

**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
ON POLICY STATEMENT AND SECOND FURTHER NOTICE OF PROPOSED
RULEMAKING REGARDING TEXT TO 9-1-1**

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Summary

The Commission should adopt the proposed deadline of December 31, 2014 for all wireless and OTT text providers to make text messaging to 9-1-1 available. The Commission should require that device and CMRS providers make the APIs for location determination and native text messaging available for any text messaging application to use as the default means for transmitting text messages to 9-1-1. This will allow both users and PSAP personnel to work with text messaging interfaces with which they are familiar. The requirement to make location and communication APIs available to third-party applications should also apply to voice applications.

The requirements should apply to WiFi, CMRS and WiFi/CMRS capable devices. The ability of OTT applications to use native applications for text messaging 9-1-1 should enable the devices to search for and use any available connection to send a text message to 9-1-1, and provide a positive feedback when a connection is not available for a message to be sent.

Waivers should be granted upon a showing that the provider cannot meet the deadline due to circumstances beyond its control, and what steps the provider will take during the waiver period to implement text-to-911. Requiring device and CMRS providers to make APIs available should eliminate the need for OTT text messaging providers to obtain waivers.

While text messaging to 9-1-1 is important, in retrospect it is clear that there are a number of other issues presented by technological evolution which will impact greater numbers of people. BRETSA identifies a number of such issues for the Commission's agenda for the continued health of the 9-1-1 system.

The Commission should take the lead in development of location determination solutions for 9-1-1, rather than waiting to adopt an industry-developed solution. The Commission can

address the issue on a broader scope and scale providing a solution benefitting multiple services, while industry stakeholders will tend to focus on a solution for the service they provide.

Relay Services are not able to play a meaningful role in voice relay of text messages to 9-1-1. With text-to-911 solutions available at no cost to PSAPs, there is no demand for such a solution. Specialized Relay Services may allow the deaf and hard-of-hearing to communicate with PSAPs by ASL, but the Specialized Relay Services will require different hiring criteria, the ability to determine caller locations, and to terminate the voice relay calls over 9-1-1 trunks or ESInets to the appropriate PSAP. Relay Services do not currently have these capabilities.

Text-messaging to 9-1-1 for roaming users can perhaps best be provided through 9-1-1 Service Bureaus which have access to systems of both the roaming provider and the subscribed or home provider for the user. Such service bureaus could provide other important benefits.

Liability is a market force compelling providers to act prudently. Rather than assuming that service providers should benefit from liability protection, the Commission should carefully weigh the competing considerations. Liability for parties which market non-compliant or defective OTT applications may be necessary to prevent distribution of such applications.

As CMRS providers evolve their systems to LTE-IMS platforms, the additional coverage provided by control-channel SMS text messaging will be lost. The Commission should consider this and any remedial measures which may be available.

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Exhibit No. 1. Suicide By Semi Transcript

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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 January 31, 2014 Policy Statement and Second Further Notice of Proposed Rulemaking in the above-referenced Docket (“SFNPRM”). 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 funding 9-1-1 operations, *and*

of the agencies and authorities responsible for PSAP operations and overall public safety services.

I. Context Of The Second Further Notice Of Proposed Rulemaking: Many Issues Have Yet To Be Addressed.

BRETSA appreciates and commends the leadership of the Commission in addressing the challenges posed to 9-1-1 Service, and the opportunities presented, by changing telecommunications technologies. The implementation of wireless 9-1-1 and wireless E9-1-1 has saved countless lives. BRETSA is aware of cases in which text-messaging has saved lives of people lost in the Colorado mountains whose family and friends were able to contact 9-1-1 after receiving text messages; and BRETSA is also aware of people whose lives were lost when they were unable to text-message 9-1-1.¹

The Commission states in the opening paragraph of the SFNPRM:

One of the core missions of the Federal Communications Commission is promoting the safety of life and property of the American public through the use of wire and radio communications. Consistent with that overarching obligation, the Commission has specific statutory responsibilities with respect to 911 service.

* * *

At the broadest level, access to 911 is a core value that translates across communications platforms, including text applications, and should not be lost or devalued as technology changes.

While BRETSA is mindful of the truism that “all emergencies are local” and strenuously disagrees with statements that have been made by representatives of NENA that 9-1-1 service

¹ BRETSA has previously provided examples of people lost in wilderness areas who were rescued through text-messaging. For example, four snowmobilers lost in the Colorado mountains out of range of a cell tower to place a voice call, sent text messages to family and friends requesting help. Their family members and friends contacted the PSAP for a Colorado mountain county and provided the snowmobiler’s cell-phone numbers. A dispatcher then used her personal cellphone to exchange text messages with the snowmobilers, facilitating the rescue of three of the snowmobilers and, unfortunately, the recovery of the fourth. BRETSA has also seen reports of incidents where individuals have been murdered after text-messaging friends to call police, because they feared the sound of a voice-call to 9-1-1 would lead a violent person to their hiding place.

should be nationalized and the FCC should exclusively regulate 9-1-1; BRETSA fully concurs with and endorses the Commission's statement.²

Changing technology poses a significant challenge for the 9-1-1 Community, state agencies and the Commission. Commercial operation of cellular telephone service first commenced in 1985, but wireless 9-1-1 calling was not available on most wireless systems until the Commission adopted rules requiring it almost 15 years later. The Commission is still addressing issues related to wireless E9-1-1, as the 9-1-1 Community is facing new challenges related to VoIP technology. CenturyLink, successor in interest to RBOC US West, currently reports that it provides telephone service to only twenty-five percent (25%) of the residences its lines pass, a majority of Colorado's rural ILECs have deployed soft switches, and federal and state policy now supports ubiquitous deployment of broadband service in place of wireline telephone service.³ Given the rapid pace of technological transformation of consumer and business telecommunications, it is important to address impacts on 9-1-1 service.

The 9-1-1 Community and the Commission anticipated that text-to-911 would impact a significant number of people, and BRETSA was also concerned with the impact that text-to-911 would have on PSAPs and PSAP personnel. Experience to date has shown that most PSAPs that have implemented text-to-911 have only infrequently received text-to-911 messages. In Colorado, the City of Denver which has a sizeable deaf and hard-of-hearing population had already implemented an alternative solution of publicizing to that population the numbers of two smartphones assigned to the Denver PSAP for purposes of receiving text messages. The Aspen-

² BRETSA recognizes and appreciates the leadership role NENA has played in developing standards for 9-1-1. However NENA betrays its members in advocating transfer of local and state authority to federal authorities.

³ The Colorado Public Utilities Commission is conducting hearings in to determine which Colorado telephone exchanges are subject to effective competition, indicating that high-cost support is no longer required. The Colorado Legislature is currently considering legislation which would shift subsidies for high cost areas for exchange telephone service to support rural broadband deployment.

Pitkin County PSAP which has already implemented text-to-911 waited four months for its first text message, and other Colorado PSAPs which have receive perhaps one TDD message every 15 years are not placing a high priority on implementation of text-to-911. Providing effective 9-1-1 Service for the deaf and hearing impaired through text-to-911 is essential, but Commission action to address other technological evolution-driven challenges to 9-1-1 and Emergency Notification Services, or failures to act, will impact many more people.

BRETSA respectfully offers the following list of issues for the Commission's agenda, to assure that their importance is not overlooked:

A. Reporting Of Outages Affecting 9-1-1.

Colorado Public Utility Commission ("CPUC") Rules require service providers to report 9-1-1 outages and anticipated failures. The Rules define a 9-1-1 failure or outage as:

[A] situation in which 9-1-1 calls cannot be transported from the end users to the PSAP responsible for answering the 9-1-1 emergency calls. 9-1-1 failures also include the inability to deliver location information to the PSAP from the 9-1-1 Automatic Location Identification (ALI) database or a loss of the 9-1-1 ALI functionality.

4 CCR 723-2-2131(c). Such outages would include outages within service provider networks, outages in service provider 9-1-1 transport facilities and in the extant dedicated wireline 9-1-1 network operated in Colorado by a "Basic Emergency Service Provider" or "BESP". It would also include outages affecting the intermediate providers with which some originating wireless and VoIP providers contract to manage their 9-1-1 traffic. Such outage reports are intended to trigger implementation of contingency plans, and allow the Commission to identify weaknesses in the 9-1-1 system, and determine if remedial measures are necessary or appropriate. In light of the Commission's findings regarding the June 2012 Derecho, such reporting is essential.

To BRETSA's knowledge, after consultation with the CPUC, wireless, VoIP and intermediate providers do not report 9-1-1 failures or outages to the BESP or CPUCs. Wireless,

VoIP and underlying broadband providers also generally claim that they are exempt from state regulation, oppose any assertion of state authority over their services, and are also promoting state legislative deregulation of VoIP and IP-enabled services.

Although some of these providers may file outage reports with the Commission, it is BRETSA's understanding, following consultation with the CPUC, that the Commission does not forward service provider outage reports to the CPUC, and these reports are not provided to the PSAPs either.

As stated above, CenturyLink now reports that it provides basic local exchange service to only twenty-five percent (25%) of the residences its facilities pass. This means that seventy-five percent (75%) of Colorado residences are now wireless only, or have substituted VoIP for traditional wireline service, and that service providers supplying voice service to a majority of Colorado's population are not complying with state requirements to assure the continuity and robustness of 9-1-1 service in the state.

Immunity for providers, if appropriate, is appropriate because the state establishes the actions which are prudent for a provider to take, including reporting of outages. The link between state oversight and immunity for providers should not be discounted.

This situation must be addressed by the Commission.

B. Contingency Planning And Redundant Facilities.

The CPUC's rules pertaining to 9-1-1 require that service providers participate in development of contingency plans that can be implemented in the event of a 9-1-1 outage. 4 CCR 723-2-2143. To BRETSA's knowledge, after consultation with the CPUC, wireless and VoIP providers do not participate in such contingency planning.

The CPUC's rules pertaining to 9-1-1 also require redundant and diversely routed facilities wherever feasible. 4 CCR 723-2-2143 (a). The extent to which wireless and VoIP

providers deploy redundant and diverse facilities for routing of 9-1-1 calls within their networks is not known. The Commission's rules and decisions require wireless and VoIP providers to deliver 9-1-1 calls to a state's dedicated Wireline E911 Network, if there is one. Currently, CPUC rules require that the BESP connect with the originating service providers for and transport calls from the originating service provider's switch to the BESP's 9-1-1 Selective Routers. Given the increased costs of NG9-1-1, BRETSA believes that with the transition to NG9-1-1 the CPUC's rules should conform to Commission requirements making wireless and VoIP providers responsible for delivery of their customers' 9-1-1 calls to the NG9-1-1 "Data Complex" which is equivalent to the legacy 9-1-1 Selective Routers. Every proposal for NG9-1-1 service in Colorado which BRETSA has seen has featured two redundant and diversely located Data Complexes.⁴ It would be consistent with Commission requirements and should be within the state's authority to require that the wireless and VoIP providers deploy redundant and diversely located facilities for transport of their customers' 9-1-1 calls to the redundant and diversely located NG9-1-1 Data Complexes.

