

**INTEROPERABILITY IN THE NEXT ADMINISTRATION:
ASSESSING THE DERAILED 700 MHz
D BLOCK PUBLIC SAFETY SPECTRUM AUCTION**

HEARING

BEFORE THE

SUBCOMMITTEE ON EMERGENCY
COMMUNICATIONS,
PREPAREDNESS, AND RESPONSE

OF THE

COMMITTEE ON HOMELAND SECURITY
HOUSE OF REPRESENTATIVES

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INTEROPERABILITY IN THE NEXT ADMINISTRATION: HEARING ON ASSESSING THE DERAILED 700 MHz D BLOCK PUBLIC SAFETY SPECTRUM AUCTION

Tuesday, September 16, 2008

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOMELAND SECURITY,
SUBCOMMITTEE ON EMERGENCY COMMUNICATIONS,
PREPAREDNESS, AND RESPONSE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in Room 311, Cannon House Office Building, Hon. Henry Cuellar [Chairman of the subcommittee] presiding.

Present: Representatives Cuellar, Dicks, Lowey, Christensen, Thompson (ex officio), and Dent.

Mr. CUELLAR. The House Committee on Homeland Security Subcommittee on Emergency Communications, Preparedness and Response will come to order. The subcommittee is meeting today to receive testimony regarding "Interoperability in the Next Administration, Assessing the Detailed 700 MHz D Block Public Safety Spectrum Auction."

Again, good morning. On behalf of the Members of the subcommittee, let me welcome all the witnesses that we have from the Department of Homeland Security, the Federal Communications Commission, and representatives of the public safety community, the private sector and the State and local governments.

The need for emergency communications is not new. Interoperability communications is the ability of emergency response providers in relevant Federal, State and local government agencies to communicate with each other as necessary through a dedicated public safety network, utilizing information technology systems and radio communications systems, and to exchange voice data and video with one another on demand in real time as necessary.

By the way of history, the Communications Act of 1934, as enacted, recognized that the regulations of communications must promote the national defense and the safety of life and property. As we know, the spectrum is managed by the Federal Communications Commission, which provides a license to a private entity, local government or a public safety agency to use specific channels for communication purposes. But since the late 1960's the spectrum available has become increasingly crowded. That crowding has led to interference on the channels that first responders rely to talk on during times of emergency.

In 1996, the Public Safety Wireless Advisory Committee, a blue ribbon committee created by Congress to examine the issues of emergency communications, concludes that public safety agencies did not have the sufficient radio spectrum to communicate with each other when they responded in emergencies. In fact, this blue ribbon panel released its report to Congress in 1996 and called for the congested spectrum to be cleared by September 11, 2001.

In 2002, the 9/11 Commission called on Congress to support pending legislation, which provides for the expedited increased assignment of radio spectrum for public safety purposes.

In 2006, Congress finally set up a firm date of February 17, 2009, to set aside portions of the 700 MHz spectrum to public safety. However, the auction of the spectrum channels earlier this year fell far short than the expected \$1.33 billion reserved price set by the FCC. As a result, many are saying that the D Block on the 700 MHz is dead, done, delayed or derailed.

The reality of the situation is that the Nation must clear the spectrum and promote a public safety communications network. Simply put, we must invest in the communications systems that have the substantial participation of public safety. That is why the public-private partnership of the D Block would truly reflect how the spectrum can be shared among commercial and public safety users on a network that meets the needs of the first responder communities. The bottom line is that we must have the commitment of all key players to make the public safety network build-out on the 700 MHz more than just a concept.

So to move along with this hearing, I will look forward to hearing from Chief Derek Poarch of the Public Safety and Homeland Security Bureau of the FCC. Specifically, this subcommittee wants to better understand the FCC's concrete plans for making sure that all key players are faithfully participating in the development of a national system or at the very least a regional system that is built upon a national framework.

Mr. Essid, this committee wants to know how the Office of Emergency Communications in the Department of Homeland Security through the emergency communications preparedness spectrum is coordinating efforts to facilitate the D Block auction as well as its impact on the national emergency communication plan.

Dr. Boyd, the subcommittee would like to understand the technological challenges and opportunities that exist as it relates to the D Block.

On the second panel, we will have Mr. Mirgon and Deputy Chief Dowd give us the public safety perspective on the status of and the future implications of the 700 MHz D Block. Mr. Contestabile and Mr. LeGrande will discuss the State and local governments' concern regarding the national or regional approach to building out the public safety network of the 700 MHz. Finally, Mr. Carlson of U.S. Cellular will give us the private sector's perspective on the status of the D Block auction.

With that, I thank the witnesses for coming. I look forward to our robust discussion about how we will recommit ourselves to ensure a public-private partnership plan that promotes public safety on the 700 MHz.

The Chair now recognizes the Ranking Member of the subcommittee, the gentleman from Pennsylvania, Mr. Dent, for an opening statement.

Mr. DENT. Well, thank you, Mr. Chairman. I am pleased that we are holding this hearing today to talk about the status of efforts to build a Nation-wide wireless network for public safety communications. All our witnesses today understand how critically important this issue is and understand the challenges it poses to the first responders and government officials at all levels.

Since March of this year when the Federal Communications Commission, the FCC, began reconsidering how to proceed in auctioning the D Block, many public safety advocates, technology experts, and commercial providers have offered varying recommendations to structure the second auction. One of the key issues I would like to discuss today is whether the FCC should proceed with a national approach to developing the network through a public-private partnership or whether the license for the spectrum should be broken down and auctioned on a regional basis. I look forward to examining the benefits and challenges of both approaches with our panel of witnesses today.

In particular, if the license is sold on a regional basis, I would like to discuss how the FCC can ensure that the communications systems put in place will facilitate interoperability and avoid the current patchwork of systems faced by our Nation's first responders.

Another important issue is that of universal technology throughout the network. The deployment of common technology will be critically important to fully achieving interoperable communications. I look forward to hearing from Dr. Boyd on his office's efforts in this particular area.

I also look forward to discussing with Mr. Essid, Director of the Office of Emergency Communications, how the development of the new 700 MHz network will impact other communications work underway, such as the implementation of State-wide communications interoperability plans.

Also, areas such as the National Capital Region and New York City have invested millions of dollars on their own to improve the interoperability of voice and data networks. I would like to discuss with our witnesses how the work of areas such as these can be leveraged in the development of a new Nation-wide network.

Again, I would like to thank our witnesses for joining us today, and I thank you, Mr. Chairman, for holding this important hearing. I yield back at this time.

Mr. CUELLAR. Thank you, Mr. Dent.

The Chair now recognizes the Chairman of the House Committee on Homeland Security, the gentleman from Mississippi, Mr. Thompson, for his opening remarks. Mr. Chairman.

Mr. THOMPSON. Thank you very much, Mr. Cuellar. Thank you for holding this hearing. Your leadership on this subcommittee is vitally needed for such an important issue as we hear today; namely, interoperability. Interoperability emergency communications challenges are not a new issue. As a former volunteer firefighter, I know first-hand how heavily reliant first responders are on sharing a network that allows them to relay life-saving information on

the scene and in real time. In the 7 years that have passed since the terrible attacks on 9/11, I remain very concerned about the slowness of progress made to provide first responders with the resources necessary to be fully operable and interoperable during a time of disaster.

This committee has authorized billions of Federal dollars to improve our first responders' ability to protect, defend and secure the homeland. Congress has set aside the date of February 19, 2009, to provide first responders with the additional spectrum that they need to carry out their day-to-day tasks. We are here today to work together and provide recommendations for the future of the 700 MHz D Block public safety spectrum.

As Dr. Martin Luther King Jr. once said, we are confronted with the fierce urgency of now. Our first responders and American public cannot afford another delay in the process of the D Block auction.

I am pleased that we have a panel of witnesses with broad representation from Federal, State and local public safety entities as well as industry stakeholders that will present future steps on how to implement a Nation-wide interoperable broadband network. I look forward to receiving your explanation on how a regional report or national licensing build-out will impact the public safety community.

While the first auction of the D Block is commonly referred to as dead or derailed, this does not mean the D Block is doomed. As I have mentioned in the past, the public-private partnership is crucial in a successful reauction of the public safety spectrum. Congress expects that Government, public safety and commercial entities will cooperate fully to give first responders the additional spectrum that is needed to facilitate emergency communications.

Thank you for joining us today. Mr. Chairman, I look forward to the testimony of these individuals and a successful reauction.

Mr. CUELLAR. Thank you, Mr. Chairman. Other Members of the subcommittee are reminded that under the committee rules opening statements may be submitted for the record. I now welcome today's panel of witnesses.

Our first witness, Mr. Derek Poarch, is the Chief of Federal Communications Commission's Public Safety and Homeland Security Bureau. The bureau is responsible for the FCC activities pertaining to public safety, homeland security, emergency management and disaster preparedness and represents the Commission on these issues before Federal, State and industry organizations. Prior to his position at the FCC, Mr. Poarch served in various law enforcement capacities and as a Director of Public Safety and Chief of Police at the University of North Carolina at Chapel Hill. Welcome.

