

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

In the Matter of)	
)	
Public Safety And Homeland Security Bureau)	PS Docket No. 12-333
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)	
)	
Facilitating the Deployment of Text-to-911)	PS Docket 11-153
and Other Next Generation Applications)	
)	
Framework for Next Generation 9-1-1)	PS Docket No. 10-255
Deployment)	
)	
)	

**COMMENTS OF
TELECOMMUNICATION SYSTEMS, INC.**

Kim Robert Scovill
Senior Director Government Affairs
TeleCommunication Systems, Inc.
275 West Street – Suite 400
Annapolis, MD 21401

H. Russell Frisby, Jr.
Counsel
Stinson Morrison Hecker LLP
1775 Pennsylvania Ave. NW, Suite 800
Washington, DC 20006-4605

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**COMMENTS
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TeleCommunication Systems, Inc. ("TCS") hereby submits its comments in response to the Public Notice ("Notice") released by the Federal Communications Commission ("Commission" or "FCC") in the above-referenced proceedings.¹ Through the Notice, the Commission seeks comments and information so that it can prepare a report to Congress as required by the Next Generation 9-1-1 Advance Act of 2012 a part of the Middle Class Tax Relief and Job Creation Act of 2012.

TCS's experience and expertise in E9-1-1, particularly as to call routing based on caller location information, and text-messaging, date from the earliest days of the wireless industry, and provide a sound experiential foundation for its comments. Since deploying the first U.S. wireless non-call associated signaling E9-1-1 solution in 1997, TCS has been leading the development and implementation of public safety products for wireless E9-1-1, 9-1-1 for VoIP, Next Generation ("NG") 9-1-1, and E1-1-2.² Its award-winning wireless and VoIP E9-1-1, together with wireline E9-1-1 solutions, serve over 140 million wireless and IP-enabled devices. With the nation's only non-carrier TL 9000-certified Network Operations Center, TCS' highly-reliable E9-1-1 solutions ensure that a subscriber's emergency call routes to the appropriate PSAP and automatically identifies the caller's location. TCS also has as much or more contemporary practical experience with designing, installing, and managing NG9-1-1 systems as

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 Advancement Act of 2012*, PS Docket 12-333 (November 13, 2012); Notice of Proposed Rulemaking, *Facilitating the Deployment of Text-to-911 and Other Next Generation Applications*, PS Docket 11-153 (September 22, 2011); Notice of Inquiry, *In the Matter of Framework for Next Generation 9-1-1 Deployment*, PS Docket No. 10-255 (December 21, 2010) ("NOI").

² "1-1-2" is the universal emergency call number for the European Union.

any public safety vendor. For example, our contemporaneous NG9-1-1 operations in Tennessee³, Iowa⁴, and Texas⁵ represent leading edge operations in this space.

TCS incorporates by reference into these comments the whitepapers, *Recommendations for Implementing NG9-1-1 Components*,⁶ and *Enhancing Public Safety and Next Generation 9-1-1* (NG9-1-1) (Frost and Sullivan),⁷ and information from its website offering insights into the transition from traditional 9-1-1 to Next Generation 9-1-1 architectures and services.⁸ In response to the general areas of inquiry and specific questions in the Notice, TCS offers the following comments. For clarity, TCS's responses are referenced to the questions in the Notice as noted herein.

SUMMARY

TCS believes that the Commission's report should propose a clear set of Congressional actions needed to augment the FCC's authority to draw and enforce a straightforward roadmap to deploying national NG9-1-1 services. With a few exceptions, Federal preemption is unnecessary, and the important role of coordinator will achieve the same results. One exception is liability protection. A uniform federal preemptive liability protection scheme would benefit NG9-1-1 by removing all uncertainty from the provision of NG9-1-1 services. Also, the Commission should exercise its current preemptive authority and provide clarity for provider certification and interconnection. Finally, the Commission must act to prevent the inevitable industry problems and negative impact on innovation that will result from avoidable disputes between NG9-1-1 vendors and patent assertion entities.

