

JOINT WRITTEN STATEMENT

Of

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Hearing

on

**First Responder Interoperability:
Can You Hear Me Now?**

Joint Hearing Before the

**Subcommittee on National Security,
Emerging Threats and International Relations**

**Subcommittee on Technology, Information Policy,
Intergovernmental Relations and the Census**

**Committee on Governmental Reform
United States House of Representatives**

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**JOINT WRITTEN STATEMENT OF
JOHN MULETA AND EDMOND THOMAS
FEDERAL COMMUNICATIONS COMMISSION**

Good morning, Chairmen Shays and Putnam, Ranking Members Kucinich and Clay and other Members of the House Government Reform Committee. Thank you for this opportunity to appear before you on behalf of the Federal Communications Commission (“FCC”) to discuss the wide range of issues related to first responder communications interoperability and public safety spectrum use.

The Commission’s work in this area is longstanding and central to the maintenance of America’s public safety telecommunications network. Homeland security, in its many facets, is an unquestioned policy goal and one of the Commission’s core strategic objectives. Under the leadership of Chairman Michael K. Powell, the Commission is coordinating internally and with other U.S. Government agencies to ensure that our nation’s first responders have the unencumbered ability to communicate in times of local or national crises. The Commission’s staff works together to ensure that homeland security will never be compromised.

The FCC is proud of its accomplishments in this area, but cognizant of the hard work ahead. What follows is an overall picture of the Commission’s role regarding public safety spectrum. We will set forth the Commission’s approach to public safety spectrum needs and discuss the steps taken to make spectrum available for public safety communications – including a review of all the bands allocated or designated for public safety use and interoperability. We also will provide a comprehensive outline of the spectrum planning processes that the Commission, working with various public safety representatives, has undertaken to promote

interoperable communications. In addition, we will address the challenges represented by interference to public safety systems, the various mitigation efforts that can be taken to eliminate harmful interference, and highlight possible new solutions to improve interoperability. It is worth noting though, that the Commission is only one stakeholder in the process, and regional planning and cooperation by local and state officials is tantamount to respond to the needs of our Nation's first responders.

The Commission's Structure and Processes

The Commission maintains a flexible organizational structure designed to meet the needs of first responders and the civilian population. Indeed, it was the tragedy of the Titanic and the inability to communicate clearly during that disaster that led to the formation of the Commission's predecessor agency and first highlighted emergency communications as a crucial policy objective. While the industry and the Commission have undergone significant changes over the last century, the FCC remains committed to confronting the challenges inherent in national emergencies.

Chairman Michael K. Powell recognized the importance of reforming the Commission and upgrading its equipment and staff even before the September 11, 2001 crisis. The Commission has undergone a significant reorganization in order to make the FCC, as an institution, more efficient, effective, and responsive. The Chairman developed and implemented a clear and substantive policy vision based on six strategic goals to maintain an emphasis on management, cohesive and efficient operations, and clear and timely decisions. He realigned the organization of the FCC consistent with the dynamic of the converging marketplace and initiated

staff revitalization to foster solid technical expertise. This program continues with ongoing restructuring in some bureaus and the hiring of more engineers and other technical experts.

The overall agency reform includes the ongoing implementation of the agency's inter-bureau Spectrum Policy Task Force Report. The Spectrum Policy Task Force is comprised of senior staff from several Commission Bureaus and Offices, including attorneys, engineers and economists, and assists the Commission in identifying and evaluating changes in spectrum policy that will increase the public benefits derived from the use of the radio spectrum.

In the area of public safety, the Commission functions in an integrated fashion to revitalize and allocate available resources and assign channels to entities in need of spectrum. The two most active sectors in this area are the Commission's Office of Engineering and Technology (OET) and the Wireless Telecommunications Bureau (WTB). Although these bureaus work directly with other agencies on spectrum issues, the Commission also maintains a Homeland Security Policy Council (HSPC) and the Office of Homeland Security to facilitate intergovernmental communications on homeland security issues. A more detailed description of these offices and their functions is available at Attachment A.

