reduce the costs of ESInets by reducing the required bandwidth.

Some public safety authorities believe photos, videos and other data may be of use to First Responders en route to the scene of an incident, but are exploring options to have such data bypass the PSAP call-takers and dispatchers. In such case, the photos, video or other data could be separated from the text or voice portion of the message at the PSAP for transmission to the First Responders. In either case, it would be beneficial if the 9-1-1 messages were formatted to facilitate such separation of content. The Commission should thus specify default messaging formats which will permit such flexibility in handling of calls or messages and associated data. There is time for the Commission to adopt such standards, as attachment of photos and videos to SMS text messages causes them to be handled as MMS messages which are not currently capable of being routed to 9-1-1.

In summary, the Commission should adopt formats or specifications for SMS and RTT text messages and multimedia messages to PSAPs which will not only allow PSAP personnel to use consistent interfaces and formats, but will also allow text, audio, photographic, video and other content to be segregated and handled separately without interrupting or delaying text or duplex voice communications.

D. Considerations Pertinent To Text Messaging Formats.

The results of tests of SMS text messages by the University of Colorado and Intrado, and the several trials of SMS text messaging notwithstanding, a number of commenters continue to submit that SMS text messaging is inappropriate for text messages to 9-1-1. Their statements that SMS was not designed or intended for use as an emergency service, accepted as true, do not refute the tests and experience demonstrating that SMS is sufficiently reliable for the purpose.⁹ The perfect cannot be the enemy of the good.

BRETSA initially favored RTT text messaging, as it will be more conversation-like and enable PSAP personnel to interrupt individuals text-messaging 9-1-1 to direct them to provide the most essential information first. However, BRETSA has since learned of a number of incidents where snowmobilers or others lost in the Colorado mountains, in areas where there was an insufficient wireless signal for a voice call yet an adequate signal to send and receive SMS text messages. It was through SMS text messaging that their rescues were effectuated. (BRETSA also appreciates that relay centers may not be as efficient at handling 9-1-1 calls as had been assumed.)

The University of Colorado study showed that SMS text messaging can be sent where there is an insufficient signal to complete a voice call. This is consistent with experiences in the incidents referenced in which rescues of people lost in the mountains of Colorado were rescued because they were able to send and receive text messages in locations where voice calls could not be placed, and with anecdotal evidence of SMS messages “going through” when voice calls would not. While SMS messaging will continue to be provided by service providers in an LTE environment because it is a revenue driver, it will not be true SMS messaging with the same transmission characteristics as current SMS messaging. In the near term, SMS over SGs as

⁹ Sprint Nextel Comments, at 7. *See also, e.g.*, TIA Comments, at 7, T-Mobile Comments at 2.

specified in 3GPP Rel. 8 will be provided as a transitional solution, and in the long term SMS over IMS will be provided per 3GPP Rel.7. This will be an emulation of SMS text messaging, provided over IP. It appears that SMS over IP provided in the LTE environment will not be as robust as current SMS provided over control channels, although LTE can provide low interference margins. Nevertheless, for the present SMS text messaging is not unsuitable for text messaging to 9-1-1, and the transmission characteristics of true SMS may make it a superior solution.

III. The Commission Cannot And Should Not Preempt State Laws Pertaining To Liability.

Commenters almost unanimously support the Commission taking action to limit service provider liability and even preempting state laws to limit liability. However neither the Commission nor the Congress has the Constitutional authority to so trample states' rights, nor should they. Liability laws serve important purposes.

Our system of laws holds persons liable for damages they cause through their negligence, gross negligence or intentional acts, to provide (i) specific deterrence of the responsible party from further such action, (ii) general deterrence of similarly situated parties and others from similar negligent, grossly negligent or intentional actions, and (iii) to provide a remedy to the injured party through payment of damages. Other reasons for holding persons liable for injury to others include retribution, and to spread the costs (damages) from such behavior.

BRETSA supports extension to new providers of 9-1-1 communications the same liability protections granted by states to existing providers. However no party submitting comments in this docket has articulated a valid reason why immunity should be granted in the first place, and why service providers should not be liable for the harm they cause to others through their negligent, grossly negligent or intentional acts. Suggestions that if not granted

immunity, service providers would refuse to comply with Congressional and Commission requirements to provide emergency communications services, and put their valuable spectrum licenses in jeopardy, cannot be taken seriously.

BRETSA believes that Colorado has struck the right balance in providing limited immunity for service providers and others involved in the provision of emergency communications services. Under Colorado law, service providers are immune from liability except in cases of gross negligence or intentional conduct. BRETSA recognizes that in a system where governmental entities benefit from sovereign immunity, and failures of the 9-1-1 and emergency response system may result in “hard cases;” findings of liability on ordinary negligence *may* result in inequities. Another rationale for limited liability is that potential defense costs and awards could be reflected in providers’ rates, increasing costs of service. A consequence of *limiting* liability, however, would be that injuries and losses due to a service provider’s negligence would go uncompensated.

