

**Before the United States Department of Commerce
National Telecommunications and Information Administration**

Development of the Nationwide) Docket No.120928505-2505-01
Interoperable Public Safety Broadband)
Network)
)
To: Assistant Secretary for)
Communications and Information)

**COMMENTS OF WISPA EMERGENCY COMMUNICATION ACTION TEAM
(WECAT)**

The WISPA Emergency Communication Action Team (“WECAT”), by counsel, submits these comments in response to the Notice of Inquiry issued by the National Telecommunications and Information Administration, U.S. Department of Commerce (“NTIA”).¹ WECAT provides vital assistance in the repair of fixed wireless infrastructure during emergencies and other times of need.

NTIA seeks public comment regarding the design and business plan of the First Responder Network Authority (“FirstNet”) created pursuant to the Middle Class Tax Relief and Job Creation Act of 2012.² WECAT submits these comments to urge NTIA and FirstNet to incorporate fixed wireless networks into the new nationwide public safety network envisioned by Congress. As members of their local communities, Wireless Internet Service Providers (“WISPs”) are also stakeholders in the success of FirstNet and should have the opportunity to participate in building and maintaining the new public safety network. WISPs can meet critical United States needs for backhaul, reduce the burden on other wireless networks by offloading data and enable a readily deployable wireless network when other networks have failed.

¹ 77 Fed. Reg. 60680 (rel. October 4, 2012) (“NOI”).

² Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112-96, 126 Stat. 156 (2012).

WECAT was established by the Wireless Internet Service Providers Association (“WISPA”), a trade association founded in 2004 to represent the interests of WISPs, vendors and customers. WISPs provide fixed wireless broadband service to more than three million persons, residences and first responders across the country, often in rural and remote areas that would otherwise be unserved by other broadband services. Many of these WISPs also operate licensed microwave backhaul networks to support the wireless services they provide in their communities. Some estimates place the number of WISPs at more than 2,000 in locations throughout the United States.

In times of emergency, WECAT works to coordinate communications among WISPs and to mobilize support to restore service that has been disrupted. WECAT also administers the WECAT Disaster Fund, which helps WISPs restore services when outages result from severe weather or natural disasters. For example, when tornadoes devastated large portions of the country on April 27, 2011, assistance was provided to WISPs that suffered outages by mobilizing to collect donations from other WISPs to help quickly restore wireless service in areas of Alabama.³ Given that some WISPs provide service to extremely rural and remote areas, WISPs provide a critical link that can help ensure that the FirstNet Nationwide Network (“FNN”) can be a truly nationwide network.

As described below, WECAT urges FirstNet to incorporate WISPs and fixed wireless infrastructure in moving forward to establish the FNN. Doing so would help advance the goal of ubiquitous US coverage, extend service into unserved and underserved rural areas, promote mission-critical reliability through multi-network access and make available fixed wireless infrastructure needed to address large-scale emergencies.

³See <http://www.wispa.org/disaster-fund> (visited November 1, 2012).

The NOI invites public comment “on the conceptual network architecture presentation made at the FirstNet Board of Directors’ meeting held on September 25, 2012, as well as invites input on other network design and business plan considerations.”⁴ FirstNet officials in this meeting set forth a conceptual framework for meeting its Congressional mandate. Officials considered a variety of network options, such as building out a standalone network, working with a single nationwide wireless operator or creating a diverse nationwide network with multiple wireless networks and systems. Ultimately, they settled on creating a diverse nationwide network using multiple wireless networks to leverage the significant investments and combined efforts of the public sector and the commercial wireless industry.⁵ Unfortunately, no mention has been made of the vital contributions that some fixed wireless networks can make to enable police, firefighters, emergency medical technicians and other first responders to effectively communicate with one another during emergencies and to improve response time to save lives and to keep communities safe.⁶

WECAT supports FirstNet’s recommendation to promote “high reliability and redundancy through multiple networks: terrestrial, satellite and deployable micro networks.”⁷ NTIA and FirstNet should clarify that the network design and business plan should also include WISP networks, which provide available, cost-effective, and deployable fixed wireless solutions for emergency communications in furtherance of the NITA and FirstNet plans, including “[c]overage extension into unserved/underserved

⁴ NOI at 60681. The NOI further requests that interested parties: 1) Describe all of the assumptions necessary for the proposal to succeed; (2) identify the specific opportunities or benefits the proposal provides in meeting the Act’s objectives and the criteria enumerated above; (3) discuss any existing challenges or obstacles that must be overcome to realize the proposal; and (4) specify any areas in need of further research and development to ensure the success of the proposal.

