

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

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

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

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Summary

Commenters and parties conducting demonstration projects of text-messaging-to-9-1-1 are providing the service today. The agreement of the major national CMRS providers to commence supplying text-to-9-1-1 service by the end of 2014 is just a further implementation of their strategy to delay implementing the service. The Commission should nevertheless adopt the proposed rules requiring all CMRS providers to supply the service by the same dates to which the major providers have agreed, subject to waiver.

In adopting the deadlines for implementation of text-messaging-to-9-1-1, the Commission should also require CMRS providers to continue to provide access to system data necessary for existing provision of text-to-9-1-1 service, and for third party providers such as TCS, Intrado and Bandwidth, to implement new text-to-9-1-1 service. The Commission should also adopt deadlines for CMRS providers to improve the location accuracy of text messages to 9-1-1 and voice calls, including implementation of Phase II routing where possible.

The Commission should specify formats and specifications for text messages to 9-1-1, whether transmitted by CMRS providers or Interconnected Application Providers. This is necessary to assure that the taxpayer/ratepayer-finances public safety agencies incur the expense of only one SMS and one Real Time Text messaging system, and Public Safety Answering Point call-takers have only one system to work with.

Text-messaging-to-9-1-1 should be discouraged except in the case of the speech- and hearing-impaired community, silent call situations, and people located in areas where there is an insufficient signal to place a voice call.

Table of Contents

	Page
Summary	i
Table of Contents.	ii
I. The Commission Should Adopt The Proposed Deadline For CMRS Providers To Supply Text-Messaging-To-9-1-1.....	2
II. Text-Messaging-To-9-1-1 Should Be Addressed Independently of Next Generation 9-1-1.	2
III. The Commission Should Impose Firm Deadlines And Grant Temporary Waivers.	5
IV. The Deadline Should Not Be Permitted To Delay Implementation Of Text-Messaging-To-9-1-1.....	7
A. Service Providers Are Seeking To Game The Commission In The Customary Way.	7
B. Commission Action Should Not Preclude More Expeditious Implementation of Text-Messaging-To 9-1-1.	8
V. It Is Essential That The Commission Specify Default Systems Or Standards For Text-Messaging-To-9-1-1.	10
VI. The Commission Should Require Service Providers To Improve Location Capabilities.	12
VII. Text-Messaging-To-9-1-1 Should Be Generally Discouraged.	14
VIII. Text-Messaging-To-9-1-1 Is A Service Feature Which Should Be Funded By Service Providers.	17
A. Carriers Should Fund Carrier Services.	18
B. 9-1-1 Authorities And PSAPs Have Elected Carrier Self-Funding.	19
IX. Liability Protection Is A Matter To Be Addressed By The States.	20
X. Conclusion.	22

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The Boulder Emergency Telephone Service Authority (“BRETSA”), by its attorney, hereby submits its Comments on the Commission’s proposals in its December 13, 2012 Notice of Proposed Rulemaking in the above-referenced Docket (“NPRM”).¹ 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

¹ BRETSA previously filed Comments and Reply Comments, on January 29 and February 8, 2013, respectively, responding to the Commission’s proposal in Section III.A. of the NPRM to require that certain automated messages be provided to consumers attempting to send text-messages to 9-1-1 when text-messaging-to-9-1-1 is not available.

the entity responsible for 9-1-1 operations, *and* of the agencies and authorities responsible for PSAP operations and overall public safety services.

I. The Commission Should Adopt The Proposed Deadline For CMRS Providers To Supply Text-Messaging-To-9-1-1.

The record in this docket demonstrates that text-to-9-1-1 service can be provided today. There have been a number of successful demonstrations and trials of text-messaging to 9-1-1. Third-party service providers and Interconnected Application Providers have also reported that they are currently providing text-to-9-1-1 services. Accordingly, the Commission should adopt the proposed deadlines for CMRS providers to supply the service to PSAPs which request it.

As discussed below, the Commission should assure that its rules do not delay implementations of text-to-9-1-1 which may occur prior to the Commission's proposed deadline for provision of the service.

By moving forward with flexible delivery mechanisms for text-to-9-1-1, the Commission can avoid delaying service availability until NG9-1-1 is deployed and achieve almost ubiquitous text-to-9-1-1 service much more quickly. This will limit concerns with customer confusion caused by text-to-9-1-1 being available in some jurisdictions but not other, even adjacent, jurisdictions.

II. Text-Messaging-To-9-1-1 Should Be Addressed Independently of Next Generation 9-1-1

Text-messaging-to-9-1-1 does not require Next Generation 9-1-1 ("NG9-1-1"). Any suggestion that text-to-9-1-1 requires NG9-1-1 will only serve to delay its implementation, as authorities in non-NG9-1-1 jurisdictions or with non-NG9-1-1 PSAPs will assume that text

messaging is not available to them. Thus, the Commission should make clear that the text messaging requirements it adopts are independent of and unrelated to NG9-1-1.²

NG9-1-1 is just one means of delivering text messages. It has been demonstrated in this docket that text messages can be delivered, *inter alia*, via TTY device or interface, browser (over the public Internet), via a remote call center or contractor receiving and exchanging the text messages with the “caller” and relaying the emergency information to the destination PSAP (perhaps via the “ASAP” system), or through forwarding via wireless provider to smartphones procured by the PSAP for that very purpose.