The majority of homes in Colorado, and likely in all states, are now provided voice telecommunications services by wireless and VoIP providers. It is essential that these providers participate fully in contingency planning for 9-1-1 outages, and the Commission should make this clear. The Commission should also make clear that its rules and decisions requiring wireless and VoIP providers to deliver 9-1-1 calls to the dedicated Wireline E911 Network for delivery to the appropriate PSAP includes the requirement of redundant and diversely routed transport facilities to redundant and diversely located NG9-1-1 Data Complexes. During transition to

⁴ Colorado's extant, legacy, Wireline E911 Network, features 3 sets of paired, redundant and diversely located 9-1-1 Selective Routers, all of which are interconnected. Each paired set of 9-1-1 Selective Routers serves a separate region of the state.

NG9-1-1 states must be able to require separate connections to both legacy Selective Routers *and* NG9-1-1 Data Complexes.

Immunity for providers, if appropriate, is appropriate because the state establishes the actions which are prudent for a provider to take, including participation in contingency planning, implementation of contingency plans during outages, and provision of redundant and diverse facilities for transport of 9-1-1 traffic. The link between state oversight and immunity for providers should not be discounted.

C. State Jurisdiction Over IP-9-1-1, Including NG9-1-1.

On October 23, 2012, BRETSA filed a petition for declaratory ruling requesting the Commission to settle the issue of state jurisdiction over services which employ IP-routing technology, particularly in the context of IP9-1-1 or NG9-1-1. At that time, providers were arguing in a Colorado PUC docket that state authority over services utilizing IP technology was preempted, while BRETSA found support in Commission decisions for state authority over such services, particularly in the context of 9-1-1.

Service providers have also been lobbying for legislative deregulation of services using IP technology, arguing in part that the state's do not have authority over these services in any event. These providers have stated that state authority over IP-911 or NG9-1-1 is unknown. While the Commission expressed concerns over states voluntarily deregulating services which employ IP networking, and "*recommend[ed] state and local public safety authorities should retain authority over the deployment and provision of NG911 services within their jurisdictions*" in its February 22, 2013 Report to Congress and Recommendations on Legal and Regulatory

Framework for Next Generation Services, the Commission has not acted on BRETSA's Petition to preclude service provider claims that states cannot regulate these services.⁵

In Colorado, the CPUC certifies Basic Emergency Service Providers to assure that they have the requisite technical, financial, managerial and other qualifications to reliably provide this mission critical service. The PUC also tariffs the rates which PSAPs pay for Basic Emergency Service and averages those rates statewide to assure ubiquitous E9-1-1 service, requires redundant and diverse facilities, requires reports of 9-1-1 outages and can investigate outages and remedial actions which may be necessary to assure reliable service. The PUC rules also provide for the Colorado 9-1-1 Task Force, in which PSAPs and providers have traditionally addressed and resolved issues which have arisen regarding 9-1-1 service.

The need for such oversight is not lessened by the transition to IP technology and NG9-1-1; indeed the increased complexity of NG9-1-1 mandates the continuation of such oversight to assure reliable, efficient and affordable 9-1-1 service and a smooth transition to NG9-1-1. State oversight of 9-1-1 is also appropriate given state plenary authority over public safety.

Immunity for providers, if appropriate, is appropriate because of state oversight and state establishment of actions which are prudent for a provider to take. The link between state oversight and immunity for providers should not be discounted.

The Commission must resolve the issue of state authority over IP-911 and NG9-1-1.

D. Bundling And State Regulation Of ANI/ALI And 9-1-1 Transport Services /NG9-1-1 Data Complex and ESInet Services.

With legacy 9-1-1 Service, 9-1-1 Selective Routing, 9-1-1 Transport and ANI/ALI are the essential elements of the service. In 1998, the Commission, by the Chief of the Common Carrier

⁵ *Legal and Regulatory Framework for Next Generation 911 Services, Report to Congress and Recommendations*, at 29 (Feb. 22, 2013) (NG911 Report).

Bureau, determined that ANI/ALI services are information services, but that such services could continue to be provided on an integrated basis with the other elements of E9-1-1 Services. *Bell Operating Companies Petition for Forbearance from the Application of Section 272 of the Communications Act*, CC Docket No. 96-149, Memorandum Opinion and Order, 13 FCC Rcd 2627, 2633-2653 (Comm. Car. Bureau 1998)(“*Forbearance Order*”). The *Forbearance Order* thus found that Bell Operating Companies could continue to provide integrated E9-1-1 Services even though some of the components of that service constitute “Information Services.”

Today, and in the context of the transition to NG9-1-1, some service providers are seeking to provide information service components of 9-1-1 services on a competitive basis. BRETSA believes that with both 9-1-1 and NG9-1-1 services, a state should be able to select or designate a single provider to supply end-to-end Basic Emergency Service including aggregation and transport of 9-1-1 calls, and any information services essential or convenient to that service, on an integrated basis. Moreover, a state should have the authority to preclude competitive provision of service components where it determines that provision of Basic Emergency Service by a single provider is in the public interest.⁶

Immunity for providers, if appropriate, is appropriate because of state oversight and state establishment of actions which are prudent for a provider to take. The link between state

⁶ For example, a state could find that provision of end-to-end Basic Emergency Service will simplify system architecture and service and limit potential points of failure, make the service more reliable, reduce overall costs to tax payers and ratepayers (as public agencies are the customers for the service), or promote reliability and *efficiency* of the service. In this regard, BRETSA notes the Commission’s recent citation to the Salt Lake City study which verified that reducing response times improves outcomes and reduces mortality rates. Wireless E911 Location Accuracy Requirements, PS Docket No. 07-114, *Third Further Notice of Proposed Rulemaking*, FCC 14-13 at para 33, p. 15, February 21, 2014, available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0221/FCC-14-13A1.pdf (last visited March 15, 2014), citing Wilde, Elizabeth Ty, Do Emergency Medical System Response Times Matter for Health Outcomes?, 22 *Health Econ.* 7, pp. 790-806 (2013), available at <http://www.ncbi.nlm.nih.gov/pubmed/22700368> (last visited Feb. 6, 2014).

oversight and immunity for providers should not be discounted, and immunity may not be appropriate where state oversight is limited.

The Commission should address this issue.

E. Jurisdiction Over “Intermediate Providers.”

Currently, many wireless and VoIP service providers contract with intermediate providers such as Bandwidth.com, Intrado and TCS to manage their 9-1-1 compliance.⁷ As BRETSA understands it, originating service providers contract with these or similar companies to determine the state from which a call to 9-1-1 has been placed, route that call to the correct state’s 9-1-1 Selective Router or NG9-1-1 Data Complex, and update the associated p-ANI in the ANI/ALI database with the location information for the customer.

BRETSA does not understand the Commission to exercise oversight of these providers, and to the extent it may exercise oversight it would appear to be indirectly, through oversight of the originating service providers. The calls these intermediate carriers handle are jurisdictionally intrastate, because 9-1-1 calls originate and terminate within the same state; in the case of Colorado, generally within the same City or County.

BRETSA understands that the states have jurisdiction over these providers, and believes that any such intermediate provider in Colorado should be certified by the CPUC to assure that it has the requisite technical, financial and other qualifications to reliably and efficiently provide that portion of 9-1-1 service which it undertakes to provide. These providers should participate in outage reporting, development and implementation of contingency plans, and all of the

⁷ The BRETSA-supported PSAPs collectively receive an average of 1800 calls for service per day. While this is a large number of calls for the PSAPs to handle, it is likely not even a “rounding error” compared to the number of calls transiting an originating service provider’s network. Thus they outsource 9-1-1 Call handling to smaller, specialized providers.

requirements to which the originating service providers that contract with them should be subject.

Again, immunity, if appropriate, must be founded upon governmental oversight and establishment of standards of performance. Immunity without governmental oversight eliminates any incentive for a provider to operate prudently. Even if there was no immunity and these intermediate providers or the originating service providers were liable for their negligence in delivery of 9-1-1 calls, liability and damages are hollow substitutes for life or limb lost.

As providers in the 9-1-1 call-handling chain, these intermediate providers must be subject to oversight to assure that they are not weak links. While BRETSA is very familiar with Intrado, regulations have general applicability and should apply equally to established providers and newcomers who may simply seek to profiteer on 9-1-1 service and on the fact that PSAPs cannot practically refuse to accept 9-1-1 calls regardless of the price, and thus have limited bargaining power.

F. Funding Of 9-1-1 Through Surcharges Or Taxes On Telecommunications Services.

Funding of 9-1-1 Service through surcharges or taxes on telecommunications services has been both appropriate and adequate. However this system is threatened and has become inequitable due to the inconsistent remittance of surcharges on pre-paid wireless service and on VoIP service. Collection and remittance of surcharges or taxes on pre-paid wireless service is generally handled at the point of sale, with many small retailers and internet vendors of prepaid minute cards simply not collecting and/or remitting the surcharges or taxes. Taxing authorities with the authority to address these failures tend to focus their efforts on violations which involve larger amounts, and surcharges or taxes on prepaid wireless simply don't garner a great deal of attention.

As for VoIP providers, BRETSA is not even certain of the providers supplying service within its jurisdiction. With the decrease in the number of homes to which CenturyLink provides service, it is likely that there are VoIP providers supplying service in Boulder County which are not collecting and/or remitting surcharges. This is almost impossible to verify, however.

This situation in which Colorado Emergency Telephone Surcharges are collected from some users and remitted, while other users get a free ride, is both inequitable and threatens stable funding of 9-1-1 Service.

As BRETSA has previously suggested, the Commission should implement, or request Congress to implement, a national prepaid wireless surcharge system in which a uniform nationwide surcharge would be imposed on prepaid wireless service. This surcharge would be included in the price of prepaid minutes wherever and however sold. When a user activates the prepaid minutes, the service provider would require the user to specify a state, city and/or county depending upon the funding structure implemented within the user's state, and remit the surcharge for the activated minutes to the user's state, city or county. This would avoid the free-rider problem and be enforceable and auditable by the Commission.