Making Spectrum Available for Public Safety

Public safety operations traditionally have consisted of two-way communications between a base and mobile station or between two mobile stations, and as such, have required the use of sufficient spectrum to function properly. The 30-50 MHz band was the earliest band allocated for public safety use. The propagation characteristics of this band permit longer distance transmissions and this is now commonly used for statewide public safety systems.. Over time, technology has advanced, enabling two-way communications at higher frequencies.

In addition, existing public safety bands have become more and more intensively used. As a result, the Commission has made several additional public safety spectrum allocations at increasingly higher and higher frequencies.

As the chart at Attachment B indicates, the Commission currently has designated throughout the country, for public safety use, approximately 97 MHz of spectrum from ten different bands. In addition, in 11 major urban areas, where the demand for public safety spectrum is the greatest, the Commission has authorized up to an additional 18 MHz of spectrum. For instance, in the Washington, D.C. metropolitan area, public safety systems are authorized to use an additional 12 MHz of spectrum on UHF TV channels 17 and 18. Also, in the New York and Los Angeles metropolitan areas, two locations that have some of the highest demand for public safety spectrum, an additional 18 MHz of spectrum is available.

Public safety entities also actively use spectrum-based services in other spectrum bands. For example, under the ultrawideband rules, ground penetrating radars and imaging systems enable public safety users to detect the location or movement of people behind or within walls or other structures, an important and potentially lifesaving tool. In addition, various frequencies are available from 2 to 25 MHz for emergency communications. Finally, the availability of Priority Access Service (PAS) on some commercial wireless networks gives certain emergency personnel greater ability to access commercial cellular and Personal Communications Service (PCS) systems in times of crisis. Also, many public safety entities use commercial wireless communications to supplement their other communications.

Spectrum Dedicated to Interoperability

The Commission's rules define *Interoperability* as an essential communications link within the public safety and public service wireless communications systems which permits units from two or more different entities to interact with one another and to exchange information according to a prescribed method in order to achieve predictable results. The Commission has designated certain channels in the public safety bands for this purpose. A public safety entity may use designated frequencies only if it uses equipment that permits intersystem interoperability. The frequencies that have these so-called "use designations" include 2.6 MHz of the 700 MHz band, 5 channels in the 800 MHz band, 5 channels in the 150 MHz band (VHF Band), and 4 channels in the 450 MHz band (UHF Band).

Starting on January 1, 2005, the Commission will require newly certified public safety mobile radio units to have the capacity to transmit and receive on the nationwide public safety interoperability calling channel in the UHF and VHF bands in which it is operating. Also, for the special case of certain inland coastal areas, known as VHF Public Coast areas (VPCs), the Commission has designated several additional channels in the VHF band to be used exclusively for interoperable communications.

Recent Public Safety Allocations

In the last few years, the Commission has made two allocations that illustrate the importance placed on ensuring that public safety entities have sufficient spectrum to carry out their critical missions. First, the Commission made an important allocation of spectrum for public safety use in the 700 MHz band that is being transitioned from TV broadcasting as part of the digital television (DTV) transition. In 1997, the Commission proposed, consistent with a

recommendation in a Final Report by its Public Safety Wireless Advisory Committee, to allocate 24 MHz of this reclaimed broadcast spectrum for public safety uses. Consistent with this proposal, Congress enacted the Balanced Budget Act of 1997, which specifically directed that 24 MHz of the 60 MHz of spectrum being reclaimed from Channels 60-69 be allocated for public safety purposes, with the other 36 MHz to be auctioned for commercial uses. At the end of that year, the Commission identified and allocated the new 24 MHz of public safety spectrum.

The Commission then moved to take steps toward enabling the new 700 MHz public safety spectrum to be effectively utilized. In doing so, it crafted special provisions both to address the continuing interoperability issues among various public safety systems and to provide flexibility to accommodate a wide variety of innovative uses. In particular, the Commission dedicated 2.6 MHz of this spectrum for interoperability purposes.

From the beginning, the Commission has recognized that the utility of this spectrum for public safety depended on taking actions, consistent with the current statutory scheme, to minimize, and ultimately clear, the broadcast use of this spectrum. For instance, during the digital television (“DTV”) planning, the Commission minimized the use of channels 60-69. As a result, the new 700 MHz public safety spectrum on TV channels 63-64 and 68-69 is available now in many areas of the country.