It is important that the Commission be clear that text-to-9-1-1 service is not dependent upon deployment of NG9-1-1 to a PSAP and PSAP capability of receiving the text messages in SIP format via NG9-1-1. There are jurisdictions which are not yet receiving Phase II Wireless E9-1-1. On information and belief, this is in some cases due to the PSAP’s understanding that they must have a CAD system capable of displaying caller-locations on a map display, and/or that requesting Phase II Wireless E9-1-1 would result in increases to their constituents’ wireless

² Next Generation 9-1-1 (NG9-1-1) is being pursued largely for the promise of providing text, video, photos and other data (such as crash telemetry data) to the PSAP and First Responders. The facts are, however, that (i) in the ordinary case, text, video, photos and other data will delay the dispatch and arrival of First Responders and/or be of little use for Emergency Response without corresponding benefit, (ii) First Responders already have the training and take with them the equipment they will require for any incident they might encounter (and if they do encounter an extraordinary situation as might be dreamed-up by a Hollywood script writer, they are unlikely to have the necessary equipment at hand anyway). NG9-1-1 may be effective for improving reliability of 9-1-1 networks which do not feature redundant Selective Routers and trunks as does the Colorado 9-1-1 System, or providing hosted phone, CAD and other services (assuming that the costs of implementing NG9-1-1 do not exceed the cost efficiencies of the hosted services); but there is no urgent need to spend billions of dollars to expeditiously implement NG9-1-1 nationwide. Video messaging and transmission of photos to the PSAP will is not available today, so that transition to NG9-1-1 may simply mean that phone calls will be delivered in digital format at greater expense than with legacy, analog service. It makes more sense to educate the public and manage consumer demand rather than seek to implement text and video to 9-1-1 to the detriment of Emergency Response for everyone. Hiring additional PSAP personnel to handle additional and less efficient messaging formats may mean reductions in the number of actual First Responders employed to respond to the location of emergencies, also to the detriment of overall Emergency Response.

service rates. This understanding may be based on statements made by representatives of wireless providers.³

In fact, 47 C.F.R. §20.18(j)(i) requires only that a PSAP be “capable of receiving and utilizing the data elements associated with the service, and a mechanism for recovering the Public Safety Answering Point's costs of the enhanced 911 service is in place.” To *use* the location data, a PSAP need only have (i) an inexpensive consumer level map application providing the capability of entering locations by geographic coordinates, access, (ii) internet access and a browser capable of accessing Google Maps, Bing Maps or Mapquest in which geographic coordinates can be entered, or even a set of USGS Quads for their jurisdiction and a ruler to manually plot caller locations.⁴ It is beneficial when a PSAP does have equipment which can display the location information without PSAP personnel having to manually enter or plot the data, as the call-taker can use the location data to verify information being provided by the caller and interdict prank or harassing calls. However even where the location must be manually plotted or entered (copied and pasted) into an independent mapping program or webpage, the PSAP is “capable of utilizing the data elements” (location information).

In the event the SSP facilities or customer premises equipment is incapable of transmitting or displaying the location information, the availability of text-messaging to the PSAP may actually provide an economical workaround. It may well cost less to automatically transmit location information associated with a p-ANI to such a PSAP via text message (or alternatively, via (i) e-mail, (ii) fax, etc.) than to upgrade the transmission facilities or CPE.

³ This has been true in the past. Whether this remains true for any PSAP today is not known; but misunderstandings of the requirements by official's whose primary responsibility and focus is delivering PSAP and Emergency Response services is a concern.

⁴ It has been stated that there are PSAPs which have not yet requested even Wireless Phase I location information. *See* January 29, 2013 Comments of Blooston Rural Carriers in this Docket at 4 (para. 5.) BRETSA is not aware of any reason that a PSAP otherwise receiving E9-1-1 Service should not be receiving Phase I wireless location information today, given that Phase I location data is simply the street address of the wireless system antenna on which the call is received.

Just as authorities have delayed implementation of Phase II Wireless E9-1-1 Service based upon misunderstandings that such service required expensive CAD systems to automatically display the locations, or network or PSAP-system upgrades; the hype over NG9-1-1 may lead to misunderstandings that NG9-1-1 is a necessary prerequisite to text-to-9-1-1 service when entrepreneurs have been demonstrating inexpensive alternatives for implementation in a non-NG9-1-1 environment. This is important because delivery of text messages to PSAPs via flexible means can allow for the almost ubiquitous deployment of text-to-9-1-1 service to be rapidly achieved with minimal PSAP cost, virtually eliminating concerns with customer confusion resulting from text messaging being available in some jurisdictions and not others. The ubiquity of text-messaging-to-9-1-1 is also important because text-messaging is primarily a service of wireless (mobile) devices; wireless users may not know the jurisdiction in which they are located when they use their wireless devices.

