Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Framework for Next Generation 911 Deployment	)	PS Docket No. 10-255
	)	
Facilitating the Deployment of Text-to-911 And Other Next Generation 911 Applications	)	PS Docket No. 11-153
	)	
Legal and Statutory Framework for Next Generation 9-1-1 Services Pursuant to the Next Generation 9-1-1 Advancement Act of 2012	)	PS Docket No. 12-333

COMMENTS OF BANDWIDTH.COM, INC.

Bandwidth.com, Inc. ("Bandwidth") submits these comments in response to the Federal Communications Commission's ("Commission") November 13, 2012, Public Notice seeking comment on the legal and statutory framework for Next Generation 9-1-1 ("NG9-1-1") services.[1]

Introduction and Summary

Bandwidth is uniquely situated to provide comments on the legal framework for NG9-1-1 implementation because of its ability to support nearly every critical aspect of NG9-1-1 service delivery. As an E9-1-1 solution provider for nearly 300 CLECs, ILECs, and VoIP service providers, Bandwidth manages a nationwide network that connects to the selective routers covering 95% of the country's population and all of the associated automatic location identification ("ALI") databases operated by the 9-1-1 System Service Providers ("SSPs") and by standalone jurisdictions. In July of 2011 Bandwidth was selected by the State of Alabama to provide NG911 call routing services across the state. Bandwidth is also active in many NENA Technical Committees and is currently the Chair of the Policy Routing Rules Working Group, has participated in many of the NENA Industry Collaboration Events, and has participated in all of the Commission's NG9-1-1 proceedings. Further, among other industry leadership roles, Bandwidth also holds

[1] 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, PS Docket Nos. 10-255, 11-153 and 12-333, *Public Notice*, FCC DA 12-1831 (rel. Nov. 13, 2012).

a seat on the Colorado PUC 9-1-1 Taskforce and on the Legislative & Regulatory sub-committee of the Steering Committee established to provide direction regarding the orderly migration to NG9-1-1 in Colorado.

Bandwidth's experience as an active NG9-1-1 leader has afforded it an opportunity to view key issues and obstacles to NG9-1-1 implementation from multiple perspectives. One overarching conclusion Bandwidth draws from this experience is that an efficient, cost-effective approach to successfully implementing NG9-1-1 solutions that provide consumers the greatest benefits of advanced communications services will require a federal statutory and/or regulatory framework to establish the fundamental rights and obligations of the broad set of NG9-1-1 stakeholders. The critical elements of a federal NG9-1-1 framework will need to address classifications of services and their interoperability in a way that accounts for a wide variety of service functionality, while permitting states the flexibility to implement NG9-1-1 solutions that suite their unique circumstances and needs. While state-level deployments are likely to be most effective, without a consistent, federal mandate requiring all necessary stakeholders to participate according to clear rights and obligations, nationwide deployment of NG9-1-1 systems will not be possible. In order to rapidly capture the promise of NG9-1-1 for as many consumers as possible, it is critical that the Commission establish these expectations for providers in all corners of the industry and put stakeholders on notice of the impending launch of large scale NG9-1-1 deployments across the country.

Comments

Bandwidth supports the implementation of strong federal requirements, by Congress and/or the Commission, that apply to all stakeholders to require participation in NG9-1-1 deployment, establish an even playing field for all vendors, and ensure interoperability of systems to achieve NENA's vision of a national NG9-1-1 infrastructure that is composed of a system of systems optimized for advanced communications services. Bandwidth also recommends the Commission promulgate rules that provide clear guidance to state and local 9-1-1 authorities and industry participants to ensure the rapid, consistent and cost-effective migration from today's E9-1-1 system to the NG9-1-1 system. Given the pace at which

various stakeholders are moving to implement NG9-1-1 solutions, clear national standards are critical to uniformly address issues such as service and provider interoperability obligations across diverse systems and jurisdictions to trigger widespread implementation and end-user adoption.

Bandwidth's hands-on experience implementing a NG9-1-1 solution in Alabama underscores the importance of overarching federal requirements. While the deployment continues to progress and hold great promise, one glaring take-away from Bandwidth's early experience in Alabama is that NG9-1-1 projects are susceptible to the whims of incumbent interests. As the history of the telecommunications industry has demonstrated, if service providers do not wish to "play along" with the planned network and traffic routing interoperability necessary, they will become critical stumbling blocks to other stakeholders dedicated to a full NG9-1-1 deployment. Specifically, the most fundamental elements to successful nationwide NG9-1-1 deployment are ensuring that all stakeholders participate in the process while avoiding the perpetuation of PSTN-based policies and infrastructure bottlenecks that impede full NG9-1-1 implementation.

