Office of the Assistant Secretary of Defense
Network & Information Integration

DoD Spectrum Symposium
2009

Remarks by
James Arden Barnett, Jr., Rear Admiral (ret.)
Chief of the Public Safety and Homeland Security Bureau
Federal Communications Commission

October 15, 2009

Hyatt Regency Hotel
Arlington, Virginia

Introduction

Danny, thank you for your kind introduction, and I appreciate the kind invitation to address this august group. I am especially pleased to be with you today, not only because of the 32 years that I spent in the Navy and Navy Reserve, but because I started my career in the Navy as a Communications Officer aboard a destroyer. I have a deep appreciation for all of our Armed Forces, all of whom depend on the efficient and effective use of the electromagnetic spectrum. My superior officers, Chairman Julius Genachowski and the other FCC Commissioners, and the FCC professional staff, recognize and support the Department of Defense's expertise in communications and other uses of the spectrum in defense of our nation abroad, and its support of civil authority during attacks or emergencies are crucial to our security at home.

As Chief of the FCC's Public Safety and Homeland Security Bureau, I think that the Department of Defense and the FCC have some common purposes: The FCC's enabling legislation, the Communications Act of 1934, the Communications Act, expressly provides that the FCC was created "for the purpose of the national defense" and "for the purpose of promoting safety of life and property through the use of wire and radio communication." This is one of the reasons the Public Safety and Homeland Security Bureau was established at the FCC in 2006 following Hurricane Katrina.

SLIDE 2

In addition to common purposes, we share some common history. The FCC is 75 years old, but its predecessor, the Federal Radio Commission, to which we trace our heritage, was first chaired by Rear Admiral William H.G. Bullard, who was a champion of Naval radio and the uses of the spectrum for navigation at sea. There is one other historical note where Bullard played a part. It happened 94 years ago (so I barely remember it), this month, even this week: The first successful experiments of transatlantic transmission and reception of a human speaking by the wonder of radio telephony. October, 1915. The U.S. convinced the government of France to let engineers use the Eiffel Tower as the point of reception (one way only). Rear Admiral

Bullard, then the Director of Communications for the Navy Department, was in Paris to witness the experiment. The French government was a little distracted in 1915, what with a World War going on in its backyard, so they limited the time on the Eiffel Tower to the point it almost ruined the experiment. And does anyone know from where the radio signal originated? Arlington, Virginia! And even in those days, with far fewer sources, the engineers and experimenters complained of interference.

Radio revolutionized navigation at sea, the military and the nation, and we have seen other technological revolutions in our life time: satellites, cell phones, computers and of course the Internet.

Now we are on the wave of the new revolution as the applications of broadband are changing the world. Now the thing about waves is they can pass you by, they can swamp you or you can get on top of them and ride them. Today I want to talk to you about riding the broadband wave for public safety & homeland security. And I will discuss with you some of the initiatives and goals we have at the Bureau.

SLIDE 3

The Public Safety and Homeland Security Bureau consists of over 100 dedicated professionals (engineers, lawyers and communications specialists) who carry out the FCC's public safety mission. We authorize and oversee wireless communications that support the public safety community and ensure the American public has access to critical services to reach public safety in times of emergency (9-1-1 services) and is able to receive alerts in times of emergency. The Bureau is responsible for policy analysis leading to the rules established by the Commission involving public safety communications. Along with our licensing and policy responsibilities, we commit significant resources to outreach and planning teams in the first responder community, and we have some responsibilities in supporting law enforcement operations, Communications Assistance for Law Enforcement (CALEA), and occasionally in support of national security as it relates to disaster preparedness and response.

The FCC is all about networks and communications. Its responsibilities include ensuring that the spectrum resource is used in an effective and efficient manner. The Commission has the responsibility to ensure that the nation's communications networks are interoperable and are able to operate in times of emergency, as well as on a day-to-day basis. This includes both the communications networks that American citizens rely on, as well as the men and women who make up our public safety community. And this brings me back to broadband.

In February of this year, President Obama signed the American Reinvestment and Recovery Act. The Act requires the FCC to present a National Broadband Plan to Congress by February 17, 2010, promoting the concept that all people in the United States have access to broadband services and capabilities – this includes the public safety community (the plan is due about 87 working days from today—not counting weekend working days).

If you don't take away anything else that I say today, please know this: the people of America, your family, your parents, your children, your friends, you, you need a Public Safety Broadband Network. Broadband will revolutionize public safety. On a day-to-day, broadband communications will save lives and property. When hurricanes batter us, when earthquakes hit, and when terrorists strike, broadband will help us save hundreds or thousands of lives, help us recover, help us connect with our families and loved ones, and help hold the fabric of society together. The National Broadband Plan has given us one critical opportunity to get this right, and we must, as a nation, seize upon it. A public safety broadband network is not inevitable; we must make it happen.