In the case of VoIP service, the surcharge should be applied to the underlying broadband/data service, per unit of upstream bandwidth. A person subscribing to cable television service only with no upstream bandwidth should not pay any surcharge. A person or business subscribing to broadband service with enough bandwidth to support multiple simultaneous VoIP calls, including broadband connections to IP-PBXs, should of course pay a multiple of surcharges. Thus, the surcharge would be applied to the *connection* to the telecommunications service provider, per upstream bandwidth, rather than to any particular application or service which may operate on that bandwidth. This will mean that surcharges will be assessed of

providers with facilities in the state, and will be identifiable and auditable. It will also mean that the distinction of whether a service provided over a broadband/data connection is an information or telecommunications service will be moot. The charge will be assessed on the connection to the telecommunications network, the *underlying* telecommunications service.

G. Efficiency In Obtaining Locations Of Cellphones.

Attached hereto at Exhibit No. 1 is the transcript of a 9-1-1 Call placed to the Longmont, Colorado PSAP in February 2013, in which the caller reported that a friend had called and said he was going to commit suicide by stepping in front of a semi.⁸

The call-taker completed gathering the information from the caller and disconnected the original call at three-minutes and fifty-four seconds into the incident. The call-taker placed a call to the wireless provider which provided service to the suicidal individual at the four-minute and one-second mark. Wireless providers generally require that the PSAP fill out a paper form and fax it to the provider for the provider to “ping” the location of a wireless device. In this case the provider waived that requirement as a precondition to determining the location of the device. Still, it not until eight minutes later, at twelve-minutes and two-seconds into the incident, before the wireless provider completed reading off the to the call-taker the geographic coordinates identified for the caller’s device, and it is not until the twelve-minute and twenty-five second mark that the wireless provider completed requesting that the above-referenced form be faxed to the provider and the call to the provider was terminated.

The suicidal person was in another jurisdiction, the City of Aurora. The original call-taker phoned the Aurora PSAP at twelve-minutes and thirty-one seconds into the incident to

⁸ The recording of this call “Suicide By Semi” is available on the website of the 9-1-1Colorado Foundation, at <http://911colorado.org/911-audio-videos/other-911-calls/>. Last names, street addresses, the last four digits of telephone numbers, and identifying information regarding individuals involved in other incidents which can be heard in the background of the call, have been deleted from the transcript recording. The recording may not be consistent with the call times included in the transcript due to the deletion of this information from the recording.

relay the information to a call-taker there. The Longmont call-taker completed relaying the incident information at fourteen-minutes and sixteen-seconds into the call--at which point the Aurora call-taker responded: "We just had somebody step in front of a vehicle less than two minutes ago."

It will never be known whether First Responders could have reached the suicidal person's location if the person's location could have been determined more expeditiously. But if wireless providers uniformly omitted the requirement for PSAPs to complete and fax a paper form, and they (and other providers) allowed PSAPs to electronically submit requests for customer locations or other relevant information, preferably through their CAD systems, and automated the location and response process, the time required to obtain locations could be significantly reduced.

In the case described above, the call-taker obtained the suicidal person's phone number at two-minutes and forty-four seconds into the call (and if automated access to location information was provided, would likely have asked for it sooner). With automated electronic query capability, as soon as the call-taker typed the suicidal person's number into the CAD system she could have quickly highlighted the number and pressed a key combination or clicked an icon to submit the number to the provider to ping the location, and responded affirmatively to a prompt for verification that the request was related to a 9-1-1 call and for a proper purpose.

The one-minute and forty-seconds taken up in the call-taker dialing the wireless provider, waiting on hold for a representative to come on the line, and explaining the circumstances and providing the number to be searched, would have been avoided. The almost two-minutes from the time the wireless carrier representative came back online and provided the location information, repeating it to avoid any mistake, would have been avoided. Moreover, in an

NG9-1-1 environment, instead of or in addition to calling the Aurora PSAP, the Longmont call-taker could have transmitted the CAD incident file to the Aurora PSAP. Once that file was received and the Aurora CAD system had a location and incident type, the CAD system would automatically recommend First Responders to dispatch to the scene, if automatic unit recommendations were enabled.

BRETSA proposed in its November 21, 2012 Petition for Rulemaking in this docket that wireless providers should be required to provide for automated requests for caller locations and other customer information. BRETSA suggested that the requirement could best be met through establishment of non-profit service bureau(s) with access to provider systems, so that PSAPs would only have to submit an electronic request to one location to obtain the required information, regardless of the provider to whose service a subject subscribed. BRETSA suggested that the service providers establish the service bureaus to so that they could implement the measures they deem appropriate to protect their proprietary data.

H. Population Of Emergency Notification Databases

Emergency Notification Services (“ENS”) utilize “reverse 9-1-1” databases, in which the user’s numbers are associated with their residential or business addresses. These ENS databases have traditionally been populated from the 9-1-1 database. However in Colorado the dominant wireline provider now provides exchange telephone service to only about twenty-five percent (25%) of the residences its lines pass. Wireless customers numbers have never been included in the 9-1-1 database, and VoIP numbers and addresses are not included in the 9-1-1 database. While the largest facilities-based VoIP provider in Colorado makes its customer number and address data available for a fee so that 9-1-1 Authorities can populate ENS databases with that information, few if any other VoIP providers supply this information. 9-1-1 Authorities and

independent organizations have promoted residents self-registering their VoIP and wireless numbers and residential and business addresses in ENS databases, with limited success.

ENS information is crucial for providing evacuation notices or other instructions during fires, floods, storms, police incidents such as hostage takings, etc. ENS allows authorities to stage the evacuation of neighborhoods threatened by wildfire starting with those most threatened, so that roads do not become so jammed with traffic that evacuation and the movement of firefighters into the area is hindered. It also allows law officers to be positioned to prevent individuals from moving back into the evacuated neighborhoods, including potential looters.

BRETSA's November 21, 2012 Petition for Rulemaking urged the Commission to adopt a requirement that VoIP and wireless service providers obtain their customers' residential and business addresses (as opposed to billing addresses) as appropriate for purposes of populating the ENS databases, and make the telephone number and address information available to 9-1-1 Authorities and/or ENS providers. BRETSA has suggested that the service bureaus discussed above could be the repository for and provide this information for ENS databases, and could also provide other information such as location information and subscriber information for surcharge remittance verification purposes.

I. Location Determination of MLTS, Wireless and VoIP Users/Devices.

Location information is not just an issue with wireless service, but also with multi-line telephone systems (PBX service) and VoIP services. Location information is most important for proper routing of 9-1-1 calls or messages, and secondarily for locating callers who are either unresponsive or don't know where they are. Rather than proceeding to develop solutions on a service-by-service basis, location solutions could be developed which benefit multiple services and provide a larger overall market for the location solution, reducing unit costs. Alternatives might include (i) requiring that more devices including WiFi routers include GPS chipsets and

transmit their location coordinates in their beacon, (ii) establishing a LORAN-type system(s) embedding signals in more powerful broadcast station transmissions which can penetrate buildings, or (iii) some other solution with a scope and scale beyond that of an individual service. See Section IV, below.

J. Standardization Of Message Formats And Information For Delivery To PSAPs, And Requirements For Intercept Of Various Types Of Alarm And Technical Information.

Finally, application developers are already developing applications to transmit to PSAPs information related to emergencies or potential emergencies. Applications and services are being proposed, developed and implemented pursuant to which calls or messages would automatically be placed to PSAPs upon the triggering of some type of sensor (alarm) or health or other technical information would be sent to a PSAP.

PSAP personnel already multitask and respond to all manner of calls. They cannot be expected to also decipher different formats of messages or information which may be presented by various applications, to interpret medical or other technical information for which they have no training or experience, or to clear false alarms from automated systems for the alarm service providers. Nor can PSAP personnel be expected to take and retain training regarding the wide variety of information formats or health or technical information which may be presented.

Standardized formats for presentation of information to PSAPs must be developed, and which CAD vendors can manipulate into a common format with which users of their systems are familiar. Any automated alarm which is not both (i) manually activated and (ii) provides for the user to communicate by voice with the PSAP, must first be answered at the alarm system or device provider's call center and false alarms cleared. If health information, crash telemetry data, or other technical information is to be provided a PSAP, the party providing that data must

interpret that data and reduce it to a usable format or useful information for the PSAP to relay to First Responders.⁹

Because applications, alarms and technical data will be marketed and used nationwide it is appropriate for the Commission to adopt rules and drive the standardization process. See Section II.B. below.

II. The Commission Must Recognize The Changing Paradigm In The Telecommunications Industry, And *Require* Service- And Device-Providers To Make API's Available For Applications To Access Location Data And Communicate With 9-1-1.

The historical paradigm in the telecommunications industry involved a provider supplying the end-to-end network for a customer or other user to send information (telegraph, then voice messages, and sometimes data) to another user. The provider supplied the customer premises equipment (“CPE”) to convert the user information into electrical signals for transmission, and from electrical signals back to the original and usable format. The provider defined the type of information (text, voice, etc.) which could be transmitted over the network.

A. The New Paradigm For Telecommunications Service.

In today’s more varied and competitive telecommunications environment, a provider may or may not supply the equipment used to convert and transmit or receive the information, may or may not provide the end-to-end network, and is less likely to define the type of information transmitted as we migrate to a digital, IP environment. Today, it can fairly be said that providers supply the connection to the network-of-networks for transmission and/or reception information of the user’s choice, using provider-supplied or independently-acquired CPE. Nevertheless, the user selects and contracts with the provider to be able to send (or receive) user-selected information to (or from) anyone on the PSTN or Publicly Accessible Internet, including PSAPs.

⁹ Health information should probably be directed to the receiving Emergency Room in most cases.

B. Challenges To 9-1-1 Posed By The New Paradigm.

Users increasingly use applications to convert or encode/decode information for transmission over today's digital, IP networks. The capability for anyone to independently and with little or no expense create an application ("App") to operate on any of various types of consumer devices for transmission of voice, text or data over the multi-billion dollar provider networks has both democratized communications and created a robust market for entrepreneurs, with thousands of apps being available to the public and many choices among apps offering the same essential functionality. With these same applications authored by individuals or entities independently of the major CPE manufacturers or service providers and made available to the public at very low prices or for free, there is a large and ever-growing number and variety of apps in use by the public. Even car manufacturers which provide hands-free calling capability for wireless phones via Bluetooth, are incorporating the capability for the car to call 9-1-1 through the user's bluetooth-linked cellphone in the event of airbag deployment or activation of the fuel-pump cutoff. These systems may automatically provide information regarding the vehicle in addition to opening a voice channel.