Finally, the Commission has worked with Canadian authorities to clear the 700 MHz spectrum for use by public safety. We first addressed this problem in response to concerns raised by New York State’s public safety community, but quickly expanded our efforts to address channel usage all along the U.S.-Canada border. In the period since September 11, 2001, the Canadians have re-evaluated their own public safety communications needs and decided to amend their DTV Table of Allocations to permit channels 63 and 68 to be used immediately for

public safety communications, instead of DTV. We are working to develop similar arrangements with Mexico for use of the 700 MHz public safety frequencies in the border areas with that country.

The Commission also recently has made available for public safety use 50 MHz of spectrum at 4.9 GHz, which promises to permit the use of new advanced wireless technologies by public safety users. Part of a transfer of Federal Government spectrum to private sector use, the 4940-4990 MHz band (4.9 GHz band) was originally proposed to be allocated to fixed and non-aeronautical mobile services and to be auctioned to commercial users, with no designation of the spectrum for public safety use. In response to requests from the public safety community for additional spectrum for broadband data communication, the Commission designated the 4.9 GHz band for public safety use in February 2002 and adopted service rules in April 2003.

The rules adopted for the 4.9 GHz band are intended to accommodate a variety of new broadband applications such as high-speed digital technologies and wireless local area networks. For example, before leaving the fire house, building plans and schematics could be almost instantly downloaded to a fire vehicle. A local area network could be set up at the scene so that this information could then be relayed to all public safety personnel on site. These rules also foster interoperability, by providing a regulatory framework in which traditional public safety entities can pursue strategic partnerships with others necessary for the completion of their mission.

Spectrum Planning to Promote Interoperable Communications

800 MHz Regional Planning

In 1986, the Commission designated six megahertz of spectrum in the 821-824/866-869 MHz bands for public safety use. In 1987, it adopted policies, service rules and technical standards to govern this spectrum. A public safety advisory group called the National Public Safety Planning Advisory Committee (NPSPAC) recommended these rules, which constitute a “National Plan” for public safety services. The National Plan was created to accomplish two goals: encourage efficient use of the spectrum, and increase interoperability among communications systems, which would enable local, state, and federal public safety agencies to better coordinate their activities. Most importantly, the Commission designated five channels nationwide for mutual aid communications which is today referred to as interoperability communications.

The regional planning committee approach to spectrum management replaced the traditional first-in-the-door approach to spectrum licensing and management. There were 55 Regional Planning Committees (RPCs) created to develop regional plans tailored to the particular communications needs of each region.

State geographical boundaries formed the basis of the regions, with membership comprised of police, fire, local government, forestry conservation, highway maintenance and emergency medical services. The RPCs elected chairpersons and established balanced membership with representation from multiple public safety entities within their regions. The Commission had approved all the initial regional plans by 1993. Still, the regional planning process continues today. There are periodic requests for regional plan modifications and

amendments to initial plans, which are placed on public notice. Once Commission consent is granted, the parties may file the corresponding applications.

700 MHz Regional Planning

In adopting its band plan for 700 MHz, the Commission divided the band for different purposes in terms of spectrum management. The majority was for general use and it will be managed by 700 MHz RPCs that are patterned after the 800 MHz regional planning structure and process. In addition to the 700 MHz general use spectrum, the Commission also designated about 10 percent of the total allocation, or 2.6 MHz of spectrum, for interoperability.

Regional planning allows for maximum flexibility of RPCs to meet state and local needs and encourage innovative use of the spectrum to accommodate new and as yet unanticipated developments in technology and equipment. To date, 44 regions have held initial meetings and elected a chairman, while 11 regions have held no meetings. Two regions, Region 5, Southern California, and Region 24, Missouri, have filed their 700 MHz Regional Plans. Both plans are under staff review.

State Interoperability

Given the central role that states provide in managing emergency communications, the Commission concluded that states are best suited for administering the interoperability spectrum and that state-level administration would promote safety of life and property through seamless, coordinated communications on the interoperability spectrum.

States were allowed until December 2001 to inform the Commission whether they would form a State Interoperability Executive Committee (SIEC) or use an existing state entity to

administer the interoperability spectrum. Thirty-eight states and the District of Columbia elected to administer their interoperability spectrum. For the fourteen who did not, the RPCs have been delegated the responsibility to administer this spectrum.