³ <http://phx.corporate-ir.net/phoenix.zhtml?c=123361&p=irol-news&t=Search&nyo=1>

⁴ <http://www.iowahomelandsecurity.org/>

⁵ <http://phx.corporate-ir.net/phoenix.zhtml?c=123361&p=irol-news&t=Search&nyo=1>

⁶ <http://info.telecomsys.com/NG9-1-1-recommendations-whitepaper/>

⁷ <http://www.telecomsys.com/products/public-safety/NG9-1-1.aspx>

⁸ <http://www.telecomsys.com/products/public-safety/NG9-1-1.aspx>

I. Legal and Regulatory Framework for the Development of NG9-1-1 Services and the Transition from Legacy 9-1-1 Networks to NG9-1-1

- A. Although Congress should not create requirements for states to establish NG9-1-1 oversight bodies at the state or regional level, it should, however, provide for incentives to encourage the same goals.**

Localism is one of the primary hallmarks of the highly successful 9-1-1 systems.

Consequently, TCS believes that Congress should not create requirements for state or regional entities to provide oversight of NG9-1-1. It is unnecessary and would be wasteful to duplicate every information resource, network resource, and/or process where regional or state economies of scale make practical sense. It's a matter of balance that local authorities know best.

Instead, it would be beneficial for Congress to create incentives for those states which can and prefer to create a state or regional entity for NG9-1-1 oversight. Examples of state and regional entities which are successfully deploying NG9-1-1 are the Tennessee Emergency Communications Board⁹, the North Central Council of Governments¹⁰, and the Iowa Homeland Security and Emergency Management Division.¹¹

- B. Each state or region should be encouraged but not required to designate an organization to be responsible for planning, coordinating, and implementing the NG9-1-1 system in that particular state or region.**

For reasons noted above, TCS believes history dictates that coordination among existing entities should be encouraged but not required. Due to differences in state law, this may be accomplished by various procedures (*e.g.*, joint task force, oversight board, coordination through a state utility commission, etc.) which may or may not require the establishment of a new "entity" to ensure cooperation.

⁹ <http://tn.gov/emergency/index.shtml>

¹⁰ <http://www.nctcog.org/ep/index.asp>

¹¹ <http://www.iowahomelandsecurity.org/>

C. The formation of state or regional oversight bodies is not necessary in order to better ensure adherence to a standardized architecture that facilitates greater levels of functionality.

It is TCS's experience that it is rare to find a Public Service Answering Point ("PSAP") Authority that is not already following industry standards and guidelines (and if not, there are established reasons for the deviation). As noted herein, it is the collaborative dialog and joint standards development process among government, public safety, and industry that offers the surest path to technical proficiency and economic viability for NG9-1-1 implementation.

D. The Commission and the Congress should consider existing alternatives to deploying a new national NG9-1-1 infrastructure that would allow PSAPs to connect to a nationwide ESIInet, prior to the deployment of statewide or regional ESIInets.

The interrelationship and interconnection between and among ESIInets is an important topic for the Commission and Congress. 9-1-1 is a first line of notification in all emergency events. National security can only be enhanced through the modernization and internetworking of 9-1-1 systems. Yet, seamless interconnection is lacking. On September 11, 2001, wireless 9-1-1 calls from the World Trade Center were answered in New Jersey; however there was no standardized mechanism to transfer those calls back to the NYPD 9-1-1 system.

Today, in advance of the transition to NG9-1-1, many PSAPs provide services across political and state boundaries that require the relevant PSAPs to interconnect their networks. It is the maintenance of this connectivity which will be important in ensuring that various ESIInets do not become virtual "islands." Even so, at least in the short term, the lack of an existing national network does not mean that it will necessary to deploy a new national NG9-1-1 infrastructure that would allow PSAPs to connect to a nationwide ESIInet prior to the deployment of statewide or regional ESIInets.

Some elements of a nationally interconnected NG9-1-1 infrastructure may already exist. One example of an operating National network for use by law enforcement is the National Law Enforcement Telecommunications System (“NLETS”). NLETS, which began in 1966, has been successful in serving its membership for over 40 years. NLETS is owned by the States and is a 501(c) (3) nonprofit organization that was created by the principal law enforcement agencies of the States.¹²

II. The Commission should recommend that Congress take further steps to provide for liability protection to promote the development of NG9-1-1 Device-Initiated Emergency Calls

- A. Existing law does provide the Commission with authority to provide adequate liability protection to NG9-1-1 providers, including carriers, vendors, and PSAPs.**
- B. Congress should take steps to further encourage or require states to extend liability protection to 9-1-1 and NG9-1-1 services.**
- C. Congress should provide direct liability protection for NG9-1-1 services at the federal level.**

Due to the interrelated nature of liability statutes in various levels of government, TCS has provided a combined answer to this series of questions related to the issue of liability protection. Ensuring adequate liability protection is critical if the transition to NG9-1-1 is to be successful. Without adequate liability protection, NG9-1-1 innovation will quickly slow and eventually cease. Such a result is unacceptable, and certainly not in the best interests of the citizens using or benefitting from 9-1-1.

