

**AT&T Comments**  
**SGA Task Force: Achieving Interoperability**  
**For Public Safety Communications**

AT&T lauds the Southern Governors' Association ("SGA") for establishing an Interoperability Task Force ("SGA Task Force") to analyze approaches for achieving interoperable broadband capabilities for public safety communications. AT&T strongly supports public safety organizations and their need for efficient, cost-effective communications systems. AT&T actively participates in a variety of organizations established to improve public safety communications, such as the National Security Telecommunications Advisory Committee's ("NSTAC") Emergency Communications and Interoperability Task Force ("ECITF") which was formed to address many of the same issues now being considered by the SGA Task Force. AT&T also has worked extensively with a variety of vendors to develop a suite of broadband services targeted for public safety use and recently donated \$1 million to support public safety programs.

It is vital that first responders have the ability to communicate with each other during emergency situations. This ability to communicate must include all first responders, and not be confined to a narrow segment of agencies or jurisdictions. Unfortunately, this capability does not currently exist in many areas. Public safety networks have been designed and deployed in a balkanized manner. Each public safety entity has access to a different communications network. Networks that were designed to permit access by some first responders but not others produces anomalous, undesired consequences (*e.g.*, the police department in City A not being able to communicate effectively, if at all, with the fire department in City A or the police department in City B).

The problem is not new. Interoperability concerns first came to national prominence almost 25 years ago when an Air Florida jet crashed into the 14<sup>th</sup> Street bridge in Washington, D.C. First responders arrived from DC, Maryland, and Virginia and soon learned that they could not coordinate efforts due to incompatible communications networks. Numerous parties have struggled since then to solve the problem, and a variety of proposals have been put forward over the years to improve public safety communications, including recent proposals by the FCC, Frontline Wireless, M2Z Networks, Cyren Call, and a joint proposal by Access Spectrum, LLC and Pegasus Communications Corporation. Some of these proposals are quite recent; it would be premature to endorse any particular proposal until all have been fully vetted and compared. Moreover, it is likely that additional proposals will be forthcoming. AT&T has examined the proposals made to date. Fundamentally, AT&T believes that the solution ultimately will require the joint efforts of the public and private sector. These comments set forth a general framework for moving forward with a public/private solution.

**Cause of the Problem: How Did We Get Here?**

Public safety entities serve the vital role of protecting the public. Public safety policy makers wisely determined some time ago that wireless networks could improve the ability of the public safety community to carry out its core responsibilities. The federal government thus made wireless spectrum available for public safety, and networks were rapidly deployed.

Of course, public safety managers are not telecommunications network engineers and, unfortunately, despite the best of intentions, public safety networks have been designed for specific public safety services operating within local areas with little analysis given to whether a single network could serve multiple entities or broad geographic regions. Rather than engage in this time-consuming process, the public safety community concentrated on deploying wireless networks as quickly as possible. The rapid availability of wireless accessibility outweighed the benefits associated with comprehensive planning.

This process achieved the immediate objective — the deployment of wireless networks — but resulted in the fragmentation of public safety communications assets and capabilities. Numerous wireless public safety networks were deployed, but users of one network could not communicate with entities using a different network. Although public safety entities now had wireless communication capability, they were unable to communicate seamlessly with each other. Thus, in large-scale emergency situations, such as natural disasters or terrorist attacks, relief efforts were hampered.

In addition to the lack of interoperability, balkanized public safety networks create other problems. For example, these networks place a tremendous strain on the budgets of city, state, and federal governments. Thousands of uncoordinated, independent communications networks use more spectrum and equipment than would be necessary if a coordinated approach were utilized.

### **Finding the Solution**

Although interoperability is in the common interest of all public safety agencies, individual agencies, in their quest to meet the needs of their citizens, have little incentive to utilize their limited budgets to foster public safety interoperability. It would be extremely burdensome and time consuming to require local public safety agencies to construct new networks, operating on new spectrum, for the purpose of creating interoperable, broadband public safety networks. As the FCC noted, spectrum is not the panacea for interoperability problems:

We also believe that spectrum is only one factor in ensuring that emergency response providers have access to mobile broadband applications. Public safety entities must also have access to adequate funding to upgrade or replace existing infrastructure and for associated training. Without adequate funding for such purposes, any additional public safety spectrum allocations may lay fallow, and existing allocations may be used inefficiently.  
[FCC Report to Congress, 2005 FCC LEXIS 6907 (2005)]

AT&T supports a multi-faceted, multi-jurisdictional approach for addressing public safety interoperability. At the Federal level, the FCC has proposed to reallocate spectrum already assigned to public safety in the 700 MHz band and assign this spectrum to a single licensee for the creation of a nationwide, broadband, interoperable public safety network in the

700 MHz band.<sup>1</sup> AT&T generally supports this approach. The reallocation of 10 MHz for this new network would be sufficient to satisfy public safety spectrum needs, along with other holdings in the 700 MHz band and other bands. Any public safety entity that utilizes this network will be able to use its equipment on a national, regional, or local basis and will be able to communicate with every other public safety entity that also utilizes the network. By opting for a single nationwide licensee, funding requirements for the public safety network would be reduced. The new network should not be dedicated solely to public safety, but should be available for use by others for a fee when excess capacity is available (*i.e.*, in non-crisis situations). This would make the system more cost-effective by spreading the cost of the network to commercial entities through usage fees.

