Submitted via email (firstnetnoi@ntia.doc.gov)
National Telecommunications and Information Administration
U.S. Department of Commerce
Attn: FirstNet NOI
1401 Constitution Avenue, NW  HCHB Room 7324
Washington, DC  20230

Re:  FirstNet Network Architecture
Docket No. 120928505-2505-01
RIN:  0660-XC002

The Alarm Industry Communications Committee ("AICC"), on behalf of its members, hereby submits the following comments on the Notice of Inquiry issued on September 28, 2012 in the above-captioned proceeding. As detailed below, AICC applauds NTIA for moving forward promptly in taking the steps necessary to implement the nationwide public safety broadband network that is to be operated by the First Responder Network Authority (FirstNet). As discussed below, AICC's interests in this proceeding are limited to (1) ensuring that whatever network architecture is adopted for FirstNet continues to foster the exchange of emergency information between alarm service providers and public safety entities, and (2) facilitating access to the national public safety broadband network by alarm service providers and other quasi-safety
operations, to the extent that FirstNet decides to pursue such arrangements.

**Statement of Interest**


CSAA and ESA, representing the alarm monitoring and installation industry sectors, collectively have 2434 member companies providing alarm service to the public. Together with these trade association members, AICC member companies protect a wide range of sensitive facilities and their occupants from fire, burglaries, sabotage and other emergencies. Protected facilities include government offices, power plants, hospitals, dam and water authorities, pharmaceutical plants, chemical plants, banks, schools and universities. In addition to these commercial and governmental applications, alarm companies protect a large and ever increasing number of residences and their occupants from fire, intruders, and carbon monoxide poisoning. Alarm companies also provide medical alert services in the event of medical emergencies.
Over the past several decades alarm companies have worked with public safety entities, to relay information about emergency conditions. In more recent years, the alarm industry and the public safety community have formed a more deliberate partnership, to develop technology that will ensure the more rapid and accurate relay of emergency information, and to develop protocols that have succeeded in eliminating the vast majority of false alarms. Consistent with this important relationship, AICC has long supported the public safety community’s efforts to finally obtain the spectrum and funding it needs to establish a truly nationwide, interoperable public safety broadband network. And based on AICC’s own efforts to evaluate the technology that will be used by its members in the coming years, AICC knows that the costs involved in deploying large-scale communications capabilities require that you “get it right” from the beginning.

**Facilitating Public Safety/Private Sector Cooperation**

The public safety community has previously explored the possibility of having safety-related entities participate in the national broadband network on a limited basis, as a way to foster beneficial interoperability between public safety and quasi-safety private sector operations, and as a potential source of additional revenue for the construction and maintenance of the network. Under the proposed arrangement, private sector use of the network would be subject to priority access for public safety communications. AICC discussed this possibility with the Public Safety Spectrum Trust (PSST), the predecessor to FirstNet. In the event that FirstNet agrees this concept is worth continued exploration, AICC supports the expansion of eligibility for access to and use of the nationwide broadband network, in the case of safety-related service providers such as alarm companies. Allowing such entities to make use of the network not only maximizes the use of the spectrum, but does so in a way that promotes its intended use, which is to further
public safety. If safety-related service providers can operate on the same spectrum as first responders, it can improve their ability to send emergency communications to the public safety broadband network. Alarm service providers are such entities, providing alerts to public safety about fires, home invasions, and medical alerts. As alarm services are becoming more advanced, including use of data and video images, its role in working with public safety can go beyond merely notifying a PSAP about an alarm signal, and instead incorporate direct transfer of digital information to first responders on a real-time basis (as is being explored in the FCC’s Next Generation 911 proceeding). Other private sector operations (such as automobile emergency services, and OnStar-type telematics services) may likewise benefit from such limited sharing arrangement.

In the event that FirstNet wishes to pursue public safety network access arrangements with quasi-safety private sector operations, AICC recommends that any technological standards adopted for operation of the nationwide broadband network take into account this possibility. This would mean including manufacturers of equipment for the affected industries in the group of “stakeholders” having input into the technical standards that will ultimately be adopted (a course which NTIA seems to be fostering with the issuance of the instant Notice of Inquiry). It may also mean finding a standards-based approach that would take into consideration private sector equipment that already exists or is under development. Use of a standards-based approach helps ensure interoperability, which is of paramount importance to a public safety network. Indeed, interoperability issues are one of the primary problems the 700 MHz public safety broadband network is intended to address.¹ Use of such technical standards would also promote equipment availability and cost effectiveness, and could leverage the research and development

¹ See, e.g., Middle Class Tax Relief and Job Creation Act of 2012 Pub. L. No. 112-96, 126 Stat. 156 (2012). Indeed,
resources already being expended by the private sector for broadband.

Some specific thoughts on facilitating alarm company participation in FirstNet include:

- It would be contemplated that customer premises alarm radio units would communication through the Public Safety LTE Network, and traffic would be delivered to the participating central stations. Signals would be fire, intrusion, medical alert, and carbon monoxide alarms (all of which involve short data signals sent multiple times to ensure receipt), and potentially video (to be delivered to central station and, where desired, directly to public safety personnel). Certain alarm technologies would also send short data messages to verify system and protected premise status.

- AICC would verify that system access is limited to communications pertaining to safety of life and property, and for maintenance or testing of the protection facilities, by companies rendering a central station commercial protection service that are certified by Underwriters’ Laboratory, Factory Mutual or other recognized rating agency, consistent with FCC Rule Section 90.35(c)(63). AICC would verify each entity’s eligibility and furnish a certification of that fact to FirstNet.

- Prioritizing communications:
  - In the event of a national or regional emergency, public safety communications would receive top priority. With regard to alarm messages, when absolutely necessary, the first level would be to limit bandwidth usage and prioritize application use. This would be done on a city, regional or even national basis as required, recognizing the need of citizens to maintain police and especially fire protection.
  - Priorities might be assigned by application in a fashion similar to the National Fire Protection Association (NFPA) Code 72.
  - The alarm industry should be able to design hardware and software in such a fashion that the priority limitation which is finally decided could be automatically administered by remote commands.

AICC stands ready to work with FirstNet and NTIA to explore an avenue for private sector entities engaged in safety-related activities to utilize the public safety broadband network, in close coordination with FirstNet’s vision for such participation.

the Tax Relief Act even creates an Interoperability Board to ensure network interoperability. Id. at § 6203(c)(1)(A).
Respectfully submitted,

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