While BRETSA supports Colorado’s grant of limited immunity to service providers, BRETSA also recognizes that other states could fairly reach different conclusions. A state may well opt for compensating individuals for injuries suffered through the negligent or intentional acts of service providers over controlling service provider costs, and that it is preferable to pay higher SSP charges and have its citizens pay higher service fees than to have such injuries go uncompensated. A state may decide that defense costs and awards arising out of simple negligence could be recovered through higher charges to spread the costs; but that shareholders of a regulated SSP must bear awards and defense costs where gross negligence or intentional conduct is found, so as to incentivize the exercise of due care and properly assign fault. In any case, the proper role for the Commission is not to meddle in state liability laws, but to require

that service providers implement any appropriate cost recovery in response to state laws through increased charges or surcharges within the state at issue, rather than spreading costs imposed as a matter of the public policy of one state onto other states.

IV. The Current 9-1-1 Funding Model Is Adequate And Appropriate, With Minor Updates.

The current model of funding 9-1-1 services through surcharges, fees or taxes on communications services (collectively “9-1-1 Fees”) is appropriate, and is working well in general. Some improvements in the current system will provide adequate funding, achieve a level playing field among competitors, and make collection of 9-1-1 Fees more practical and achievable. *See also* Section 1.C. above, BRETSA’s proposal to require service providers supply electronic access to, *inter alia*, customer data to facilitate verification and audit of remittance of proper 9-1-1 Fees.

A. The Commission Should Adopt Rules To Assure That Prepaid Wireless Users Finally Contribute Their Fair Share, And To Eliminate Unfair Market Advantages For Prepaid Service Providers.

When collection of 9-1-1 Fees was initially extended to prepaid wireless providers in Colorado, the prepaid providers remitted 9-1-1 Fees. Prepaid wireless providers subsequently ceased remitting surcharges, based on language in C.R.S. 29-11-102(4) that “[e]very *billed* service user shall be liable for any charge imposed under this article...”, when prepaid service providers purportedly do not bill their customers. Ultimately, the Colorado 9-1-1 Community accepted a point-of-sale fee collection program advocated by prepaid wireless providers.

Under the point-of-sale fee collection program, fees on prepaid wireless minutes are to be collected at the point-of-sale of the cards representing prepaid minutes, remitted to the Colorado Department of Revenue. The Department of Revenue distributes the revenues from this

surcharge, after deducting its expenses, to the Colorado 9-1-1 Authorities based upon their percentage of the total wireless 9-1-1 calls in the state during the previous year.

The point-of-sale fee collection program is cumbersome, expensive, inconsistent, and difficult to enforce because of the small amount of surcharges to be collected and remitted by many small retailers. It is also difficult to identify and collect prepaid surcharges from Internet vendors. This provides prepaid wireless service providers an advantage insofar as their customers are capable of avoiding and not paying their fair share of 9-1-1 Fees.

A better and more equitable solution, which would provide a more level playing field among service providers, would be for the Commission to collect 9-1-1 Fees from prepaid providers on a national scale, and distribute the fees among the states. That is, the Commission would establish a percentage of the cost of prepaid minutes, taking into account the term over which prepaid minutes are typically used, and the average monthly 9-1-1 Fees assessed in the several states. The prepaid wireless provider would add this percentage onto the cost of its prepaid minutes, separately identifying it as a 9-1-1 Fee. When a customer activated the fees, the prepaid service provider would (i) query the user for the user's residential address and business or educational address, if applicable, for ENS purposes, (ii) query the user to identify a state, city or county for purposes of remittance of 9-1-1 Fees if the consumer declined to provide an ENS address, and (iii) remit the amount of the prepaid 9-1-1 Fee to the Commission and identify the jurisdiction to which the surcharge should be credited.¹⁰ The minutes would not be activated until the customer identified a jurisdiction for allocation of 9-1-1 Fees.

¹⁰ Alternatively, the prepaid 9-1-1 Fees and jurisdiction information might be remitted directly to the appropriate authorities in each state, or to a non-profit corporation created to operate the ESBs for distribution to the appropriate authorities in each state.

B. 9-1-1 Surcharges Should Be Assessed On “Connections,” Not “Services,” Including On Broadband Connections Rather Than VoIP Services.

It is impossible for 9-1-1 Authorities to identify with certainty VoIP providers supplying services in their jurisdictions, let alone to determine whether they are remitting appropriate 9-1-1 Fees. This is an increasing problem as people terminate traditional wireline phone service in favor of VoIP service provided over cable modem or naked DSL. BRETSA also notes that the vision of NG9-1-1 is that anyone can contact 9-1-1 using any device. It is impractical to assess 9-1-1 Fees on the basis of every device that might be used to contact 9-1-1.

