Before the
Federal Communications Commission
Washington, D.C. 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
	)	PS Docket No. 12-333
Legal and Statutory Framework for Next Generation 9-1-1 Services	)	DA 12-1831

REPLY COMMENTS OF AGERO, INC.

Agero, Inc. submits these reply comments responding to the *Public Notice* of the Public Safety and Homeland Security Bureau[1] addressing the Next Generation 9-1-1 Advancement Act of 2012 (NG 9-1-1 Advancement Act).[2] Under the NG 9-1-1 Advancement Act, the Commission is to recommend to the Congress the legal and statutory framework for NG 9-1-1 services. The *Public Notice* asks for comments on issues that should be addressed in the recommendations.

In its NG 9-1-1 proceedings, the Commission seeks to close the gap between the capabilities of modern networks and devices and today's 911 system, including furthering the transition to IP-based communications capabilities for emergency communications and

[1] *Public Notice*, Public Safety and Homeland Security Bureau Seeks Comment on the Legal and Statutory Framework for Next Generation 9-1-1 Services Pursuant to the Next Generation 9-1-1 Advancement Act of 2012, DA 12-1831, PS Docket No. 10-255, PS Docket No. 11-153 and PS Docket No. 12-333 (November 13, 2012).

[2] The NG 9-1-1 Advancement Act is contained in the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96 (2012), Title VI, Subtitle E.

NG 9-1-1.[3] Agero urges that the Commission's recommendations relating to NG 9-1-1's legal and statutory framework recognize that technological advances in mobile telecommunications have outpaced the legacy 911 infrastructure and that NG 9-1-1 must do better. The NG 9-1-1 platform must embrace a much broader range of communications facilities, afford those facilities access to the NG 9-1-1 platform and be able to integrate technology more expeditiously, not only to summon emergency response but to assist it. The Commission's Public Safety and Homeland Security Bureau report addressing 911 communications failures resulting from the June 2012 Derecho recognizes this fundamental and that NG 9-1-1's enhanced diversity will advance emergency communications.[4] Agero presents the automobile as a critical example of a communications facility linked to 911 that should be integrated into NG 9-1-1. Agero urges the Commission to pursue a coordinating and regulatory role to establish and maintain this path.[5]

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[3] In the Matter of Framework for Next Generation 911 Deployment, *Notice of Inquiry*, PS Docket No. 10-255, FCC 10-200 (December 21, 2010) at paragraph 1.

[4] Impact of the June 2012 Derecho on Communications Networks and Services, *Report and Recommendations, A Report of the Public Safety and Homeland Security Bureau, Federal Communications Commission*, January 2013, PS Docket 11-60, DA 12-1153 (January 10, 2013) ("*Derecho Report*")

[5] The following abbreviations or acronyms are used in these reply comments: Advanced Automatic Collision Notification (AACN), Automatic Collision Notification (ACN) Agero, Inc (Agero), Emergency Notifications System (ENS), Global Positioning System (GPS), Internet Protocol (IP), National Emergency Number Association (NENA), National Highway Traffic Safety Administration (NHTSA), National Telecommunications and Information Administration (NTIA), Next Generation 911 (NG 9-1-1), Next Generation 9-1-1 Advancement Act of 2012 (NG 9-1-1 Advancement Act), Shared Emergency Service IP Networks (ENINets), Short Messaging Service (SMS), Telematics Service Provider (TSP), Telematics Agent (TLMA) and US Department of Homeland Security (DHS).

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Agero, Inc.

Agero (formerly ATX Group/Cross Country Automotive Services), a privately held company headquartered in Medford, Massachusetts, offers comprehensive, private-labeled, connected vehicle or telematics solutions for automobile manufacturers.[6] Agero provides advanced in-vehicle connectivity, safety, and driver assistance information to nearly two million vehicle owners.

Agero services are provided through electronic devices that can interface with drivers through in-vehicle navigation screens, direct two-way communication audio links with a response center agent via a dedicated in-vehicle button, SMS messaging transmitted to a hand-held communications device or accessed via an application on a Smartphone or tablet, an off-board Web portal, and through automated, interactive voice/speech technologies. Agero develops and deploys services for automobile manufacturers that meet the increasing need of time-challenged drivers to use drive-time more productively while enhancing driver safety and improving emergency response.[7]

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[6] www.agero.com

[7] Agero's telematics services are provided to vehicle owners through the brand names of its customers: BMW, Hyundai, Infiniti, Lexus, Rolls-Royce Motor Cars and Toyota. In Spring 2013, Agero will commence providing services to Acura vehicle owners.