III. The Commission Should Impose Firm Deadlines And Grant Temporary Waivers.

The several trials of SMS text-messaging to 9-1-1, as well as the emergency text messaging services now being provided by over-the-top application providers and providers delivering text messages via PSAP TTY devices or interfaces, demonstrates that text-messaging to 9-1-1 can be implemented today. Whatever deadline the Commission adopts for provision of text-messaging to 9-1-1, should be established as a firm deadline for all CMRS providers.

The rule waiver process is available for providers which are able to demonstrate that they are not reasonably capable of providing text-to-9-1-1 service by the deadlines established by the Commission. The successful trials of text-to-9-1-1 service demonstrates that any deadline established by the Commission will be reasonable, particularly a deadline 20 months in the

future.⁵ CMRS providers which are unable to meet the deadline should be the exception, so the Commission should not be overwhelmed with waiver requests.

There are several advantages to granting waivers for those providers which are unable to meet the established deadline, rather than trying to provide different deadlines for various providers or classes of providers. First, the waivers would be limited to those providers who are not reasonably capable of meeting the deadline, even though it has been demonstrated that the service can be provided today. Second, any waivers would be for a limited period of time, based upon the representations in the waiver requests as to the time required to address the obstacles to the particular provider supplying the service. The Commission should require that each waiver requests include specific commitments, plans and a realistic timetable to address the specific obstacles to provision of text-to-9-1-1 service. Third, successive waiver requests would require a showing that factors beyond the provider's control prevented it from meeting the timetable to which it had committed.

The waiver process would avoid further delay due to CMRS provider foot-dragging, or strategies to delay implementation of text messaging until technological evolution enable implementation of the service at less cost to them, and maintain the momentum towards ubiquitous implementation of text-to-9-1-1.

The Commission should not grant waivers on the basis that PSAPs have not yet upgraded to Phase I or II Wireless E9-1-1, as suggested by Blooston. Neither Phase I nor Phase II Wireless E9-1-1 service is a technical prerequisite to text-to-9-1-1 service, and indeed implementation of text messaging capability within the PSAP, whether via TTY, browser, PSAP-smartphone or

⁵ Under the proposed rules, CMRS providers would not be required to make text-to-9-1-1 service available until May, 2014, and would have an additional 6 months to provide service in response to a PSAP request.

other means could provide an inexpensive alternative channel for delivery of Phase I and Phase II wireless location data to the PSAP.

IV. The Commission Should Not Allow The Proposed Deadline To Delay Implementations Of Text-Messaging-To-9-1-1.

Text-Messaging to 9-1-1 is being provided *now*. There are ongoing demonstrations of text-messaging-to-9-1-1, and existing text-to-9-1-1 services. Commenters have demonstrated in this docket that they can provide text-messaging-to-9-1-1 today, if they are provided access to wireless provider system information. However the deadline in the agreement between the national carriers and the National Emergency Number Association (“NENA”) and proposed by the Commission will delay the general availability of text-messaging-to-9-1-1 until the end of 2014. That is, wireless carriers would not be required to make available text-messaging-to-9-1-1 until May, 2014. Service providers then have up to six months to respond to a PSAP’s valid request to implement NG9-1-1.

A. Service Providers Seek To Game Commission In The Customary Way.

The well-worn playbook for industry response to regulatory requirements is to (i) applaud the agency’s foresight in addressing the issues, but point out the complicated considerations or technological challenges to implementing the requirements, (ii) recommend or form committees to spend years studying the issues and developing potential solutions and timelines for implementation, and (iii) when these tactics have worn thin, propose implementation of a self-serving version of the regulations at a future time that will further delay the regulations. The action of the CMRS providers here fits the same stale script.

B. Adoption Of The Proposed Rules Should Not Preclude More Expeditious Implementations of Text-Messaging-To-9-1-1.

For the Commission to adopt its proposed deadlines for CMRS providers to make available text-messaging to 9-1-1 could forestall any implementation of such service until the end of 2014, and then limit the service to that offered by the CMRS providers themselves. The deadlines could provide a basis for CMRS providers not to cooperate with alternative and more expeditious implementations of text-messaging-to-9-1-1.

Entrepreneurial entities have not only shown that they can provide text-messaging to 9-1-1 today, they have demonstrated a willingness to deliver text-messages to the PSAP in a format of the PSAP's choosing. They have even demonstrated a willingness to operate call centers to intercept the text messages and exchange text messages with the "caller," and place a voice call to the destination PSAP to deliver the message content.