The variety of apps provide numerous unique interfaces with which users may become familiar, and the Commission has found users expect to be able to reach 9-1-1 with texting apps and that it is important that users be able to use apps and app-interfaces with which they are familiar when communicating with 9-1-1. It is likely users also expect to be able to reach 9-1-1 with the various voice apps, and entrepreneurs are even developing personal safety apps specifically intended to provide various types of information including photos to public safety agencies, including through 9-1-1. These apps are often designed without consultation with public safety agencies or PSAPs, and marketed without any notice, education or training to public safety agencies or PSAPs.

Even if public safety agencies and PSAPs were provided notice, education or training regarding the burgeoning number of personal safety apps, it is unrealistic to expect PSAP personnel to not only be able to simultaneously multitask between communicating with callers, entering data into CAD systems, run queries and/or retrieve information on subjects involved in an incident and on location or premises information including previous incidents or hazardous conditions, often communicate with First Responders by radio; and also be able to navigate the unique features or interfaces of any of thousands of application interfaces. It is unrealistic to expect that PSAP call-takers who have received notice, education or training on each of the multitude of such apps which have been and will be developed (assuming there would be time for such education or training in addition to performing their jobs) will retain useful knowledge regarding any specific app, particularly those that are not in widespread use. The Commission has found it important that user's be able to communicate with 9-1-1 in an emergency using the application interface with which they are comfortable and familiar; it is no less important that the PSAP call-takers also be able to communicate with users using an interface with which they are comfortable and familiar.¹⁰ The Commission's citation to the Salt Lake City Study confirms the intuitive fact that more efficient 9-1-1 service, which gets First Responders to the scene of an incident faster, will save more lives.

It is also unrealistic to expect that apps marketed for relatively small unit prices or at no cost, will undergo rigorous development and testing for 9-1-1 compatibility and reliability. Many

¹⁰ Currently, the browser interfaces made available by service providers appear to be the favored solution for receipt of text messages, but as NG9-1-1 is deployed and/or non-NG9-1-1 PSAPs subscribe to IP data channels for the purpose of receiving text messages, they will be displayed through the CAD system on an interface the CAD vendors design to be consistent with their respective general user interfaces. It is not clear how OTT text will be provided pending deployment of NG9-1-1, and whether text messaging app developers/providers will establish separate browser interfaces or be able to contract with providers or third-party browser interface providers such as Intrado or TCS to deliver text-to-911 to PSAPs.

app developers may be students, start-ups, or others with limited financial resources who are judgment proof, even if not provided immunity pursuant to state or federal law.¹¹

C. Service- and Device-Providers Should Be Required To Make API's Available For Apps To Access Location Data And Communicate With 9-1-1.

In the new telecommunications industry paradigm, consumers purchase services based on the devices available, and the apps, or number and variety of apps, which can run on those devices. Service provider marketing features the devices available for their service, and when those devices will be available, as well as the number and variety of apps that can run on the devices, in addition to the native functionality of the devices. Service providers sell packages of minutes of use, quantities of native SMS text messages that can be sent and received, and/or the amount of data that can be transmitted or received for internet access for web browsing or apps. Users purchase devices and service with the expectation, even the purpose, of being able to reach 9-1-1 and get help in an emergency.

In this environment, the best solution for implementing efficient OTT text messaging to 9-1-1 is to require service providers and device manufacturers enable and openly publish APIs for retrieval of location data and communication with 9-1-1. BRETSA believes that such a requirement, coupled with user demand and interest in a vibrant app market, would lead to equipment and service providers also (i) publishing code which app developers could simply incorporate in their applications to provide a "9-1-1" solution, and (ii) making available on-line the capability for app developers to run their applications and 9-1-1 solutions in a test

¹¹ In Colorado, C.R.S. 29-11-105 grants telecommunications service providers limited immunity, *i.e.*, immunity from liability for damages resulting from their negligence, but not from liability for damages resulting from their intentional acts or gross negligence. It would also be reasonable for a state to spread the cost of damages resulting from negligence in the provision of 9-1-1 service across all users of a provider's services by not immunizing providers from liability for their negligence. This would avoid the potential inequity of a single person or family bearing a loss from a failure which is the result of their chosen provider's negligence. If a state were to adopt such a policy, the provider should not be able to spread the costs of that policy to other states which have granted them full or limited immunity, but should recover and spread the costs through surcharges in such state.

environment to assure proper functionality and reliability. In addition to requiring that service providers and device manufacturers provide APIs for third-party apps to access location information and communicate with 9-1-1, immunity should be provided to such providers who are not grossly negligent (or guilty of intentional misconduct) in making available the APIs, application code or test-beds, related to any failures of third-party apps to access location data or communicate with a PSAP. Device and service providers should further be entitled to indemnification by any third party app developer whose application fails to function with the native location or communications/messaging APIs to reach 9-1-1 and the appropriate PSAP.

The Commission states that it “does not expect that... wireless providers should be prevented from migrating away from SMS capability in their systems.” SFNPRM, Appendix B, para. 7. BRETSA believes that any CMRS or WiFi/Internet capable communications device should be required to include location and text-messaging functionality, and the APIs should be made available for third-party apps to utilize the native location and text-messaging functionality to communicate with 9-1-1. This requirement should apply regardless of whether the text messaging application is an SMS text messaging application.¹² If a consumer purchases a device with the expectation that it is useful for communicating with others, then it should be 9-1-1 capable and the 9-1-1 capability should be available to any communications app which may be installed on the device.

An advantage of this solution is that when a device is not connected to a CMRS provider or internet-connected WiFi (or wired) network, the app will be able to cause the device to connect to a CMRS network, or unsecured internet-connected WiFi network, for the purpose of communicating with 9-1-1 (assuming the Commission adopt BRETSA’s recommendation that

¹² BRETSA is concerned that migration away from SMS messaging over a control channel will limit SMS coverage in rural areas as well as inside buildings and other areas beyond range of voice-call functionality.

type acceptance be denied to devices which do not provide such functionality with their native applications/services). When the device is unable to connect to a CMRS or Internet Enabled network, the app should provide positive feedback to the user that the device has been unable to connect to a network and that communication with 9-1-1 is not possible.

With this approach, it will not only be the app user who will be able to use a familiar and favored application interface for communicating with 9-1-1, but using the native device/service provider voice or texting applications should also present the communication to the PSAP in a common format. (BRETSA also advocates the development of a standard interface among providers for presentation of text messages by browser.)

To implement this solution, the Commission should not grant type acceptance to any CMRS or WiFi and Internet Enabled device which does not include a native location and text-messaging capability and does not make APIs available for third-party apps to access location information and utilize the native text-messaging capability and any native voice-calling capability to communicate with 9-1-1. The Commission should prohibit service providers from marketing or providing to users any device which does not meet such requirements, and should require service providers to make publicly available any requirements or specifications for device providers or application developers to develop applications and APIs which will be compatible with the provider's network and systems.

App developers should not be prohibited from developing their own 9-1-1 solutions and seeking to "build a better mousetrap" rather than communicating with 9-1-1 through native device applications using APIs. However any such apps should be required to meet the same standards as the equipment or service provider applications accessed through published APIs, in terms of location resolution and presentation of information to a PSAP in a common format to be

approved by the Commission (likely through Commission adoption of NENA or APCO standards).

It may be difficult or impossible to police apps and enforce rules requiring app-compatibility with 9-1-1 requirements. Apps may be published in any country, and downloaded by users located outside the developer's intended market. Apps may be so numerous, marketed through different channels with different brands, and the developers sufficiently difficult to identify as to make enforcement ineffective. Even if there is jurisdiction over a developer who violates rules requiring 9-1-1 compatibility, and the developer is subject to service of process, the developer may be "judgment proof" in that the costs of proceeding against a developer may exceed the amount of damages which may realistically be recovered. Nevertheless, developers of communications apps marketed in this country should be subject to liability for penalties and claims for damages if their apps do not comply with Commission requirements and are not compatible with 9-1-1, and disclaimers of liability should be void as against public policy. App developers should not be exempt from liability for their negligence which results in harm to people.

Neither a service provider supplying physical network connections in this country (whether by fiber, coaxial cable, twisted pair or radio) nor a device manufacturer should include in its "app store" any communications app which it has not validated for compliance with Commission regulations and 9-1-1 compatibility. Publications and other information providers which rate and/or sell or distribute applications and target the U.S. market should not recommend or make available communication apps which they have not validated for compliance with Commission regulations and 9-1-1 compatibility. In addition to penalties for violation of these requirements, service providers, device manufacturers and parties recommending or selling apps

should be subject to liability for damages resulting from such regulations. That is, given the potential difficulty of enforcing the regulations against app developers, the regulations should also apply to marketing channels and those profiting from the marketing of apps.

There is no reason not to subject the app market to the same market forces, including liability for defective products, to which other markets and vendors are subject. There is no reason to leave consumers, who expect their communications apps, services and providers to allow them to contact 9-1-1; to solely bear the substantial damages which may flow from a failure to connect with 9-1-1. There is no reason not to incentivize developers of communication apps, vendors of such apps and service and equipment providers to supply the capability to contact 9-1-1. This is particularly the case when 9-1-1 compliance can be facilitated at little or no cost through publication of requirements for, and open access to, APIs for access to location information and native messaging systems for reliable communication with 9-1-1.

When the cost of developing and providing open APIs for access to location information and native messaging systems for reliable communication with 9-1-1 can be spread all users of a manufacturer's device or devices which implement those APIs, and across all customers of the service on which the APIs and underlying applications are intended to operate, the impact of these costs should be slight. Further, immunity from negligence for the device manufacturers and service providers would not be inappropriate where the Commission, or labs engaged by the manufacturers and providers, verify native voice and text-messaging functionality or apps and APIs for 9-1-1 Compliance as part of the Commission's type acceptance process.

D. Service- and CPE- Providers Should Include The Cost Of 9-1-1 Compliance In Their Pricing To Subscribers/Users.

The Commission states in the SFNPRM that it does not expect use of the SMS API to communicate with 9-1-1 should occur without reasonable compensation. SFNPRM, para. 28 at

11. As a matter of public policy, the Commission has required that 9-1-1 calling be available for uninitiated wireless devices, for initiated wireless devices on which plan-minutes have been exceeded, and through wireline and payphones without charge. Providing for compensation to service providers for third-party app use of the SMS API or the API for another native communications capability, could lead to user-charges for calling 9-1-1.¹³ This is contrary to public policy, and unwise since people frequently call 9-1-1 to report incidents they witness which affect third parties.