Since the 1990's, telematics technology has provided integrated GPS location and wireless communications to consumer vehicles so emergencies can be located and assistance dispatched. Automatic collision notification (ACN), where a voice link and vehicle location is transmitted to the telematics service provider (TSP) response center when an airbag deploys or the tensioning restraint sensors linked to seat belts are activated, followed. Telematics vehicles provided call back and location information prior to any Commission mandate.

In several vehicle brands and models served by Agero, advanced automobile collision notification (AACN) is provided. AACN encompasses in-vehicle crash sensor information – including delta impact velocity, the number and direction of impacts, whether the vehicle rolled over, and if seat belts were engaged, to calculate the potential of severe injury to the vehicle occupants.[8] Whether involving AACN or other request for assistance, IP-based networks transmit information directly to the Agero response center. Information is not generally routed throughout the public switch network or its successor IP networks. Since initial deployment, telematics service has been ubiquitous from coast to coast, capable of communicating with all US and Canada 911 Centers.

Summary of Comments

Comments noted the importance of unified and consistent NG 9-1-1 platforms but varied as to how to ensure such. Counties of Southern Illinois state that federal legislation is needed to

[8] Algorithms, the foundation of AACN, have been developed by the Lehman Research Center at the University of Miami and the Center for Automotive Medicine at the University of Michigan and are being tested in pilots conducted by BMW North America and General Motors in collaboration with the US Centers for Disease Control and Prevention. *See* National Center for Injury Prevention and Control, *Recommendations from the Expert Panel: Advanced Automatic Collision Notification and Triage of the Injured Patient*, Centers for Disease Control and Prevention (2008) at 2, 5-6. http://www.cdc.gov/injuryresponse/pdf/AACN%20Report_FINAL-a.pdf.

establish minimum standards to implement, deploy and maintain NG9-1-1 systems. States would be assigned to oversee implementation with the National Highway Traffic Safety Administration (NHTSA), National Telecommunications and Information Administration (NTIA) and the Department of Homeland Security (DHS) providing coordination and certification responsibilities.[9] Texas 911 Entities *et al* stated that the Commission should take positive steps to empower state and local governments to integrate NG9-1-1 and emergency response systems by developing national standards, best practices, and operational policies through grants and other incentives.[10]

NENA, while not endorsing a comprehensive federal role, states that the Congress and federal agencies should facilitate the deployment of NG9-1-1 by the states and ensure that state deployments are timely and effective. NENA recommends that the Commission be responsible for establishing national policy to ensure consistent regulation.[11] APCO suggests that Congress create a federal program led by the Commission and involving other federal agencies to work with the public safety community to create a standard national framework that PSAPs can follow to ensure secure, effective, and efficient NG9-1-1 deployments.[12]

Intrado relates that the federal government should take responsibility for mandating access to NG9-1-1, ensure reliable NG9-1-1 networks, determine interconnection obligations among originating service providers, 9-1-1 service providers and 9-1-1 authorities, and clarify

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[9] Counties of Southern Illinois *Comments* at pages 1-4.

[10] Texas 9-1-1 Alliance, Texas Commission on State Emergency Communications and the Municipal Emergency Communications Districts Association, *Comments* at pages 6-7 and 10-11.

[11] National Emergency Number Association *Comments* at pages 4 and 9.

[12] Association of Public Safety Communication Officials, International, *Comments* at page3 .

whether states and/or federal authority determine the obligations of service providers in delivering and routing calls to 9-1-1 authorities.[13]

AT&T emphasizes that successful NG9-1-1 deployment depends on creating a standardized, basic NG9-1-1 infrastructure. It also notes that how public safety is organized to receive and process NG9-1-1 information will drive costs. The present structure, which relies on over 6,800 individual PSAPs operating autonomously, may prove inadequate or counterproductive to NG9-1-1 deployment.[14] Verizon notes a similar concern. The traditional county- or city-level PSAP-by-PSAP implementation approach used for wireless E911 is untenable for NG9-1-1 because of the substantially higher costs and technical and administrative complexities of NG9-1-1.[15]

The NG 9-1-1 Platform Must Embrace Universal Access of Technologies, Facilities and Devices

The *Public Notice* solicits comments on several NG9-1-1 subjects. These include governance, funding and whether federal direction could promote a more consistent nationwide regime. It asks what legacy regulation and jurisdiction divisions should be eliminated or reformed. It inquires about the potential for Shared Emergency Service IP Networks (ENINets). Whether current liability protections for 911 providers are adequate is noted. The *Public Notice* asks what framework will best ensure efficient and accurate transmission of 911 caller information to first responders.