Our second witness is Mr. Chris Essid. Mr. Essid is the Director of the Department of Homeland Security Office of Emergency Communications. Prior to this, he served as the first interoperability coordinator for the Commonwealth of Virginia. He aided in the development of the Nation's first State-wide communications interoperability plan. Prior to this noteworthy achievement, Mr. Essid served for 5 years in the U.S. Army followed by 4 years with the Virginia Department of Transportation and Taxation. Welcome, Mr. Essid.

Our third witness is Dr. David Boyd, who currently serves as the Director of the Command, Control, and Interoperability Division of the Science and Technology Directorate within the Department of Homeland Security. Before joining DHS, Dr. Boyd served as the Director of Science and Technology for the National Institute of Justice, where he managed R&D programs affecting law enforcement. Dr. Boyd is also a retired Army officer. Dr. Boyd, welcome.

Our second panel, if I can go ahead and just introduce them so we can move quickly to the second panel, that we will hear right after the first panel, the fourth witness is Mr. Richard Mirgon, President-Elect of the Association of Public-Safety Communications Officials. He has recently retired from the position of Director of Technology Services for Douglas County in Nevada. Mr. Mirgon served 4 years in the United States Air Force as an intelligence analyst. Can you wave so we can—there you are. Okay. Thanks.

Our fifth witness is Mr. John Contestabile. Mr. Contestabile is currently the Director of the Office of Engineering and Emergency Services in the Secretary's office of Maryland's Department of Transportation, where he has served for nearly 30 years. He is a board member of the Public Safety Spectrum Trust, which holds the national license for the proposed 700 MHz broadband system. Thank you.

Our sixth witness is Mr. LeRoy Carlson. He is the Chairman of the Board of U.S. Cellular. Mr. Carlson is President and CEO of the telephone and data system and has been with the company since 1974. Okay.

Our seventh witness is Mr. Robert LeGrande, the former Chief Technology Officer for the District of Columbia, where he provided leadership for the city's wireless network operations, human services modernization program, the city-wide credential project and the National Capital Region's interoperability communications program. He is now the President and CEO of LeGrande Technical and Social Services, where he utilizes his experience with the District to provide similar high-quality technology solutions and services to the Government and commercial clients.

Our final witness is Deputy Chief Charles Dowd, the commanding officer of the New York City Police Department Communications Divisions. Chief Dowd has a special appreciation of the importance of interoperability in that he has served 27 years in the New York Police Department.

We are pleased to have all of you present and greatly appreciate the testimony today. Without objection, the witnesses' full statements will be inserted in the record. I now ask each witness to summarize his statement for 5 minutes, beginning with Chief Poarch.

STATEMENT OF DEREK K. POARCH, CHIEF, PUBLIC SAFETY AND HOMELAND SECURITY BUREAU, FEDERAL COMMUNICATIONS COMMISSION

Mr. POARCH. Good morning, Chairman Cuellar, Ranking Member Dent, Chairman Thompson and Members of the subcommittee. My name is Derek Poarch, and I am Chief of the Public Safety and Homeland Security Bureau at the Federal Communications Commission. Thank you for inviting me to appear before you on behalf

of the Commission to discuss on-going efforts to develop a Nation-wide interoperable broadband network in the 700 MHz band for the benefit of public safety throughout the country.

As you may be aware, prior to joining the Commission I spent three decades in law enforcement in North Carolina. I retired as Chief of Police and Director of Public Safety at the University of North Carolina just prior to joining the Commission. I remain a sworn police officer in the State of North Carolina today. Because of this experience, I have first-hand knowledge of the critical role that emergency communications play in the arena of public safety and homeland security.

The 700 MHz proceeding addresses some of the most critical issues facing the Commission. Through this proceeding, we seek to foster development of a Nation-wide broadband network that can meet public safety requirements while also providing state-of-the-art commercial technologies. We also seek to ensure that public safety will have access to broadband applications, including off-the-shelf radios and newly designed equipment at more affordable prices.

Last year, the Commission adopted the second 700 MHz report and order which set forth the regulatory framework for the creation of such a network for public safety. The order provided for the Nation-wide licensing of 10 MHz of the 700 MHz public safety spectrum block to a single entity, the public safety broadband licensee, or PSBL, and established rules for a public-private partnership that would bring together the PSBL and the eventual winner of the commercial D Block spectrum. Subsequently, the Commission approved the Public Safety Spectrum Trust Corporation to serve as the PSBL.

As you know, the D Block auction earlier this year did not result in the successful bidder to fulfill the commercial half of the partnership. Following the auction, the Commission issued a second further notice of proposed rulemaking in which the Commission sought comment on a variety of options for successfully re-auctioning the D Block. The Commission emphasized that its aim was to identify ways to improve the existing public-private partnership while meeting the broadband needs of the public safety community in a commercially viable manner.

The Commission also stated that it would issue a subsequent further notice that presented a detailed proposal for an additional round of comments from all interested parties. We received numerous comments in response to the second further notice. While the comments were wide-ranging, we found that most commenters expressed continued support for the public-private partnership concept re-auction of the D Block license and a network sharing agreement between the D Block licensee and the PSBL. Many commenters also noted the absence of any alternative funding source that could ensure access by public safety agencies to an interoperable public safety network.

Based on the comments, the Commission staff has developed a draft third further notice which is scheduled to be considered and voted on by the Commission at its upcoming agenda meeting on September 25. Because the draft further notice is currently under consideration by the Commission, I cannot provide specific detail

on its content. Indeed, because the Commission has not made any final decision on the draft notice, elements of the proposal as currently drafted could change. However, I would like to give you a broad overview of the current proposal under consideration.

The current draft sets forth in detail a new proposal for reauction of the D Block and reconfiguring the public-private partnership. This would include offering at auction both a Nation-wide license and two sets of regional licenses, one using the LTE or Long-Term Evolution Standard and one using the WiMAX standard. The regional licenses would be auctioned on the basis of the 55 public safety regional planning areas with three additional areas auctioned for Guam and the Northern Mariana Islands, American Samoa and the Gulf of Mexico, for a total of 58 regional licenses. The auction itself will be utilized to determine which set of licenses will be awarded in this regard so long as there are bids on licenses that cover at least half of the U.S. population. The set of licenses yielding the highest population coverage would be the winning set.

The current proposal would set the minimum opening bid for each set of licenses at \$750 million, with the minimum bid for each individual region established according to the region's population density.

The current proposal extends the license term from 10 to 15 years and adjusts the build-out obligations for the commercial entity, including benchmarks at the 4-year, 10-year and 15-year marks. The final 15-year build-out benchmark would vary according to population density from the least densely populated areas required to reach 90 percent population coverage to the highest density areas required to reach 98 percent population coverage.

The proposal includes specific technical and operational parameters to ensure interoperability, quality of service and hardening. For example, public safety would be allowed to designate up to 35 percent of the network sites as critical, which would trigger enhanced backup power obligations, including 8 hours of battery backup and 48 hours of generator backup.

With respect to the public safety broadband licensee, the proposal contains additional requirements that would increase transparency and eliminate conflicts of interest. This includes more clearly defining the role of the PSBL, prohibiting the PSBL from acting as a mobile virtual network operator and requiring certain structural safeguards related to the licensee's management and advisers. A minimum term sheet is also proposed that will be a mandatory part of the network sharing agreement between the PSBL and the commercial D Block license. This would include specific monthly pricing for public safety users and an annual \$5 million cap on the lease payment that the D Block license would pay the public safety licensee for use of the spectrum.

Finally, to provide further certainty, the draft further notice includes a full set of proposed rules as was requested by many in Congress, the public safety community and commercial industry. Following receipt of comments on the third further notice, the Commission will work as quickly as possible to reach a decision on final rules. Chairman Martin has stated his desire to have final rules adopted by the end of the year so that a reauction of the D Block could take place by the middle of next year.

Thank you for the opportunity to appear before you today. I would be pleased to answer any questions you may have.
[The statement of Mr. Poarch follows:]

PREPARED STATEMENT OF DEREK K. POARCH

SEPTEMBER 16, 2008

Good Morning Chairman Cuellar, Ranking Member Dent, and Members of the subcommittee. My name is Derek Poarch, and I am Chief of the Public Safety and Homeland Security Bureau at the Federal Communications Commission. Thank you for the opportunity to appear before you on behalf of the Commission to discuss our ongoing efforts to develop a Nation-wide interoperable broadband network in the 700 MHz band for the benefit of public safety agencies and first responders throughout the United States.

As you may be aware, prior to joining the Commission, I spent three decades in law enforcement in North Carolina. I spent 21 years of my career in the Lenoir, North Carolina Police Department, after which I served for 9 years as Chief of Police and Director of Public Safety at the University of North Carolina at Chapel Hill. I remain a sworn police officer in the State of North Carolina. Because of this experience, I have first-hand knowledge of the critical role that emergency communications play in the arena of public safety and homeland security. After retiring from law enforcement, I accepted the position as Chief of the Public Safety and Homeland Security Bureau with a purpose and vision in mind—to help shape and advance initiatives that will provide the public safety community with the communications tools they need to do their jobs and save lives.

The 700 MHz proceeding addresses some of the most critical issues facing the Commission and the Bureau. Through this proceeding, we seek to foster development of a Nation-wide broadband network that can meet public safety requirements while also keeping pace with state-of-the-art commercial technologies. We also seek to ensure that public safety will have access to a number of applications including off-the-shelf radios and newly designed equipment at more affordable prices. Development of a Nation-wide broadband public safety network is essential to meeting the communications and information needs of first responders in the 21st century.