Service providers market their services by touting the devices compatible with their service, and the number of apps available for those devices. Consumers purchase or subscribe to the services with the expectations, and often the purpose, of being able to reach 9-1-1 to get help in an emergency. It is therefore reasonable for service providers to include in the price of their service an “overhead element” for the cost of customer’s communicating with 9-1-1 for which the provider cannot charge directly or on a per-call basis. Indeed, service providers must already include a price element for 9-1-1 calls and text-messages. A consumer will not call or text-message 9-1-1 more because additional applications enable communications with 9-1-1, because it is the consumer’s involvement in or witnessing an incident which causes the consumer to call 9-1-1, *not* the availability of a third-party communications app or the pricing of the communication.

Requiring that each service provider bear the cost of users communicating with 9-1-1 as overhead, and price their end-user rates to spread those costs among all customers, service providers will compete on an even playing field as all competitors will be responsible for such

¹³ An example of a third party app using the API for another native communications capability would be if a user installed on their wireless communications device and typically used Vonage or Skype to place voice calls, and the Vonage or Skype application was modified to access the device’s native voice calling functionality via the published API when the user dialed 9-1-1.

costs. There is no reason to expect that any service provider would be subject to a higher proportion of 9-1-1 calls over the long term than any other service provider, and again, consumers expect that they will be able to reach 9-1-1 when they subscribe to a communications service.

III. WiFi Connected Devices and Applications Should Be Subject To 9-1-1 Compatibility Requirements When Connections To The PSTN (Via CMRS) Or Publicly Accessible Internet Are Available.

As the Commission notes, some devices such as tablets may be WiFi enabled, but not be enabled to communicate through a CMRS provider's network. In other cases, tablets and even phones are able to connect through either the CMRS provider's network, or through WiFi (where there is an Internet connection) as a VoIP device. Some UMA-enabled phones are even able to switch automatically between WiFi and CMRS networks without dropping calls as the device moves in and out of range of a registered WiFi access point.

If a user's device is connected to a non-Internet connected WiFi network and the user seeks to call or send a text message to 9-1-1, the device should connect to the CMRS provider's network, if available, to send the message. If a user's device is connected to a WiFi network which is in-turn connected to the publicly accessible Internet, the device should be able to communicate with 9-1-1 through the Internet. If the device is VoIP enabled and the person seeks to place a voice call to 9-1-1, the device should transmit the call via VoIP. If the device is capable of transmitting a text message via the Internet, then it should be capable of transmitting a text-message to 9-1-1 utilizing available location information. If the device is unable to access location information or transmit a VoIP call or text message to 9-1-1, it should provide the user positive feedback to that effect.

These same requirements should apply to VoIP or text messaging applications running on computers connected to the publicly accessible Internet. However BRETSA recognizes that application of the rules to general purpose information processing devices such as computers, and applications designed to operate on general information processing devices, rather than devices designed and intended as communications devices and/or to interoperate over the public Internet, may be beyond the scope of this proceeding.

IV. The Commission Should Develop Standards For And Mandate Location-Aware Technologies.

The Commission allowed CMRS services to be developed and deployed without 9-1-1 compatibility, and has also implemented a post-hoc “fix” for VoIP service of users entering their address information in response to splash screens. 9-1-1 compatibility is not a market-driver, because consumers don’t expect that bad things will happen to them, and also take for granted that 9-1-1 will be available if something does happen. BRETSA has addressed above that an important agenda item for the Commission is improving location information not only for wireless devices but also for multi-line telephone systems and VoIP and other Internet connected devices. The establishment of standards and even systems for location determination, and enforcement of the standards through the Commission’s type-acceptance process, can improve location information for text messaging.

A. Development of Commission Standards.

The Commission has historically been loath to develop or adopt standards *ab initio*, lest it pick commercial winners and losers, and has preferred to await industry or market acceptance of a standard. For example, the Commission allowed to different standards for AM stereo broadcasting to compete in the marketplace until one prevailed. It was only the broadcaster and

consumer investment in obsoleted equipment that was lost. In the case of HDTV, the Commission waited until the sole proponent of an analog HDTV system dropped out of the running to have its proposal considered, and the remaining proponents of digital HDTV standards settled on a single standard to propose, rather than selecting among competing standards. The transition to HDTV was once looked upon as a means to revitalize the domestic consumer electronics manufacturing industry; but by the time the competing proponents had settled on a standard among themselves in the face of Commission inaction, the last of the domestic television manufacturers had moved its factories overseas or across the border. It was only American jobs that were lost, however.

In the case of location capability for 9-1-1, it will be lives that will be lost. The FCC recently stated:

A study examining 73,706 emergency incidents during 2001 in the Salt Lake City area found that on average, a one-minute decrease in ambulance response times reduced the likelihood of 90-day mortality from 6 percent to 5 percent, i.e., a 17 percent reduction in the total number of deaths. This implies that, in the Salt Lake City area, a one-minute reduction in response times would have resulted in an annual saving of 746 lives.¹⁴

It is thus not only the ability to reach the local PSAP by dialing 9-1-1, but the efficiency of the 9-1-1 service and system, that is vital. The misrouting of a 9-1-1 call resulting in delay in delivery of a call or message to the PSAP which can dispatch First Responders to the caller's location, costs lives. (Delays from sending text messages to 9-1-1 when the user could safely place a voice call to 9-1-1 can also cost lives). This verifies the intuitive knowledge that the sooner First Responders arrive on scene, the more favorable the outcomes.

¹⁴ Wireless E911 Location Accuracy Requirements, PS Docket No. 07-114, *Third Further Notice of Proposed Rulemaking*, FCC 14-13 at para 33, p. 15, February 21, 2014, *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0221/FCC-14-13A1.pdf (last visited March 15, 2014), *citing* Wilde, Elizabeth Ty, Do Emergency Medical System Response Times Matter for Health Outcomes?, 22 *Health Econ.* 7, pp. 790-806 (2013), *available at* <http://www.ncbi.nlm.nih.gov/pubmed/22700368> (last visited Feb. 6, 2014).

B. Standards To Improve Location Determination Are Essential.

Because E9-1-1 compatibility has not been a requirement for development, authorization or marketing of new communications services, wireless and VoIP service were not developed with location determination capability or 9-1-1 compatibility *ab initio*.¹⁵ Indeed, providers of VoIP service have benefitted from the uncertainty of where a call originates and terminates in initially avoiding all state regulation and continued arguments for deregulation of the service, particularly by states.

Ironically, location information is particularly vital for wireless or VoIP calls to 9-1-1, so that the call can be routed to the correct PSAP. That is, for example, only the BRETSA-supported PSAPs serving the cities, towns and unincorporated areas of Boulder County know whether First Responders have already been dispatched to an incident which may be the subject of a 9-1-1 call, or if the call concerns a new incident. Only the Boulder County PSAPs know what units are on duty in the County and available to respond to a new incident (not responding to other incidents), which public safety agencies have jurisdiction over a particular area and can respond to incidents in the area, and the business rules of the agency concerned (e.g., two law enforcement officers are dispatched to a domestic dispute, a brush truck and a tanker are dispatched to a non-structure fire, a law officer, fire truck and ambulance are initially dispatched to a reported traffic accident with injuries, etc.)¹⁶ Only the PSAPs serving Boulder County, or certain of those PSAPs, will have the radio and other systems to dispatch First Responders in Boulder County. Only those PSAPs will have access to the Computer Aided Dispatch systems

¹⁵ “E9-1-1” or “Enhanced 9-1-1” means that the service is location aware and the location is provided to the PSAP.

¹⁶ The business rules are developed based upon experience, resources and budgets. An agency does not want to send more or different types of units than are typically required to handle an incident and protect the responding units, because units dispatched to an incident are not then available to respond to other incidents, and there is a cost to dispatching units. Budgeting for local public safety agencies is also a zero-sum game, where increasing costs in one area of service will mean curtailing other services.

and records regarding prior incidents at a location, prior incidents involving the residents at a location, hazardous materials stored at some locations, etc., and dispatchers with “local knowledge” and experience.¹⁷ Location information is required to deliver the call to the correct PSAP.

If a 9-1-1 call placed from within Boulder County is routed to an adjacent county, the PSAP for that county could not dispatch the call but must determine where the caller is located and transfer the call to the correct PSAP in the correct county. When calls are delivered to the wrong PSAP, unnecessary delays result. If location information is not available because a VoIP user has not provided an address for 9-1-1 purposes, a 9-1-1 call could be received by a PSAP in another state which cannot help the caller at all, nor transfer the call to the correct PSAP.

With residential and some business wireline services, routing 9-1-1 calls to the correct PSAP is provided through a simple and reliable database entry associating the access line with the service address and the appropriate PSAP in databases, specifically a Selective Router Database (“SRDB”) and an Automatic Number Identification/Automatic Location Identification (“ANI/ALI”) database. With Multi-Line Telephone Systems (“MLTS”) or PBXs, the SRDB and ANI/ALI records typically include the address at which the PBX is installed, even though that PBX may serve extensions throughout a large building with numerous separately secured units, a number of separate buildings on a campus, or even buildings located in different cities and counties. Unless the PBX operator subscribes to PS-ALI or similar service, a 9-1-1 call placed

¹⁷ One of the most useful aspects of NG9-1-1 will be rule-based alternative call routing in cases of PSAP call-overflow or PSAP or network outage; but these same considerations and issues of governmental immunity for PSAP personnel handling 9-1-1 calls or dispatching First Responders outside of their employing jurisdiction are issues which must be addressed. It may be most effective to have personnel handling default-routed overflow calls simply act as call-takers, creating a CAD incident file based on the call and transmitting the incident file to the destination PSAP for dispatch, if necessary. This would emulate to an extent the environment of many larger PSAPs where a portion of the personnel on duty on any shift act as dedicated call-takers, and the remaining personnel on duty on the shift act as dispatchers.

from any station served by the PBX will be delivered to the PSAP serving the location where the private switch is installed, and report the incident as being at the location of that switch.