BRETSA submits that a better approach would be to assess 9-1-1 Fees on the underlying connection; the basic communications service which a device or voice or text service might use to communicate with a PSAP. That is, state or local jurisdictions would assess 9-1-1 Fees on traditional wireline connections, wireless service connections, and broadband service connections such as DSL, cable modem or satellite delivered Internet service per unit of uplink bandwidth. With the exception of satellite providers supplying upstream broadband bandwidth, wireline, wireless and broadband service providers should have facilities located within the state, be qualified to do business in the state and be subject to the jurisdiction of the state. It will be practical for 9-1-1 Authorities and/or state utility commissions to identify the service providers responsible for remitting 9-1-1 Fees and to audit the remittance of fees, if and when deemed necessary. Assessing the 9-1-1 Fees on the underlying connection will also avoid issues regarding whether a specific service provided over those facilities is a communications or information service (when it appears service providers might manipulate their configuration of their services to meet the definition of an information service).

A single 9-1-1 Fee could be assessed per connection or upstream bandwidth without regard to the actual number of devices which connect to the PSTN or public Internet via the

connection, although the bandwidth of the connection may well reflect the number of devices which use the connection. Assessing fees per unit of upstream bandwidth of broadband facilities would (i) avoid assessing a fee on consumers who use a broadband connection solely to access video entertainment and not for voice, text or other communications or messaging purposes, and (ii) reflect the number of devices or services which can use the connection. For example, a business using an IP PBX with a broadband connection would pay a total 9-1-1 Fee based upon the actual number of simultaneous VoIP calls which could transit the broadband connection, not the number of devices behind the PBX.

These proposed changes would assure that all service providers compete on a level playing field and their customers contribute equally to the cost of 9-1-1 service. It will eliminate free riders and reduce the administrative overhead of collecting 9-1-1 Fees.

C. With 9-1-1 Fee Reform, 9-1-1 Fees Are Adequate To Fund NG9-1-1 And Advanced Services Such As Text To 9-1-1.

BRETSA has discussed in sections A. and B. above 9-1-1 Fee reforms to assure that prepaid wireless customers and VoIP customers are paying their fair share and are not free-riders due to the difficulty and expense of collecting surcharges from wireless and VoIP providers. Factoring these changes into BRETSA's Colorado 9-1-1 Fee proposal should produce adequate revenues for a migration to NG9-1-1 in Colorado, and BRETSA believes similar proposals would meet the needs of other states. Note, BRETSA anticipates a migration to NG9-1-1, not an unrealistic and needlessly expensive flash-cut implementation.

BRETSA's Colorado proposal includes an increase in the statutory limit on the amount of the Emergency Telephone Surcharge a jurisdiction may assess, without PUC approval, from \$0.70 to \$1.50. BRETSA proposes a second statewide 9-1-1 Surcharge of up to \$0.50 to be administered by the PUC and distributed in inverse proportion to county populations, to

subsidize service to rural areas and assure ubiquity of NG9-1-1 Service. This would result in a maximum surcharge of \$2.00 per wireline, wireless or broadband connection (per unit of upstream bandwidth) absent PUC approval. This fee would not be prohibitive.

For purposes of illustration, applying the maximum combined monthly surcharge to each of Colorado's 2010 residents and non-farm businesses (5,185,880) would produce annual proceeds of \$124.5M. BRETSA believes this amount is adequate to meet the ongoing costs of 9-1-1 as well as the NG9-1-1 deployment costs over a 3-to-6 year ESInet deployment and 10-year overall deployment period.¹¹

BRETSA's estimate of annual fees is conservative, as it assumes one connection for each Colorado resident (overstates connections as not all residents have a wireless phone), and one connection for each Colorado non-farm business (understates connections as each non-farm business should have at least one connection, while many will have multiple connections or multiple units of upstream bandwidth), and does not assume *any* wireline connections to residences nor *any* broadband connections to residences with upstream bandwidth.

BRETSA assumes that any ESInet and NG9-1-1 Data Complex provider will capitalize facility costs and recover them through a recurring rate element. However, like other states the Colorado legislature is considering High Cost Fund reforms which would limit distributions from Colorado's High Cost Fund in areas subject to effective competition. There is legislative interest in using the savings from the High Cost Fund reform to fund a Broadband Fund to subsidize deployment of commercial broadband service to un-served areas of the state. BRETSA supports this proposal, with the caveat that disbursements from any Broadband Fund should first go to

¹¹ At least one potential NG9-1-1 provider has proposed a 3-to-6 year period for statewide deployment of the ESInet, using Legacy PSAP Gateways for legacy PSAPs. BRETSA believes its funding proposal will allow all legacy PSAPs to become NG9-1-1 ready within 10 years or less. It should be noted that Colorado 9-1-1 Authorities, like other governmental entities in Colorado and some other states, are Constitutionally prohibited from incurring debt.

meet the costs of the Broadband ESInet and intra-jurisdictional broadband facilities connecting PSAPs. Funding deployment of the broadband ESInet for public safety is a higher and better use than subsidization of commercial services. Using the Broadband Fund to pay the capital costs of the ESInet such as through purchasing indefeasible rights of usage, and contracting with a provider to maintain, manage and operate the facilities, would significantly reduce recurring charges and overall costs of 9-1-1 service.¹²

D. In States In Which Service Providers Have Achieved Deregulation Of IP-Based NG9-1-1 Service; Service Providers Must Fund 9-1-1 Service And Be Liable For The Service.

