The PoliceChief
The Professional Voice of Law Enforcement

800 MHz Public Safety Interference: The Consensus Plan

Harlin R. McEwen, Chief of Police (Ret.), Ithaca, New York, and Chair, IACP Communications and Technology Committee

In August 1999 the Phoenix Police Department and other public safety agencies were experiencing serious interference in their 800 MHz public safety radio systems. It was soon discovered that commercial mobile radio service (CMRS) licensees (wireless phone operators) such as Cingular, Sprint PCS, Nextel Communications, AT&T, and Verizon Wireless were the unintentional cause of this interference.

Competing Transmissions

The primary problem is that 800 MHz spectrum systems used by public safety and commercial users such as wireless phone companies are intermingled. These public safety systems typically have one or a few high site base stations serving a large area, while CMRS systems use hundreds of low site base stations in the same area. In many cases, these ubiquitous broadcasting units "overpower" the public safety transmissions.

This situation has serious, and potentially fatal, consequences for first responders. In many cities around the United States, first responders experience garbled, fuzzy, or blocked calls. And the vulnerability of one police officer or one firefighter who cannot communicate risks not only that person but also the citizens he or she protects. Especially in times of crisis, when panic and confusion can so easily cripple a response, there is simply nothing more important than getting information where it needs to go and getting it there fast.

This fact has prompted the public safety community to act so that mission critical communications can function as needed. By partnering with private wireless users and Nextel Communications, the Consensus Plan was born.

The Consensus Plan

In March 2002 the Federal Communications Commission (FCC) promised to resolve this issue as effectively and expediently as possible. Their primary objectives were to (1) remedy interference at 800 MHz, (2) minimize disruption to existing licensees and services at 800MHz, and (3) ensure that public safety agencies have access to adequate spectrum to support their critical missions.

After numerous discussions and studies, the public safety community, private wireless companies, and Nextel introduced the Consensus Plan. This proposal solves the economic, technical and policy problems associated with the current banding at 800 MHz for public safety, including interference. Most of the first responder community stands behind this plan because it takes a systemic approach to solving the problem

that involves no extra cost to taxpayers or first responders.

The Consensus Plan would realign the current jumbled licensing of 800 MHz systems into two distinct blocks: one block for high-site architectures like those used by public safety and private wireless systems, and one block for cellular-like architecture-low-site systems like those used by wireless carriers. Creating these separate contiguous blocks for high-site and low-site systems means that interference will be nearly eliminated. Also, the Consensus Plan would allow public safety communications operators to use considerably more spectrum at 800 MHz.

The Opposition

There is an ongoing effort on the part of those opposing the Consensus Plan to convince the FCC and others that rebanding is not the solution. Those opposing are primarily wireless carriers competing with Nextel, the United Telecom Council (UTC), and utility companies.

This opposition has suggested that the solution to the interference problems is a case-by-case mitigation tactic. Each public safety area, in theory, could-through a combination of retraining and technical fixes-minimize interference. The trouble with this incremental approach is that it is reactive and attempts to alleviate the symptoms of interference issues rather solving the underlying problem: that pubic safety and commercial radio systems are inherently incompatible system architectures in the same spectrum and geography. Also, this plan is not funded and does nothing to allow the creation of advanced, reliable, and robust communications networks

Moving Forward

Interference continues to escalate, and more public safety agencies throughout the country are identifying similar problems in their jurisdictions every day. Currently, wireless carriers are addressing interference on a case-by-case basis through the use of best practices.

The Consensus Plan is the only proposed solution that meets both the needs of public safety and the goals of the FCC and that is comprehensive, funded, and technically proven. But, most importantly for first responders, by separating cellular operations from public safety operations in the 800 MHz band, the plan will eliminate interference and make critical communications more reliable.

There continues to be broad support for the Consensus Plan, which was proposed by the IACP, the Major Cities Chiefs Association, the National Sheriffs' Association, the International Association of Fire Chiefs, APCO International, and others. The signatories to the Consensus Plan represent more than 90 percent of all affected licensees in the 800 MHz band.

In order to eliminate interference and mobilize first responders to vocalize support for the rebanding effort, the advocates of the Consensus Plan have created a Web site, available at www.projectconsensus.org, where visitors can learn more about the plan.

We must act to ensure that the FCC makes the safety of first responders and the communities they serve its top priority.

The IACP Communications and Technology Committee invites IACP members to share their concerns and experiences to enhance the activities of the committee. The committee will hold its annual meeting at the Philadelphia Convention Center on October 22, 2003, from 9:00 a.m. to 12:00 noon.

Return to Article