The Commission should prohibit CMRS providers from limiting, restricting or terminating text-to-9-1-1 services they currently provide, or services such as access to CMRS system-information necessary for routing such text messages.

Second, the Commission should act on BRETSA's November 21, 2012 Petition for Rulemaking, which proposed that the Commission require CMRS and VoIP providers provide manual and automated electronic access to their customer and system information for purposes of, *inter alia*, (i) locating wireless callers to 9-1-1 who have been disconnected, (ii) routing text messages to 9-1-1, (iii) obtaining customer information to populate 9-1-1 and Emergency Notification Service databases, and (iv) auditing or verifying remittance of 9-1-1 Fees. BRETSA proposed that PSAPs and their agents (such as SSPs and ENS providers) be able to access the data of all providers through a single interconnection point, and indeed that the CMRS providers cooperate to develop a single service bureau to provide such information. This would serve the

interest of providers and public safety agencies (and taxpayers) alike by leveraging economies of scale, and allow the providers to implement such measures as they deem necessary and appropriate to protect their proprietary information. The establishment of such a centralized location for third-party vendors to access CMRS and VoIP system information for routing of text messages to 9-1-1 (and perhaps 9-1-1 calls) would at the same time provide a competitive environment for such vendors to develop new services and technologies which would benefit the public interest (in the context of 9-1-1 and public safety applications), and consumers and CMRS providers (in the context of consumer-oriented commercial services for which CMRS providers could assess a fee for access to system information).

Finally, companies such as Intrado, TCS and Bandwidth currently route VoIP and wireless 9-1-1 calls to the appropriate 9-1-1 Selective Router and location information to the ANI/ALI database pursuant to contracts with wireless and VoIP providers. Third party text-to-9-1-1 and emergency services providers including over-the-top application providers may rely upon these “Intermediate Providers” for the network and connections to the selective router and ANI/ALI database to deliver calls and location information, and for p-ANIs necessary to route calls to the correct PSAP. In an NG9-1-1 environment, these same Intermediate Providers will be relied upon by to route calls to the NG9-1-1 data complex. The Intermediate Providers may also compete with the third-party providers in the provision of text-to-9-1-1 and similar emergency services. To the extent the Commission preempts states from regulating the transport of 9-1-1 calls and information to the 9-1-1 Selective Router, ANI/ALI database, and/or NG9-1-1 Data Center, and assignment of p-ANIs, the Commission must prohibit discrimination in the provision of services by Intermediate Service Providers to ensure a fully competitive market for the development and provision of text-to-9-1-1 and related services.

V. It Is Essential That The Commission Specify Default Systems Or Standards For Text-Messaging-To-9-1-1.

The Commission proposes that CMRS providers supply text-messaging-to-9-1-1 either natively within customer devices, or via an over-the-top application for use with customer devices. The Commission also proposes that certain over-the-top text messaging applications be capable of transmitting text messages to NG9-1-1. Many application developers are already offering a variety of applications capable of transmitting text messages, and even photos and video messages, to 9-1-1. Some of these applications require that software be installed at the PSAP.⁶

It is not economically or operationally feasible for PSAPs to install software or systems to receive the multitude of messaging systems which could be developed. It is not feasible for PSAP personnel to be trained on and familiar with the number of messaging systems which could be developed. Commenters in this proceeding supporting implementation of SMS text-messaging to 9-1-1 have argued that in an emergency, a person should be using a text messaging system with which they are familiar rather than an interface which is new to them. The same logic should apply to use of a text messaging system by PSAP personnel to receive and respond to text messages to 9-1-1, *i.e.*, PSAP personnel should be able to use consistent and familiar interfaces to receive, process and respond to text messages and other message formats which may be transmitted to 9-1-1. Thus to control PSAP costs, provide PSAP personnel a minimum number of message formats and implementations with which to contend, and protect the

⁶ Developers and marketers of these applications may also sell smartphone applications and services to the public by promising that in an emergency, they will provide photographs and other data to the PSAP; when PSAPs may not have the facilities to receive the data or corresponding applications to display the data, and/or the data may not be of any actual use for Emergency Response. The smartphone applications or services may also provide false expectations of the capabilities of Emergency Response. There is significant potential for the public to be defrauded.

Commission should limit the message formats which may be used to transmit text-messages to the PSAP, and the formats which can be transmitted to 9-1-1 without a PSAP request.⁷

Specifically, the Commission should (i) adopt specifications for SMS text-messaging, and a standard for real-time text (RTT) messaging to 9-1-1 with which all CMRS providers can comply and with which all over-the-top application providers will be required to comply for messaging 9-1-1, *i.e.*, message 9-1-1 via the RTT and/or SMS text API; (ii) over-the-top applications or other services which are intended to provide automated messages or alarms (messages or alarms which are *not* initiated through simultaneous action by the user), or which are intended to or purport to provide a service other than a communications channel to a PSAP for transmission of a message simultaneously or contemporaneously composed by the user, must be first transmitted to a call center where a human being will verify the emergency (confirm that it is not a “false alarm”) and communicate appropriate information regarding the emergency and/or the individual(s) involved in the emergency to the PSAP in the formats approved by the PSAP.⁸ The call centers should communicate emergency information to PSAPs in the same manner that premises alarm monitoring companies currently do.