The State of Alabama selected Bandwidth to develop and implement a NG9-1-1 call routing solution for Alabama. The Alabama NG9-1-1 network is being designed to accommodate all types of services and traffic. Bandwidth, in collaboration with the Alabama Supercomputer Association will establish IP interconnections with all of the Public Safety Answering Point ("PSAPs") in the state and will serve as its own selective router for NG9-1-1 calls. There are of course transitional phases that must be done in an orderly and predictable fashion to enable the migration of traffic off the PSTN and on to an IP-based NG9-1-1 network. Both Bandwidth and the State of Alabama were confident and optimistic that they had the requisite pieces to the deployment puzzle in place throughout the early planning and implementation phases to ensure a smooth transition to the NG9-1-1 network. However, they encountered the difficulty of attempting to steer people anchored in out-dated policies and mindsets to the next generation system, without federal requirements mandating that they do so. As a result, while there were no clear technical issues identified that would prevent provisioning additional capacity to selective routers to carry 9-1-1 traffic to PSAPs in Alabama, incumbent 9-1-1 processes steeped in the PSTN policies

of yesterday threatened to derail the entire deployment schedule for all stakeholders. With the backing of the state, Bandwidth was optimistic that incumbents would not inappropriately leverage their gatekeeper control over bottleneck facilities to frustrate the fundamental goals of NG9-1-1 deployment. Unfortunately, it found that embedded gatekeeper attitudes and processes are not easily revised. Even when the state expresses is clear intent to deploy NG9-1-1, the owners of bottleneck facilities can cause many months of delay to the detriment of end-users and the other providers who have committed to the effort irrespective of technical or legal necessity.

The Commission must clearly address instances, such as what Bandwidth encountered in Alabama, where there may be reluctance or outright refusal to embrace NG9-1-1 deployments in order to effectuate success. Among other things, the Commission should establish requirements for interconnection and transition to NG9-1-1 that include timelines for providing notice to stakeholders, developing solutions for the transition, and ultimately, for interconnecting to the NG9-1-1 network. To be clear, the benefits that can be realized from NG9-1-1 will not create costs for incumbent providers, but NG9-1-1 does represent a shift in their traditional revenue streams and PSTN business models. Nonetheless, this shift is necessary and is not unexpected, so the real issue is who gets to control it - the Commission and NG9-1-1 implementers, or those that believe they gain from delaying it. The precise points driving decisions of other providers are often difficult to discern, but the risks to the entire industry eco-systerm that bottleneck facilities represent are clear. Use of unnecessary and inappropriate leverage over bottleneck facilities must be addressed and resolved at the outset in order to rapidly enable and empower NG9-1-1 end-users.

Some outdated carrier policies and processes are attributable to legacy PSTN-centric interconnection regulations in some states. Previously, Bandwidth has highlighted rules and carrier policies that require CLECs to maintain direct trunks to incumbent SSPs even where alternative paths are available and equally effective.[2] In Alabama too, Bandwidth encountered some challenges along these lines as well. While the ability of incumbent interests to raise roadblocks to NG9-1-1 deployment is not

[2] *See* Letter from Michael P. Donahue, Counsel for Bandwidth, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 10-255 (Apr. 6, 2011).

limited to states with stale, PSTN-based policies in place, the existence of these outdated requirements, that have no relevance in the NG91-1 environment, provide an additional basis upon which the incumbent can rely to slow roll the transition. Aside from the unreasonable, discriminatory nature of the practice, establishing separate infrastructures for each provider, or even for different classes of services by the same provider, is contrary to the very nature of the NG9-1-1 network, which is intended to accommodate any service or device, anywhere, at anytime, over a single, IP-enabled network.[3] Here again, state rules and carrier policies that clearly interfere with the fundamental goals and objectives of NG9-1-1 should be remedied by a federal framework that overcomes outdated legalistic roadblocks such as these that remain on the books but are not germane to the NG9-1-1 networks of the future.

On a more positive note, the Alabama wireless carriers have been extremely dedicated to the cooperative efforts necessary to enable NG9-1-1. Because wireless traffic represents a large majority of emergency calling in the country, the effective participation of the wireless industry is an absolute necessity. In Alabama, planning for the migration of wireless traffic to the NG9-1-1 system has been straightforward and extremely productive. Bandwidth did observe however that there were cost saving opportunities that have not been fully capitalized upon in this deployment that might be realized under an established federal framework in the future. For example, had the wireless carriers been allowed additional notice, through established standards or rules, to set expectations early that a "native" IP interconnection to the new NG9-1-1 system would be required, the project would have seen significant improvements in terms of efficiency, timing and cost. Lessons learned from Bandwidth's Alabama experience, like those described above, should be captured quickly and reflected in the Commission's NG9-1-1 policies so that they can improve the experience for future projects deployed more broadly.

At the same time a federal framework streamlines outdated regulations and irrelevant policies, it should also provide authority to the states to enable them to make decisions related to the

[3] *See In the Matter of Framework for Next Generation Deployment*, Notice of Inquiry, PS Docket No. 10-255, 25 FCC Rcd 17869, at ¶ 25 (2010) ("In contrast to the device-specific connection protocols in legacy 911 networks for wireline, wireless, and interconnected VoIP phones, NG911 will need to provide IP-enabled devices with multiple means of accessing the NG911 network, resulting in a blurring of the difference between stationary, nomadic and mobile devices.")

implementation, management, and operation of their 9-1-1 systems.[4] The NENA Standard 08-003 promotes a "system of systems" approach to NG9-1-1 deployment. This approach accommodates the unique circumstances and requirements of each state, within the context of a national framework. State 9-1-1 administrators and regulators are familiar with the facts on the ground in their jurisdictions and the unique, financial and technological considerations of their constituents. Likewise, these agencies already have some level of regulatory authority over many of the parties that will play a role in the transition to NG9-1-1. Such a framework should also require that all states implement their NG9-1-1 systems in a manner that ensures interoperability between states. As part of this approach, all states should be required to have a state-level organization with the statutory authority and responsibility to initiate the migration to NG9-1-1 and the authority to oversee the migration and operation of the systems and resolve regulatory issues as they arise in an expeditious manner.

