BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Commission, on its motion, seeking to investigate the requirements, costs and impact of the implementation of Next Generation 911 in Nebraska relating to the provision of Enhanced Wireless 911 Service	))))))	Application No. 911-045 / PI-166

COMMENTS OF INTRADO INC. AND INTRADO COMMUNICATIONS INC.

Intrado Inc. and Intrado Communications Inc. (Intrado)[1] appreciate the opportunity to provide comments to the Nebraska Public Service Commission (Commission or PSC) in support of the Commission's investigation of the requirements, costs and impact of the implementation of IP-based Next Generation 9-1-1 (NG9-1-1) in Nebraska.[2]

I. INTRODUCTION

This historic time in the emergency communications industry presents complex challenges. Public safety must adjust to the prevalence of advanced-intelligent networks and now next-generation technology in commercial and consumer markets. Given the fact that legal and policy changes notoriously lag behind technological advances, coupled with the fact that the 9-1-1 industry is comprised of multiple public and private entities that largely operate independently from one another, the 9-1-1 industry has lacked a coherent strategy for regulatory,

[1] Intrado Inc. is a wholly-owned subsidiary of West Corporation, a leading provider of technology-driven communications services headquartered in Omaha, Nebraska. Intrado developed much of America's emergency communications technology and infrastructure and has supported the delivery of emergency communications and related services for more than thirty-two years. Intrado pioneered 9-1-1 location and routing solutions for wireline, wireless, voice over internet protocol (VoIP) and SMS text messaging to 9-1-1. Intrado also led the development of next generation 9-1-1 products and services—with early deployments in Washington, Vermont and Florida. Today, Intrado provides the core of the nation's 9-1-1 infrastructure by managing the majority of the nation's caller location and selective routing information and by supporting the delivery of several hundred million 9-1-1 calls every year.

[2] In the Matter of the Commission, on its own motion, seeking to investigate the requirements, costs and impact of the implementation of Next Generation 911 in Nebraska relating to the provision of Enhanced Wireless 911 Service, Nebraska Public Service Commission, Order Setting Hearing and Seeking Comment (October 30, 2012).

legal and funding changes necessary to implement the transition to NG9-1-1 on a widespread basis. Implementation will require an unprecedented, but surmountable, level of commitment and collaboration from all participants, including federal, state and local governments.

II. DISCUSSION OF REQUIREMENTS, COSTS AND IMPACTS TO IMPLEMENTATION OF NG9-1-1 IN NEBRASKA

A. Federal, State and Local Government Participation and Cooperation in NG9-1-1

The roles and responsibilities of federal, state, and local governments in the transition and operation of NG9-1-1 are the subject of national discussion. Through the Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act)[3], the United States Congress acted to create a national public safety broadband network (NPSBN) for first responders that will interoperate with the NG9-1-1 system as part of a larger emergency communications ecosystem.[4] Congress also took action to evaluate the role the federal government can and should play in fostering the nation's transition to NG9-11. At the direction of Congress, the Federal Communications Commission (FCC) is considering the relative roles and responsibilities of federal, state and local agencies, authorities and governing bodies and investigating the existence of state and federal barriers. The FCC's efforts will result in a report to Congress with recommendations on the "legal and regulatory framework for the development of Next Generation 9-1-1 service requirements and specifications."[5] Also as directed by Congress, the 9-1-1 Implementation Coordination Office must prepare and submit a report to Congress that identifies the costs of NG9-1-1 that will "serve as a resource for Congress as it considers creating a coordinated, long-term funding mechanism for the deployment and operation, accessibility, application

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[3] Pub. L. No. 112-96, 136 Stat. 156 (2012).

[4] *Id.*, § 6206 (b) (2) (c) (requiring "integration of public safety answering points or their equivalents").

[5] *Id.*, § 6509.

development, equipment procurement, and training of personnel for Next Generation 9-1-1 services."[6] The FCC's proceeding and the Reports generated by both the FCC and the 9-1-1 Implementation Coordination Office should be useful sources of information to this Commission and could eventually result in necessary and appropriate changes to funding and governance. However, Congress and the FCC have historically preserved fundamental state authority over 9-1-1 services, and ultimately governance over NG9-1-1 will be a collaborative state and federal approach.[7] Intrado encourages the Commission to participate in the FCC proceeding and commends the Commission for considering the NG9-1-1 implementation issues outlined in this proceeding.