The provision of 9-1-1 service (and in the future, NG9-1-1 service) is no longer a legacy monopoly process. The traditional regulatory scheme which relies on individual state-mandated liability protection regimes is breaking down. Liability protection based on state tariffs is

¹² <https://www.nlets.org/mission-vision>

quickly becoming inadequate because in many jurisdictions tariffs are no longer mandatory or even permitted.¹³ State carrier certification may qualify an entity for state liability protection, but not every state supports 9-1-1 liability protection or claims jurisdiction over competitive 9-1-1.

The clarification and extension of liability protection embodied in the NET 9-1-1 Act¹⁴ was important and a good start. However, as many parties have already demonstrated in their comments in previous E9-1-1 and NG9-1-1 proceedings, there is a real and substantial danger that this statute is too "voice-centric" for the advanced telematics, non-voice devices, software applications, and other broadband based services that will encompass NG9-1-1. For example, still at issue is the question of whether the NET 9-1-1 Act shields a VoIP software vendor whose downloaded free application fails during the transmission of a mobile broadband VoIP 9-1-1 call. This is just one of many possible, and predictable, scenarios which demonstrate that the current liability structure is inadequate.

The delivery of wireless NG9-1-1 services entails (at a minimum) the cooperative involvement of many parties in addition to the caller, including the specific carrier where the emergency call is generated, a handset manufacturer, a routing infrastructure / location vendor, an application software vendor, a PSAP CPE / GIS vendor, the appropriate PSAP personnel, and first responders. Liability protection must extend to all forms of information pushed to a PSAP or pulled from external sources by a PSAP, regardless of the platform over which information travels. So long as the party complies with the appropriate statute, liability protection should be

¹³ Examples include Tennessee, Florida, Indiana, Virginia, Oregon, Vermont, North Carolina, Montana, North Dakota, Nevada, and New Hampshire.

¹⁴ The Act modified Section 4 of the Wireless Communications and Public Safety Act of 1999 (47 U.S.C. 615a) to include "IP-enabled voice service providers" and "other emergency communications providers" under existing state and federal liability protections codified in the U.S.C. for their involvement in 9-1-1 communications.

platform agnostic. Federal, state, and local liability protection must extend beyond the PSAP to all entities appropriately involved in the emergency response.

To prevent the distraction and market dislocation that lack of appropriate liability protection would cause, the Commission should re-examine the NET 9-1-1 Act and recommend appropriate federal preemptive legislative changes both to protect all coordinating and/or contributing entities to the call completion chain and to insure that all forms of "emergency" calling (today and in the future) are equally and completely indemnified.

III. Recommendations for Removing Jurisdictional Barriers and Inconsistent Legacy Regulations - Removal of State Regulatory Roadblocks to NG9-1-1 Services Development

A. Certain existing state approval processes and certification requirements for SSPs are outdated or overly burdensome and Federal action is required.

Unfortunately, the state certification process is in large part outdated and overly burdensome, and the lack of certification has unintended consequences. For example, in order to qualify to offer the services of a 9-1-1 System Service Provider ("SSP"), TCS has had to seek traditional state Competitive Local Exchange Carrier ("CLEC") certification in over 30 jurisdictions. TCS's uneven and sometimes harrowing experience in this effort demonstrates that State CLEC certification is far from uniform.

The time frame for CLEC certification ranges from 90 days to 18 months and the process varies from paper application-only to a complex affair requiring testimony, witnesses, cross-examination, newspaper notice, costly local counsel, and expensive performance bonds.¹⁵ Several states have asserted that they could not certify TCS because their CLEC certification laws and regulations were not applicable to SSPs since such entities did not provide end-to-end

¹⁵ Examples: Montana as a low complexity state; Arizona as a complex process jurisdiction.

voice service.¹⁶ In these states, the lack of certification presents additional issues with regard to access to pseudo ANI access,¹⁷ as well as the liability questions noted above. Two states, Illinois and Colorado, currently have open State Utility Commission proceedings to examine the appropriateness of their current statutory and regulatory environment on competitive telecommunications providers, including 9-1-1.¹⁸

B. Congress should facilitate the authorization by states of public safety entities to act directly as NG9-1-1 SSPs through the FCC.