At the State and regional level, efforts should be undertaken to move away from local public safety networks in favor of statewide or regional networks. Such an approach would complement and enhance the Federal proposal. As NSTAC has concluded:

A key enabler and best practice for public safety communications interoperability is the existence or planned deployment of statewide or regional networks. Many States and regions have significant investments in these large-scale, shared, public safety networks, and much of the communications equipment used by emergency responders is being upgraded to standards-based digital equipment. These networks offer a high degree of interoperability within their geographic coverage areas and can be linked to other networks through gateways, which improves communication between State and local Governments and between neighboring local jurisdictions. [NSTAC Report to the President on Emergency Communications and Interoperability, at 21 (Jan. 16, 2007)]

These regional and statewide networks do not necessarily require the construction of new networks. The most cost-effective approach would be to form such networks by combining existing local networks and deploying new technology.

AT&T also agrees with NSTAC that the National Governors Association's ("NGA") recommendations are critical components of an interoperability solution. In particular, the NGA proposed "institutionalizing a governance structure that fosters collaborative planning among local, State, and Federal Government agencies" and "encouraging the development of flexible and open architecture standards" for public safety networks. The linchpin of any such standards should be a requirement that new and modified public safety networks utilize an IP protocol. Networks based on IP protocols eliminate many of the barriers to interoperability associated with proprietary technologies designed by vendors for very narrow uses. Commercial licensees are migrating toward this IP-based model, which would potentially allow the new public safety licensee to leverage developments in the commercial sector for public safety use. Moreover, such an approach would facilitate connectivity with commercial networks, which could add redundancy to public safety networks. Adoption of this requirement also would encourage

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<sup>1</sup> PS Docket No. 06-229.

infrastructure sharing between public and commercial entities — they are more likely to share infrastructure if they are using it in the same or a very similar manner.

The use of IP protocols also will potentially extend interoperability to existing equipment because the standard is device agnostic. This will permit existing equipment to access other networks that utilize IP protocols. As NSTAC has noted, it is essential to ensure that any interoperability solution address the needs of the embedded user base of public safety networks:

Users embrace technology preferences that have evolved to support missions and roles and provide an ease of use gained through a user's experience with such systems and technologies. Interoperability is essential across these technologies rather than provide users with new devices or capabilities in the heat of an emergency. Users need to be able to turn to their "trusted" solutions with which they are familiar. [NSTAC Report to the President on Emergency Communications and Interoperability, at 26 (Jan. 16, 2007)]

Adoption of a coordinated approach at the State and regional level and utilization of standard communications protocols would have numerous benefits, including (i) minimizing costs, (ii) minimizing demand for additional spectrum, (iii) encouraging more efficient use of public safety spectrum, and (iv) promoting timely system upgrades. Economies of scale could be realized by utilizing the purchasing power of numerous public safety agencies to develop a standardized solution. Because public safety entities within an entire State or region would all be utilizing the same protocol, it would be easier to obtain state-of-the-art equipment at reasonable prices. Networks would no longer require specialized, limited availability equipment and, therefore, would no longer be hamstrung by designs that become outdated because of reliance on inefficient technologies and equipment.

These efforts will not eliminate the interoperability problem overnight. The 700 MHz spectrum that will be utilized for the new national public safety network must be cleared and it will take time to deploy the network. In the interim, AT&T believes that interoperability can be addressed through a private-public partnership utilizing commercial communications systems already in place. Not only would the commercial provision of public safety communications create the right incentives for public safety to overcome interoperability, it is also more timely, more efficient, and more cost effective than the existing system of self provisioning.

AT&T has demonstrated the benefits for public safety associated with taking advantage of IP protocols. On May 2, 2006, at Rash Field in the Inner Harbor of Baltimore, Maryland, AT&T participated in a demonstration of the wide variety of public safety/national security applications possible over commercial UMTS/HSDPA networks utilizing IMS. A similar demonstration was conducted late last year in Washington, DC. IMS permits the sharing of different media during a single transmission — i.e., numerous applications such as voice communications, video feeds, and file transfers can be utilized simultaneously. For example, the demonstrations showed how public safety agencies could use IMS available over commercial networks to link first responders *via* conference call and send real-time video from a disaster area, manuals, and other critical information to all participants during the call.

AT&T also volunteered to provide priority access to first responders. As a result, authorized emergency personnel can gain access to the next available wireless channel on AT&T's network during an emergency. This feature thus provides a baseline level of interoperability — the first responders can use ordinary wireless handsets to communicate.

In sum, a number of competing proposals have been submitted to the FCC to address public safety communications issues. It would be premature for the SGA to endorse any *particular* proposal at this time. Nevertheless, two general concepts should be endorsed. First, it should be recognized that the solution to public safety interoperability issues lies in the establishment of a new, nationwide broadband network that utilizes IP protocols and moves away from local public safety networks in favor of regional and Statewide networks that operate utilizing IP protocols. Second, it should be acknowledged that many public safety communications' needs can be addressed in a cost-effective manner by utilizing existing commercial networks.