In Colorado, service providers have contended that state authority over IP-enabled services has been federally preempted. The service providers are currently pushing legislation such as they have pushed through in other states under which Colorado would expressly refrain from exercising regulatory jurisdiction over VoIP and IP-enabled services including NG9-1-1. Service provider claims that the states have been federally preempted from regulating IP-enabled services aside, 9-1-1 calls are by definition *intrastate* calls and state authority over them cannot be preempted. Pursuant to state and federal law and regulation, service providers including providers of IP-enabled services are required to deliver 9-1-1 calls to the PSAP in the same state and jurisdiction in which the caller is located. SSP services involving the delivery of the call from the Selective Router or NG9-1-1 Data Complex to the PSAP are also *intrastate* services. State authority over these calls and service providers cannot be preempted.

¹² BRETSA believes it is prudent to engage a qualified commercial communications service provider(s) to provide, maintain and/or operate the ESInet and NG9-1-1 Data Complexes (or maintain and operate the ESInet if the capital costs are paid upfront out of a broadband fund), rather than to have these mission critical facilities maintained and operated by existing or newly established government agencies. The much broader customer bases of commercial providers means that they will have superior technical, personnel and capital resources to devote to outages or other issues than a government agency could ever justify. The costs of the superior resources of commercial providers can also be spread across that larger customer base.

Nevertheless, a number of states have, and Colorado may, expressly refrain from exercising jurisdiction over IP-enabled providers including NG9-1-1 providers (SSPs). This is a particular concern because (i) SSP service retains the characteristics of a natural monopoly, (ii) NG9-1-1 proposals which have been introduced in Colorado would increase service costs, decrease reliability and cost lives, and (iii) financial responsibility may be separated from the ability to the provider.

First, SSP service, the aggregation of 9-1-1 calls through a 9-1-1 Selective Router or NG9-1-1 Data Complex, routing and delivery of the 9-1-1 calls to the appropriate PSAP retains the characteristics of a natural monopoly. However, not only are there relatively high capital costs combined with very low marginal costs of production; there is only one customer for the service in any area (jurisdiction). With but one customer in each jurisdiction, competition is an all-or-nothing proposition.

Second, in 2011 NexGen Communications, Inc. (“NextGen”), a subsidiary of TCS, filed an application in Colorado PUC Docket No. 11A-531T for certification as an SSP in Colorado to deliver only a portion of the traffic from each jurisdiction to the PSAP for that jurisdiction, on what would have been a monopoly basis. That is, wireless and VoIP providers (“Originating Service Provider,” or “OSP”) contract with TCS to route their end user customers’ 9-1-1 calls to the 9-1-1 selective routers in the appropriate state, and update the ANI/ALI shell records for the p-ANI used to route the calls. NextGen proposed to route only the 9-1-1 calls from TCS’ OSP-customers’ end users to the PSAPs. It did not propose to route the 9-1-1 calls originating on the networks of other OSPs to the PSAPs. NextGen requested a waiver of the regulatory requirement to file a tariff with cost-based rates averaged across its service area, stating that it would instead

contract for delivery of calls to each jurisdiction's PSAP(s) by responding to an RFP issued by each jurisdiction.

NextGen's proposal to deliver only the 9-1-1 calls originating on TCS' OSP-customers' networks would thus have required that other SSP(s) deliver calls originating on the networks of other wireline, wireless and VoIP OSPs, dividing the 9-1-1 traffic currently carried by a single SSP among multiple SSPs, each with redundant and diverse facilities to be supported out of the 9-1-1 Fees. More significantly, *NextGen would have a monopoly over the delivery of TCS' OSP-customers' 9-1-1 calls*. It proposed to bid on RFPs for delivery of these 9-1-1 calls to the PSAPs, but insofar as it would be the only SSP capable of delivering 9-1-1 calls originating on TCS' OSP-customer's networks, *it could name its price and terms*. The only bargaining power a PSAP would have would be to refuse to accept 9-1-1 calls originating on the networks of those carrier customers; a position that would violate human conscience and public policy.¹³ The PSAP would have no leverage to negotiate price or even network redundancy to assure reliability.¹⁴

Third, responsibility for the cost of 9-1-1 (SSP) service is segregated from the choice of provider, and in a deregulated environment would result in increased costs of service, decreased reliability, and lives lost. This is especially the case where service providers have been granted immunity.

In support of its application, NextGen argued:

¹³ NextGen dismissed its application when the Colorado PUC held that NextGen would have to demonstrate that its waiver requests were in the public interest, including addressing the affects that its proposals to serve less than the entire state and not to average rates (continue the implicit subsidy for service to high cost areas) would have on the ubiquity of 9-1-1 service. If the Colorado legislature deregulates IP-networking including NG9-1-1, neither the PUC nor any other authority will have jurisdiction to make such public interest inquiries prior to SSPs entering the market with proposals such as NextGen's.

