

**Before the
U.S. Department of Commerce
National Telecommunications and Information Administration
Washington, D.C.**

In the Matter of:)	
)	
Development of the Nationwide Interoperable)	Docket No. 120928505-2505-01
Public Safety Broadband Network)	RIN: 0660-XC002
)	
)	

**COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL**

The National Public Safety Telecommunications Council (NPSTC) submits these Comments in response to the Notice of Inquiry issued by the National Telecommunications and Information Administration (NTIA) in the above-captioned proceeding on behalf of the First Responder Network Authority (FirstNet).¹ This Notice of Inquiry (NOI) seeks comment on the conceptual network architecture presentation made at the FirstNet Board of Directors’ meeting held on September 25, 2012, on other network design and business plan considerations and on the general concept of how to develop applications for public safety use. In its comments, NPSTC highlights work in which the public safety community has engaged that it believes is applicable to the NOI.

¹ Notice of Inquiry, Development of the Nationwide Interoperable Public Safety Broadband Network, 77 Fed. Reg. 60,680 (Oct. 4, 2012).

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 15 organizations participate in NPSTC:

- American Association of State Highway and Transportation Officials
- American Radio Relay League
- Association of Fish and Wildlife Agencies
- Association of Public-Safety Communications Officials-International
- Forestry Conservation Communications Association
- International Association of Chiefs of Police
- International Association of Emergency Managers
- International Association of Fire Chiefs
- International Municipal Signal Association
- National Association of State Chief Information Officers
- National Association of State Emergency Medical Services Officials
- National Association of State Foresters
- National Association of State Technology Directors
- National Emergency Number Association
- National Sheriffs' Association

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency

Communications, the Office of Interoperability and Compatibility, and the SAFECOM Program; Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, CommTech Program). In addition, Public Safety Europe is also a liaison member. NPSTC has relationships with associate members, the Telecommunications Industry Association, the Canadian Interoperability Technology Interest Group, the National Council of Statewide Interoperability Coordinators, the Utilities Telecom Council and the Alliance for Telecommunications Industry Solutions.

NPSTC Comments

NPSTC congratulates the FirstNet Board on embarking on the important task of planning and implementing the Nationwide Interoperable Public Safety Broadband network. NPSTC, the overall public safety community and industry have long held that such a network designed to meet the rigors of public safety requirements is needed. While current public safety networks support mission-critical voice operations, they simply do not have the capacity to provide emerging high speed data access, imaging and video applications that are also essential to the public safety community.

The presentation to the FirstNet Board on which NTIA has requested comment sets forth three network implementation options: 1) build-out a standalone network; 2) work with a single nationwide wireless operator; or 3) create a diverse nationwide network with multiple wireless networks and systems.² The presentation goes on to list several pros and cons for each option. It then rejects out of hand the first option, stating it is “unworkable” and “inconsistent with the legislation” and clearly expresses a preference for option three.

² First Responder Network Authority, Presentation to the Board, FirstNet Nationwide Network (FNN) Proposal, F. Craig Farrill, September 25, 2012. See http://www.ntia.doc.gov/files/ntia/publications/firstnet_fnn_presentation_09-25-2012_final.pdf

The presentation then provides a very high level framework discussion of option three, including several diagrams. These diagrams show a Mobile operator's "Core Network" placed between the public safety band-class 14 public safety radio access network (RAN) and the FirstNet Enhanced Packet Core Network (EPC). In the diagram the operator's RAN that would serve mostly consumer use also connects through the operator's "Core Network" into the FirstNet EPC. Given the diagrams presented, it is not completely clear the extent to which public safety broadband traffic and reliability would be dependent on current elements of one or more commercial mobile operator's networks.

As highlighted by the Public Safety Alliance in the sustained multi-year public safety community initiative to obtain the D block yielding a full 10+10MHz of broadband spectrum capacity for public safety use, the multiple commercial systems already available are designed to meet general consumer needs, not public safety requirements:

...Carriers build networks to meet daily peak loading, not for emergency-to-catastrophic events. They'd have to fundamentally change their business model. This is one of the many reasons public safety cannot rely on commercial networks...³

The reality is that in times of a major incident or disaster, both public safety and consumer traffic tends to peak. To the extent public safety traffic is dependent on the commercial network in the proposed architecture, or shares the spectrum together, the risk exists that public safety and consumer traffic may be in contention at a given cell site or sector that is critical to effective public safety communications. The presence of multiple commercial operator networks does not prevent all those networks from being clogged during such times. Accordingly, without additional information and detail, NPSTC believes it is premature to declare that option three solves mission-critical reliability as stated in the presentation.