⁷ Comments submitted in this docket and numerous Colorado back-country incidents have demonstrated that SMS text messages may be transmitted when there is an insufficient CMRS signal for a voice call. It is unclear whether an over-the-top text messaging application transmitted via the Internet (as implemented by CMRS carriers) also provide this important capability.

⁸ Although not relevant in the immediate context, the Commission should adopt standards or specifications for transmission of video messages, photos attached to text messages and other data which may be attached to a text or voice message to facilitate separation of non-voice data from a voice call without compromising the duplex nature of the voice call or delaying delivery of the text message. Data, photos and particularly video attachments may impose significant bandwidth requirements on the ESInet and impede PSAP receipt of additional calls. Many public safety professionals believe photos, videos and crash telemetry data may be useful for investigation and prosecution after-the-fact, but will be of little use for dispatch purposes and may actually delay dispatch of First Responders, and may unnecessarily add to the stress of PSAP personnel. Separating such content at the NG9-1-1 Data Complex to be stored and forwarded as specified by the PSAP will ease bandwidth requirements, particularly as non-real-time transmissions can be made on a bandwidth-available basis. Some PSAPs are seeking means to suppress display or bypass display of such content at the PSAP but forward it to First Responders, who *may* make use of it. This would also be facilitated by existing or yet-to-be developed messaging formats which would allow the NG9-1-1 Data Complex and PSAP to identify and separate discrete message payloads by format without interrupting duplex communications; particularly duplex voice communications.

VI. The Commission Should Require Service Providers To Improve Location Capabilities.

Text Messages to 9-1-1 will apparently be routed primarily based upon Phase I Wireless E9-1-1 information, the cell system antenna to which the device used to send the text message is connected, under current technology. The same information will be apparently be presented as the “caller” location. The accuracy of this information for call routing purposes will depend upon the area served by the wireless system antenna, and its proximity to jurisdiction boundaries. The accuracy of this information for purposes of locating a “caller” will depend upon the area served by the cell system antenna (the coverage area).

However application developers have stated to representatives of BRETSA that applications can be developed which would insert geographic coordinates, determined by a GPS chipset in the device, into the text messages; even SMS text messages. Representatives of PSAPs supported by BRETSA have also met with representatives of NextNav regarding potential demonstration projects involving the NextNav location determination system, which utilizes terrestrial GPS transmitters and existing GPS chipsets in smartphones.⁹ NextNav claims that its system will provide more precise location information indoors and in urban canyons (including in the vertical axis) than the current FCC requirements for outdoor locations; but more importantly from BRETSA’s perspective, NextNav has indicated that its system permits the smartphone GPS chipsets to provide a position fix within six seconds from a cold start; and reduce the battery draw of such GPS chipsets by up to ninety percent so that GPS chipsets can be left on, eliminating a delay in obtaining a position fix. This presents the potential for text messages as well as calls to 9-1-1 to be routed based upon Phase II location data. BRETSA

⁹ The proposed demonstration projects may have been rendered unnecessary by the recent tests of indoor location technologies conducted in San Francisco by the Communications Security, Reliability and Interoperability Council, Working Group III. The tests were concluded in December 2012 and the results are to be published in March, 2013.

understands that other location technologies were included in the indoor location texts conducted by Communications Security, Reliability and Interoperability Council, Working Group III, and these may also offer improvements which will facilitate Phase II routing of 9-1-1 calls and texts.

BRETSA regards these developments as important because delays in dispatch of First Responders due to misrouted 9-1-1 calls can be measured in minutes, even in states such as Colorado where PSAPs have the capability for “two button transfer” of a misrouted call to any other PSAP in the state over the 9-1-1 network, and even when the first PSAP is able to readily identify the PSAP which should receive the call. Because information gathered from the caller by the first call-taker before determining that the caller is located outside the first PSAP’s jurisdiction is not transferred with the call the second call-taker at the appropriate PSAP must begin gathering the information again after the call is transferred. Thus there is delay both in the initial handling of the call before it is identified as having been misrouted, and in the transfer and re-interviewing of the caller for the same information by the PSAP to which the call is transferred. This will be exacerbated in the context of text messages because it is unclear how misrouted texts will be transferred. Properly routing the text messages based on more accurate location information, including Phase II location information, will be critical to avoiding these issues.

It is not clear if these technologies are ready for market; but even if they are not, continued improvement in location technology is likely. Accordingly, the Commission should not simply adopt a deadline for CMRS providers to provide text-messaging to 9-1-1, but should also adopt additional deadlines for improvements in the resolution of location information used to route text messages to 9-1-1, and to be provided with such text messages.