SLIDE 4

We have just passed the eighth anniversary of the 9/11 attacks in New York, Pennsylvania and the Pentagon. The 9/11 Commission Report clearly identified that the inability to communicate at each of the three sites was strong evidence that **compatible and adequate communications among public safety organizations** at the local, state, and federal levels was an important problem. The 9/11 Commission recommended more radio spectrum for Public Safety, that connectivity among civilian

authorities and the National Guard be ensured, and that federal funding for these things should be given a high priority. In other words, public safety communications capacity and interoperability is crucially important. And what I urge on you today is that public safety broadband offers the greatest advancement, a quality leap forward, in capacity, in interoperability and in application that we will have for the foreseeable future.

SLIDE 5

Imagine your mother or father collapses in a rural area. In the near future, a future with Public Safety Broadband, an EMT will arrive with a portable CT scanner which will be able to tell whether your parent has had a stroke or an aneurism. If it's an aneurism, your mother needs to go to Hospital A, but if it's a stroke, then she needs to go to Hospital B, where they specialize in strokes. Knowing that can add 30 minutes or more to the "Golden Hour" to treat the victim. The difference in getting her to the right hospital can mean the difference of whether she is paralyzed and disabled for the rest of her life or whether she goes back to work in a few weeks. But the EMT cannot make that determination. The CT scan has to get back to a doctor, and it must have broadband to get to the doctor.

That is the power of broadband, and this is only one application. Medical records, vital signs, medical imaging, all of these are becoming possible now.

Imagine the firefighter receiving plans to a building on fire and the location of hazardous material even as the firefighter is on the way to the fire. But you have to have broadband. Imagine the cell phone video of a terrorist leaving the scene. What if you could get that back to the 911 call center and then have them blast it out to every law enforcement officer in the region? But you have to have broadband.

Today, our police, law enforcement, firefighter and emergency medical services communicate largely in the VHF, UHF and in the 800 MHz frequency bands, and more recently in some narrowband 700 MHz frequencies. Public Safety Mission Critical Voice Communications in these bands and modes are crucial and will be for some time. But we also know that there are still significant concerns about interoperability,

especially during emergencies that inflict great loss of life, extreme damage to critical infrastructure or involve multiple, dispersed jurisdictions. Great strides have been made in the interoperability of Public Safety Communications and these have been made by hard work at the local, state and federal levels.

But we all recognize that we are not where we want to be, especially for big emergencies, really bad incidents. In the mid-to-long term, broadband offers the best chance at technical interoperability, but we must have a Public Safety Broadband Network for data first, so that the technology for Mission Critical Voice can mature. This is our best chance; the chance starts now.

SLIDE 6

Here is what we need in a Public Safety broadband network:

- Broadband data
- Ultimately, mission critical voice (MCV)
- Ubiquity (geographic coverage/population coverage)
- Public Safety Hardened (in-building coverage)
- Resilience/Reliability (physical and guaranteed capacity)
- Affordability (service and devices)
- Adequate capacity for catastrophic events
- Operability/interoperability
- Performance (voice quality and data speeds)
- Practical, timely

John Paul Jones once said “It seems to be a law of nature, inflexible and inexorable, that those who will not risk cannot win.” America’s military takes risks in order to win, as does the public safety community. It should be our goal to see that those who undertake those risks are supported by trusted and proven communications systems. I believe that we cannot afford is to miss this opportunity to work together in this rapidly evolving age of innovative information technology.

SLIDE 7

The FCC is working furiously and diligently on the National Broadband Plan, not just Public Safety (though I think that is the most important part!), but all aspects of it. We will make our deadline of February 17, 2010. You can find out more on our website which is www.broadband.gov.

SLIDE 8

We will base the plan on hard facts and data, and we are open to all comments and ideas. The FCC has held 28 public workshops to promote an open dialogue on matters important to the development of a National Broadband Plan and several field hearings have also been held. Here you see some of our Public Safety open forum workshops, where we bring in experts from all over and take questions and information from all over the nation via the web.

SLIDE 9

The Broadband Plan seems to be our whole job at the FCC, but we actually have a lot of other work and initiatives I want to you to know about.

Another important priority for the FCC is ensuring that the FCC maximizes its readiness. On his first day in office, Chairman Genachowski commissioned a 30-day review of the FCC’s ability to respond to natural disasters, terrorist attacks and other emergencies that compromise the safety of the American public. The report has now been issued and outlines steps that the FCC has and will take to better support emergency communications preparedness and response. I am proud to say that we

have already begun implementing many of the actions recommended in the Report. For example, this past week we deployed our first Field Representative to Florida from our Bureau who will perform day-to-day outreach with the public safety community in the Gulf region to help ensure that they are well prepared from a communications standpoint for hurricanes and other disasters.