An FCC-facilitated joint working group of state public safety and industry representatives should cooperatively work together and develop a uniform definition of entities that are qualified to act as NG9-1-1 SSPs (as certified by the FCC).

C. Congress should encourage or require existing state regulations, laws, or tariffs to be modified to ensure that 9-1-1 governing authorities or new 9-1-1 SSPs are entitled to receive relevant routing, location, and other related 9-1-1 information at reasonable rates and terms.

TCS urges the Commission to encourage Congress to review certain specific issues created by federal telecommunications laws that are enabled on the state level. In particular, TCS has experienced three issues that are detrimental to NG9-1-1 implementation: (a) the state mandate for an interconnection agreement as part of state CLEC certification; (b) anti-competitive interconnection agreement posturing by the incumbent local exchange company (which is also often the incumbent legacy 9-1-1 provider); and (c) cumbersome and expensive LEC 9-1-1 provider tariffs, and 9-1-1 authority transition policies.

¹⁶ Examples include Utah, Iowa, and Maine.

¹⁷ TCS has filed and frequently supplemented a Petition with the Commission regarding the continuing issues related to CLEC certification and pANI, and incorporates those filings by reference into its Comments herein. See *Petition of TeleCommunication Systems, Inc. and HBF Group, Inc. for Waiver of Part 52 of the Commission Rules*, CC Docket No. 99-200 (filed February 20, 2007) et al.

¹⁸ Public Utilities Commission of Colorado, Docket No. 12R-862T IN THE MATTER OF THE PROPOSED RULES REGULATING TELECOMMUNICATIONS PROVIDERS, SERVICES, AND PRODUCTS, 4 CODE OF COLORADO REGULATIONS; , and general information at <http://www.icc.illinois.gov/911/> , and the Illinois Rulemaking of Part 725 at <http://www.icc.illinois.gov/Telecommunications/CodePart725.aspx>

As previously noted in TCS's filings before the Commission, TCS believes that the Navin Letter requirement for "certification" prior to access to p-ANI is unnecessary and should be eliminated. In any case, after complying with a state's CLEC qualification process, some state utility commissions also require CLECs to negotiate an interconnection agreement (as a post-certification condition) with a relevant LEC by a prescribed deadline and submit that agreement to the state commission for approval.¹⁹ In an NG9-1-1 environment, it is unclear whether traditional interconnection is even necessary,²⁰ or to the extent that it is, if the technical specifications appropriate for the provision of NG9-1-1 services are adequately addressed in traditional voice-centric interconnection agreements.

In these circumstances, given an artificial deadline, negotiating with a LEC, that is also often "the" 9-1-1 competitor, is challenging. The capacity to "opt-in" pursuant to the Telecommunications Act of 1996²¹ ("96 Act") to an existing interconnection agreement is of limited value. Existing LEC agreements are not designed for competitive NG9-1-1 services interconnection so they include unnecessary network elements, costs, and service conditions. Additionally, since many CLECs have exited the market or consolidated, there are fewer interconnection agreements to review each year.

When a competitive 9-1-1 entrant does secure a County 9-1-1 system, state agency, or similar 9-1-1 authority as a client, it is necessary to transition from the incumbent LEC's legacy 9-1-1 services to the competitive provider. This entails provisioning new data and voice circuits. However, 9-1-1 network interconnection is not treated the same as voice interconnection.

¹⁹ For example, Delaware and Alabama.

²⁰ Competitive E9-1-1 and NG9-1-1 services are, by definition, "unbundled," that is, the voice portion of the 9-1-1 call is not in-band with the relevant caller location, callback number, and other information. Therefore, a provider may provide database-only services and not transport the voice portion of the 9-1-1 call. Historic interconnection agreements are premised on two competitive voice providers exchanging calls, not coordinating voice and data traffic for the support of emergency calls.

²¹ <http://www.fcc.gov/telecom.html>

Because the LEC's obligations under the '96 Act are defined relative to "telephone exchange service" and bounded only by services that are "equal in quality to that provided by the local exchange carrier to itself,"²² this process is often ill suited for interconnection with an alternative 9-1-1 company.