Last year, the Commission adopted the Second Report and Order in the 700 MHz band rulemaking, which set forth the regulatory framework for the creation of a Nation-wide, interoperable, broadband communications network for public safety. The order provided for the Nation-wide licensing of 10 MHz of the 700 MHz public safety broadband spectrum block to a single entity, the Public Safety Broadband Licensee, and established rules for a public/private partnership that would bring together the Public Safety Broadband Licensee and the eventual winner of the commercial D Block spectrum in the upper 700 MHz Band. Subsequently, the Commission approved the Public Safety Spectrum Trust Corporation (PSST) to serve as the Public Safety Broadband Licensee.

As you know, the D Block auction earlier this year did not result in a successful bidder to fulfill the commercial half of the partnership. Following the auction, the Commission issued a Second Further Notice of Proposed Rulemaking in May of this year, in which the Commission sought comment on a broad variety of options for reauctioning the D Block and potentially reconfiguring the public/private partnership. The Commission emphasized that its aim was to identify ways to improve upon the existing public/private partnership concept while meeting the broadband communications needs of the public safety community in a commercially viable manner. The Commission also stated that before ultimately adopting final rules in response to the Second Further Notice, it would issue a subsequent Further Notice that presented a detailed proposal for an additional round of comments from all interested parties.

We received numerous comments in response to the Second Further Notice from the public safety community, commercial wireless providers, equipment manufacturers, and many other interested parties. While the comments were wide-ranging, we found that most commenters expressed continued support for the public/private partnership concept, reauction of the D Block license, and a network sharing agreement between the D Block licensee and the Public Safety Broadband Licensee. Many commenters also noted the absence of any alternative funding mechanism that could ensure access by individual public safety agencies to an advanced, Nation-wide, interoperable broadband network over spectrum dedicated for public safety use. At the same time, we received many thoughtful and detailed comments suggesting ways in which the Commission could refine and improve the rules governing

the prospective D Block licensee, the Public Safety Broadband Licensee, and the partnership relationship between them.

Based on the comments we received, the Commission staff has developed a draft Third Further Notice of Proposed Rulemaking, which is scheduled to be considered and voted on by the Commission at its upcoming agenda meeting on September 25, 2008. Because the draft Further Notice is currently under consideration by the Commission, I cannot provide specific detail on its content. Indeed, because the Commission has not made any final decision on the draft notice, elements of the proposal as currently drafted could change. However, I would like to give you a broad overview of the current proposal under consideration.

The current draft Third Further Notice sets forth in detail a new proposal for re-auctioning the D Block and reconfiguring the public/private partnership. This would include offering at auction both a Nation-wide license and two set of regional licenses, one using the LTE or Long Term Evolution standard, and one using the WiMAX standard. The regional licenses would be auctioned on the basis of the 55 public safety regional planning areas, with three additional areas auctioned for Guam, the Northern Marianas islands, and the Gulf of Mexico for a total of 58 regional licenses. The auction mechanism itself would be utilized to determine which set of licenses would be awarded. In this regard, so long as there are bids on licenses that cover at least half of the U.S. population, the set of licenses yielding the highest population coverage would be the winning set. The current proposal would also set the minimum opening bid for each set of licenses at \$750 million, with the minimum opening bid for each individual region established according to the population density of the region.

The current proposal would also extend the license term from 10 to 15 years, and adjust the build-out obligations for the commercial entity, including benchmarks at the 4-year, 10-year, and 15-year marks. The final 15-year build-out benchmark would vary according to population density, with the least densely populated areas required to reach 90 percent population coverage, the medium density areas required to reach 94 percent population coverage, and the highest density areas required to reach 98 percent population coverage.

The proposal also includes specific technical and operational parameters that the network would be required to meet, such as mandatory roaming for regional licenses to ensure interoperability, minimum standards for throughput, quality of service and hardening. For example, public safety would be allowed to designate up to 35 percent of the network sites as "critical," which would trigger enhanced back up power obligations including 8 hours of battery back up and 48 hours of generator back up.

With respect to the Public Safety Broadband Licensee, the proposal contains additional requirements that would increase transparency and eliminate conflicts of interest. This includes more clearly defining the role of the Public Safety Broadband Licensee, prohibiting the Public Safety Broadband Licensee from acting as a mobile virtual network operator, and requiring certain structural safeguards related to the licensee's management and advisors. A minimum term sheet is also proposed that will be a mandatory part of the Network Sharing Agreement between the Public Safety Broadband Licensee and the commercial D Block licensee(s). This would include specific monthly pricing for public safety users and an annual \$5 million cap on the lease payment that the D Block licensee would be obligated to pay the public safety licensee for use of the public safety spectrum.

Finally, to provide further certainty, the draft Third Further Notice includes a full set of proposed rules, as was requested by many in Congress, the public safety community, and commercial industry. As I noted earlier, the purpose of the Third Further Notice is to solicit a final round of public comment on the Commission's detailed proposal before the Commission adopts final rules. Therefore, upon release of the Third Further Notice, interested parties will have the opportunity to review and comment on the proposal and proposed rules.

Following receipt of comments on the Third Further Notice, the Commission will work as quickly as possible to reach a decision on final rules for the D Block, the public safety broadband spectrum, and the public/private partnership. Chairman Martin has stated his desire to have final rules adopted by the end of the year, so that a reauction of D Block could take place by the middle of next year. I can assure you that I and my staff will work tirelessly to help the Commission achieve this goal.

Thank you for the opportunity to appear before you today. This concludes my testimony and I would be pleased to answer any questions you may have.

Mr. CUELLAR. Thank you for your testimony. I now recognize Mr. Essid to summarize his statement for 5 minutes.

STATEMENT OF CHRIS ESSID, DIRECTOR, OFFICE OF EMERGENCY COMMUNICATIONS, DEPARTMENT OF HOMELAND SECURITY

Mr. ESSID. Thank you, Chairman Cuellar, Congressman Dent, Chairman Thompson and Members of the subcommittee. I am pleased to appear today to discuss the importance of this Nation-wide public safety broadband interoperable network and how it stands to improve communications for emergency responders.

In recent weeks we have all seen vivid reminders of the role emergency responders play in the safety and security of our Nation. Real life events such as Hurricanes Gustav, Hanna and Ike as well as the seventh anniversary of the September 11 terrorist attacks underscore the need for a coordinated interoperable response during natural disasters and man-made incidents.

Congress created the Office of Emergency Communications to ensure the Nation's emergency responders have the necessary capabilities to communicate during major disasters and their day-to-day operations. This is the focus of everything OEC does as an office from providing technical assistance to the development of Federal grant policies and strategic planning with State, Federal and local officials.

A number of OEC's key initiatives have shaped our perspective on the FCC's 700 MHz proceeding. The most significant of these is the National Emergency Communications Plan, which we delivered to Congress in July. We worked with over 150 practitioners from all levels of government and the private sector to develop the strategies and solutions to drive operability and interoperability Nation-wide. In addition, the plan builds on the work of all 56 States and Territories, which now for the first time in history have State-wide communications interoperability plans. Our collective efforts have resulted in a Nation-wide strategic document that will guide decisionmaking, better target our resources for emergency communications and further coordinate Federal, State, local and private sector emergency communication efforts.

The NECP emphasizes the benefits of getting advanced broadband services into the hands of our Nation's first responders and proposes solutions to spur the development of emerging communications technologies. Furthermore, it is clear from OEC's work with the emergency responders at all levels of government that it will be critical for responders to have access to advanced voice data video capabilities to perform their missions, and there is a recognition that the 700 MHz band offers an invaluable opportunity to deploy these capabilities on a Nation-wide basis.

In conclusion, I appreciate the opportunity to appear today and I applaud the committee's on-going leadership in ensuring that our Nation's emergency communications are efficient and effective regardless of the nature of the scope of any given incident. OEC is committed to supporting our first responders and incident managers through a coordinated practitioner-driven national policy framework, and we offer our on-going support toward a successful conclusion to these critical rulemakings regarding the 700 MHz band.

I will be happy to answer any questions you have.
[The statement of Messrs. Essid and Boyd follows:]

JOINT PREPARED STATEMENT OF DAVID BOYD AND CHRIS ESSID

SEPTEMBER 16, 2008

INTRODUCTION

Good afternoon Chairman Cuellar, Ranking Member Dent, and Members of the subcommittee. Thank you for inviting us to speak to you today.

The Science and Technology (S&T) Directorate's Command, Control and Interoperability Division (CID), within the Department of Homeland Security (DHS), uses a practitioner-driven approach to create and deploy information resources that enable seamless and secure interactions among homeland security stakeholders. Our goal is to ensure that stakeholders have comprehensive, real-time, and relevant information to protect the Nation.

The Office of Emergency Communications (OEC) was established by Congress to serve as the departmental focal point for emergency communications policy, planning, technical assistance, and coordination. On July 31, 2008, OEC completed the first-ever National Emergency Communications Plan (NECP), which provides a framework for emergency communications users across all levels of Government. The NECP was developed with significant stakeholder input from Federal partners, private sector stakeholders, and public safety officials at the State and local level. Moving forward, OEC will continue to assess the emergency communications landscape and to identify what is and what is not working; develop plans to reverse deficiencies in emergency responders' communications capabilities; collaborate on initiatives with our Federal, State, and local partners; and work with our partners to implement programs and activities that target gaps and make measurable improvements in emergency communications.