With respect to 700 MHz State licensing, the Commission gave each state the option to receive a statewide authorization and to apply for a single, geographic license for up to a total of 2.4 MHz for their needs. All states applied for and were granted state licenses for this spectrum. The geographic license gives states a new tool for managing and planning the radio communications needs of state agencies.

Public Safety National Coordination Committee

The Public Safety National Coordination Committee (NCC) operated as a Federal Advisory Committee from 1999 to 2003 and recommended technical and operational standards to assure interoperability in the 700 MHz public safety band. The over 300 members employed a consensus-based decision-making process to meet its charge. The NCC was guided by an eleven-member Steering Committee and used three subcommittees, each of them having several work groups to develop its recommendations, many of them highly technical. It submitted its final recommendations in July 2003.

The NCC developed recommendations on a technical standard for the narrowband voice and data channels to ensure that police, firefighters, EMS and other public safety officials using 700 MHz radios can communicate with one another instantly on common voice and data channels. The same channels are designated for interoperability use everywhere in the United States. The Commission adopted the narrowband voice standard and also a narrowband data standard in January 2001 as the NCC recommended.

The NCC also developed a recommendation for a wideband data standard and forwarded it to the Commission in July, 2003. This standard would give public safety agencies a common “pipeline,” on 700 MHz wideband data interoperability channels, with which to implement such applications as sending mug shots and fingerprints to police vehicles, medical telemetry from EMS units to hospitals, blueprints of burning buildings to firefighters and video coverage of incidents to the incident commander. The NCC worked with the Telecommunications Industries Association – an accredited standards developer – to develop interoperability technical standards that are open and non-proprietary. The remaining recommendation of the NCC, including the wideband data standard, will be considered for rulemaking by the Commission in the future.

4.9 GHz Band

The Commission’s service rules for the 4.9 GHz band adopted in May, 2003 are designed to promote a broad array of possible uses such as broadband mobile operations, fixed “hotspot” use, and temporary fixed links. Licenses for this spectrum will be granted to public safety entities based on a “jurisdictional” geographical licensing approach. This means that 4.9 GHz spectrum is licensed for shared use. Under this approach, 4.9 GHz licensees will be authorized to operate throughout those geographic areas over which they have jurisdiction and will be required to cooperate with all other 4.9 GHz licensees in use of the spectrum. In order to increase spectrum use and foster interoperability, licensees will be permitted to enter into sharing agreement or strategic partnerships with both traditional public safety entities, including Federal Government agencies, and non public safety entities, such as utilities and commercial entities.

Public Safety Interference

Although providing access to sufficient spectrum for public safety entities has been a significant step in enhancing first responder capabilities, harmful interference to public safety communications also is of significant concern to the Commission. First responders can be seriously compromised in their ability to carry out their life-saving responsibilities when they are unable to receive or transmit wireless communications. Accordingly, the Commission has taken an active role in protecting public safety communications from harmful interference.

Currently, the most critical public safety interference issues involve public safety communications in the 800 MHz band.¹ The Commission has placed its highest priority on working to alleviate these interference issues. During the past three years the Commission has been working actively with the affected parties to alleviate interference problems, and began a rulemaking proceeding in March of last year to consider this matter. To provide a sense of the technical complexities underlying these important interference issues, here is a brief description of the nature of the interference in this band, and then some of the possible solutions under active consideration.

Current 800 MHz Band Plan

A total of 36 MHz of spectrum is designated for a variety of spectrum users, including:

1. public safety users;
2. Nextel and Southern Link, Specialized Mobile Radio (SMR) providers who now provide commercial mobile radio services to the public; and
3. various traditional dispatch service providers, as well as private businesses, such as utilities, which use the spectrum to provide mobile wireless services for internal communications.

¹ 806-824 MHz and 851-869 MHz.

Just above this band is the spectrum assigned to the two cellular carriers. Because cellular licenses were not nationwide licenses, different carriers provide service in different locations. Verizon Wireless, Cingular Wireless, and AT&T Wireless are major carriers often providing service in part of this spectrum.