The LEC usually provides only circuit switched analog 9-1-1 service that utilizes a selective router for call management. This architecture is often not suitable for an advanced E9-1-1 data or NG9-1-1 vendor. For some interconnecting carriers (i.e., the clients of the competitive E9-1-1 / NG9-1-1 vendor), this can result in a demand to provide duplicate simultaneous 9-1-1 voice facilities to PSAPs; one for legacy 9-1-1 voice calls through the LEC selective router, and a second for new digital NG9-1-1 traffic directly to the PSAP. LEC tariffs often have elements that are not traffic or volume sensitive (not to mention expensive special access circuits). These additional costs are a powerful barrier to any carrier deciding to use a non-LEC vendor for some or all of its NG9-1-1 needs. Due to the existence of multiple 9-1-1 Authorities (with separate funding sources) in any jurisdiction, few entire jurisdictions, if any, will "flash-cut" to NG9-1-1 services. Therefore, a seamless and financially-neutral transition processes must exist for NG9-1-1 to be a success.

The Commission has adequate existing authority under the '96 Act to define such a process, and should: (a) find the traditional CLEC certification process is unnecessary if a NG9-1-1 provider is not transmitting the actual voice portion of a 9-1-1 call; (b) assist the competitive NG9-1-1 industry with defining a simpler and standardized "NG9-1-1 centric" interconnection agreement; (c) approve such agreements on a national rather than state basis; and (d) prohibit incumbent provider transition plans that require duplicate facilities, excessive tariff charges, and related anti-competitive processes. Where the Commission concludes that it does not sufficient

²² '96 Act at Section 251 (c) (2).

authority to accomplish these goals, it should seek such authority from Congress. Also, since the Commission has previously received comments regarding the positive benefits derived from competition in the provision of E9-1-1 and NG9-1-1 services, it should consider that information as relevant to the competition questions contained in this inquiry.²³

IV. Intellectual Property Rights

Though not cited specifically in Notice, the issue of Intellectual Property Rights (“IPR”) is essential to this inquiry. Companies subject to the FCC's jurisdiction and others may own, control, or develop IPR, such as patents that are directly relevant to the introduction and provision of NG9-1-1, especially as to requirements and standards. Next Generation 9-1-1 services are particularly dependent upon cooperation among carriers, vendors, and public safety. As such, IPRs play an indispensable role in the success of NG9-1-1.

TCS has previously filed a Petition for Rulemaking with the Commission on this issue²⁴ and incorporates by reference its Petition to these Comments. The FCC's mandatory 9-1-1 requirements that require the use of IPR create an unfortunate arbitrage opportunity for litigation-minded IPR holders, patent assertion entities, sometimes called "patent trolls,"²⁵ that use the FCC's rules to force carriers and their vendors into licensing agreements or face crippling litigation expenses. While the direct effect of such actions is delayed or modified compliance with FCC directives, the chilling effect on future compliance and/or technological advancement is even more damaging to the public safety industry and the public's safety. The Commission must review closely the details of an enforceable IPR policy in this docket and act to halt the

²³ *Comment Sought On Competitive Provision of 9-1-1 Service Presented By Consolidated Arbitration Proceedings*, consolidated proceedings WC Docket No. 08-33 and 08-185 (rel. June 4, 2009).

²⁴ In the Matter of Reasonable and Nondiscriminatory Licensing of Patents Essential to Implementation of Mandatory E911 FCC Rules and Standards, GN Docket No. 11-117, WC Docket No. 05-196, PS Docket No. 11-153, PS Docket No. 10-255 (Filed July 24, 2012)

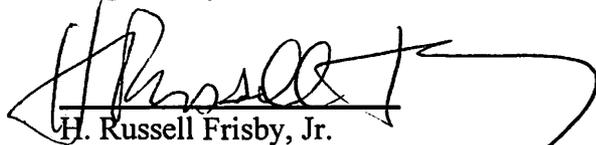
²⁵ http://en.wikipedia.org/wiki/Patent_troll

current avalanche of litigation that surrounds E9-1-1 and will engulf NG9-1-1 services if nothing is done.

Conclusion

In summary, TCS urges the Commission to act in accordance with its comments herein, and further encourages the Commission to resolve the additional open question regarding IPR highlighted by this Notice and immediately publish TCS's Petition for public comment.

Respectfully submitted,



H. Russell Frisby, Jr.

Counsel

Stinson Morrison Hecker LLP

1775 Pennsylvania Ave., NW, Suite 800

Washington, DC 20006-4605

Kim Robert Scovill
Senior Director Government Affairs
TeleCommunication Systems, Inc.
275 West Street – Suite 400
Annapolis, MD 21401

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