¹⁴ While the Commission has recommended the adoption of federal backstop regulations to fill the regulatory void, neither Congress nor the Commission has the Constitutional authority to impose on states regulations of jurisdictionally intrastate services where a state legislature has made taken affirmative action to forego regulation. This is a consequence of the Commission's lack of clarity on the preemption issue.

Given the effect of consumer choice that disciplines the pricing of NextGen's services, there is no need to require the cost support described in Rule 2136(c). Regulation of NextGen's rates to approximate competitive rates is unnecessary because NextGen is subject to competition.

NextGen Communications, Inc.'s Exceptions To Recommended Decision No. R11-0964-I, filed September 21, 2011 in PUC Docket No. 11A-531T. at 22 (Emphasis added). *Consumers do not exercise choice when calling 9-1-1.*

Consumers do not consciously choose to use one service provider over another when making a 9-1-1 call, they do not choose the BESP/SSP to deliver the call to the PSAP, and they do not consider the price, terms or reliability of the BESP/SSP's service. As a public policy matter, we do not want users to stop and think about such matters when faced with an emergency and when seconds count. 9-1-1 service is made as transparent to the consumer as possible, as providers are unable to charge consumers for calls to 9-1-1 or to refuse 9-1-1 calls from uninitiated wireless devices, and the 9-1-1 Authority pays for the SSP services in routing and delivering the call to the PSAP.

9-1-1 Service is not subject to consumer competition, nor competition in the traditional sense at all. With unregulated NG9-1-1 service, the OSP will select the SSP, giving that SSP a monopoly over the delivery the OSP's end users' 9-1-1 calls. Unless the PSAP is willing to refuse to accept calls 9-1-1 calls from the SSP, it will have no bargaining power to discipline rates, require redundant and diverse facilities and otherwise reliable service, or otherwise achieve by contract what state commissions would require by regulation. The separation of financial responsibility for payment of the BESP/SSP charges from the service provider's selection of the SSP will thus result in soaring costs of 9-1-1 service and soaring 9-1-1 Fees, decreased reliability of 9-1-1 service, and lives lost. This will particularly be the case where SSPs and the service providers who select them are granted immunity from liability.

The selection of the SSP to deliver 9-1-1 calls to the PSAP must remain coupled with the responsibility for paying the SSPs charges. The Commission should adopt rules requiring that in those states which have refrained from exercising regulatory oversight of NG9-1-1 service, service providers shall be responsible for the fees or charges of SSPs for aggregation and delivery of their customer's 9-1-1 calls to the PSAPs, and liable for the services of the SSP they select. Only by coupling financial responsibility and liability with the discretion to select the SSP can (i) competition discipline rates and terms of service, (ii) needless proliferation of SSPs to transport a very limited amount of traffic be discouraged, and (iii) reliable service be encouraged.

The decision of states to forego regulatory oversight of NG9-1-1 services represents another area in which a state might reasonably choose to deny service providers immunity, or limited immunity, related to 9-1-1 service. Absent regulation, states may reasonably conclude that subjecting service providers to the same tort liability to which every other business is subject, is the best way to assure that providers reasonably invest in redundant and diverse facilities, investigate 9-1-1 outages and take reasonable remedial measures.

V. The Commission Must Confirm State Jurisdiction Over IP-Enabled NG9-1-1 Service.

As discussed in Section IV.D. above, service providers have been representing to the States that state authority over IP-enabled services including *intrastate* NG9-1-1 services has been federally preempted. *See* BRETSA's October 25, 2012 Petition For Declaratory Ruling. *See, also*, Comcast's August 29, 2012 Comments in PUC Docket 12R-862T, at 2:

Even where state legislatures have yet to explicitly update their state laws, Public Utility Commissions have generally recognized that VoIP is outside of their jurisdiction. The Colorado Commission should not discourage the continuing growth of competition by attempting to impose unnecessary regulatory burdens on these information services.

Emphasis added.

The Commission's recent acknowledgement of continuing state authority over IP-Enabled 9-1-1 Services has to date been unavailing:

[T]his report recommends state and local public safety authorities should retain authority over the deployment and provision of NG911 services within their jurisdictions. However, as several commenters point out, there may be instances where states lack authority under state law to regulate certain elements of NG911 service or otherwise choose not to exercise such authority. For example, a number of states have expressly refrained, by statute, from exercising regulatory jurisdiction over VoIP services. This could potentially create a regulatory vacuum in regard to VoIP-based 911 service. In such instances, Congress has the power to establish a federal regulatory "backstop" to ensure that there is no jurisdictional gap between the exercise of federal and state authority.

Federal Communications Commission February 22, 2013 Report to Congress and Recommendations on Legal and Regulatory Framework for Next Generation Services, at 29 (footnotes omitted, emphasis added). This is sparse support for continuing state jurisdiction in the face of the onslaught of service provider insistence that state regulation has been federally preempted, as demonstrated in BRETSA's Petition for Declaratory Ruling.

Absent Commission clarity on the issue, the Commission may conclude this docket only to find that it has whistled past the graveyard of 9-1-1 and countless individuals who relied on 9-1-1; as the Commission's failure to issue a strong, clear statement that it has not preempted state regulation of IP-enabled NG9-1-1 service has rendered the service unaffordable and unreliable, and cost lives.