B. Implementation of NG9-1-1 and Potential Impediments to Transition

NG9-1-1 is an all IP environment that is very different from the existing legacy environment. The only federal statutory definition of NG9-1-1, as a service, is provided in the Next Generation 9-1-1 Advancement Act of 2012 (Advancement Act), a part of the Spectrum Act. For the purpose of that statute, Congress defined NG9-1-1 as:

> [A]n IP based system comprised of hardware, software, data, and operational policies and procedures that—
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> (A) provides standardized interfaces from emergency call and message services to support emergency communications;
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> (B) processes all types of emergency calls, including voice, data, and multimedia information;
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> (C) acquires and integrates additional emergency call data useful to call routing and handling;
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> (D) delivers the emergency calls, messages, and data to the appropriate public safety answering point and other appropriate emergency entities;

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[6] *Id.*, § 6508 (b).

[7] While recommending to Congress there be federal jurisdiction and oversight for the "development and transition to NG9-1-1 networks," the FCC has explicitly declared that states—today and under the legal and regulatory framework contemplated by the National Broadband Plan (NBP)—retain authority for 9-1-1 services inclusive of 9-1-1, E9-1-1 and NG9-1-1. *See* Connecting America: The National Broadband Plan (NBP), 326 (March 16, 2010), *available at* http://www.broadband.gov/plan/(last visited December 13, 2012).

(E) supports data or video communications needs for coordinated incident response and management; and

(F) provides broadband service to public safety answering points or other first responder entities.[8]

An "emergency call" is defined as: any real-time communication with a public safety answering point or other emergency management or response agency including—

(A) Through voice, text, or video and related data; and
(B) Nonhuman-initiated automatic event alerts, such as alarms, telematics, or sensor data, which may also include real-time voice, text, or video communications.[9]

Thus far, the prevailing architectural design of NG9-1-1 is embodied in the National Emergency Number Association (NENA) i3 model[10] wherein emergency services IP networks (ESInets)[11] replace the dedicated TDM[12] 9-1-1 networks provided by legacy 9-1-1 service providers; E9-1-1 selective routing is replaced by the emergency call routing function (ECRF)[13] and the emergency service routing proxy (ESRP)[14]; and IP session border controllers replace legacy selective routers as the network demarcation point for purposes of cost allocation. Caller location information will be derived from each network provider that gives their customers access to the NG9-1-1 system as part of the call set-up, embedded in the header of SIP messages.

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[8] Spectrum Act, § 6001 (22).

[9] *Id.*, § 6001 (13).

[10] Version 1.0 of NENA Technical Standard 08-003, Detailed Functional and Interface Specification for the NENA i3 Solution – Stage 3, wherein it states, "This NENA standard intentionally describes an *end-state* NG9-1-1 architecture, rather than an immediate "build-to" specification for a complete NG9-1-1 system, http://www.nena.org/?page=i3_Stage3 (Emphasis added).

[11] ESInets are communications facilities that utilize Session Initiation Protocol or IP Multimedia (IMS, which incorporates SIP) not unlike the public Internet but explicitly provisioned to deliver voice, video, text and data "calls" to the PSAP.

[12] Time division multiplexing.

[13] Emergency Call Routing Function, also referred to as a LoST Server, contains the information and functionality to determine primary routing destination based on the caller's location. It is a functional element that replaces the MSAG, SRDB and legacy selective router routing and associated rules.

[14] Emergency Services Routing Proxy performs core call control functions within a NG9-1-1 domain.

Call routing information will be housed in national and regional databases and accessed through IP technology rather than through dedicated links to databases maintained jointly by local public safety agencies and regional incumbent 9-1-1 service providers. Originating service providers will be responsible for transporting their IP calls directly to the ingress of the ESInet, which is the session border controller. In some instances, ESInets might be operated by local or state 9-1-1 authorities, and NG9-1-1 data provisioning as well as delivery of advanced functionality will likely involve multiple providers operating in a competitive market.

The comprehensive version of NG9-1-1 as envisioned in the i3 model, complete with greatly-expanded data, video capabilities, pictures, text, and replacement of all TDM elements, lies in the future, not the present. As the Commission's staff itself noted, full NG9-1-1 capabilities could be 5 to 10 years away.[15] While a transition to that comprehensive end state will take many years, some public safety agencies have already replaced their legacy 9-1-1 systems with IP systems, created and deployed statewide ESInets, and developed data rich cloud services utilizing multiple providers participating in the NG9-1-1 ecosystem. NG9-1-1 projects have been completed or are in the planning process in a number of states including Washington, Vermont, North Carolina, Florida, Hawaii, Minnesota, Virginia, Pennsylvania, California, Louisiana, Nevada, Ohio, South Carolina, Texas, Utah, Connecticut, Alabama, Illinois, Indiana, Iowa, Tennessee and Maine. The projects represent a mix of statewide and local deployments. From a technical perspective, these efforts will easily be leveraged in future deployments of a fully-envisioned NG9-1-1 system consistent with the i3 model. However, as described more fully below, widespread transition to the full NG9-1-1 environment may be impeded by

[15] *In the Matter of the Commission, on its own motion, seeking to determine the surcharge for the Enhanced Wireless 911 Fund;* Application No. 911-002, Order Setting Surcharge, 2 (October 23, 2012).

unaddressed governance and funding issues, which require both state and federal cooperation and collaboration.