VII. Text-Messaging-To-9-1-1 Should Be Generally Discouraged.

As BRETSA and other public safety entities have stated in various comments in this docket, text-messaging-to-9-1-1 will, in the ordinary case, be less efficient than a voice call to 9-1-1 and delay Emergency Response. The primary purpose of 9-1-1 Service is to notify the public safety authorities of the location and nature of an emergency so that appropriate First Responders can be dispatched to the location. This can be most expeditiously accomplished through a voice call, which not only allows the information to be communicated more quickly, but also allows the call-taker at the public safety answering point to hear the level of stress in the caller's voice, better calm the caller, interrupt the caller and ask for the most pertinent information (which is not possible with simplex text-messaging systems), and to hear background noises. For PSAPs which provide Emergency Medical Dispatch ("EMD:"instructions in the provision of First Aid), the interactive diagnostic questions and the ensuing First Aid instructions are also much more effectively provided via voice call.

When a call is made to 9-1-1, the PSAP call-taker doesn't just speak with the caller, but is simultaneously seeking to determine whether the incident has already been reported and First Responders dispatched, entering into the CAD system pertinent information provided by the caller, identifying and dispatching First Responders who are available to respond, and reviewing premises records related to prior calls from the location or hazards at the location. The call-taker may review GIS data including maps, aerial photographs or Pictometry of the incident location, and complete other tasks if relevant to the particular incident. In larger PSAPs, personnel on any shift are assigned to dedicated call-taking or dispatch roles and the call-takers enter incident data provided by callers into the CAD system, and dispatchers use the data entered into CAD to dispatch First Responders. However the Commission has found that over 80% of PSAPs have 5 or fewer dispatch positions, and all PSAPs typically have more dispatch positions than

dispatchers who are regularly on duty.¹⁰ In smaller PSAPs, personnel will often simultaneously perform call-taking and dispatch functions, while also typing incident-related data provided by the caller or First Responders into the CAD incident record.

With both large and small PSAPs, 9-1-1 calls are typically recorded, but the call-taker's entry into the CAD incident record of the pertinent information from the caller (and First Responders, in a PSAP where call-taking and dispatching responsibilities are not assigned to different personnel) is critical. The ability of a CAD system to capture a text-message exchange as a record may not substitute for a "call-taker" pulling the critical information out of the exchange for entry into the CAD incident record which a dispatcher may use to dispatch First Responders, which may be forwarded to First Responder MDCs, and which may be used to populate First Responder incident reports, downloaded into agency data record systems, etc. Multitasking skills are a key requirement for PSAP personnel, but the ability of an individual to timely respond to e-mail messages regarding an incident and simultaneously enter critical information from the e-mail messages into a CAD incident record and complete other keyboard-driven tasks, would be rare indeed.¹¹ Yet it has even been suggested that a single "call-taker" could handle text message exchanges *regarding emergencies* with multiple "callers" at once.

It has also been stated that concerns with PSAPs being overwhelmed with text messages to 9-1-1 have been demonstrated to be overblown. BRETSA respectfully submits that it is premature to reach such a conclusion on the limited tests that have been conducted, and before text-messaging to 9-1-1 is generally available.

¹⁰ The extra dispatch positions are used for training, in case of an outage or during updates of the CAD workstations, or for a major incident when extra dispatchers are called-in to work on overtime.

¹¹ BRETSA's experience is that fewer than one percent of applicants for PSAP positions are hired, and fifty percent or fewer of those hired complete training. Typing ability, *multitasking ability*, psychological or emotional capability to handle the stress of the job, and police background checks are the primary evaluations which applicants must pass.

Text-messaging-to-9-1-1 is nevertheless critical for certain populations and in certain circumstances. It has been established in this docket that the speech- and hearing-impaired community now relies primarily on text messaging, and there has been an 80% decrease in use of TTY devices and communications over the last decade. Text messaging is also useful in “silent call” situations, when an individual would be placed in increased danger if he or she were to be heard speaking to a PSAP call-taker.

Finally, there are situations where individuals in locations where they cannot get a sufficient signal to place a voice call are able to communicate by text message. For example, there have been situations where snowmobilers lost in the Colorado back country have been able to contact friends by text message. After being alerted to the situation PSAP personnel used their personal smartphones to contact the snowmobilers by text message, and were able work with First Responders to locate and rescue them.¹²

Thus, text-messaging-to-9-1-1 is critical for certain populations, and in certain circumstances, but should be discouraged in the ordinary case. As stated by BRETSA in its comments on Section III.A. of the NPRM, any time an individual addresses a text-message to 9-1-1, a pop-up message generated by the application or device should *always* prompt the user to place a voice call to 9-1-1 instead of sending a text message. Such a message might state: “Please CALL 9-1-1 if you can safely do so,” or “First Responders will arrive sooner if you CALL 9-1-1.” If a person is unable to call 9-1-1 because of a disability, their location in a Gray Area, or the sound of a voice call would place them in danger; then of course they will attempt to send a text message to 9-1-1 instead.