VI. The Commission Should Adopt Requirements Which Are Generally Achievable, Grant Waivers Where Not Reasonably Achievable, And Require Improvements When Achievable.

The Commission should follow the adage of not letting the great be the enemy of the good, while many commenters urge the Commission to delay action until perfection can be achieved.

A. Capabilities of Providers.

The Commission should adopt the proposed requirements and deadlines for implementation of text-messaging to 9-1-1, and should grant individual waivers upon a showing by a service provider that the deadlines are not reasonably achievable for that service provider. The waivers should be granted for limited periods, the service provider required to demonstrate the progress it has made toward implementation since the previous waiver was granted, and that implementation of text messaging to 9-1-1 remains infeasible. This will grant relief to deserving service providers, while maintaining regulatory pressure for implementation. BRETSA also believes the establishment of ESB's operated by non-profit entities as discussed above would enable providers to spread costs of implementation among multiple carriers, achieve economies of scale, and lower the barriers to implementation.¹⁵

B. Accuracy of Location Information.

Location information for routing and for locating the user may not initially be as accurate as users and the 9-1-1 community would prefer, but getting the message to the PSAP with coarse information is better than not getting the message or location information at all.¹⁶ Technological developments promise to improve location accuracy for 9-1-1 calls and text messages in the near term, and as service providers migrate to full LTE (IMS) and devices do not have multiple transceivers powered up simultaneously, battery life will improve and the disincentive to having the GPS chipsets powered up will be reduced. Transmitting OTT application text messages through the native provider/device text messaging systems will also ameliorate this issue.

¹⁵ BRETSA proposes that OTT text providers transmit text messages to 9-1-1 using device/provider text messaging systems via APIs, to better limit the formats and costs for PSAPs to deal with and to take advantage of the service provider's location capabilities, for example.

¹⁶ Without location information necessary for routing the text to the correct PSAP, the text message will be useless and the end user, even if hearing or speech-impaired, may be better making repeated voice calls to the PSAP with location information until First Responders arrive to investigate.

C. Roaming.

Service providers have commented that transmitting text messages from a roaming user to a PSAP is not currently achievable. If so, it is better to implement text-to-9-1-1 without roaming capability, than to delay text-to-9-1-1 implementation altogether. It would be irrational to deny important service to hearing- and speech-impaired individuals in their own communities because the service may not be available to them when they travel to other areas.

BRETSA notes that the City of Denver has published a ten-digit number for the speech- and hearing-impaired community to reach the Denver PSAP. In one instance, a speech- or hearing-impaired individual from Denver used the number to seek assistance while travelling in the Grand Junction, Colorado area. The Denver PSAP call-taker assigned to handle text messages at the time contacted the Grand Junction PSAP by phone and relayed the messages between the PSAP and the end user.

In other cases, a person repeatedly calling 9-1-1 (and staying on the line long enough for Phase II information to be transmitted to the PSAP) will result in the dispatch of a First Responder. Many agencies have a policy of investigating “9-1-1 hang-ups,” where a call to 9-1-1 was disconnected prior to the caller speaking. Agencies may have modified these policies in view of the number of 9-1-1 hang-ups received due to “pocket dialing,” particularly when phones were pre-programmed to autodial 9-1-1 when the “9” key was depressed and held. However in BRETSA’s experience those agencies which have modified their policies leave it to the discretion of the call-taker whether to dispatch a First Responder to investigate a 9-1-1 hang-up. BRETSA would expect that Repeated 9-1-1 hang-ups or 9-1-1 calls where there is some speech even if not fully intelligible, would result in dispatch of a First Responder to the caller’s location.

Thus, even without the ability to implement text-to-9-1-1 for roaming end-users, the users will benefit from availability of the service in their home market. While roaming, the end users should receive bounce back messages that the text message cannot be delivered to 9-1-1, and there remain options for them to obtain assistance from First Responders even if they are speech- or hearing-impaired and even if the options are not optimal.

D. Ability Of Devices To Use A Three-Digit Short Code.

Some devices in use may not be capable of transmitting text messages to a three-digit short code such as 9-1-1. Motorola states only that it has not tested the large number of devices it has produced which may still be on the market, but does not identify even a single model which it has determined to be unable to transmit a text message to 9-1-1. Without definitive information on the models, age and number of phones which would not be able to send a message to “9-1-1,” the Commission cannot assess the scope of the problem, the length of time such phones are likely to remain in use, and the number of people affected, or, potentially, the number of speech- and hearing-impaired individuals affected. The information provided by Motorola is nothing more than speculation that some phones on the market may not be capable of transmitting text messages to a three-digit short code.

Even if a *majority* of mobile devices on the market are not capable of sending a text message to 9-1-1, the Commission should adopt the proposed Rules. It should also assure that its equipment testing procedures include demonstration of this ability, and publish a list of device models which are capable of transmitting text messages to the short-code 9-1-1. The alternative of denying emergency assistance to speech- and hearing-impaired individuals until all devices in the market can send text messages to the short code “9-1-1” is unacceptable.