As the Members of this subcommittee are well aware, the ability to communicate is essential to the success of any emergency response operation. Emergency responders need to share vital data and voice information across disciplines and jurisdictions to successfully respond to day-to-day incidents and large-scale emergencies. A key mission of CID's Office for Interoperability and Compatibility (OIC) is to strengthen interoperability by developing technologies and tools—reports, best practices, frameworks, and methodologies—that emergency response agencies can use immediately. We are also developing data and voice messaging standards and testing communications equipment to those standards. Though testing proves useful, the key to improving interoperable communications requires a focus on user needs and requirements. As a result, we rely on both practitioners and policymakers across disciplines, jurisdictions, and levels of government to ensure that our work is aligned with responders' needs.

Our focus on the practitioner level has done much to improve interoperability since the attacks of September 11, 2001. Also within DHS, OIC and OEC are working closely to ensure coordination and consistency among our programs, services, policies, and activities. A few examples of ways that DHS has improved and is working to improve interoperability include the following:

- In 2004, OIC developed the Interoperability Continuum to help policymakers understand what it takes to achieve interoperability: effective and collaborative governance, well-designed standard operating procedures, well-implemented technology solutions, meaningful training and exercises, and the integration of all of these elements into day-to-day operations.
- In 2006, OIC conducted the landmark National Interoperability Baseline Survey, which revealed that approximately two-thirds of emergency response agencies use interoperability to some degree in their operations.
- In 2007, each of the Nation's major urban/metropolitan areas developed a Tactical Interoperable Communications Plan.
- In 2008, 56 States and territories developed Statewide Communications Interoperability Plans (SCIPs); OEC's Interoperable Communications Technical Assistance Program (ICTAP) is working closely with the States to help them implement the SCIPs and align them with the goals and objectives of the NECP.
- Later this year and continuing into 2009, OIC will complete laboratory testing, demonstrate, and pilot a multi-band radio that is capable of operating across different radio bands, across different modes—including digital and analog—and with radios developed by different manufacturers.
- OEC is establishing the Emergency Communications Preparedness Center (ECPC) to improve the coordination of interoperability programs and activities across the Federal Government; later this year, the ECPC plans to finalize its operating charter and submit a strategic assessment to Congress on progress to date and remaining challenges to interoperability.

- OEC is working with Federal Emergency Management Agency (FEMA) to establish Regional Emergency Communications Coordination Working Groups (RECCWG) to coordinate multi-State efforts to improve the survivability and interoperability of communication systems; beginning next year, OEC plans to hire ten regional coordinators that will be collocated in the FEMA regional offices to serve as senior points of contact for OEC in that region.

SYSTEM OF SYSTEMS APPROACH

With emergency response practitioner input, OIC developed a core strategy for improving interoperability for the Nation's emergency response community. This strategy promotes a "system of systems" approach using standards-based communications equipment. This approach grants emergency response agencies the flexibility to select equipment that best meets their unique technical requirements and budget constraints. It also allows systems operated by different emergency response agencies to communicate, regardless of their manufacturer. The long-term strategy aims at building a system of systems so that separate agencies can join together using interface standards, compatible procedures, and training exercises without having to discard major investments in their existing systems.

Ultimately, emergency responders operating on a system of systems will be able to respond to an incident anywhere in the Nation, using their own equipment, on any communications system, and on dedicated public safety spectrum as needed and authorized. OIC is working on identifying solutions that advance the emergency response community toward a reliable system of systems—one that is not dependent on any single technology but instead allows for maximum flexibility within and among numerous technologies.

RESEARCH, DEVELOPMENT, TESTING, AND EVALUATION EFFORTS

OIC is improving interoperable communications through multiple research, development, testing, and evaluation (RDT&E) efforts related to land mobile radio (LMR) communications, public safety grade communications networks, and interoperable applications. Access to the 700 MHz (MHz) band will have a positive impact on the spectrum needs of the emergency response community which will continue to evolve beyond voice communications. Examples of OIC's ongoing efforts in this area include:

Multi-Band Radio

The advent of two-way radio communications in the early 1930's generated a need for public safety radio channels, or spectrum. To support emergency response radio communications, the Federal Communications Commission reserved radio spectrum within several different frequency bands for public safety use. Until recently, emergency response radios were built to operate within a single radio band. As a result, local, tribal, State, and Federal emergency response agencies had to rely on the use of several single-band portable or mobile radios to maintain a level of interoperability with partner agencies. While some agencies swapped or shared radios, others employed time-consuming methods to exchange information, including relaying messages through dispatchers or using runners to hand-carry messages.

To address these challenges, OIC worked with the emergency response community and its partners in the Federal Emergency Management Agency and OEC to identify requirements for a multi-band radio. OIC is in the process of further developing and testing a prototype multi-band, multi-mode portable radio capable of providing uninterrupted communications between local, tribal, State, and Federal emergency response agencies operating in the various public safety radio bands. The radio is capable of operating in the primary State and local public safety bands between 150–162 MHz and 470–512 MHz as well as in the 700 MHz and 800 MHz bands. Additionally, when authorized, the multi-band radio will be capable of operating within the Federal public safety bands 162–174 MHz, 406.1–420 MHz; and in the 138–144 MHz, and 380–400 MHz bands which are used primarily by the Department of Defense.

This capability represents a significant step for Federal agencies that need to interoperate with their local, tribal, regional, and State counterparts. This multi-band radio is equal in form, factor, and cost to existing high-end portable radios. However, a significant difference is that this multi-band radio equips emergency responders with the unprecedented capability of operating across the entire range of public safety radio bands. To communicate with another agency, users simply select the assigned channel.

OIC will test and evaluate this multi-band radio through pilots Nation-wide. These pilots will focus on testing the radio's operation across multiple systems—

analog, conventional, digital, and Project 25 (P25) trunked—and multiple agencies, including local, tribal, State, Federal, and military. During these field tests, the primary users of the new technology will likely be emergency responders in a command and control role or those involved in special operations that need to interoperate with multiple entities.

OIC is in the pre-planning stages for an initial pilot in New York City. The pilot will involve emergency responders at the local, regional, and State levels. The pilot will thoroughly evaluate the radios and the results will provide vendor-agnostic best practices for integrating multi-band radio technology into agencies across the Nation.

To successfully support emergency response communications and operations, it is essential that technologies align with user requirements. In keeping with its user-driven approach, OIC is working closely with DHS customers to ensure that the multi-band radio meets current and future operational requirements, such as personnel tracking, usage in locations where there is a danger of explosion, and responder health and well-being monitoring. OIC and S&T are encouraging private industry to continue developing similar technologies that meet emergency responders' diverse needs and requirements. The principal reason for OIC's undertaking of multi-band radios is to pressure industry to do what has always been technologically feasible. Results are already evident—multiple companies have entered the competition and others are likely to join in the near future.

Radio Over Wireless-Broadband

As demonstrated recently on Capitol Hill, OIC—in partnership with the National Institute of Standards and Technology (NIST) and the Institute for Telecommunication Sciences (ITS)—is leading the Radio Over Wireless-Broadband (ROW-B) project to research how to connect existing LMR systems with advanced wireless broadband technologies, such as Push-To-Talk over Cellular, while also leveraging Geographic Information System (GIS) technology. Push-To-Talk over Cellular technology allows for walkie-talkie-type communication over a cellular phone network. This smart phone technology effectively allows a single user to reach multiple users through talk groups on the cellular network. By reducing the need to place several calls to coordinate a group, this technology saves critical response time.

GIS technology refers to a host of applications that identify the location (based on a map) of other vehicles, equipment, and emergency responders. GIS databases display these locations on maps that include important information such as roads, buildings, and fire hydrants. This technology enables emergency responders to access the locations of critical resources—such as equipment and personnel—in real time and to form dynamic talk groups based on the proximity of resources.

ROW-B will enable emergency responders and agencies working on interoperable communications to evaluate the benefits and limitations of providing interoperability between previously incompatible systems. By documenting lessons learned and best practices, ROW-B will assist localities Nation-wide in the integration of existing and emerging communications systems. The impact of the ROW-B project reaches beyond technology. Emergency response agencies will have an opportunity to create new standard operating procedures as well as new governance structures for managing incident communications.

Voice Over Internet Protocol

OIC is also working to improve the bridging devices that emergency responders rely to connect radio systems creating networks. Computer networks are increasingly being used to transmit voice communications among radio systems. This is done using a technology known as Voice over Internet Protocol (VoIP). OIC is working with emergency responders, NIST, and ITS to define a common connection for bridging devices that use VoIP. This connection allows one vendor's bridge to pass a voice call to another vendor's bridge. In support of these efforts, OIC has held multiple VoIP PlugFests to test interoperability between different VoIP-based radio bridges.