SLIDE 10

700 MHz

For the past three years, the FCC has been working on the 700 MHz proceeding, which is designed to provide a regulatory framework for the creation of a nationwide, interoperable, broadband wireless mobile communications network for public safety. As a result of the digital television transition that occurred in June of this year, public safety now has access to a portion of the 700 MHz band. While the FCC has already set the rules and begun licensing public safety in the narrowband portion of the 700 MHz band, the rules for use of the broadband portion of the 700 MHz band are still outstanding.

This proceeding is a high priority for the FCC. We have also placed on public notice 13 waiver applications for early buildout in the 700 MHz public safety broadband spectrum and the first round of comments are due tomorrow.

800 MHz

Another important area we are focused on is the 800 MHz band. In 2004, the Commission reconfigured the band plan for 800 MHz to separate public safety systems in the band from commercial wireless systems. As part of the rebanding process, most 800 MHz public safety licensees are reconfiguring their systems to operate on new channel assignments in the band, with the cost of reconfiguration being paid by Sprint Nextel Corporation. Completing the 800 MHz rebanding process continues to be a top priority for the Commission.

We have also made progress in rebanding within the border regions. The U.S. and Canada have agreed on a border area band plan and rebanding of Canada border

area stations is now well underway. Our remaining and highest priority is to conclude our negotiations for a Mexico border area band plan, so that rebanding of Mexico border licensees can begin. The discussions have been intensive and ongoing and we believe an agreement is achievable in the near future.

As you are aware, using our nation's broadcast and cable facilities, the President, as well as state and local authorities can use our Emergency Alert Service to warn citizens of emergency situations. Currently, we are working with FEMA to bring emergency alert technology to the next generation. Once this update is completed, the Emergency Alert system will provide state-of-the-art digital message and delivery systems nationwide and make it possible to simultaneously transmit emergency warnings and information in English and other languages, and send targeted messages to persons with disabilities.

In that same vein, the FCC is working with FEMA to deploy a Commercial Mobile Alerting System (CMAS). CMAS has the potential to significantly impact how American's receive critical warnings on the go by enabling the distribution of emergency alert on mobile devices. As a result, individuals and families will be better informed and better able to take actions to protect themselves before, during and after an emergency or disaster.

9-1-1 Location Accuracy is a further example of how advances in technology can assist both first responders and the public in times of crisis. We are examining how caller-location-data can be effectively measured and how technological innovations can help in meeting this important need. The Commission has a pending rulemaking to develop more refined location accuracy requirements for wireless service providers. As more and more people rely on wireless as their primary means of communication – to the point where in one out of five U.S. households, the wireless phone is the only phone. It is increasingly important that wireless users not only have access to 911 but also that first responders receive automatic and accurate information to identify the caller's location.

Cyber Security

Cyber Security is another area where technological advances have resulted in new concerns. The FCC is seeking to strengthen the protection of critical communications infrastructure, to assist in maintaining the operations of networks during cyber attacks, and to aid in swift recovery afterwards. We are constantly evaluating capabilities in these areas to determine how to enhance detection and response to cyber attacks. We have formed an internal FCC working group to look further at what the FCC should be doing in this important area and have recently released a public notice asking for input on cyber security and broadband issues.

Health Care & Public Health

The FCC coordinates with the Department of Health and Human Services (HHS) and other public health organizations in instances of national or regional public health emergencies, such as bioterrorism events, disease-related outbreaks, or pandemics.

We are also working with HHS to review all of the communications issues for hospitals as part of emergency preparedness, including what is needed for alternative care settings or shelters in place.

Outreach

Finally, I would like to touch on our Outreach Programs within the Public Safety and Homeland Security Bureau.

Our Bureau's website and Clearinghouse website provide a wealth of information for first responders, 9-1-1 Call Centers, the health care sector, persons with disabilities and state, local and tribal governments. On the Clearinghouse, we have posted over 250 public safety communications links and documents.

In addition to providing web-based resources, we also recognize the importance of direct outreach to public safety organizations, industry, and other governmental agencies on a variety of public safety and homeland security communications issues

and we conduct summits, workshops and speaker series, all posted on our webpage at: www.fcc.gov/pshs.

Conclusion

In closing, I want to thank you again for this wonderful opportunity to speak with you. I welcome hearing from all of you about ways we can better work together to protect the citizens of this fine nation. I, along with my colleagues at the FCC, look forward to continuing and enhancing our dialogue with you. Thank you for what you do for our Armed Forces and for our Nation.