VII. Local Authorities Must Decide The Format Or Method For Delivery Of Text Messages.

The Commission should preserve and promote local decision-making regarding implementation of text messaging and NG9-1-1, and reject arguments for state control, one-size fits all solutions or national standards and requirements for PSAPs. Geography, population densities and distribution, road networks, industry and even climate varies significantly even across Colorado, let alone the nation.

Major cross-country interstate highways, where the paving ends at the end of the entrance or exit ramp and the underpass is a dirt-road, may be rare in the Northeast, but are common in areas of the Midwest and West. In counties where the snow plows stop at dusk due to budget limitations, First Responders couldn't reach a person suffering a heart attack or an infant with a spiking fever until the plows cut through drifts and opened the roads in the morning, and the nearest hospital is 100 miles or more away; paying a premium to receive calls in digital format may not be the highest priority. The largest PSAPs in Colorado typically has 35 or more call-takers/dispatchers on duty while the smallest has only 1. A PSAP in mountain county with (i) destination ski resorts and many foreign visitors speaking little or no English, and (ii) many outdoors enthusiasts exploring the back country on ski, snowmobile, mountainbike, horseback, foot or by jeep or 4-wheeler; will have different concerns and priorities than an urbanized county. Each state and each area within a state will have its own characteristics and local public safety professionals are in the best position to determine and weigh the needs of the population they serve.

Public safety agencies, PSAPs, and their personnel are dedicated to serving the public. BRETSA believes that most PSAPs will choose to receive text messages prior to implementation of NG9-1-1 in order to be able to receive communications from the speech- and hearing-

impaired, and others in need of help; provided location information is available for proper routing. However PSAPs have the right to decline to accept any form of messages, and this right must be respected. (BRETSA believes PSAPs are more likely to decline to receive photographic and video attachments or messages because of their dubious value, potential negative impacts, and the cost of bandwidth to receive them and the cost to store them.) Of greater concern, specifying TTY as a default method for delivery of text messages to PSAPs is no substitute for educating PSAPs and authorities as to options for receipt of text messages, the benefits and tradeoffs of each option, and allowing the PSAP to make an informed decision.

Nor are state agencies or offices with control over 9-1-1 services necessary for state coordination or effective provision of 9-1-1 service. In Colorado, the PUC has adopted rules regarding the provision of Basic Emergency Service (the aggregation and routing of 9-1-1 calls to the appropriate PSAPs). The PUC has also established the Colorado 9-1-1 Task Force, with membership including representatives of 9-1-1 Authorities/PSAPs, LECs, wireless and VoIP service providers, SSPs, the disabled community, and stakeholders.

Task Force meetings are open to all, and participation, voting membership and leadership positions (*e.g.*, Chairperson) are uncompensated. The Task Force has provided a coordinating function, and has been a forum for resolution of issues including, for example, deployment of Wireless Phase I and II E9-1-1. The Task Force sponsored an RFP and study on behalf of all of the Colorado 9-1-1 Authorities on the requirements, options and recommendations for transition to NG9-1-1, which resulted in a report from Mission Critical Partners. In 2012, the Task Force created a Next Generation Steering Committee, with membership open to representatives of 9-1-1 Authorities and with nearly every Colorado 9-1-1 Authority represented, to move from the

roadmap provided to the Mission Critical Partners Report to selection of a provider or providers to deploy NG9-1-1 service.

From the perspective of BRETSA, the creation of a state agency because vendors or the Commission think it would be a good idea, would be counterproductive. The current Colorado model allows for coordination of 9-1-1 service, while also allowing each 9-1-1 Authority (typically consisting of Sheriff's, Police and Fire Chiefs, and/or County Commissioners) to tailor its 9-1-1 operations to best meet the needs of their county and constituents. A bureaucracy such as a state agency to coordinate 9-1-1 would tend to adopt one-size-fits-all solutions, grow larger and more administratively expensive over time, and exert increasing control over local decision-making contrary to Home Rule and local control.

While the PSAPs supported by BRETSA have been NG9-1-1 ready for several years, BRETSA recognizes that there are also reasons not to migrate to NG9-1-1 at this time. Advantages of NG9-1-1 include a robust network with redundant and diverse facilities and the ability to transfer calls between PSAPs in different jurisdictions. Colorado already has that with paired and interconnected 9-1-1 Selective Routers and diverse and redundant trunking to PSAPs, and other states may have these characteristics as well. NG9-1-1 will enable the transmission of text messages, photos, video and other data to the PSAP. However various providers have identified various means of delivering text messages to the PSAP without NG9-1-1, and many public safety professionals consider the ability to deliver photos, video and other data to the PSAP of limited value given the actual mission of the PSAP and First Responders.