700 MHz Statement of Requirements

OIC continues to support efforts to fully define the emergency response community's communications requirements. In that regard, OIC—through the National Public Safety Telecommunications Council—led the creation of the *Public Safety 700 MHz Broadband Statement of Requirements* that was published in November 2007. OIC brought together many of the stakeholders involved in developing this document, including emergency responders, equipment manufacturers, and service providers. Through a practitioner-led process, the emergency response community clearly and articulately provided their requirements for a broadband network.

Project 25 Compliance Assessment Program

P25 is focused on developing standards that allow radios and other components to interoperate regardless of the manufacturer from which they are made. This Project's efforts enable emergency responders to exchange critical communications. The goal of P25 is to specify formal standards for interfaces between the various components of an LMR system.

In order to better address the needs of emergency responders, Congress passed legislation calling for the creation of the P25 Compliance Assessment Program (CAP). P25 CAP is a partnership of CID, NIST, ITS, industry, and the emergency response community. P25 CAP establishes a process for ensuring that equipment complies with P25 standards and is capable of interoperating across manufacturers. P25 CAP is providing manufacturers with a method for testing their equipment for compliance with P25 standards. With results publicly posted, P25 CAP is helping emergency response officials make more informed purchasing decisions.

Wireless Broadband Productization Project

Starting in fiscal year 2009, this project plans to test and evaluate commercially available and emergent wireless broadband products. The overall goal of the project is to ensure that technologies developed in a laboratory work in a real-world environment. The testing and evaluation will reveal capability gaps, if they exist. Ultimately, emergency response agencies will be able to purchase solutions that meet their needs and maintain interoperability as future networks are deployed.

CONCLUSION

The emergency response community has long sought additional spectrum for mission-critical activities. The additional spectrum in the 700 MHz band is essential to the emergency response community's requirements and helps to satisfy this shortfall. The 700 MHz band can support functions that many existing bands cannot. In addition to voice communications, 700 MHz will allow emergency responders to exchange critical text, imagery, and other data. OIC will continue to work with local, tribal, State, and Federal emergency response agencies on these RDT&E efforts to strengthen interoperable communications across the various public safety bands.

Ultimately, interoperability is not solely a technology problem that can be solved with just the "right" equipment or the "right" communications system. All of the critical factors for a successful interoperability solution—governance, standard operating procedures, training and exercises, and integration of systems into daily operations as well as technology—must be addressed.

We appreciate the opportunity to testify before you today and would be pleased to answer any questions you may have.

Mr. CUELLAR. Thank you for your testimony. I now recognize Dr. Boyd to summarize his statement for 5 minutes.

STATEMENT OF DAVID BOYD, DIRECTOR, COMMAND, CONTROL, AND INTEROPERABILITY DIVISION, SCIENCE AND TECHNOLOGY DIRECTORATE, DEPARTMENT OF HOMELAND SECURITY

Mr. BOYD. Good morning, Chairman Cuellar, Ranking Member Dent, Chairman Thompson and Members of the subcommittee. As Chairman Thompson has already observed, effective wireless communications are essential to the success of any emergency response operation. For that reason a key mission of my office for operability and compatibility is to strengthen interoperability by developing technologies, tools and standards and by testing communications equipment to those standards. But any successful solution requires a focus of user needs and requirements. So we rely on both practitioners and policymakers across disciplines, jurisdictions, and all levels of government to ensure that our work is aligned with actual responder needs.

To this end, we developed the interoperability continuum to outline for policymakers and response agencies what was required to ensure interoperability. House Homeland Security Committee staff

have told us they have seen this continuum posted in every public safety communications center they visited. Canadian Public Safety has also adopted most of our tools, including the continuum, which they have also translated into French.

We have completed the first national interoperability baseline on-line survey, which revealed that approximately two-thirds of emergency response agencies are now capable of establishing command-level interoperability for emergency operations. We also published the first national statement of requirements for public safety wireless communications and interoperability to serve as a guide for agencies developing their own requirements and for industry to use in developing systems to respond to those requirements. Each major urban metropolitan area now has a tactical interoperable communications plan scored by the Department of Homeland Security, while all 56 States and territories now have State-wide communications interoperability plans.

The Department has released the first National Emergency Communications Plan, which is informed by national principles developed by practitioners at every level of government. Our core strategy aims at building a system of systems so that separate agencies can join together using interfaced standards, compatible procedures, and training exercises without having to discard major investments in their existing systems.

Until recently, emergency response radios were built to operate within a single radio band. As a result local tribal, State and Federal emergency response agencies had to rely on the use of several single-band portable or mobile radios to maintain a level of interoperability with partner agencies. To address these challenges, we worked with the emergency response community to identify requirements for a multi-band radio capable of providing uninterrupted communications among local tribal, State and Federal emergency response agencies at a cost roughly equal to that of a current single-band radio. This multi-band radio equips emergency responders with an unprecedented ability to operate across the entire range of public safety radio bands. To communicate with another agency, users simply select the assigned channel. We are evaluating this radio through pilots Nation-wide to demonstrate communications across multiple agencies, including local, tribal, State, Federal, and military.

We are also encouraging private industry to continue developing similar technologies and, quite frankly, a principal reason for undertaking the multi-band radio project was to pressure industry to deploy affordable multi-mode, multi-band radios, something that has been technologically feasible for several decades. The results are already evident. Multiple companies have entered the competition and others are likely to join in the near future.

Since the multi-band radio addresses only part of the interoperability problem, we recently demonstrated with our District of Columbia partners the Radio Over Wireless-Broadband Project—we call it ROW-B. It was initiated with Rob LeGrande, who you will hear from later—to develop ways to connect existing land mobile radio systems with advanced wireless broadband technologies, such as push-to-talk over cellular while also leveraging geographic information system technology.

The multi-band radio and ROW-B, however, represent only two of the initiatives we are undertaking with our emergency responder partners. Because your time is limited I have briefly described several others in my statement for the record.

The emergency response community has long sought additional spectrum for mission-critical activities. The additional spectrum in the 700 MHz band is essential to the emergency response community's requirements and helps to satisfy this shortfall. The 700 MHz band can support functions that many existing bands cannot. In addition to voice communications, 700 MHz will allow emergency responders to exchange critical text imagery and other data. The multi-band radio will bridge both existing bands and this new band and, most importantly, will be valuable in maintaining interoperability during the implementation of new systems on this new band.

Ultimately, interoperability is not solely a technology problem that can be solved with just the right equipment or the right communications system. All of the critical factors for a successful interoperability solution, Government standard operating procedures, training and exercises and integration of systems into daily operations as well as technology must be addressed.

I appreciate the opportunity to testify before you today, and I would be pleased to answer any questions you may have.

Mr. CUELLAR. Thank you for your testimony. I want to thank all the witnesses for being here with us. I will remind each Member that he or she will have 5 minutes to recognize the panel. I now recognize myself for questions.

The first question to Chief Poarch. According to your testimony, the FCC will consider a new proposal for the reauctioning of the D Block at the meeting next week. At issue is whether the public safety networks will be built out nationally or within the 58 FCC public safety planning areas. As Hurricanes Ike, Gustav, Katrina and Rita demonstrated, emergency communications plans need to entail a local regional and sometimes a national component. As we all know, DHS, FEMA and regional offices play a critical role in assisting States during an emergency. My question is, has the FCC worked with DHS to examine how the 58 FCC regions tie to the existing 10 FEMA regional offices?

Mr. POARCH. Thank you, Mr. Chairman. I think it is important to note that we are not proposing that we change the Nation-wide public safety spectrum that is currently 10 MHz. As it was in the previous auction, it will remain issued as one single Nation-wide 10-block MHz to public safety assigned to the public safety broadband licensee or the PSST. So there is no change in the public safety spectrum from the previous auction. The only change that we are proposing is regarding the commercial spectrum. That is being done in an attempt to try to develop more interest in partnering with the public safety community. So while we collaborate regularly with DHS and OEC, we are proposing no changes whatsoever in how this operates from the public safety community standpoint that would impact DHS, those types of operations.

Mr. CUELLAR. Okay. Next question to Mr. Essid. As the Director of the Office of Emergency Communications, do you advocate a

public safety network on a national or regional basis? What challenges do you see with either approach?

Mr. ESSID. Well, right now, sir, we are just waiting to see how the proceedings go. Our perspective is this issue is very important to public safety to have the capabilities that they need to use these advanced features. So you know we have got some things in the national plan about these advanced technologies and how critical they are to the future of our Nation's first responders' ability to have the capabilities necessary to do their job. So right now we are not advocating one or the other. We just know that public safety needs this capability.

Mr. CUELLAR. Okay. Dr. Boyd, in your capacity and given your many years of experience in the field, do you advocate a public safety network on a national or regional basis? Same thing, what challenges do you see with each approach?

Mr. BOYD. We have always suggested that interoperable communications should be addressed on a system-to-system basis; that is, that you take existing infrastructure that exists and then figure out how you tie it in as you move upward to a regional and, if there is a national network, into a national network. But the most important thing to remember about public safety communications is that they are all local, that the emergency communications are predominantly local. That is where they normally will start. They will start with a local community, its surrounding communities and maybe some of the surrounding counties as well. They are going to have to start with the equipment that they have. No matter what we put in place, we will still have to make sure that we can interoperate with the systems that are in place right now because it will take some time to build out any system.

Mr. CUELLAR. Okay. I now recognize the Ranking Member of the subcommittee, the gentleman from Pennsylvania, Mr. Dent, for questions.