³ <http://www.psafirst.org/news/press-release/psa-sets-the-record-straight-reiterates-call-for-an-interoperable-broadband/>

NPSTC recognizes that FirstNet has a daunting task to design and implement the Nationwide Interoperable Public Safety Broadband Network. As highlighted on numerous occasions during the last 6 years of regulatory and policy discussions anticipating the actual availability of the public safety broadband network, public safety has more stringent communications requirements than those typically provided by commercial networks for the general consumer population. Therefore, to be successful, a nationwide network for public safety use must meet those requirements. NPSTC believes that FirstNet obviously will need to go beyond the high level framework presented at its first meeting in deciding the most appropriate path to take to meet those needs.

Fortunately, we believe there is a wealth of information already on the record or on the horizon which can be extremely beneficial to FirstNet. Given the 6 years of deliberations which have already taken place, the FCC has collected a significant amount of information from public safety and industry regarding development of the planned public safety broadband network. NPSTC in particular has been fully engaged in development of a Statement of Requirements (SoR).

The initial NPSTC 700 MHz Broadband Network Requirement Task Force Final Report approved September 15, 2009, offered some baseline recommendations to the Public Safety Spectrum Trust Corporation (PSST). Given the unanimous, sustained and successful public safety initiative to obtain legislation reallocating the D block spectrum for public safety use, NPSTC embarked on a significant effort to update the SoR. That process has tapped into the expertise of approximately 150 participants, including public safety leaders from around the country, as well as a broad range of industry experts in the design of Long Term Evolution (LTE) that has been designated as the interoperable technology for the Nationwide Interoperable Public Safety Network.

The resulting SoR document, targeted for completion by yearend, can provide FirstNet a useful headstart on collecting public safety input as required under the Jobs Act. As examples of the breadth and depth of the SoR, NPSTC previously finalized several key documents of importance to

public safety that feed into the overall SoR process. Two of these documents address public safety requirements and recommendations for Priority/Quality of Service and Local Control, respectively.

The NPSTC Broadband Working Group document “Priority and QoS in the Nationwide Public Safety Broadband Network” addresses specific requirements for public safety and recommends a system that incorporates the combination of a “Default” day-to-day prioritization and QoS capabilities and “Dynamic” prioritization and QoS capabilities to meet special incident situations, such as a responder emergency.⁴ Also, the Working Group document “Local Control in the Nationwide Public Safety Broadband Network” was developed to outline a public safety user entity’s needs and expectations for control of the network. This document recognizes that for effective operation, there will need to be overarching elements required for nationwide interoperability and at the same time some elements in which the end user organization has control.

The NOI also seeks comment on a potential framework for developing applications that would benefit public safety use. NPSTC believes that necessary applications and data sources will fall into two main categories. First, some applications would be required for all agencies on the network to ensure nationwide interoperability. Second, provisions need to be made for local applications and services that are local in nature, and are in addition to those required for nationwide interoperability. The NPSTC Working Group document on Local Control referenced above includes a section on these local applications and services. In part, it states that

The User Entity must have the ability to install local applications and services on their associated PS LTE devices and in their local networks as well as the ability to manage the user access to those applications.⁵

⁴ Priority and QoS in the Nationwide Public Safety Broadband Network, dated April 17, 2012, at page 5. See http://www.npstc.org/download.jsp?tableId=37&column=217&id=2304&file=PriorityAndQoSDefinition_v1_0_clean.pdf

⁵ Local Control in the Nationwide Public Safety Broadband Network, dated March 2012, at page 14. See <http://www.npstc.org/download.jsp?tableId=37&column=217&id=2254&file=LC21%20Local%20Control%20Definition%20Rev%20F.pdf>

Both of these NPSTC Broadband Working Group resources are readily available. As noted above, the overall NPSTC broadband SoR should also be available soon. NPSTC believes this body of work which is the product of significant public safety and industry involvement, can help inform FirstNet on public safety requirements for the broadband network, and would be an essential element in defining the resulting network and application requirements.

Conclusion

In summary, NPSTC congratulates FirstNet on embarking on the daunting task of defining and implementing the Nationwide Interoperable Public Safety Broadband Network. NPSTC and others have already been fully engaged in the regulatory and policy processes for six years in an effort to help bring the network to fruition. During that time, NPSTC and others have developed a significant amount of information regarding public safety requirements and we urge FirstNet to take advantage of that work. The ultimate test of success for FirstNet is whether the network as deployed meets public safety requirements.

Respectfully submitted,



Ralph A. Haller, Chairman

National Public Safety Telecommunications Council
8191 Southpark Lane, Number 205
Littleton, Colorado 80120-4641
866-807-4755

November 1, 2012