If NG 911 means anything, various services and applications must be able to summon emergency response through the 911 platform. The 911 platform must address and promote a

[13] Intrado, Inc and Intrado Communications, Inc. *Comments* at page 2

[14] AT&T *Comments* at pages 1-3.

[15] Verizon and Verizon Wireless, Comments at page 4.

flexible interface capable of integrating evolving technologies efficiently. That emergency messages via text, email, or social media continue to remain a vision for most 911 centers profiles this critical NG 9-1-1 objective. The automobile is an example; the vehicle has evolved to a mobile telecommunications platform, whose benefits cannot access 911. The law should promote integrating the vehicle and other facilities into NG9-1-1.

Agero's IP based connected vehicle infrastructure, and the expertise its response specialist possess, transmit and receive voice and data information regarding an incident and those involved. A virtual file of the incident is created. This capability presents a valuable model and resource for emergency response. It affords 911 centers a means to access and leverage technology and efficiencies developed and deployed by private investment. 911 Centers would be notified of an emergency-- prescreened by the TSP response center-- and be presented with an incident record for review. Available today, it would allow 911 to devote more time evaluating an incident instead of gathering information about it. Yet an interface between a TSP and 911 remains distant and are reflected by the following challenges:

- There is no ubiquitous data path into all PSAP platforms.
- In most locales, no direct voice path exists for TSP emergency calls – even those triggered by an airbag deployment – into 911 trunks through local exchange carriers.
- There is no universal identification in identifying a telematics call (TLMA). In some states and localities, a TLMA call type classification immediately identifies to the 911 call taker that the incoming emergency call stems from a vehicle and has likely been filtered by a TSP as a bona fide emergency requiring priority. Most jurisdictions, however, do not offer such classification. In some locations, telematics emergency calls are routed to non-priority alarm lines.
- TSP call takers undergo radically different training than 911 call takers even though their safety-related training is grounded on APCO Institute requirements.

Pervasive mobile telecommunications shows the need for 911 to move beyond voice and to be more readily adaptable to evolving service platforms. In emergency circumstances, the family vehicle, with its access to immediate shelter, electrical power, controlled climate, and,

now mobile communications, often becomes a temporary refuge. The emergence of the automobile as a mobile telecommunications platform is affirmed by carrier investment.[16]

Automobile industry experience indicates that if access is not provided within the vehicle, consumers bring a nomadic device to the vehicle. As a result, highway and vehicle safety agencies, the automobile industry and wireless carriers are committing significant investment to promote safe driving using the vehicle communications platform.

Agero has expanded its services to encompass the personal device as well as that embedded in the vehicle. Investment is directed to innovation and research centered on functions and applications pivoting around in-vehicle interfaces with embedded systems, nomadic devices, and speech recognition systems, all of which are linked to 911. 911 cannot be isolated from the mobile telecommunications market. The market's advancements, efficiencies and adaptability should be elements of the NG 9-1-1 framework.

Agero recommends the Commission, in its recommendations, pursue a more consistent nationwide 911 system capable of integrating evolving technology and consumer expectation. The current system remains voice centric; it lacks technologies that have been available for several years. The result is a less efficient emergency communications system. The Commission should be authorized to establish a balance that ensures reasonable access to 911 by the range of technologies and applications while preserving the discretion of state and local governments to direct emergency response.