NG9-1-1 will enable hosted PSAP telephone and CAD systems; but it is yet unclear whether the economies of hosted services justifies the expense of the ESInet and additional bandwidth required for hosted services. NG9-1-1 will permit rule-based routing of 9-1-1 calls in

a PSAP overflow or outage situation; but routing of calls to alternative PSAPs or locations requires agreements for the handling of those calls, poses liability concerns for PSAPs handling calls from outside their jurisdiction, and leaves unanswered the question of what the second PSAP does with the call. The PSAP will not ordinarily have visibility to First Responder resources and statuses in the first county, let alone the ability to dispatch them. While resolutions to these issues are foreseeable and likely on the drawing board, they have not yet been resolved.

One of the exciting capabilities projected to be available with NG9-1-1 is the ability of smartphones to transmit certain profile information with a 9-1-1 call or text, such as a non-English speaker's native language, or that a "caller" has a speech- or hearing-disability. In the former case, the call would be routed to a call-taker who speaks the caller's language, or a third-party interpreter would be conferenced-in on the call *during call set-up*, saving valuable time. In the latter case, the "call" would be routed to a call-taker skilled at communicating with persons with the type of disability involved, or an MCLS as proposed by the EAAC or a relay service would be conferenced-in *during call set-up*.¹⁷ However the MCLS call centers have not yet been established, relay center-emergency call experts engaged, or provision made for caller profiles in wireless phones and inclusion of profile information in "calls" to 9-1-1.

¹⁷ From review of comments in this docket, it appears that the difficulties in placing calls to 9-1-1 through a relay service are that (i) the relay services do not have the facilities and training to identify the caller's location and the ten-digit number of the PSAP serving that location, or the ability to connect to the PSAP via 9-1-1 trunks, and (ii) the relay service personnel who have handled the calls did not have adequate skills, experience or training to handle emergency situations. Where the NG9-1-1 Data Complex identifies the "call" as coming from a speech- or hearing-impaired person, the NG9-1-1 Data Complex can conference the PSAP-preferred relay center in with the PSAP and caller *during call set-up*, so that the PSAP call-taker and relay service operator come on line at the same time. This will avoid the difficulties with relay service handling of 9-1-1 calls which have been related in this docket. The key is in routing emergency calls to the NG9-1-1 Data Complex (or PSAP) which engages the relay center, rather than routing such emergency calls to a relay center and relying it to identify and connect to the correct PSAP.

MCLS call centers may be established as proposed by the EAAC, or existing relay centers may employ and train personnel to handle emergency calls in light of the fact that emergency calls would be identifiable insofar as they would be received from the NG9-1-1 Data Complex. In either event, the necessary facilities to provide data, text, video, voice, and/or captioned telephony individually or in any combination would be required only to the MCLS call center/relay center; with a voice-only connection to the PSAP. This would also avoid the need for these technical capabilities and for the recruitment and training of PSAP personnel capable of communicating effectively with these callers, even in one-or-two person PSAPs.

Until some of these more useful features and capabilities of NG9-1-1 have been deployed for early-adopter PSAPs, NG9-1-1 primarily offers nothing more than delivery of the same 9-1-1 calls a PSAP currently receives, but in digital format and at increased cost. PSAPs may reasonably find it prudent to delay upgrading to NG9-1-1 until some of the promises of NG9-1-1 move from blue sky to fully implemented applications or services.

Decisions regarding transition to NG9-1-1, features to implement it, and operational priorities must originate at the local level.

VIII. Service Providers Must Take Responsibility For Educating Their Customers.

Service providers supply various communications services to their customers. It is the service providers' responsibility to advise their customers of the capabilities of the services they provide. There is evidence that many consumers believe they can send text messages to 9-1-1 today, and it is the service providers' responsibility to properly inform their customers if this is not the case. The same is true for any interconnected texting application provider.

Amazingly, service providers demand that they be (i) exempt from state regulation or oversight, even with respect to wholly intrastate services, (ii) granted immunity from liability for their negligent, grossly negligent and intentional actions pertaining to emergency communications, and (iii) that the Commission and public safety community educate their customers regarding their services.¹⁸

Service providers have many "touches" with their customers, each an opportunity to educate their customers. These "touches" include calls to customer service, visits to "brick and mortar" retail locations, the transmission of invoices, the transmission of text messages and e-

¹⁸ T-Mobile even makes the "Hush-a-phone" type argument that subjecting wireless service providers to different state liability standards will "continue to hamper the implementation of new technologies." T-Mobile Comments, at 3. Not only is this assertion ludicrous, but it contradicts the competing marketing claims regarding their progress in implementing 4G and LTE.

mails to customers, device packaging, and promotional messaging through print and broadcast media and the Internet. Service providers, device providers and application developers also have the unique ability to provide “real-time” education and guidance or cues to end users regarding use of their services and devices to contact 9-1-1, through pop-up messages and context-sensitive help menus. Given the service provider’s relationship and contacts with their customers, they have far superior opportunities and more cost-effective opportunities to educate *their* customers regarding use of *their* service and *their* devices, which is their responsibility in any event.

Service providers may not escape their obligations; they must educate their own customers regarding their services.

Respectfully submitted,

**BOULDER REGIONAL EMERGENCY
TELEPHONE SERVICE AUTHORITY**

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