Mr. DENT. Thank you, Mr. Chairman. Thank you, gentlemen. For Mr. Poarch and Mr. Essid, I have a question. As you know, this year all States and territories were required to submit Statewide Communication Interoperability Plans in order to receive homeland security grant funds. These plans chart a path toward achieving interoperable emergency communications State-wide. Maybe States, including my own, the Commonwealth of Pennsylvania, are beginning to develop and implement their own interoperable communications networks State-wide. How do you see these networks being coordinated with the new 700 MHz network that will be developed across the country? Will any of the work that is being undertaken by these States be leveraged by the Nation-wide 700 MHz network?

Mr. ESSID. That is an excellent question, sir. These State-wide plans, many of them have, as you can imagine, different technology investments. The Statewide Communications Interoperability Plans are all built upon the same criteria so each plan in every different State has the same criteria. That being said, a lot of the criteria deals with governance, training and exercises, SOPs. Then you look at the different technology projects. Some States are building State-wide systems. Some States have a lot of regional stuff. Many

States have all of the above. It is in different frequency bands, you know, that these investments are being made.

I think from what we have seen when we did an analysis of these State-wide plans, a lot of folks are waiting and seeing what happens with the auction before moving forward. This is advanced technology. But right now throughout the Nation we have billions and billions of dollars worth the land mobile radio investments that aren't going to be going anywhere that people are going to be using throughout their life cycle for the next 10 to 15 years.

So it is kind of a balancing act for a lot of States and regional entities on how do you integrate this new capability, new technology with what is there and existing? We don't see it as hampering any planning efforts. But a lot of folks are waiting and seeing what happens with the rulemaking before moving forward with some of these projects.

Mr. DENT. Mr. Poarch.

Mr. POARCH. I would just say from the Commission's perspective, we certainly recognize the legacy systems that are in place today. Part of the third further notice that we are proposing talks about ways to integrate the legacy systems into the 700 system. We recognize that for many agencies there won't be immediate transformation over to 700. Some will go quick. Some will go over time. That is important. Certainly as a public safety officer, I recognize that many agencies will not immediately move.

So part of the plan that we are proposing in putting forward would allow for the integration, as Dr. Boyd has referred to, of the legacy systems currently in place and to be able to use the 700 system.

Mr. DENT. For all of you, I have a question too. I understand that some in the public safety community have concerns with sharing a communications network with commercial customers. Would you please address these concerns? Maybe Mr. Boyd.

Mr. BOYD. Not surprisingly, public safety will tell you that their experience with commercially provided systems has not been very good. If you think about Katrina, if you think about any of the recent hurricanes, if you think about what happened here at the Pentagon, the reality is that most of—both the public safety telephone network, the public switch telephone network, the wired network and the cellular networks have tended to collapse in the first few seconds of any emergency.

So one of the things any system is going to have to do is to build that credibility with public safety. That is not going to happen overnight because it is going to be essential to these people that they understand they have a system available. I also think it is important to remember, the function of the 700 MHz spectrum we are talking about now, the national network, is not to replace all the public safety communications. It is to augment it with capabilities that they cannot currently place on their existing systems. So we shouldn't think of this as an either/or.

Mr. ESSID. I would like to just add to that, that we have looked at this issue. I did so in my former role in Virginia, and talking with public safety. You know, the commercial entities that provide wireless services, they deal with a whole different set of requirements than public safety needs. We have found out that a 2 per-

cent tolerance for failed calls was acceptable for most commercial standards. That would be unacceptable to public safety. So those are the types of things that you know you would hear public safety voice their concerns on.

Mr. DENT. Just real quickly, my time has just about expired. But the Department of Homeland Security submitted comments to the FCC's previous rules regarding the spectrum auction. In your view, how should the next auction be structured to ensure it is successful while also ensuring that the needs of public safety are met? What do you believe are the most important factors to consider? Mr. Poarch or Mr. Essid, either one of you real quick.

Mr. ESSID. Well, I mean we submitted comments through NTIA for the auction. You know we participated in providing comments to NTIA. You know as of yet, those comments I believe have been considered by the FCC. We feel that you know again that there is a lot of things that the FCC has to take into consideration that we don't. But I think our first and foremost top priority is to get the emergency communications needs of our first responders met.

Mr. POARCH. I would just add briefly to echo Mr. Essid's comments, the Commission is committed to a Nation-wide interoperable broadband system for public safety users around the country. That is what we worked on the first time. That is what we are committed to this time. We are trying to explore all the different options that are available to make this option successful this time so we can finally build a network that is very much needed by the public safety community.

Mr. DENT. Yield back.

Mr. CUELLAR. Thank you, Mr. Dent. The Chairman will now recognize other Members for questions they may wish to ask the witnesses.

In accordance with our committee rules and practice, I will recognize Members who were present at the start of the hearing based on seniority on the subcommittee, alternating between the majority and minority. Those Members coming in later will be recognized in the order of their arrival. At this time I would like to recognize Chairman Thompson for his line of questioning.

Mr. THOMPSON. Thank you, Mr. Chairman.

Mr. Poarch, other than the fact that in the last auction we didn't get a price that we expected, did you do an analysis as to why we didn't? Are you prepared to do something different with the next auction?

Mr. POARCH. Yes, sir. I think we are prepared to do a number of things appreciably different with this auction as has been proposed by Members of Congress, the public safety community and the commercial industry. To begin with, everyone said to us last time, part of the reason there wasn't a successful auction on the D Block was the lack of clarity concerning the roles of the public safety community or the PSST and the commercial providers. What the Chairman has put forward for this auction, there is appreciable clarity in the roles of both the commercial entity, the public safety community, what we expect of each one of them. There is clarity in terms of the technical requirements. So those that are interested in bidding will understand what it is we expect them to bid on. There is a minimum term sheet that will be included.

So from that standpoint, we have heard what Members of Congress said to us, what the public safety community said, and what commercial industry said. We have attempted to balance all of those comments and put forth in this proposal additional clarity, additional definition of roles taking all that into consideration, working toward a successful auction.

Mr. THOMPSON. Can you share with the committee any potential incentives that might be offered, either to the public safety community or the commercial sector? Other than clarity.

Mr. POARCH. Well, no, I really can't. The items on circulation, anything that I would talk about today would be purely speculative. But I will tell you that in terms of setting, for example, one incentive would be an additional 5 years on the license. The previous license was 10 years. Now the proposed license term is 15 years to give additional time to build out the license. There are benchmarks that set in place at 4 and 10 years. So, for example, that in my mind would be an incentive for the commercial side to be willing to undertake this.

So there is a number of those things that are placed throughout the third further notice that we are seeking comment on that is under proposal.

Mr. THOMPSON. Is your testimony that you have for the next auction made a considerable effort to talk to both the commercial side and the public sector side in going forward for the auction?

Mr. POARCH. Yes, sir. There has been an appreciable amount of communications with all parties involved.

Mr. THOMPSON. I want to get a question responded to. Mr. Essid, these State-wide plans for communications: Is there a requirement that those plans have to cover every part, every county or parish in a State?

Mr. ESSID. Well, sir, I mean, the focus of the State-wide plans is to not have it just be a State plan. It is a State-wide plan to focus on localities, on regions throughout that State. The urban and the rural. That is what we are going for. Now some States did a great job of doing that. Some States we are still working with it. But this is the first time many States have put together such a plan, and it is a huge step forward for them. But a common misconception with these State-wide plans is that there would be one system considered for coverage throughout that whole State. That is not, in fact, true. Most of these State-wide plans and most States out there, as Dr. Boyd said, for years have a system of systems. There is so much communication infrastructure out there all over the place, and these plans are really creating the forum in the governance structures that we are creating to, you know, exchange ideas and come together and coordinate all of those different systems. So there is a lot of stuff out there already. It is just in the past many of them did not coordinate with one another or they are all over different frequency bands or you have to come up with ways to make them interoperable or operable.

Mr. THOMPSON. Well, is the goal rather than taking one plan, is it to take whatever the infrastructure is there and allow you to communicate—

Mr. ESSID. One of our top priorities, sir, is to utilize as much as we can the infrastructures that are already out there. You know,

talking with Dr. Boyd here over the years in my role in Virginia and now in my current role, I mean he has always explained to me that when you look at what is out there, we just don't have the funding to rip everything up and start over again and say put everybody on this frequency band or that. First, there is not much spectrum in any given frequency band to handle that. But the cost would just be enormous.

So to answer your question, yes, sir. We try to leverage existing investments as much as we can.

Mr. THOMPSON. Well, Mr. Poarch, if we are successful with the auction, what could we offer States in terms of that State-wide communication opportunity?

Mr. POARCH. First, our commitment is to a Nation-wide 700 MHz band system that States will have the opportunity to be a part of if they choose to do that. In addition to that, we propose and we hope that the system turns out to be one that is reasonably affordable. The States will not have to put up the money for the infrastructure. That will be done by the commercial entity as part of the public-private partnership. So our goal is a Nation-wide system that States can be a part of, that is affordable for all of the public safety users out around the country.

Mr. THOMPSON. So the two systems that we are discussing right now, is there a compatibility to the systems? Or are we going to do one system and then we are going to do a second one?