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[16] Verizon Completes Acquisition of Hughes Telematics, *Verizon Expands Capabilities in Automotive and Fleet Telematics and Accelerates Growth in Machine-to-Machine Services (July 26, 2012.)* *http://newscenter.verizon.com/press-releases/verizon/2012/verizon-completes-acquisition.html*

NG 9-1-1's Improvements and Reliability Depend Upon Reciprocating Communications Platforms

The tenuous condition of the legacy 911 network is well established. The June 2012 Northeast derecho disrupted 911 services in the Washington, D.C. area, profiling the fragile character of current emergency communications. With millions in public investment committed to 911, Northern Virginia jurisdictions were unable during the incident to resolve carrier failure to transmit 911 calls.[17] The circumstance emphasizes the silo-like nature of the current 911 system and reaffirms the need for NG 9-1-1 to more robustly integrate and support broader services offerings and to benefit from their connectivity. Reacting to Hurricane Sandy, the Commission plans hearing addressing communications networks in catastrophic circumstances, including obstacles to 911.[18]

Relying on one entity, a carrier, to deliver emergency calls contradicts an era where alternative and diverse transmission providers exist. 911 is a core government service. There is a need to strengthen its diversity and redundancy and expand 911 resources. That path involves not just improving the legacy delivery method but expanding the platforms able to access 911. As noted, the automobile is a prominent example.

NG9-1-1 should embrace a range of service platforms able to access directly emergency response. Agero currently deploys key components of NG 9-1-1's central elements. Agero integrates into a single platform varied services, multiple interfaces (in-vehicle, handset/tablet apps, web portals), and cloud-based databases for motorists. Envisioned to be managed inside

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[17] *Derecho Report*, at pages 1-36, Comments of Fairfax County, Virginia, In the Matter of Reliability and Continuity of Communications Networks, Including Broadband Technologies and 9-1-1 Resiliency and Reliability in Wake of June 29, 2012, Storm in Central Mid-Atlantic and Northeastern United States, PS Docket 11-60, DA 12-1153 (August 17, 2012).

[18] Statement of Chairman Genachowski, *Post-Superstorm Sandy Field Hearings to Examine New Challenges to Resiliency of US Communications Networks During Natural Disasters & Other Times of Crisis* at page 2 ((November 21, 2012).

the vehicle for purposes of promoting safely (mitigating driver distraction), the functions process data generated by both vehicle and vehicle owner.

The vehicle platform can expand the emergency communications infrastructure and promote emergency response in two fundamental ways. First, it is a primary source of incident information. During wide-scale emergencies, the catastrophic incident, natural disaster or extreme adverse weather, motorists in telematics-equipped vehicles contribute immediate and localized intelligence to the 911 network hub. Telematics vehicles will be able to provide response managers with real-time snapshots and video of evolving emergency situations at the overview and detail level in efficient and accessible formats. It can also serve as a vehicular version of the Emergency Notifications System (ENS) to provide route specific alerts.

Second, the connected vehicle can play a role where core 911 services become non-existent or severely challenged. With access to every US/Canada 911 Center, Agero's network of response centers, staffed with personnel trained to communicate with individuals confronted with an emergency, can assume a temporary or intermediary role. Response centers can receive information and transmit it to either the appropriate secondary emergency response entity or a temporary dispatch command, while remaining with the 911 caller. The emergence of the connected vehicle, and the data-centric infrastructure that supports it, provides a partial remedy when 911 falters.

No one suggests TSPs or any other service can or should be a substitute for the 911 Center. Yet, a structured delineation of responsibilities can contribute to providing information of more substance relating to incidents, large and small, and provide a reasoned alternative when core 911 service is severely challenged. A holistic approach, centered on public-private collaboration involving national organizations, such as the National Emergency Number

Association, the Association of Public Safety Communications Officials and the National Association of State 911 Administrators, can establish the parameters to strengthen 911.

The Commission's *Derecho Report* notes the importance of NG9-1-1's ability to increase access diversity opportunities, urges that PSAP's embrace NG 9-1-1 designs that deploy multiple access and emphasizes the danger of continuing to rely on one access link to 911.[19] The *Derecho Report* also noted the recommendation of the Metropolitan Washington Council of Governments that Verizon review its communications and public notification plans with each 911 center regarding disseminating emergency messages to the public during 911 outages.[20] Consistent with these recommendations, the automobile is a communications platform that should be afforded access to NG9-1-1 and is a viable means to convey the status of 911 systems to the public.