⁵ *Id.* at 21.

⁶ *Id.* at 3.

⁷ *Id.*

rural areas.”⁸ To date, FirstNet appears focused on mobile solutions in times of emergency, but such a view is too narrow.

WECAT submits that the benefits of fixed wireless networks have been demonstrated in the marketplace. Fixed wireless networks have been deployed nationwide by several thousand WISPs, particularly in rural unserved and underserved areas being targeted by FirstNet. As FCC-authorized “license exempt” services build on the model of Wi-Fi to enhance broadband services, new frequency bands and equipment will be brought to market in support of these services, increasing the capabilities of WISPs to deliver broadband services. In addition, many WISPs currently operate microwave backhaul networks on licensed frequencies. Finally, fixed wireless systems should not be overlooked as a means to help restore destroyed services or to help supplement coverage by offloading data when networks become congested in the wake of an emergency.

While the FirstNet presentation seeks to advance “[u]biquitous US coverage provided through satellite network integration,”⁹ satellite networks alone would be insufficient for the goal of effective, ubiquitous coverage. To the contrary, while WISPs cover less than 100 percent of the United States, they can support a nationwide fixed wireless network that has many benefits and advantages in promoting the goals of the FNN. Satellite broadband provides severely limited connectivity in terms of bandwidth and latency. WISPs, on the other hand, can reach many of the same areas with higher bandwidth, lower latency service. Cellular networks may suffer from severe congestion

⁸ *Id.* at 20.

⁹ FirstNet Presentation at 20.

or outages¹⁰ during times of heavy usage (such as during emergency situations), while fixed wireless architecture can supplement this coverage to help alleviate network congestion. In many parts of the United States, there is extensive overlap between WISP coverage and wireline and mobile service providers.

Fixed wireless offers advantages in emergency situations. With the right preparation and equipment, WISPs can rapidly install multi-megabit-capable networks, and in some cases up to Gigabit-capable networks, thereby advancing the goal of reaching “operational capacity as quickly as possible”¹¹ and benefiting the public safety community and those affected by emergencies. As FirstNet endeavors to accelerate build-out and to make more services available, particularly by extending coverage to unserved and underserved rural areas, WISPs can offer an effective and efficient complement to mobile service.

Ubiquitous redundant architecture is critical to assuring that the FNN will meet its fundamental purpose.¹² WISPs offer service in a variety of urban and rural areas and can provide an additional layer of redundant broadband infrastructure to support the FNN. Times of emergency will require IP connectivity that will enable the use of telemedicine, Voice over IP, video, remote desktop and other bandwidth-hungry devices, services and applications. A fixed wireless network can support these uses, thereby alleviating network congestion and freeing mobile network resources.

¹⁰ To cite just one example, one WISP has reported that when an earthquake struck a small town in Virginia served by the WISP, all of the local cellular carriers went offline, but the WISP’s service remained in operation during the emergency.

¹¹ NOI at 60681.

¹² Moreover, the network could have other benefits outside the Public Safety context. For example, the FNN could provide second-mile backhaul capacity to rural locations, and WISPs and others could access this capacity to better improved broadband services in these areas. In times of nonemergency, consumers and others would benefit from more robust and widespread broadband access services.

Some fixed wireless networks can also provide prioritization and quality of service features. Many WISPs are also providers of voice services that access the public switched telephone network and that allow users to complete E-911 calls. In this context, the importance of redundant network architecture cannot be overstated. In the end, consumers and public safety users will benefit, and FirstNet can advance its mission to ensure that such a network is truly nationwide.

Conclusion

WECAT appreciates the opportunity to participate in this important proceeding, and recommends adoption of the proposals described herein to advance nationwide availability of emergency communications infrastructure through the use of fixed wireless networks.

Respectfully submitted,

November 1, 2012

**WISPA Emergency Communication
Action Team**

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