¹² BRETSA will adapt terms previously used to describe the number of broadcast signals available in an area, and will hereinafter refer to areas in which a sufficient CMRS signal cannot be received to place a voice call, but in which text-messages can be sent and received, as a “Gray Area.”

The requirement for a prompt to call 9-1-1 instead of sending a text message is distinct from the Commission's proposal in Section III.A. of the NPRM to require provision of bounce back messages when text-messaging to 9-1-1 is not available. The prompt to call 9-1-1 instead of sending a text message would (i) be made anytime a user addressed a text message to 9-1-1, whether text-messaging-to-9-1-1 is available or not, and (ii) would be generated by the text-messaging application or user device. The user would not be prevented from addressing or attempting to send a text-message to 9-1-1, but would simply be prompted to call 9-1-1 instead.

Finally, public education and information regarding the availability of text-messaging to 9-1-1 should be directed to the speech- and hearing-impaired community, but not to the public in general. With the above-proposed requirement, a member of the public seeking to send a text message to 9-1-1 would receive a prompt to call instead but would not be *prevented* from sending a text message. If text-messaging to 9-1-1 is not available a bounce back message would be received notifying the individual that the service is not available.

VIII. Text-Messaging-To-9-1-1 Is A Service Feature Which Should Be Funded By Service Providers.

Carriers should meet their customers' expectations and provide text-to-9-1-1 service at their expense. PSAPs and the Authorities that support them should continue to be responsible for the costs of delivery of calls and messages from the 9-1-1 Selective Router/NG9-1-1 Data Complex to the PSAP. In the event that a PSAP subscribes to a provider's or vendor's service converting text messages to an alternative format and delivering them to the PSAP, the PSAP should be responsible for the cost of conversion and alternate delivery of the message. This will send the correct economic signals and encourage a PSAP to upgrade its systems or services to more efficiently receive the messages in native format when the volume of such text messages reaches a significant level.

A. Carriers Should Fund Carrier Services.

Text messaging is a standard feature of wireless services, and is also now being made available by VoIP providers. Not only do customers expect that wireless services will include text messaging, but the record in this docket demonstrates that customers expect text-messaging to 9-1-1 to be an available. Indeed, wireless and VoIP providers are able to establish price points based upon the “buckets” of text messages customers purchase. Service providers should be responsible for the costs of their own services, including the cost of delivery of text-messages to the NG9-1-1 Data Complex, or to an advanced call-center with which a PSAP contracts for format conversion and alternative message delivery. As with voice calls to 9-1-1, the PSAP should be responsible for the cost of SSP service from the NG9-1-1 Data Complex (equivalent to the legacy Selective Router) to the PSAP.

In the event a PSAP subscribes to a vendor to convert the format of text messages to TTY or another format for delivery of text messages, the vendor providing the format conversion and message delivery service should be able to charge the PSAP a per-message fee, a monthly or annual fee, or a combination of a monthly or annual fee and a per-message fee for this service. This will serve three goals. First, by requiring that PSAPs which have not upgraded to NG9-1-1 compatibility rather than wireless and VoIP service providers be responsible for the cost of message conversion and delivery, consumers in states and local jurisdictions which have incurred the costs of upgrading to NG9-1-1 will not also be required to subsidize through higher subscriber charges the message format conversion and alternative delivery services required by those jurisdictions which have not upgraded to NG9-1-1. (Otherwise CMRS providers could be expected to pass any increased service costs through to their subscribers through higher service rates, under nationally- or regionally-advertised price plans.) Second, the per-message pricing

will send economic signals to PSAPs encouraging them to upgrade to NG9-1-1 compatibility and capability to receive text messages in a native format, when the volume of text messages becomes significant and the PSAP will enjoy a cost-savings by doing so. The third benefit is that it will create a market for the service, encouraging price and feature competition so that neither the Commission nor the states will have to regulate rates for such message conversion and delivery services.

B. 9-1-1 Authorities And PSAPs Have Elected Carrier Self-Funding.

BRETSA believes that the wireless E9-1-1 model should be applied to text-to-9-1-1. Initially, the Commission required that PSAPs have a means of funding Wireless E9-1-1 service, including costs of changes in wireless provider equipment necessary to provide the service. Subsequently, the Chief of the Commission’s Wireless Telecommunications Bureau issued the “*King County Letter*,” clarifying that PSAPs could elect carrier self-funding as the means of funding wireless provider costs to provide the service.¹³ Most, if not all, Colorado 9-1-1 Authorities opted for carrier self-funding after the release of the *King County Letter*. That model has worked well for wireless 9-1-1, with wireless carriers incurring the cost for services which their customers expect, and PSAPs being responsible for the costs of the SSP call aggregation and transport service from the point that the call is delivered to the 9-1-1 Selective Router and location information updated in the shell record in the ANI/ALI database. The same model should be applied for interim (alternative) text message delivery solutions, as discussed above, and in the case of NG9-1-1 service.