Public safety agencies routinely inform the public of road closures due to law enforcement and emergency service activity through web updates and SMS. Transportation and public works departments text commuters congested area locations. Wireless devices allow users to receive breaking news such as severe weather, imminent hazards, and Amber alerts. These new services, offered across the nation, benefit a range of communities. Emergency access is no longer a one-way street but a communications web. [21] The Commission's recommendations should present a nationwide NG9-1-1 system that aspires to and embraces such a fundamental.

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[19] *Derecho Report* at page 44.

[20] *Derecho Report* at page 50.

[21] Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Association of Late-Deafened Adults, Inc., California Coalition of Agencies Serving Deaf & Hard of Hearing Persons, Inc., Hearing Loss Association of America, Dead and Hard of Hearing Consumer Advocacy Network, Cerebral Palsy and Deaf Organization and Technology Access Project at Gallaudet University, Comments at pages 3-4 (December 13, 2012).

The Need for Liability Protection

The lack of clarity regarding liability protection stifles investment and causes delay in attracting the broadest range of services to NG 9-1-1. NENA has noted that NG 9-1-1 will engage a more complex service delivery environment, with more types of services able to connect to NG 9-1-1 systems, more external data sources available to 911 Centers, and increased information sharing options among emergency response agencies. This complexity complicates affording liability protection to new and future services. Greater clarity as to liability protection will serve NG 9-1-1.[22]

NENA relates an important example. NG9-1-1 will enable informed dispatch decisions to be made based on AACN information from a telematics equipped vehicle providing information on the severity of a crash and the vehicle occupants. For AACN to be broadly available across vehicle models, it is critical that adequate liability protections be in place.

Federal law provides liability protection for 911 centers, service providers, and vendors, yet individual application depends upon state policies. Often, these policies are rooted in statute, tariff or judicial decisions that are vestiges of a common carrier regulatory framework. The challenge is that the variation and inconsistency among the states contributes to less clarity and will stifle a robust NG 9-1-1 where a broad range of services participates. The Commission should pursue more a national liability protection policy to those services participating in 911.

[22] Next Generation 9-1-1 Transition Policy Implementation Handbook, Application of the Implementation Checklist, National Emergency Number Association at pages 22-26 (June 2011). https://c.ymcdn.com/sites/www.nena.org/resource/resmgr/ngpp/ng911_transition_policy_hand.pdf

Recommended Language

Agero recommends the Commission consider the following language as it prepares its report to Congress addressing the legal and statutory framework for NG 9-1-1:

Universal Structure and Reciprocating Platforms

The Congress should consider authorizing the Commission, after consulting with the Department of Homeland Security, the National E9-1-1 Implementation Coordination Office (ICO) and other federal agencies and seeking the views of State and local governments and agencies, the National Emergency Number Association, the Association of Public Safety Communications Officials, and the National Association of State 911 Administrators, other interested parties and the public to establish parameters that promote integrating into NG 9-11 advanced technologies on a national and evolving and expeditious basis. In pursuing this responsibility the Commission shall promote:

a) the benefits of a broad range of platforms, including Carriers, Wi-Fi, Internet Service Providers, Automobiles, Instant Messaging and Social Networks to transmit information directly to 911,
b) the ability of a platform to assist emergency response in providing on scene information,
c) the ability of a platform to provide ancillary or back up assistance to the 911 Center, particularly in circumstances where 911 becomes unavailable,
d) that all platforms have fair and reasonable access to 911 and
e) the interests of state and local governments to deploy and manage NG 9-1-1 networks efficiently and effectively.

Liability Protection

The Commission recommends that the Congress consider the importance of a national policy addressing liability protections for state and local governments and their employees and agents and entities that provide information to 911 and their employees and agents or assist 911 communications. Historically, liability protection in some form has accompanied 911. While current law recognizes the need for liability protection, implementation frequently relies on outmoded state and local regulatory structures. NG 9-1-1 will benefit from a fair and inclusive uniform policy with regard to liability protection to those entities and individuals that contribute to 911 communications.

Conclusion

The framework that will best ensure efficient and accurate transmission of 911 information to first responder will flow from integrating a wide range of services directly into NG 9-11 uniformly and expeditiously. These platforms should encompass existing and evolving communications platforms, including the automobile. Agero urges the Commission to present such a path in its recommendations to the Commission addressing the legal and statutory framework for NG 9-1-1.

Respectfully submitted,

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