With wireless service, a 9-1-1 call is routed to a PSAP on the basis of the location and orientation of the wireless system provider's cell-site and antenna through which the call is received. Available location technology does not allow for identification of the actual handset location in time to route the call based on that location, and callers would hang-up and redial "9-1-1" before their location could be more precisely determined for accurate call routing.¹⁸ It is standard procedure for PSAP personnel handling wireless calls (generally seventy percent (70%) or more of all calls received by PSAPs today) to "rebid" the location (request an update of the caller's location after the wireless provider's systems have had time to determine the handset's location and update the location in the ANI/ALI database). It is also standard procedure to ask the caller for their location, both to expedite determination of whether the call should be transferred to another PSAP and as a means of identifying potentially abusive calls. While progress is being made, there are still challenges. Satellite-based GPS signals will continue to face challenges in penetrating forest canopies, large or substantially-constructed buildings, and urban canyons. Network location technologies (triangulation) require a minimum number of receive-locations to provide an accurate location, and in rural areas with fewer and more sparsely located system antennas, a cell phone signal might only be received at a single tower.¹⁹

¹⁸ Progress is being made. NextNav reports that its system allows the GPS chipsets in some phones to obtain a fix within several seconds of a cold start, and can reduce cellphone battery drain of GPS chipsets by up to ninety percent (90%) so that customers can leave those chipsets turned on and eliminate any delays in obtaining handset location data. Assisted GPS is said to also significantly reduce cellphone battery drain caused by GPS chipsets. Where GPS units in cars connect via bluetooth to wireless phones, delays in determining the location of handsets for 9-1-1 call-routing purposes might also be avoided.

¹⁹ In the attached transcript and associated audio tape of the "Suicide-By-Semi" call, the CMRS provider was able to identify the direction from the tower in which the phone was located, presumably based upon the orientation of the antenna through which the call was received, and the approximate distance based on the interval from transmission of a network signal to receipt of a return signal from the device. As distances from towers increase the vector

There may well be alternative means that would significantly enhance location-determination capability of wireless devices. The Commission or Commission-recommended legislation or standards could require inclusion of GPS chipsets in WiFi routers and devices, and that WiFi routers transmit their GPS location in their beacon (or enable users to enter such location information in devices to be transmitted in their beacon).

A system or systems similar to the old LORAN system might be established, perhaps using signals embedded in the transmissions of FM or HDTV stations, including translator stations in rural areas. Unlike GPS signals, such terrestrial broadcast signals are often strong enough in urban areas to penetrate structures and cover rural areas.

That is, in adopting standards the Commission need not limit its inquiry to single service such as wireless voice or text, VoIP or MLTS, but may be able to develop a solution with a broader scope and scale benefiting multiple services.

V. The Role Of Relay Services In 9-1-1.

In the SFNPRM, the Commission inquires into the role Relay Services can play in supporting text to 9-1-1 and the transition to NG9-1-1, including expediting text-to-voice relay calls where a PSAP is not capable of receiving a text message directly from a “caller.” SFNPRM, para. 37 at 16.

Relay Service providers’ criteria for employment of personnel are distinctly different from the criteria for PSAP personnel. Based upon comments which have previously been filed in this docket Relay Services do not have systems to identify a “caller’s” location or the PSAP serving that location, nor the capability to identify the PSAP serving that location and to place a voice call to that PSAP over either administrative lines or 9-1-1 trunks/ESInets. That is, Relay

becomes less precise, and there may be less need for directional or highly directional antennas on rural towers not requiring high levels of frequency reuse.

Services are neither staffed nor equipped to handle 9-1-1 communications, including to provide voice-relay of text messages.

There are also at least four separate means by which PSAPs can receive text messages to 9-1-1. The receipt of text messages via TDD device or CAD TDD interface is available to all PSAPs, but there are reportedly difficulties with this method due to the simplex nature of TDD communications. The browser solution, which enables PSAPs to receive text messages via a stand-alone PC by accessing a web page via browser over the public Internet, is a more popular alternative. However text-message records are not automatically recorded in the CAD system when the browser solution is used.²⁰ PSAP personnel must carry on the text-messaging exchange with the caller and re-type relevant information into the CAD system for records purposes and to transmit the data to a dispatcher or via mobile CAD to a First Responder. Both of these options are available to PSAPs at no cost, except perhaps the cost of a PC for browser access to the text messaging web page.

An alternative which is being pursued by some Colorado 9-1-1 Authorities, is to obtain an IP connection from the Basic Emergency Service Provider for the sole purpose of receiving text messages in a format for display through the PSAP's CAD system. The fourth method is the deployment of NG9-1-1 with all calls and messages transmitted to the PSAP via an ESInet. These alternatives entail costs. A fourth alternative would be the forwarding of text-messages to 9-1-1 to a smartphone or text-messaging application installed on a computer at the PSAP.

Public safety officials and PSAPs are of course interested in meeting the public safety needs of the public they serve. Cities like Denver, which has a significant deaf and hard-of-hearing community and schools for the deaf and hard-of-hearing, has already implemented a text

²⁰ While it would appear that CAD system providers could integrate the browser interface into their CAD systems so that the text messages could be automatically copied into the CAD incident record and displayed using a familiar CAD system interface, it appears they have not done so in anticipation of deployment of NG9-1-1.

messaging solution by publicizing to that community the numbers of smartphones assigned to the Denver PSAP for purposes of receiving text messages. PSAPs which are less concerned with immediately implementing text-messaging solutions report that they have received perhaps one TDD call in the past 15 years. Nevertheless, the availability of two solutions at little or no cost makes it likely that almost all PSAPs will implement text-to-911 in short order.

While Relay Services lack the technical capability and personnel qualifications to provide voice relay of text messages to PSAPs, there is a potential demand for specialized regional, or a national, 9-1-1 Relay Service. In this docket the deaf and hard-of-hearing community has made a record of their preference for the ability to be able to communicate with PSAPs via American Sign Language (“ASL”). While this may be feasible for some large PSAPs with larger deaf and hard-of-hearing populations, the vast majority of PSAPs have fewer than five seats and likely two or fewer call-takers/dispatchers on duty at any time, and would only rarely receive such calls. It is commonly stated that only about two percent (2%) of people are qualified for PSAP positions, *i.e.*, have the multi-tasking ability, communications skills, temperament, and emotional makeup for the position. It is common for PSAPs to find only one percent (1%) of job applicants qualified for the position, and for half of the applicants hired to resign before they even complete training. Adding to this already rare combination of qualifications, the capability and facility to communicate by sign language with deaf and hard-of-hearing people who are “fluent” in ASL and are excited or frantic because of their involvement in an incident, will make it even more difficult for PSAPs to find qualified people interested in such a position. For each PSAP to employ qualified personnel who are also sufficiently “fluent” in ASL, is simply not feasible.

Currently, when non-English speakers call 9-1-1, PSAPs conference-in on the call an interpreter from Language Line or a similar service provider. Several years ago, a presentation

was made to the Colorado 9-1-1 Task Force predicting that in an NG9-1-1 environment, a person's language preference would be included in their user profile on their wireless device and this profile would be used when calling 9-1-1 to automatically conference-in an interpreter during call set-up. A similar profile preference could identify deaf and hard-of-hearing individuals to the 9-1-1 system and connect their calls to the specialized Relay Service.

If communication with PSAPs by ASL is to be provided, it will likely be through establishment of a national or regional specialized 9-1-1 Relay Services employing qualified PSAP call-takers who are experienced in ASL. Such a specialized Relay Service would need to be equipped to identify the "caller's" location and the PSAP serving that location, and to terminate the voice call from the Relay Service to the PSAP over 9-1-1 trunks or an ESInet. Deaf and hard-of-hearing individuals preferring to communicate with a PSAP via ASL in an emergency should be able to create a user profile in their device which would first seek to open a video connection to the specialized PSAP if a suitable connection was available, and if a suitable connection was not available would present a text-messaging interface.

The challenge to establishment of such specialized 9-1-1 Relay Services to permit communication by ASL is that typical market incentives are not available. Public policy prohibits charging callers for individual 9-1-1 calls. Reportedly, deaf and hard-of-hearing people are frequently under-employed and lack resources for such a market to operate effectively in any event. A national or regional surcharge on telephone services would have to be established to fund such specialized Relay Services.

VI. PSAP Implementation.

As stated above, Public safety officials and PSAPs are of course interested in meeting the public safety needs of the public they serve. PSAPs will implement text-to-911 as necessary to

support their communities, consistent with demand/the number of text messages they are likely to receive, and budget considerations. A PSAP or public safety agency operating a PSAP would not want to take First Responders off the street to reallocate funding to receive text messages via dedicated IP connection if it only receives a few text-to-911 messages a year or over a several year period.

The integrity and judgment of local authorities as to how best to serve their respective communities, must be respected.

VII. Roaming.

BRETSA accepts that there are technical impediments to providing text-to-911 for roaming users. BRETSA understands that the complexity of providing text-to-911 service results from the fact that the service provider supplying service, is not the same provider to which the customer subscribed for service.

In Colorado, visitors to the back-country for purposes of snowmobiling, cross-country skiing, hiking, camping, hunting or fishing, frequently find themselves in locations where there is an insufficient signal for a voice call, but they can send and receive text messages. This service may be provided on a roaming basis, and the development of a roaming solution for text-to-911 is important.

BRETSA's November 21, 2012 Petition for Rulemaking seeks to require service providers to establish 9-1-1 Service Bureaus to provide, *inter alia*, (i) automated access to cellphone locations, (ii) VoIP numbers and Service Addresses and wireless numbers and user addresses for population of ENS databases, and (iii) verification of line counts or numbers of customers in a jurisdiction for auditing of surcharge remittances. BRETSA has envisioned these as non-profit organizations formed by the service providers with access to the systems of the

various service providers. This would provide PSAPs with a single point of access to information from any provider, and allow the service providers to implement the safeguards for their proprietary and competitively sensitive data.²¹

By virtue of the 9-1-1 Service Bureaus having access to the systems of the various service providers including the roaming and subscribed service provider, they may be able to develop and implement a solution for text-to-911 messaging for roaming users. Indeed, such service bureaus could develop special knowledge regarding provider systems and expertise in addressing 9-1-1 issues and develop additional 9-1-1 solutions. The economies of scale and shared support for the service bureaus could also reduce the costs of any individual service provider in meeting its 9-1-1 obligations.

VIII. Liability Protection.

Liability for damages arises under state law. Immunity from liability is also a matter of state law and public policy, so long as liability or immunity therefrom is not reflected in increased rates for service in other states served by a provider.

Ordinarily, providers of various products and services are liable for damage or injury for which their products or services, or failures thereof are the proximate cause. Such liability is an incentive for the providers to act prudently and not to elevate profits above due care in the provision of contracted service and for customer safety.