State readiness: network planning and legal considerations

There are no absolute regulatory requirements applicable to the implementation of NG9-1-1 in Nebraska; however, Nebraska should consider addressing outdated laws and aligning to existing federal guidance. For example, now that there is a federal definition of NG9-1-1, it is advisable for states to review their 9-1-1 tariffs and other laws to ensure consistency. Many state statutes and tariffs define 9-1-1 as a one-way service terminating at the public safety answering point (PSAP), yet this description does not align with the federal definition. If federal funds are made available to states that align their NG9-1-1 services to the federal definition, states will want to make appropriate modifications to their laws and tariffs so as to not be excluded. The public safety community in Nebraska must consider the authority that exists to procure and operate the capabilities of NG9-1-1—depending on whether it is to be implemented on a local or statewide basis. As part of the determination, it should be mindful of the Spectrum Act which provides for a national, interoperable, public safety broadband network with a single 700MHz spectrum license holder.[16] The single license holder is a newly-created independent authority, the First Responder Network Authority (FirstNet), which is housed in the National Telecommunications and Information Agency (NTIA) within the Department of Commerce. FirstNet must work closely with states to implement the NPSBN which itself must be interoperable with NG9-1-1.[17] FirstNet will be working with state level officials in the

[16] Spectrum Act, Title VI, §§ 6101-6103.

[17] *Id.*, § 6204; § 6206 (b) (2) (C).

implementation of the NPSBN.[18] For states wishing to receive federal funding available for implementing the NPSBN, designating a state level employee or office will be logical; and it might also be logical for the public safety community to consider how that state level involvement could be helpful in deploying NG9-1-1 in the state.

Roles and responsibilities of service providers: interconnection among originating service providers and call delivery to 9-1-1 authorities

In order to enable seamless transition to NG9-1-1, clarification is needed regarding the interconnection rights and obligations of originating service providers and those wishing to operate NG9-1-1 networks for the aggregation and delivery of 9-1-1 calls. This issue is not limited to IP-only 9-1-1 calls but includes delivery of TDM calls to an IP NG9-1-1 system. Transition from legacy 9-1-1 to NG9-1-1 has and will continue to involve changing the location (point of interconnection) at which service providers deliver their customers' 9-1-1 calls to the NG9-1-1 network as well as the service levels and parameters of how the call is delivered. Today it is not clear who resolves disputes over those obligations, particularly in light of the fact that the participants are currently governed by different jurisdictions. The obligation to provide subscriber access to 9-1-1 is mandated by the FCC for wireless and interconnected VoIP providers, while state public utility/service commissions regulate legacy wireline local exchange providers and the incumbent 9-1-1 service providers. At the same time, state or local 9-1-1 authorities regulate PSAPs. Very different 911 access requirements (in terms of caller location accuracy and service level requirements) have evolved over time—as have disparate cost recovery mechanisms—for wireline, wireless and VoIP providers, and the disparities are potential impediments to a NG9-1-1 transition. Because legacy ILEC networks will be replaced with ESInets, which are operated by competitive providers and/or 9-1-1 authorities, there are real

[18] *Id.*, 6206 (c) (2) (A).

questions as to regulation of competitive NG9-1-1 service providers (which could involve regulation of the agencies themselves[19]) and generally about the extent to which state PUCs will retain jurisdiction over the terms and conditions of how 9-1-1 service is delivered over the ESInet.[20] At least one state is testing its jurisdictional limits with regard to regulation of IP-based 9-1-1 service levels.[21] While the federal government is addressing these issues at a high level, unquestionably states will have a role to play in the solution and the implementation.

Liability protection

Liability protection for NG9-1-1 has been an important consideration potentially impacting access service providers, PSAPs, users and vendors providing NG9-1-1 services. In the Advancement Act, Congress broadened the level of federal protection to address the breadth of NG9-1-1 services and providers. The Advancement Act provides:

> (a) Immunity. A provider or user of Next Generation 9-1-1 services, a public safety answering point, and the officers, directors, employees, vendors, agents and authorizing government entity (if any) of such provider, user, or public safety answering point, shall have immunity and protection from liability under Federal and State law to the extent provided in subsection (b) with respect to—

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[19] *See* Public Utility Commission of Texas, *Application of the Greater Harris County 9-1-1 Emergency Network for a Service Provider Certificate of Authority*, Case No. 34049 (March 23, 2007).

