

GeoComm

December 12, 2012

Sue Vanicek, Director
Nebraska Telecommunications Infrastructure and Public Safety Department
300 The Atrium
1200 N Street
Lincoln, Nebraska 68508

RE: Docket No. 911-045/PI-166 regarding Next Generation 9-1-1 Comments

To Whom It May Concern:

Geo-Comm, Inc. ("GeoComm") appreciates the opportunity to provide comments regarding Next Generation 9-1-1 (NG9-1-1) questions included in the above referenced docket.

Below are our comments and responses to the questions posed in the docket.

1. Please identify the federal, state and local authorities, agencies, and governing bodies whose participation and cooperation will be necessary for the implementation of NextGen 911 with respect to the receiving and processing of 911 calls. In commenting, please provide the following specifics:

- a. The basis and scope of their authority including references to applicable state and federal statutes, administrative or court orders, and regulations;

NG9-1-1 is best directed and coordinated by the public safety authorities within a state, region, or at the local level. It will be necessary for public safety authorities at all levels to cooperate to interlink systems based on the hierarchical nature of the National Emergency Number Association (NENA) i3 standards. Some states direct and coordinate at a state level through a state 9-1-1 office while other states are regionalized. For other states, everything will come from the ground up through the local 9-1-1 authorities.

- b. Any efforts, projects or initiatives currently in progress or being planned related to any portion of the implementation of NextGen 911; and

On December 6, 2012, the FCC announced that the four major wireless carriers have voluntarily announced their desire to make text to 9-1-1 service available nationwide by May 15, 2014 in response to the PS Docket No. 11-153 In the Matter of Facilitating the Deployment of Text-to-911 and Other Next Generation 9-1-1 Applications and In the Matter of



Framework for Next Generation 9-1-1 Deployment, PS Docket No. 10-255. This action is key to driving the implementation of NG9-1-1 services and deployments across the country. Previously, this service was said to be five to ten years away, but now we know that it will be available to PSAP's in early 2014.

c. Identify any impediments to their participation.

One significant challenge to overcome is that NG9-1-1 is driven by Geographic Information Systems (GIS) databases. NG9-1-1 systems require GIS data for Emergency Call Routing Functions (ECRF) and Location Validation Functions (LVF). GIS data for ECRF/LVF must be provided by locally authoritative sources and must be approved for use by 9-1-1 authorities. Building 9-1-1 GIS data that meets or exceeds 9-1-1 MSAG accuracy and provisioning this data into live NG9-1-1 ECRF/LVF systems safely and securely, with no interruption to 9-1-1 service, can be a formidable and time-consuming task. Local authorities must consider issues such as conformation to a state-wide GIS data model, edge matching with neighboring jurisdictions data to avoid gaps and overlaps in 9-1-1 service areas, and 24x7x365 mission critical GIS support for mission critical 9-1-1 call routing and location validation databases. Because local authorities will be required to perform more GIS related tasks in order to support 9-1-1, strategies must be implemented to gain local buy in and to manage local PSAP constituency participation in GIS data creation, maintenance, and ESInet provisioning workflows.

2. The cooperation and participation of wireless service providers, local exchange carriers and other interested parties will be necessary for the implementation of NextGen 911 with respect to the receiving and processing of 911 calls. In commenting please provide the following specifics:

a. The nature of their participation including what elements of a robust NextGen 911 for which they would be responsible;

The State of Nebraska should consider compelling all telecommunications service providers to interconnect with Next Generation 9-1-1 systems, extend the same level of liability protection to all next generation vendors as is currently afforded to certified telecommunications service providers, and should require all service providers to populate a LIS (either self-maintained or contracted) at no cost to the PSAP (or governing body). Maintenance of an interconnected LIS should be considered a cost of doing business for any company involved in subscriber telecommunications services. The state should further consider compelling all telecommunications service providers to validate LIS locations against the GIS based Location Validation Function (LVF), and may consider options to host or subscribe to managed LVF services from an NG9-1-1 LVF systems/service provider.

To initiate implementation of NG9-1-1 services it is recommended that states approach i3 from a multi-tier perspective. The architecture of i3 is based off of the same underlying principles that allow for the Internet to be global and reliable. That means that 9-1-1 calls in the future determine call routing to the appropriate 9-1-1 PSAPs using a hierarchical model, based on the callers location, that is controlled through multiple tiers beginning at the National level and then filtering down through to the state level, county level, town level etc. At each level, during call delivery, the capabilities of the level below are evaluated and call treatment either occurs normally or calls get handled differently due to extenuating circumstances (PSAP off line, extended call volume, etc.). The features that enable both call routing via a tiered approach based on location and being able to apply policy during call routing are two critical aspects of consideration for NG9-1-1.

NENA i3 is based on the assumption that any entity capable of originating 9-1-1 calls from a transport perspective (wireline, wireless, and broadband) shall have deployed services that ensure location information is provided to any device capable of contacting 9-1-1. All three types of device configuration (fixed, nomadic, and mobile) shall have validated location information at the time when they place a 9-1-1 call. These location services shall rely on validation of civic location information through the existing 9-1-1 authorities validation process. They shall also provide the services capable of automatically assigning location information to end points and, for legacy systems, the products necessary to convert 9-1-1 calls in to a format capable of interworking with NENA i3 and applying location information automatically to those calls as well. Both of these services are thoroughly cited within the NENA i3 standards and products exist today to implement them.

All industry leading vendors implementing services as described here have tested their products for interoperability voluntarily at the NENA Industry Collaboration Events (ICE). These events have helped to foster a better understanding of the standards that drive product development and provide a level of certainty that interoperability can and does exist between disparate vendors for products that rely on functions provided by other vendors.

- b. Any efforts, projects or initiatives currently in progress or being planned related to any portion of the implementation of Next Gen 9-1-1 including any state or federal deadlines or requirements currently in place; and

Implementing Next Generation 9-1-1 is all about ensuring standard-compliance. Standards for 9-1-1 uniformly allow for states and jurisdictions to implement services without worrying about system compatibility, stranded costs, or regional

interoperability issues. As such, and unfortunately, it is often the case that non-standard “NG9-1-1 like” features are considered first over the adoption of uniform standards-aligned implementations and products. For example, the current incarnation of text messaging services to 9-1-1 may become obsolete when 9-1-1 authorities decide to move to a true NG9-1-1 platform whose features greatly exceed the usefulness of receiving text messages and incorporate all of the things that today’s 9-1-1 systems lack (including the ability to handle text messages as well as video, instant messages, and real-time-text). States and jurisdictions have to carefully try to avoid the problems associated with glittering new features, such as text to 9-1-1, in favor of pragmatically moving forward with NG9-1-1.

With that in mind the only set of standards that has been fully vetted, developed, and tested for supporting the NG9-1-1 services vision are the NENA i3 standards. The standards incorporate requirements developed over ten years of detailed discussions, documentation, and testing. The standards support all of the aforementioned desirable features as well as the core features that all 9-1-1 systems in the future need to support which are:

- Reliability
- Security
- Flexibility
- Scalability
- Interoperability
- Lower cost of ownership

c. Identify any impediments to their participation.

As evidenced by the wireless carriers’ agreement to offer text to 9-1-1 services in early 2014, we see no impediments to participation by any and all communications service providers in NG9-1-1 implementation across the nation nor in Nebraska.

Please feel free to contact me at (800) 335-4255 or by e-mail at sgross@geo-comm.com with any follow-up questions or comments pertinent to the information contained herein.

Sincerely,



Stacen C. Gross
Regional Account Manager