A state may elect to provide immunity for providers against claims for damages in the provision of 9-1-1 Service in light of the state's role in the provision of the service, or for some other reason. Alternatively, a state may elect not to grant immunity and to spread the cost of

²¹ BRETSA does not mean to preclude provision of these types of services on a for-profit basis, and companies such as Bandwidth.com, Intrado or TCS may be providing some portion of these services or uniquely positioned to provide such services. BRETSA recognizes that service providers must be confident in the security of their competitively sensitive data, and the 9-1-1 Service Bureau must have access to service provider systems and customer data.

damages and injury across all users of the service in the state, rather than leaving a customer without recourse for damage or injury and the provider without incentive to act prudently. In Colorado, service providers are immunized against liability for their negligence, but not for their intentional acts or gross negligence. C.R.S. 29-11-105. BRETSA believes this is an appropriate balancing of the interests involved.

Providers appear to take it for granted that immunity should be provided, without addressing the purpose or rationale for such immunity. Immunity or limited immunity should be provided after careful weighing of the rationale and competing considerations, such as incentive for service providers to act prudently and remedies for damages or injury caused by service provider negligence, gross negligence or intentional acts.

IX. Waivers.

The Commission should adopt the proposed deadline of December 31, 2014 for CMRS providers and OTT providers to implement text messaging to 9-1-1. Waivers should be provided to individual providers for limited periods of time upon a specific showing under penalty of perjury as to reasons beyond their control that they cannot meet the deadline, the steps they have taken toward implementation of text-to-911, and the further steps they will take toward implementation of the service during the waiver/extension period.

The required showing for any further waiver or extension should include a demonstration that the provider completed the further steps they pledged to in the previous waiver request, and that the further delay is beyond the control of the provider. A showing of financial qualifications should not be adequate to justify a waiver. Given the record in this proceeding and the text-messaging trials that have been completed, technical difficulties or infeasibility should not be an acceptable showing to justify waiver.

X. Future Evolution Of Texting Technologies.

The Commission should establish 9-1-1 compatibility as a design criteria—not just for texting technologies—but for any communications service to be authorized by Commission Rules, or to be provided over a Commission-licensed service. This should result in applications or services being developed “from the ground up” to be 9-1-1 compatible. Such compatibility may be provided via native device functionality or service for which the API is published, and which device or service providers are prohibited from blocking third-party developers from using.

BRETSA has proposed that service and device providers be *required* to develop and disclose APIs for location determination, voice calling and text messaging to 9-1-1, which any third party application could access as a default means for communicating with a PSAP. Under this proposal, there need be no impact on innovation or pricing of services or applications.

BRETSA understands that as wireless providers transition to LTE-IMS, wireless systems will provide emulated SMS messaging over a data channel rather than true SMS messaging over a control channel. As a result, the additional coverage area available with SMS text messages transmitted over a control channel vis-à-vis the voice service coverage area, will be lost. The Commission should evaluate the impact of transition to LTE-IMS on text message coverage areas, and alternatives to ameliorate any loss of such coverage.

As BRETSA has stated, PSAP personnel cannot reasonably be expected to deal with a multiplicity of formats and specialized or technical information that may be transmitted by automated systems or premises or health alarms, for example. In the context of future evolution of texting technologies including Real Time Text, it is important that as few text-messaging interfaces as practical be developed, and that CAD vendors be able to adapt those interfaces to be consistent with their system interfaces.

XI. Legal Authority.

The Commission has authority over wireless and VoIP services. The Commission should recognize state and local governments' interests and rights, and the benefit of local experience and knowledge in addressing public safety incidents. All emergencies are local.

Respectfully submitted,

**BOULDER REGIONAL EMERGENCY
TELEPHONE SERVICE AUTHORITY**

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Its Attorney

April 4, 2014

Exhibit No. 1
Suicide By Semi Transcript
February 27, 2013 4:27PM MST

Time (Tape)	Party	Audio
00:02	Longmont 9-1-1:	9-1-1. What is the address of your emergency
00:05	Caller:	Okay, my friend, a friend of mine just called me and told me he was going to kill himself and I ...
00:10	Longmont 9-1-1:	Okay. Where is your friend at?
00:13	Caller:	I don't know. He hung up on me and said he's somewhere on I-25 and he was going to step in front of a semi. And he hung up on me. I don't know if you can put a trace on his phone.
00:21	Longmont 9-1-1:	What is your name sir? Sir, what is your name?
00:24	Caller:	Aaron ----- [Last name omitted for privacy reasons].
00:26	Longmont 9-1-1:	-----? [Last name spelled; omitted for privacy reasons]
00:26	Caller:	Yes.
00:27	Longmont 9-1-1:	Aaron what's the cellphone number you're calling me from please?
00:30	Caller:	303-656-----.
00:38	Longmont 9-1-1:	One more time for me.
00:41	Caller:	303-656-----.
00:47	Longmont 9-1-1:	Okay. And what's your friend's name?
00:50	Caller:	Josh, his name is Josh.
00:51	Longmont 9-1-1:	And his last name please?
00:54	Caller:	Oh God, um -----, Josh ----- [Last name omitted for privacy reasons].
00:56	Longmont 9-1-1:	And how old is Josh?
00:59	Caller:	27.
01:03	Longmont 9-1-1:	And so he called you on your phone, on your cellphone, stated that he was going to kill himself.

01:08	Caller:	Yeah, he gave me his parents' phone number and told me to call them, and tell them he loved them.
01:14	Longmont 9-1-1:	By stepping in front of a semi?
01:17	Caller:	Yes, Yeah, that's what he told me.
01:20	Longmont 9-1-1:	Okay. And where did he say he was? Other than I-25?
01:24	Caller:	Um, that's all he said. He said he was on the Interstate. I asked him like eight times, he wouldn't tell me.
01:30	Longmont 9-1-1:	So he didn't say I-25.
01:32	Caller:	No, he said the Interstate. That's all I know.
01:34	Longmont 9-1-1:	Okay. We've got a couple of Interstates, so...
01:39	Caller:	Yeah, he he drives, um, God Oh God, I think it's a Jeep Cherokee, it's a silver he said, he told me he was pulling over on the Interstate and he lives in Aurora, so, um, I'm kind of assuming it's I-25.
01:53	Longmont 9-1-1:	Okay, what kind of a vehicle is it? You said a Jeep?
01:58	Caller:	Yeah, I think it's a Jeep Grand Cherokee. I'm pretty sure it's a Cherokee, but um.
02:00	Longmont 9-1-1:	What color is it?
02:02	Caller:	It's silver.
02:11	Longmont 9-1-1:	Okay. What is your home address, sir?
02:16	Caller:	----- [Street address omitted for privacy reasons] Street, Lyons Colorado
02:20	Longmont 9-1-1:	----- [Street address omitted for privacy reasons] Street?
02:22	Caller:	Well actually no no never mind I'm sorry I don't live there anymore. I can't think straight right now it's um...
02:26	Longmont 9-1-1:	That's okay.
02:26	Caller:	---- it's ----- [Street address omitted for privacy reasons] Drive.
02:33	Longmont 9-1-1:	Okay. And what's your friend's phone number please.?
02:38	Caller:	Okay, it's

02:40	Longmont 9-1-1:	What is your Friend's Phone number?
02:42	Caller:	I thought I...Didn't I already say it?
02:43	Longmont 9-1-1:	No Sir You didn't
02:44	Caller:	303
02:44	Longmont 9-1-1:	Is that the 303 656-----?
02:47	Caller:	Yeah Yeah
02:48	Longmont 9-1-1:	I'm sorry, I was asking for your phone number when I got that Hang on one second
02:51	Caller:	Oh, I'm sorry. Yeah, that's his.
02:53	Longmont 9-1-1:	Alright. That's okay. Your phone number then?
02:56	Caller:	720-371-----]
03:05	Longmont 9-1-1:	Okay, Um , we will see what we can do, okay?
03:08	Caller:	Okay.
03:09	Longmont 9-1-1:	Alright, and, uh, I'll have an officer contact you?
03:12	Caller:	Okay
03:12	Longmont 9-1-1:	Alright, thank you sir for calling. okay, as soon as we have um, I'll have an officer call you as well, okay?
03:20	Longmont 9-1-1:	Do you know who his cellphone carrier is.? That will save me some time.
03:24	Caller:	Um, oh God, Um, it's, um, it's Verizon it's Verizon.
03:29	Longmont 9-1-1:	It is Verizon?
03:30	Caller:	It is Verizon.
03:35	Longmont 9-1-1:	Alright, and I'll have someone call you, okay? and we'll start tracing this as soon as we can. Did he mention, he just said he was going to throw himself in front of a vehicle, ah excuse me, a semi, am I correct?
03:44	Caller:	Yeah, that's what he said.
03:45	Longmont 9-1-1:	Okay

03:45	Caller:	He wouldn't tell me where he was.
03:47	Longmont 9-1-1:	Alright, Not a problem. We'll go ahead and get on this. Okay?
03:51	Caller:	Okay.
03:51	Longmont 9-1-1:	Thank you sir.
03:53	Caller:	Yeah.
03:54	Longmont 9-1-1:	Bye.
03:54	[Disconnected]	
04:01	[Dialtone/Dialing]	
04:10	Verizon:	You've reached the Verizon Wireless Law Enforcement Team
04:14	[Ringing]	
04:31	Verizon:	Hi this is Doug with Verizon Wireless Legal. Can I have your name and agency please?
04:35	Longmont 9-1-1:	Hi Josh my name is Christine Mason I'm with the Longmont Police Department.
04:42	Verizon:	You're with...I'm Sorry, what PD is it?
04:44	Longmont 9-1-1:	Longmont L-o-n-g-m-o-n-t Colorado
04:49	Verizon:	How can I help you today?
04:51	Longmont 9-1-1:	I'm calling to report um we just received a 9-1-1 call from a male party stating that his friend just called him stating that he wanted to throw himself in front of a semi and was on the Interstate on his cellphone.
05:05	Verizon:	Okay. What's the ah target telephone number?
05:08	Longmont 9-1-1:	303-656--- I'm sorry correction ----.
05:18	Verizon:	And what's the call back verification number for you?
05:20	Longmont 9-1-1:	303-651-8501.
05:27	Verizon:	And do you have one of our emergency information request forms?
05:30	Longmont 9-1-1:	I probably do.