¹³ Letter from Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, to Marlys R. Davis, E911 Program manager, Department of Information and Administrative Services, King County, Washington (May 7, 2001)(*King County Letter*). The letter also drew the demarcation point between service provider and PSAP responsibility at the 9-1-1 Selective Router. *King County Letter*, at 4.

IX. Liability Protection Is A Matter To Be Addressed By The States.

9-1-1 is an intrastate service, as 9-1-1 calls originate and terminate within the same state. Liability of 9-1-1 service providers will primarily arise under state laws. In Colorado, service providers are given *limited* immunity, in that they remain liable for intentional acts or gross negligence. This approach seems appropriate to BRETSA, in that it avoids excessive claims and litigation and avoids the need for service providers to increase rates to offset litigation costs and damages awards; yet it provides incentives for service providers to exercise care and avoid indifferent or intentional conduct which would interfere with the proper delivery of 9-1-1 calls.

Some states may reach a different conclusion than BRETSA, and choose to grant or deny immunity or limited immunity to service providers. A state could conclude that denying any immunity to service providers would allow for residents damaged as a result of a service provider's negligent actions to be made whole, and the costs to be spread among all residents of the state. The costs would be spread among all residents through the mechanism of (i) increased provider charges to public safety authorities to enable it to defend against and pay claims arising out of its 9-1-1 service, and (ii) the public safety authorities setting fees or surcharges at a level to enable payment of the increased rates.

Such a policy would be entirely within a state's discretion, and would not be unreasonable so long as the state was not able to spread the costs of its policy to ratepayers or taxpayers of other states. Because many wireless and VoIP providers have adopted regional or national pricing plans consistent with their national or regional advertising plans, it is possible that increased liability costs would be spread to users in other states. However it is within the Commission's authority to adopt regulations requiring that any rate elements or portion of a provider's pricing attributable to a state's policy denying immunity for ordinary negligence involving the routing and transmission of 9-1-1 calls be recovered through a separate surcharge

applied only in the state denying such immunity, or through charges to SSPs to be passed through to the authorities in the state which pay the SSP charges and establish the amount of the 9-1-1 surcharge for the state.

States may wish to grant limited immunity not only with respect to the routing and transport of 9-1-1 “calls,” but also for the operation of regional advanced PSAPs by commercial providers or governmental entities. Companies such as Bandwidth.com, Intrado or TCS which manage 9-1-1 compliance for wireless and VoIP providers, SSPs, or other third-party providers, might establish regional or national advanced PSAPs to convert and/or forward text message or multimedia message content to destination PSAPs not yet capable of receiving them in native format. These advanced PSAPs might interact with the callers in cases of call-overflow or receipt of message formats the destination PSAP is not yet prepared to handle, and transmit “CAD incident files” to the destination PSAP for dispatch of First Responders, just as a call-taker in the same PSAP might create a CAD incident file for a dispatcher to dispatch First Responders.

Alternatively, a PSAP which has upgraded to full NG9-1-1 capability might provide such advanced PSAP services for other PSAPs in its state. A feature of NG9-1-1 is that 9-1-1 calls can be forwarded to alternative PSAPs in the event that the PSAP which should receive a call is at capacity, or there is a PSAP or network outage. Depending upon state law, these advanced or alternative PSAPs might not have the benefit of governmental immunity when handling 9-1-1 calls from outside their local jurisdiction.

Decisions as to whether to grant immunity from liability under state law are for each state to make in its own discretion. As long as the state’s judgment does not increase the costs of service in other states or otherwise impact other states, neither any other state nor the federal government has any interest in the matter.

X. Conclusion.

The voluntary agreement of certain CMRS providers to supply text-to-9-1-1 service commencing almost two years from now is in furtherance of their strategy to delay implementation of the service. If the agreed-upon deadline is adopted by rule for all CMRS providers, they should not be permitted to use the deadline as a means to avoid implementation of alternative text-to-9-1-1 services by third-party providers in the interim.

Text-to-9-1-1 service should not be tied to NG9-1-1 service, because text-to-9-1-1 can be provided without that expensive service which is not urgently needed and can be more cost-effectively phased in over the long-term. Indeed, the availability of alternatives for delivery of text-to-9-1-1 lessens the demand for implementation of NG9-1-1.

Text-to-9-1-1 should be actively discouraged except in the context of the speech- and hearing-impaired community, individuals located in Gray Areas, and silent call situations. Devices and applications should be required to provide pop-up messages prompting users to place a voice call to 9-1-1, anytime a user addresses a text message to 9-1-1.

Respectfully submitted,

**BOULDER REGIONAL EMERGENCY
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