[20] *See*, Colorado Public Utilities Commission, *In The Matter Of The Proposed Changes To The Emergency 9-1-1 Services For Emergency Telecommunications Service Providers And Basic Local Exchange Carriers Rules Found In The Rules Regulating Telecommunications Providers, Services, and Products, 4 Code of Colorado Regulations 723-2 and Recommended Decision Of Administrative Law Judge Dale E. Isley Adopting Proposed Rule 2147; Declining To Adopt Changes To Proposed Rules 2130 Through 2146; and Vacating Hearing*, Docket No. 09R-778T (May 5, 2010).

[21] In proposing a new Rule 251.14, "Minimum Standards for VoIP Positioning Center Operators," the Texas Commission on State Emergency Communications (CSEC) attempted to achieve what it considered to be "wireline equivalency" in the delivery of VoIP calls. CSEC initially proposed rules to compel VoIP providers to provision multiple emergency service numbers (ESN) for routing and ALI management and to meet other service requirements. After objections by commenters, CSEC modified the rule to target VoIP 9-1-1 vendors, i.e., VoIP Positioning Center (VPC) providers. *See* http://www.csec.texas.gov/component/content/article/77-9-1-1/151-comments-for-draft-rule-25114; *see also* CSEC Staff Report, *available at http://www.csec.texas.gov/rule-making.* Proposed Rule 251.14 was adopted by the CSEC with an effective date of May 1, 2013. *See,* Adoption of Proposed Rule, http://www.csec.texas.gov/images/CSEC_Docs/Rules/251_14_VPC_Min_Stds_Adoption%20Preamble.pdf .

(1) The release of subscriber information related to emergency calls or emergency services;
(2) The use or provision of 9-1-1 services, E9-1-1 services or Next Generation 9-1-1 services; and
(3) Other matters related to 9-1-1 services, E9-1-1 services, or Next Generation 9-1-1 services.

(b) The scope of immunity and extent of the immunity and protection from liability afforded under subsection (a) shall be the same as that provided under section 4 of the Wireless Communications and Public Safety Act of 1999 (47 U.S.C. 615a) to wireless carriers, public safety answering points, and users of wireless 9-1-1 service (as defined in paragraphs (4), (3), and (6), respectively, of section 6 of that Act (47 U.S.C. 615b) with respect to such release, use, and other matters.[22]

All existing federal immunity related to provisioning NG9-1-1 services ultimately depends on the level of immunity afforded in each state, which is the same immunity as that which exists today for wireless calls and interconnected VoIP calls. The FCC is considering whether federal legislation can and should preempt state law to create more uniform protection as it relates to NG9-1-1. As long as the degree of immunity is the same immunity as that which exists today for wireless calls and interconnected VoIP calls, liability protection should not be viewed as an impediment to NG9-1-1 deployment.

Funding

There are significant, complicated national policy issues surrounding how NG9-1-1 will be funded. For example: What funding model(s) will be appropriate? Will NG9-1-1 be paid for by sales or property taxes, traditional 9-1-1 surcharges, or some combination of these methods? As of the first quarter of 2012, for the first time, the United States wireless market experienced a decline in subscriber service contracts, which has been the primary vehicle for surcharge collection. The seven largest wireless carriers (representing 95% of the industry's subscribers)

[22] Advancement Act § 6506 (a) and (b).

lost 52,000 subscribers in the quarter, apparently being replaced by pre-paid arrangements.[23] This is a significant development in efforts to fund 9-1-1 given that approximately 24 states do not collect revenue for providing 9-1-1 service on pre-paid wireless service.[24]

Additionally, the funding solution will have to address capital expansion in a way that is unprecedented for 9-1-1. For example: in addition to recurring operating costs, there will be transitional, one-time capital costs. For some number of years, legacy and NG9-1-1 systems will have to operate together, and NG9-1-1 costs will be additive to the cost of legacy 9-1-1, at least to some extent, so there will need to be two funding regimes for some period of time.

Nebraska has funding mechanisms through the Emergency Telephone Communications Systems Act (for wireline, including VoIP) and the Enhanced Wireless 9-1-1 Service Fund, and these funds will be useful for supporting early deployments; however, the issues of equitable and sustainable funding must be addressed at the state and/or federal level sooner than later.

III. CONCLUSION

NG9-1-1 is a complex topic with multiple stakeholders evolving in a landscape that, over decades, has seen minimal regulatory activity. Intrado recommends that a Commission-sponsored workshop be established for all stakeholders and Commission staff to discuss the relevant issues in order to ensure that Nebraska is prepared to move forward to NG9-1-1.

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[23] Peter Svensson, US phone subscribers hang up on contracts, Associated Press, http://www.businessweek.com/ap/2012-05-10/us-phone-subscribers-hang-up-on-contracts

[24] Nebraska is not one of them and does collect revenue for pre-paid wireless 911 service.

Respectfully submitted on December 14, 2012.

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