The current Commission band plan divides the 36 MHz of spectrum in the 800 MHz band into four parts. About a third of this spectrum consists of 250 interleaved channels of 25 kHz each, with specific channels being assigned to any of the various classes of 800 MHz licensees, including public safety. As mentioned above, 6 MHz is dedicated to the nationwide public safety NPSPAC channels. Another 10 MHz is now predominantly licensed on a geographic basis to Nextel, as SMR spectrum. The final 7.5 MHz is also largely licensed on a geographic overlay basis to Nextel as an SMR licensee, but there are incumbent site-based public safety, private internal, and commercial dispatch systems operating as well in that spectrum.

Network Architectures

Both commercial and public safety licensees originally utilized a network architecture under which each licensee deployed one, or relatively few, high antennas, and planned for coverage over a relatively large geographic area around each tower. Interference was avoided by locating towers using the same and adjacent frequencies sufficiently far apart as not to cause interference.

Subsequently, however, certain SMR licensees, most prominently Nextel, began providing service using a network architecture employing more numerous low-site antennas that place higher levels of energy on the ground. Such systems contemplate frequent handoffs

between different antennas on the same call as a user moves from one “cell site” to another. These two disparate architectures have raised different technical interference issues than existed before, although they are consistent with the Commission’s rules. These issues are now the focus of the current Commission proceeding.

Interference Scenarios

With these new disparate network technologies operating in the 800 MHz band plan, interference to public safety systems can arise when a public safety officer is at a location where the signal from the cell site of one or more carriers is exceptionally strong and the signal from the public safety base station is relatively weak.

To oversimplify, two predominant interference types can occur. The first results from the presence of out-of-band emissions (OOBE) from one or more non-public safety operators in nearby frequencies. The second results from the “intermodulation” in the public safety receiver of two or more signals at other frequencies – with the intermodulation interfering with the desired public safety signal.

To protect against OOBE-type interference, the Commission limits the power level of emissions that a licensee may emit on frequencies outside their licensed frequencies. But OOBE interference can still occur. For instance, the design of an older public safety receiver may not prevent it from receiving signals on frequencies just outside its licensed frequency.

Intermodulation interference is more complicated. It occurs when the frequencies of strong interfering signals bear a certain mathematical relationship with the frequency which the public safety receiver is attempting to use at a particular location. In the current 800 MHz band plan, the mathematics of intermodulation means that the interfering signals may exclusively be

caused by Nextel signals or may be a combination of signals from Nextel and either or both of the two cellular carriers in the affected location.

Potential Interference Solutions

There are two general categories of solutions for harmful interference, neither of which are mutually exclusive: (1) Affected parties can make a number of technical changes to prevent and/or remedy instances of harmful interference as they design, deploy, and modify their systems; and (2) The current 800 MHz band plan can be modified, with a particular focus on eliminating the interleaved portion of the band. The current record finds advocates for both categories of solutions.

For instance, parties have suggested that the Commission adopt a more concrete standard for harmful interference in this band and require that interferers make all technical changes necessary to eliminate that harmful interference. As an example of possible technical changes, CMRS carriers can reduce the strength of their signals “on the street” in locations where the public safety signals are weak. They can do this using any of a variety of techniques -- such as reducing transmitter power, changing the orientation of their antennas, or deploying new antennas that reduce the downward energy.

As another example, improved public safety receivers could be deployed. For instance, Motorola has stated that it will be including in its 800 MHz public safety receivers by the end of the year a technical capability that will significantly reduce susceptibility to intermodulation interference. Similarly, public safety receivers with narrower “front ends” would be less susceptible to interference related to emissions from nearby bands.

Another tool that may be useful in mitigating interference is rebanding. Under the most widely discussed rebanding proposal presented in the current record, the parties contend that rebanding has several public interest benefits. First, with respect to interference, implementation of rebanding should minimize in the long term the likelihood of harmful interference to public safety systems in particular cases, and thus the burden of case-by-case troubleshooting by public safety systems and carriers. Second, it provides for an opportunity to designate additional spectrum for public safety use. Third, rebanding provides the Commission with an opportunity to realign the 800 MHz band in a manner which would better reflect current and near-term emerging technologies and sound spectrum management principles. According to these parties, realizing these benefits would not only promote interoperability and effective public safety communications, it would also lead to more effective and efficient utilization of the 800 MHz band.