Within the federal structure, incumbent SSPs should be required to offer, or allow third-parties to provide, the services and products that support the migration from E9-1-1 to NG9-1-1. For example, these services should include the ability to access existing Selective Routers and access to existing ALI databases and the data contained therein. The incumbent SSP should be required to make these services/products available to the state's selected NG9-1-1 provider if that entity has demonstrated its ability to provide such services, *e.g.*, by obtaining a Certificate of Public Convenience and Necessity or other authorization from the public utility commission. As part of a federal grant of authority to the states under the NG9-1-1 framework, the relevant state public utility commission can determine fair and non-discriminatory rates for these products and require that they be made readily available in tariffs and/or interconnection agreements at the outset. Finally, state-level NG9-1-1 authorities must also be empowered to resolve any disputes regarding these issues through an accelerated dispute resolution process that will not unreasonably delay deployment of NG9-1-1 projects.

[4] In this regard, the federal government has provided model NG91-1 legislation (http://www.911.gov/pdf/ModelNG911legis-110812.pdf) and NENA has prepared a legislative checklist based on experience gained from NG9-1-1 implementation efforts in Colorado (https://c.ymcdn.com/sites/www.nena.org/resource/resmgr/ngpp/ng911_transition_policy_hand.pdf) for states implementing NG9-1-1.

From a more technical perspective, communications providers and multi-line telephone service ("MLTS") and central station alarm providers that routinely interface with the 9-1-1 system should be required to deliver all emergency calls to the NG9-1-1 system being implemented in the state and to establish the necessary Session Initiation Protocol ("SIP") interconnections to do so. Requiring SIP interconnection will reduce the costs associated with perpetuating legacy PSTN-based infrastructure and facilities the transition to the IP-based NG9-1-1 environment. Whether or not a state elects to provide a transition period for full implementation of the NG9-1-1 system and decommissioning of the legacy 9-1-1 system, every entity operating in the state that is capable of routing emergency calls should be required to interconnect to the new system and begin routing calls once it is operational. Allowing service providers or other users of the 9-1-1 system to choose how and when to join the NG9-1-1 world would create unnecessary complexities and a fragmented collection of legacy 9-1-1 and NG9-1-1 systems and delay full NG9-1-1 implementation. Bandwidth's experience has shown that without appropriate regulatory oversight the risk of these outcomes are all too real. All service providers, MLTS and central alarm providers and any other entity operating in the state and handling emergency calls should be required to implement their own Location Information Server as defined in the NENA 08-003 standard according to a reasonable transition period established by each state.

Consumer access to 9-1-1, now including text messaging as well, is a firmly and validly rooted regulatory mandate that cannot be held hostage to incumbent interests as the communications industry otherwise races forward toward IP network services. NG9-1-1 networks hold the promise to "future proof" emergency services as the technologies used to deliver services continue to evolve. Near-term deployment requirements can include reasonable "ramp up" periods for providers to come into compliance with new or changed requirements, but such cases should strike an appropriate balance between customer expectations and the cost of compliance.

Finally, innovators and other communications providers that are not yet required to provide 9-1-1 should be granted access to the NG9-1-1 network to encourage their participation in NG9-1-1 even if they have no regulatory obligation to do so. In addition, to the extent they voluntarily provide NG9-1-1

services to their users, they must be given the same protections from liability currently extended to carriers, VoIP providers and 9-1-1 service providers. In this context however, consideration of different or alternative NG9-1-1 funding regimes may be necessary. Ideally, a NG9-1-1 regime should recognize that for many over-the-top service providers, the platform hosting the application is likely already remitting the appropriate 9-1-1 fees. In short, a federal NG9-1-1 framework should promote participation by the greatest number and variety of service providers.

Conclusion

Bandwidth urges the Commission to develop strong, overarching federal requirements that apply to all NG9-1-1 stakeholders and provide a uniform framework for state implementation of NG9-1-1 solutions. Interoperability, uniformity and neutrality should be the central themes of any national standards. An appropriate NG9-1-1 framework must limit the ability of incumbent participants to delay or impede the development of NG9-1-1 and require all service providers to interconnect with and route emergency calls to the selected NG9-1-1 solutions provider. Without these requirements to guide states deploying NG9-1-1 solutions and the entities implementing those solutions, the transition to NG9-1-1 will be fraught with delay, disputes and lack of participation.

Respectfully submitted,

/s/

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December 13, 2012