Mr. POARCH. No, sir. Part of the proposal that Chairman Martin has put forward now would require a component to allow the legacy systems that are in place now to be able through a system of systems that Dr. Boyd has talked about to be able to interact with the 700 D Block. It is our intent as a part of this that the legacy systems would be able to interoperate on this network.

Mr. THOMPSON. So interoperability is the key?

Mr. POARCH. Absolutely. Yes, sir.

Mr. ESSID. Sir, many of these older systems, they are just voice only. They don't have the capabilities to do any kind of broadband, you know, information sharing. So that is important as well. They are primarily focused on just voice only. We have got systems out there that could never approach anything like we are talking about here, the capabilities of broadband.

Mr. THOMPSON. If the Chairman would indulge me, you know, my point is we have put in a lot of money—

Mr. ESSID. Yes, sir.

Mr. THOMPSON [continuing]. Into this effort. I think the committee is committed to supporting the effort. But we want it to be an effort that is not on parallel tracks. But we are trying to put a system in place. The auction is key, obviously. But if the State-wide plans somehow going in a different direction, if your testimony to us today that those State-wide plans long-term can be morphed or connected to the 700 MHz auction effort, then I think there is support for that concept.

Mr. BOYD. If I may, Mr. Chairman, about I think it was 2 or 3 weeks ago we did a demonstration of what we call ROW-B up here. I guess we did it in the Rayburn Building. What we did in that demonstration was to show how you could take the only existing 700 MHz broadband network at the time, the one here in the Dis-

trict of Columbia, and we tied into that district essentially every kind of communication system that any of public safety uses so that you could make it appear to a user using one of these as though he was talking on a normal land mobile radio system or you could have somebody talking on a cell phone and it would seem as though they were talking on a standard cell phone. Or if it was a push-to-talk Nextel-like cell phone, that would work. You also could exchange graphic information systems, photographs and others.

The reason the broadband capability is essential is, as Mr. Essid has just explained, the systems we have now were built for voice communications, what requires what we call a really narrow pipe. So it is very much like a dial-up modem. That is the speeds you have to operate there. You need the broadband capability in order to be able to handle video, in order to be able to handle imagery, maps, all those kind of high through-put activities. So you shouldn't think of the 700 MHz broadband as being a capability we will evolve to. It will be a piece of the package of things State and local public safety need because they will still need all of the spectrum they have now to be able to support their day-to-day voice communications, and then they will need this to be able to provide all those other capabilities that on television we assume they already have.

Mr. THOMPSON. Okay. Let's go to this, which is the 700. Now I represent an area that is significantly rural. Is your testimony that if we are successful with the auction that most rural areas will have coverage?

Mr. POARCH. I guess I would answer the question by saying that there is nothing in our proposal that precludes any areas from having the coverage. Indeed, the part of the proposal submitted by the Chairman is that we want to do this on a Nation-wide basis so that everyone has an equal opportunity at interoperability. We don't think that larger areas deserve to be interoperable more than smaller areas. I mean, I think we have seen around the country you can't predict when there is going to be a bridge collapse, when there is going to be a flood, when there is going to be a fire, when there is going to be a hurricane. Those are not unique only to large areas. Certainly the rural areas of this country and the smaller areas of the country are prone to those events. We believe every area should have the same opportunity to this system.

Mr. THOMPSON. Can you tell me what percent coverage is required or is being proposed in the auction?

Mr. POARCH. Yes, sir. Under the proposal that is put forth now, there are benchmarks along the way toward 15 years. At the 4-year benchmark there would be a requirement that there will be a 40 percent coverage. At the 10-year benchmark there would be a requirement that there would be a 75 percent coverage. At the 15-year benchmark, it is based on population coverage. For populations that have less than 100 persons per square mile, the requirement would be 90 percent. For populations having persons between 100 and 500 persons per square mile, the requirement will be 94 percent and for populations greater than 500 persons per square mile, the requirement would be 98 percent.

Mr. THOMPSON. Mr. Chairman, I will back off after this. You have a rural area, too. So I think you will need to be a part of this.

Have you charted out what that would look like on a map?

Mr. POARCH. Yes. Our Wireless Bureau has done charting to determine which areas would have the largest amount of information in terms of whether it will be 90 percent or 94 percent or 98 percent, and we can certainly get that information back to you.

Mr. THOMPSON. Please get it to the committee.

Mr. POARCH. Yes, sir.

Mr. THOMPSON. Thank you. Thank you, Mr. Chairman.

Mr. CUELLAR. Before I pass this on to Mrs. Lowey, you said 15 years?

Mr. POARCH. Yes, sir. The ultimate build-out would be 15 years as opposed to 10 years and benchmarks along the way.

Mr. CUELLAR. What do we do between now and 15 years?

Mr. POARCH. Well, it starts immediately. Once the license is awarded, we realize that there is spectrum available February 2009. Thus we are trying to move through as quickly as we can to get rules and get to an auction. So there are going to be some areas that will be built out quicker. There will be a requirement that there be a network-sharing agreement between the public safety licensee and the ultimate winner of the D Block or D Blocks to start this building process.

So it is an evolution that will take some time to do based on the auction. There has never been an expectation that we could have this on year 1 or year 2. It will take some time to ultimately do that. We will continue to use the systems that are in place and migrate those systems into the new 700 system as it is being built out.

Mr. CUELLAR. Just to emphasize the point, 15 years from now. What year would that be?

Mr. POARCH. Well, 15 years from now would be 2023.

Mr. CUELLAR. 2023. All right. At this time I will recognize Mrs. Lowey from New York, and then we will go with Mr. Dicks and then we will move on.

Mrs. LOWEY. Thank you very much, Mr. Chairman. I would dare say to the big Chairman, when we got that—am I on? Okay.

Fifteen years is a long time. Why don't you try giving New York City the contract directly? I bet that New Yorkers would not be willing to wait 15 years. It is hard for me to believe that a city that is No. 1 on threats is going to wait 15 years for whomever you give the contract to to get their act together. But I would be interested to know how New York City responded when you give them this timetable. But going back to—unless you have a response to that, I will move to another question.

Mr. POARCH. That is fine. Go ahead.

Mrs. LOWEY. Okay. I would like to get back to where the Chairman started. The non-D Block portions of the digital TV spectrum auction generated \$19.6 billion, substantially more than many estimates. Given the revenue already generated, some public safety agencies have proposed that the FCC give the spectrum directly to public safety agencies and allow cities and regions to determine how to build a network that best meets their needs.

So Mr. Poarch, was this proposal considered by the FCC? I have listened carefully to both Chairmen's questions and I am not convinced that the second round is going to be any different from the

first round. What is the problem with giving it—if you are making such a profit on the first auction, why wouldn't you give it to the public safety agencies? I don't understand how your expectations are any different than the first time around.

Why wouldn't you give it to them? Let's do that.

Mr. POARCH. Let's start there. I have been to New York and visited with Chief Dowd, saw his operation. He has been down to visit with us. He has been down to visit us. We have taken certainly his considerations, his suggestions under consideration. We have actually got another meeting with him this week for further discussion. But I would say that I think anyone that thinks it will take 15 years to build out New York City would probably be wrong. New York City would be one of the first areas, as would the National Capital Region, those types of areas would be built out quicker because the infrastructure is in place.

However, to say why don't you just give the spectrum to the cities first, we are not sure we have got the authority to give the spectrum to the cities. We are required by statute to have a bidding process. So first, I am not sure that we could do that anyway.

Mrs. LOWEY. What would be needed to give it to the cities or the public safety agencies?

Mr. POARCH. There is certainly some belief that it would require an act by Congress for us to be able to just give that spectrum away.

Mrs. LOWEY. Have you recommended that?

Mr. POARCH. We have not had a recommendation.

Mrs. LOWEY. Have you thought about it?

Mr. POARCH. We have certainly thought about it.

Mrs. LOWEY. You think it is a good idea?

Mr. POARCH. I don't know that it is a good idea, and let me explain why I don't necessarily think that it is; because what I think you would find, and if you just gave the spectrum to cities, is that New Yorks and the Chicagos and the National Capital Regions would build a system. In areas such as where—

Mrs. LOWEY. In what period of time do you think?

Mr. POARCH. I don't know. I don't know how long it would take for them to build out. Certainly, I expect they would build out quicker. But what I think and what the Chairman has talked about and other commissioners, that is a very key, important piece of this is, while New York and Chicago and the capital region would build out quick and they would have the funding to build out quick, areas such as where Chairman Thompson comes from, Chairman Cuellar is from, and some other areas, they may never have the money at all to ever build a system. I mean it costs millions upon millions, if not more, depending upon the size of the community you come from, to be able to build one of these systems. So while if we—

Mrs. LOWEY. Well, wait a minute. This doesn't make sense to me. I realize that some of it may be above my pay grade. But the threat is in the big communities. Now Chairman Thompson's community and others need the help as well. So you are expecting by this other auction, even though you were caught off guard with the first auction, that you are going to get enough money to build it in

Chairman Thompson's area and other areas that need it? There is some disconnect here.

Mr. POARCH. Well, we are not going to get money to build it at all. The public-private partnership——

Mrs. LOWEY. Correct.