Several competing proposals have been introduced by parties to the Commission's 800 MHz proceeding, including some with a novel means of interference abatement. Among them is the so-called Consensus Plan. Nextel, joined by a group of public safety and private radio organizations, filed this plan with the Commission in 2002. The so-called Consensus Parties have subsequently updated their proposal – filing a substantial Supplement last December and further modifications just this past August.

The Consensus Plan advocates significantly reducing 800 MHz interference through rebanding and other measures. Nextel would pay up to \$850 million to cover the costs of retuning and/or relocating public safety and private land mobile radio within the 800 MHz band. Nextel would exchange additional spectrum to provide more 700 and 800 MHz channels for public safety. Also, the plan would make additional 900 MHz spectrum available for private

land mobile radio. In addition, the Consensus Plan calls for Nextel to receive contiguous 800 MHz spectrum and an additional 10 MHz of spectrum in the 1.9 GHz band. The Consensus Plan envisions that 800 MHz band licensees would continue to employ a variety of interference mitigation strategies (many of which are technical solutions) before and after implementation of band reconfiguration.

Thus, overall, the record presents a variety of approaches for addressing public safety interference issues. There are diverse solutions with different associated benefits and costs. The Commission must weigh the costs and benefits associated with the different solutions carefully before making any final determinations on how best to deal with interference issues in this band. We are committed to working with all parties to analyze and resolve the public safety interference issues as quickly as possible. We are equally committed to taking full advantage of the thoughtful ideas, expert analysis, and collective expertise of all those involved. Only by doing so will we be able to craft a solution that provides public safety entities with a lasting and meaningful resolution.

Interoperability Challenges and Solutions

Creating an optimal environment for interoperability requires increased expenditures on the purchase and upgrade of infrastructure and the implementation of staff training programs on equipment use. Today there are a broad range of telecommunications systems, dependent upon the financial resources invested by the communities supporting the systems. There are state of the art systems such as in Pennsylvania, and at the other extreme, there are low band, VHF, one-site systems with very old radio equipment. Federal grants through the Department of Homeland Security and other state and local funding sources may alleviate some local funding

challenges to facilitating comprehensive and nationwide interoperability. Alternatively, communities may “partner” with entities such as utilities and commercial users to increase access to resource funding.

For its part, the Commission is actively pursuing the potential of new technologies to enhance interoperability and encourage network efficiency. One example of such new technologies is cognitive radios, which have the capability to change their power and/or frequency, sense their environment, know their location, and optimize their communication path. This technology holds tremendous promise in the areas of interoperability and interference rejection/avoidance for public safety applications. We believe that during an emergency these radios will have the capability to configure themselves for interoperable use and automatically adjust in real time to avoid interference. The Commission staff hosted a Cognitive Radio Technologies Workshop in May 2003, as a preparatory step to beginning a rulemaking proceeding to facilitate the development and deployment of this exciting technology.

Although funding and new technologies hold promise for enhancing interoperability, neither will be effective without further cooperation among, and training of public safety entities in order to improve interoperability. The issue of whether different public safety systems can interoperate at the local, regional, and state level largely is a planning issue -- the key elements of which are coordination and cooperation. The establishment of mutual-aid agreement and standard operating procedures among public safety agencies requires that agency leaders at the state and local levels work with one another. In addition, it is important to support the educational efforts that have been undertaken to address this situation through participation in conferences and meetings of state and local elected officials.

Conclusion

In conclusion, let us reaffirm that the Commission views its responsibilities in the public safety community as one of its highest priorities. The Commission has been and will continue to be sensitive to the needs of that community by making spectrum available for its use when necessary, by protecting it from interference, and by enabling new technologies to aid it in its mission. Thank you again for your invitation to testify on this important and timely subject.

ATTACHMENT A

Office of Engineering and Technology

The FCC's Office of Engineering and Technology periodically reviews the sufficiency of existing public safety spectrum allocations and, as appropriate, drafts relevant Commission rulemakings for additional allocations. The office also evaluates any potential for interference using state-of-the-art computer modeling and simulation techniques. OET's laboratory in Columbia, MD conducts empirical laboratory tests and field measurements of reported interference cases, working hand-in-hand with the Enforcement Bureau to resolve cases of actual interference. In addition, OET routinely assesses vulnerabilities in communications networks and equipment and makes recommendations for facilitating improvements to network security, reliability and integrity. OET also evaluates new technologies and makes recommendations to the Commission for rule changes which would enable their use to improve the capability of first responders. Finally, OET is the agency's principal point of contact with the National Telecommunications and Information Administration (NTIA) and in this role works with NTIA on spectrum issues that affect both non-federal and federal government spectrum users, including state, local and federal first responders.