05:32	Verizon:	Okay. I'll put you on a brief hold while I while I get the information okay. You're looking for location information, correct?
05:37	Longmont 9-1-1:	Yes sir, I am.
05:39	Verizon:	[Unintelligible.]
05:40	Longmont 9-1-1:	Thank you.
	[Background PSAP Noise as 9-1-1 Operator Searches through public records for additional information on the reported suicidal person.]	
09:16	Longmont 9-1-1:	Oh, Looky here. I found the guy.
10:08	Longmont 9-1-1:	[To someone in PSAP:] Sorry, I'm...I'm on hold.
10:26	Verizon:	Okay Ma'am. Thank you for holding.
10:29	Longmont 9-1-1:	No problem.
10:31	Verizon:	Hello.
10:32	Longmont 9-1-1:	Yeah. I'm here.
10:33	Verizon:	Okay, it looks like the last activity I have is at 16:10 today. It looks like he hit
10:38	Longmont 9-1-1:	Yes, that would be arou...
10:42	Verizon:	I'm sorry.
10:42	Longmont 9-1-1:	That would be it.
10:44	Verizon:	Uh, yeah. 1610 was the last time I have.
10:48	Longmont 9-1-1:	okay.
10:48	Verizon:	He hit cell tower number ah 589, which is located on 3855 Lewiston street in Aurora.
10:58	Longmont 9-1-1:	Can you spell that for me?

10:59	Verizon:	It looks like...sure L-e-w--i-s-t-o-n. Street in Aurora. Ah, looks like he was approximately .91 miles away from that particular location ah it looks like he was he hit sector 1 on the tower the center of that sector is at 350 degrees which would put him in the a I would say a north-northwest direction but plus or minus 60 degrees for the full width of the sector. Now the round trip delay measurement which is not which is not related to a GPS measurement but produces a call latitude and longitude of solely off the call signal [Unintelligible]. That latitude is, is 39.77221
11:44	Longmont 9-1-1:	One more time with that latitude 39.
11:46	Verizon:	Yep. point 77221
11:50	Longmont 9-1-1:	And the lat..I mean the...
11:51	Verizon:	and the longitude is negative ah negative 104.81809, and that should correlate with the distance.
12:02	Longmont 9-1-1:	Alright, thank you. I really appreciate it and I'll fill that out and get it back to you.
12:08	Verizon:	Okay, thank you.
12:08	Longmont 9-1-1:	Uh, can you just fax one over to me just in case
12:11	Verizon:	Sure, what's your fax number?
12:13	Longmont 9-1-1:	303-651-8972.
12:18	Verizon:	Okay, I'll send it right over.
12:20	Longmont 9-1-1:	Thank you sir. I really appreciate your time.
12:21	Verizon:	No problem.
12:22	Longmont 9-1-1:	Bye.
12:22	Verizon:	Yep, no problem.
12:25	[Disconnected]	
12:31	[Dial Tone/Ringing]	
12:43	Aurora 9-1-1:	Aurora Dispatch [Unintelligible]. Do you have an emergency?
12:46	Longmont 9-1-1:	Ah.

12:47	Aurora 9-1-1:	Hello.
12:48	Longmont 9-1-1:	Hi. My name is Christine with Longmont Police and Fire Department I'm calling to report a possible suicidal party.
12:55	Aurora 9-1-1:	Okay, where at?
12:55	Longmont 9-1-1:	Ah, to be honest with you, I did this off of the cellphone ping with Verizon wireless. I have a lat long. But I don't have a physical address. I do have the gentleman's physical address I obtained off the QDA from CBI. Here's how it went down. I received a 9-1-1 phone call from a Aaron ----- who resides at ----- Drive in Longmont.
13:25	Aurora 9-1-1:	---- [Street number omitted for privacy reasons]
13:27	Longmont 9-1-1:	----- one word --- [Street omitted for privacy reasons]
13:29	Aurora 9-1-1:	Alright. I have multiple things going on and I may have to throw you on hold because I'm also on fire. That's ---- and that's north or south -----?
13:36	Longmont 9-1-1:	There is no north or south, it's just ----- Drive, in Longmont.
13:40	Aurora 9-1-1:	Got it. Okay. In Longmont. Okay.
13:42	Longmont 9-1-1:	Aaron's phone number is 720-371-----
13:51	Aurora 9-1-1:	Okay.
13:51	Longmont 9-1-1:	States his friend Josh ----- [Last name omitted for privacy reasons], 27 year-old male phoned from 303-656----- stating that he was in his silver jeep, was going to pull over on the Interstate and commit suicide by stepping in front of a semi.
14:16	Aurora 9-1-1:	We just had somebody step in front of a vehicle less than 2 minutes ago.
14:19	Longmont 9-1-1:	Are you kidding me?
14:20	Aurora 9-1-1:	A silver chief was pulled off and stepped in front of a semi.
14:24	Longmont 9-1-1:	Yeah, I've got a license plate on the vehicle that I obtained off the QDA of ----- . [To someone else in Longmont PSAP: "He did it.]
14:31	Aurora 9-1-1:	----- . Okay.
14:32	Longmont 9-1-1:	Yep.
14:32	Aurora 9-1-1:	Okay

14:33	Longmont 9-1-1:	And I have..
14:35	Aurora 9-1-1:	Is that correct?
14:38	Aurora 9-1-1:	I'm sorry.
14:39	Longmont 9-1-1:	That's what I obtained off of the QDA. [Background: "Her suicide did it."]
14:44	Aurora 9-1-1:	Okay. I'm double checking it because I'm betting your 9-1-1 ...
14:47	Longmont 9-1-1:	Yeah, I've got an address...
14:48	Aurora 9-1-1:	got hit by a tractor trailer, okay
14:51	Aurora 9-1-1:	Alright, what's the address you've got?
14:54	Longmont 9-1-1:	I have an address off the lat. long.
14:57	Aurora 9-1-1:	Uh hum
14:58	Longmont 9-1-1:	of 39.77221 longitude negative 104.818
15:10	Aurora 9-1-1:	point 818
15:12	Longmont 9-1-1:	09
15:14	Aurora 9-1-1:	09
15:15	Longmont 9-1-1:	The gentleman at Verizon said he was .19 miles away from ah a cell tower at 3855 Lewiston, and it should be in a north-northeast direction.
15:32	Aurora 9-1-1:	Pretty close to where we're ... okay.
15:35	Longmont 9-1-1:	The gentleman's name ah on the QDA. ah, his address is ----- [Street address omitted for privacy reasons] Avenue.
15:46	Aurora 9-1-1:	Okay, give me just a second here. Hold on.
15:47	Longmont 9-1-1:	No worries.
15:54	Aurora 9-1-1:	Okay.
16:08	Aurora 9-1-1:	Okay.
16:14	Aurora 9-1-1:	Yeah. [Unintelligible] real quick, I don't know if this is his home or not. Sorry, I'm grabbing another dispatcher here.

16:21	Longmont 9-1-1:	You're fine. It's particularly okay. I totally understand.
16:25	Aurora 9-1-1:	Um...hold on, I'm trying to pull up an actual address...
16:31	Longmont 9-1-1:	You're fine. No worries.
16:47	Aurora 9-1-1:	Yeah, well I'm fairly certain that's the same one because it is only about a quarter mile away.
16:53	Longmont 9-1-1:	Yeah, he, there's no coincidence like that.
16:56	Aurora 9-1-1:	Yeah. [Unintelligible]
16:59	Longmont 9-1-1:	Absolutely.
16:59	Aurora 9-1-1:	[Unintelligible]
17:01	Longmont 9-1-1:	Yep, I know.
17:02	Aurora 9-1-1:	So....hold on
17:04	Aurora 9-1-1:	[Unintelligible] Let me check with my PD dispatcher and see if this vehicle matches up okay?
18:03	Longmont 9-1-1:	You're fine.
18:40	Aurora 9-1-1:	Okay, and what was your name again?
18:42	Longmont 9-1-1:	My name is, ah, Christine Mason.
18:46	Aurora 9-1-1:	Christine, okay and a call back number there if I find I need you guys.
18:49	Longmont 9-1-1:	Longmont PD, 303-651-8501.
18:55	Aurora 9-1-1:	8501. okay. okay, they're not able to tell me yet but, ah, we've got both on the scene responded to so we'll go ahead and a I guess we'll let you know.
19:13	Longmont 9-1-1:	If you guys need a tapes request let me know, okay?
19:17	Aurora 9-1-1:	Okay, and a just my other question here. is, a was there anything else that they gave you, or any thing like that?
19:22	Longmont 9-1-1:	He didn't give me any other information.
19:25	Aurora 9-1-1:	Okay, except the lat long. Okay. I appreciate it. so much
19:28	Longmont 9-1-1:	Not a problem. uh hum. Goodbye.

19:30	Aurora 9-1-1:	Alright. Goodbye.
19:31	[Disconnected]	
	[Portion of Recording Not Related to Suicide Deleted]	
20:44	Longmont 9-1-1:	This is Christine.
20:46	Caller:	Hi, are you the one that I talked to earlier?
20:48	Longmont 9-1-1:	Is this Aaron?
20:49	Caller:	Yes.
20:50	Longmont 9-1-1:	Hi Aaron. I did speak with you earlier. How can I help you?
20:55	Caller:	Um, ah , I think he did it.
20:57	Longmont 9-1-1:	Okay. What makes you think he did it?
21:00	Caller:	He called me, and he told me that he was going to step in front of a semi truck, and then I could hear the cars in the background, and he said he was on the Interstate, and then
21:08	Longmont 9-1-1:	Um hum.
21:08	Caller:	Uh, it just went dead. And now when I call his phone, all I hear, is just, two beeps.
21:14	Longmont 9-1-1:	Okay.
21:14	Caller:	and a long beep.
21:15	Longmont 9-1-1:	Alright.
21:16	Caller:	and
21:18	Longmont 9-1-1:	Aaron, here's what I've done so far. I contacted Verizon ah security and obtained a ping for his cell phone. I was able to um I was able to secure a lat long on his cellphone from where it was at, and it shows that it's still in Aurora Colorado. Um, what I will do, is transfer you over to Aurora, I have already contacted them to let them know the situation, and they may be have further information that they're able to provide you at this time. okay?

21:50	Caller:	Okay.
21:51	Longmont 9-1-1:	If I lose you, please call me back on 9-1-1 and I'll stay on the line with you until I get you transferred. Okay?
21:57	Caller:	Okay. I, ah I just want to know something.
22:00	Longmont 9-1-1:	Sure, I understand. It may be a little bit of time, sir, before you can, ah, know anything. Okay?
22:07	Caller:	Okay.
22:07	Longmont 9-1-1:	Do you understand what I'm saying?
22:09	Caller:	Yeah, I do. I'm, I'm, I, I just don't know what to think right now.
22:13	Longmont 9-1-1:	Okay. Is there anybody with you?
22:16	Caller:	Um, yeah, I got a friend.
22:18	Longmont 9-1-1:	Okay. Alright. If you'll hold for just a moment sir, I will transfer you.
22:22	Caller:	Okay.
22:23	Longmont 9-1-1:	Thank you for your patience.
22:31	[Ringing]	
22:39	[End of recording]	