Wireless Telecommunications Bureau

Within the Wireless Telecommunications Bureau, the Public Safety and Private Wireless Division ("PS&PWD") is responsible for the administration of rules and licensing for public safety radio services. In addition, PS&PWD manages a range of other private land mobile radio services.

PS&PWD is responsible for rulemaking and other legal matters, *e.g.* waivers to license requirements, determinations on petitions for reconsideration, and interpretations and guidance concerning licensing matters. PS&PWD also reviews and processes applications for public safety licenses. Most of these applications are filed via the Universal Licensing System (ULS), a web accessible, integrated database with an automated processing system designed to easily facilitate the FCC filings necessary for public safety communications systems. In the past year, WTB processed more than 529,000 public safety and other private and mobile applications, including applications for new licenses, license modifications and renewals, waivers, and requests for special temporary authority.

Homeland Security Policy Council and Office of Homeland Security

The FCC's Homeland Security Policy Council (HSPC), created in November 2001 and composed of senior managers of the Agency's policy bureaus and offices, and the Office of Homeland Security (OHS) assist the Commission in realizing the Homeland Security Action Plan. Among the directives of the Action Plan is to ensure that public safety, public health, and other emergency and defense personnel have effective communications services available to them as needed.

Equally as important, HSPC and OHS ensure coordination with other federal, state, and local entities that are involved with Homeland Security. For example, as a partner with the Department of Homeland Security, the FCC has promoted registration of states and localities in the Telecommunications Service Priority and the Wireless Priority Access Service programs. These programs provide wire line and wireless telephone dial tone to public safety entities on a priority basis during and following a disaster. HSPC members are also working with disabilities

rights organizations to identify and resolve communications issues that have an impact on that community during national emergencies.

In addition, HSPC and OHS work closely to support the Network Reliability and Interoperability Council (NRIC VI) and Media Security and Reliability Council (MSRC), two of the FCC's federal advisory committees. Through NRIC VI, communications industry leaders provide recommendations and best practices to the FCC focused on assuring optimal reliability and interoperability of wireless, wire line, satellite, paging, Internet and cable public communications networks and the rapid restoration of such services following a major disruption. MSRC does much the same with the goal of achieving optimal reliability, robustness and security of broadcast and multi-channel video programming distribution facilities. Public safety representatives are part of this effort since, during emergencies, TV and radio are sources of information for citizens.

Attachment B

**SUMMARY OF SPECTRUM CURRENTLY AVAILABLE
FOR PUBLIC SAFETY**

FREQUENCY BAND	AMOUNT OF SPECTRUM
25-50 MHz (VHF Low Band)	6.3 MHz
150-174 MHz (VHF High Band)	3.6 MHz
220-222 MHz (220 MHz Band)	0.1 MHz
421-430 MHz*	1.175- 3.3 MHz
450-470 MHz (UHF Band)	3.7 MHz
470-500 MHz**	6-18 MHz
764-776 MHz/ 794-806 MHz (700 MHz Band)	24 MHz
806-821 MHz/ 851-866 MHz (800 MHz band)	3.5 MHz
821-824 MHz/ 866-869 MHz (NPSPAC Band)	6 MHz
4940-4990 MHz (4.9 GHz Band)	50 MHz
TOTAL	97.2- 115.2 MHz

*The 421-430 MHz band is available for use in the following urban areas: Detroit, MI; Cleveland, OH; and Buffalo, New York.

**The 470-500 MHz band is available for use in the following eleven urban areas: Boston, MA; Chicago, IL; Dallas/Fort Worth, TX; Houston, TX; Los Angeles, CA; Miami, FL; New York, New York/N. E. NJ; Philadelphia, PA; Pittsburgh, PA; San Francisco/Oakland, CA; and Washington, DC metropolitan area.