Mr. POARCH [continuing]. Is going to require that the winning D Block winner build this network for the public safety community. That is why it is very important to be able to build it on a regional or a national basis, so that the entire country is covered.

Mrs. LOWEY. That sounds fine, but when plan A, when it first failed, and the D Block spectrum did not garner an acceptable bid, the FCC appeared to be caught off guard, did not have an immediate backup plan how to proceed. One of the considerations in putting together the current plan must have been to set up a reserve price low enough to receive the bid meeting the reserve, but not so low to essentially give away prized spectrum.

So I am a little confused as to what the FCC is doing to create a plan C in case the proposal it is currently working on fails to attract a sufficient bid. Why is it so attractive that you expect to have this second round so much better than the first round?

Mr. POARCH. First, I think——

Mrs. LOWEY. At what point, in other words, do you think it through in advance and say, well, we may have to simply hand spectrum directly to public safety, make enough profit on the other, instead of auctioning off at too low a price?

Mr. POARCH. First, I don't know that if we took every bit of the proceedings from the last auction and gave it to the public safety communities around this country that they would be able to build that system. Depending upon the estimates that you talked about, if you had to build a new system from green fields starting from scratch, there are estimates of \$10-to-15 billion, with a B, to do that on a Nation-wide basis. So this auction certainly wouldn't garner the funds to do that if we gave it to the public safety community.

The real emphasis, and the problem for the public safety community around the country, thinking past just New York City and the larger areas, the problem has always been that the public safety community in the United States does not have the funds with which to do that.

That hasn't changed today. That is why we are proposing an auction that would have a Nation-wide bidder and regional bids so we can get as much interest in building this for the public safety community as we can, because they are not going to be able to do it themselves. Some areas would. New York, I am sure, would. But the other smaller areas around this country that have the opportunities, and the tragic things happen such as fires and floods and hurricanes, they cannot do this on their own.

Mrs. LOWEY. Now, I get that. I think my time is up. But with Chairman Thompson, Chairman of this committee, I would assume that you could figure out a way to give this contract, public-private contract, to those who think that there is some excitement, profit to be made, and have them take on the responsibility of the other areas, too.

But my time is up, so I have a feeling we are going to figure this out. I just don't see how this second round is going to produce a greater success than the first round. Thank you, Mr. Chairman.

Mr. CUELLAR. Yes, ma'am. The Chair recognizes the gentleman from Washington, Mr. Dicks, for his line of questioning.

Mr. DICKS. Let me just continue on this. Only the A, B and C Blocks of spectrum were sold. The D Block, which we have been talking about, designed for a public-private partnership for both public safety officials and private enterprise, received only one bid as I understand it—and I haven't been here, so I regret that—of \$472 million, far short of the \$1.33 billion reserve price set by the FCC. How could the FCC have so badly miscalculated what the market would do here?

Mr. POARCH. I wouldn't necessarily say that we badly miscalculated. I think we set the initial reserve price consistent with all of the other prices that we normally set. The difference is that there is such a requirement for a commercial entity to build a network for public safety that has requirements such as reliability and robustness and hardening and security and encryption and those types of things, this is a tremendous undertaking. Last time we proposed that we do it on a Nation-wide basis. We didn't provide any alternatives other than that. We left quite a bit of room for negotiation between the public safety community that has tremendous needs and the winner of the D Block after the auction was complete.

Many said to us leaving it until after the auction, and there not being clarity up front with these tremendous requirements of the public safety community, made it unattractive from a financial standpoint for us to bid on this spectrum. This time we have set a lower minimum bid and reserve price, we have given them—

Mr. DICKS. That's what, \$750 million?

Mr. POARCH. Seven hundred fifty. Yes, sir. In addition to that, we have given them the clarity that everyone asked for so that they know going in what it is that they are going to be bidding on.

In addition, while we are again bidding on a Nation-wide license, we are also proposing to bid regional licenses on the Long Term Evolution or the WiMAX standard, either one, so that commercial entities out here that may not have the wherewithal to build a Nation-wide license, but they have got the wherewithal to build regional licenses, that maybe we can put together a number of regional licenses that will cover the entire country.

So this proposal that is being put forth by Chairman Martin at this time is appreciably different, and we believe is the best effort within the authority that we have at the Commission in order to be able to try to build this network.

Mr. DICKS. Who made the \$472 million bid? Who was that?

Mr. POARCH. I think it was Qualcomm? Qualcomm.

Mr. DICKS. That was to do this Nation-wide?

Mr. POARCH. That was the bid. But obviously it did not meet the reserve, so it was a pretty safe bid for Qualcomm to bid \$472 million.

Mr. DICKS. Thank you, Mr. Chairman.

Mr. CUELLAR. At this time the gentleman recognizes—I mean the Chairman recognizes the gentlewoman from the Virgin Islands, Ms. Christensen.

Mrs. CHRISTENSEN. Thank you. You are a gentleman, too.

Mr. CUELLAR. Thank you. On good days.

Mrs. CHRISTENSEN. Thank you, Mr. Chairman. My question would be, I guess, to all three. In its NECP, the Department of Homeland Security attempts to establish a national framework for ensuring that first responders have access to effective interoperable communications systems, noting that, quote, the emergency response community has sought national guidance to support a more integrated coordination of emergency communications, priorities, and investments.

The FCC, through its D Block partnership proposal, has also stressed the importance of establishing a national framework to address public safety communication needs. Yet the approaches taken by the two agencies are different. DHS has input a bottom-up approach that relies on local practitioners and local needs to drive the deployment of new private systems for public safety's use. As I understand it the FCC's model is a top-down approach that relies on a single public-private partnership to implement a national system that would be shared with commercial users.

So my question is what coordination has taken place between DHS and the FCC to ensure that there is consistent national guidance to addressing public safety needs? What steps do either the Department or the Commission plan to take to ensure that their respective approaches can be integrated into a single national framework?

Mr. ESSID. Well, the national plan, which we had a lot of stakeholder involvement, and we used the State plans to develop, really lays out how important the capabilities that the 700 MHz broadband network are to public safety. We don't specifically call out in the national plan the 700 MHz spectrum, but we do basically say, under objective 4, that we put this as an emerging technology that will change everything, as Dr. Boyd alluded to earlier, with the demonstration that was done here at the Capitol, bringing in a lot of the existing legacy systems to this newer technology.

You know, the national plan doesn't really have in it one system. We are talking about increasing the level of coordination amongst the local, State and Federal partners, with all the different systems they have. So, you know, the bottom-up approach that we used is just to make sure that all the first responders and emergency personnel are involved when we are doing whatever it is we are doing, coming up with SOPs, training and exercises, plans, et cetera. So that is our bottom-up approach.

We do coordinate with the FCC. In fact, you know, I am standing up a new office, the Office of Emergency Communications when we had no staff. I mean, Dr. Boyd lent me one of his guys. I have got three detailees in the FCC in Derek Poarch's shop right now that helped us until we could hire more personnel, being a new office, keep our feet on the ground with everything that is going on. So I am very thankful to them. So we do coordinate a lot. You know, they have been pretty receptive, in my opinion, to the feedback and

input we have been giving the FCC on what the first responders need and how critical this is for them.

Mrs. CHRISTENSEN. So the national guidance that States and territories, cities, receive is consistent and coordinated. They are not getting two different messages from—

Mr. ESSID. I don't think so. As I said earlier, I think a lot of the State and local folks as well as the Federal folks are watching to see what happens in this auction. When we were crafting the national plan, for example, we were watching because we don't want to be bold enough to make a prediction and put something in the plan and then it not come to fruition. So we are kind of taking a wait-and-see approach. The one thing we all resound on is public safety needs this type of a capability out there.

Mr. BOYD. If I may add to that, it is important, as I keep saying, to remember that this is an added capability for public safety. It is not going to replace all of the existing systems. There simply isn't enough spectrum in the D Block to be able to do that. It is going to provide that broadband capability so at the end of the day the public safety view, I think, inevitably is going to be whatever form this takes, it is essential that this spectrum remain available to State and local public safety.

Mrs. CHRISTENSEN. I guess I would ask this to Mr. Essid and Dr. Boyd. As you know from the make-up of the PSST Board, public safety entities are understandably protective of their spectrum. So how does EOC or the PSST Board plan to—or Department of Homeland Security plan to coordinate with the public safety entities to turn over their spectrum to the PSST? Or is that not a problem?

Mr. BOYD. Well, this spectrum is not—public safety is not going to be turning over its existing spectrum. The D Block spectrum is separate. It would just be PSST.

Mrs. CHRISTENSEN. Right. I think you kind of had answered that in your first answer. That is all, Mr. Chairman. Thanks.

Mr. CUELLAR. Before we move on, Mr. Poarch, let me ask you one question about the State of Texas coverage. The D Block licensee, the rules that you all put out would be required to build out 79 of 254 counties in the State of Texas, which means—does that mean that the rest of the other counties would have no service? Does that include also areas that FEMA has identified that are most affected by severe hurricanes?

Mr. POARCH. I am just not familiar with the 79 of 254 counties. The proposal that puts forth from Chairman Martin would require a Nation-wide system, build out for the entire State of Texas and the entire Nation if we can get a Nation-wide bidder. Or it would be done on a regional basis, and the regional licenses, if successful, would be required in populations, as I alluded to earlier, based upon the density of the area, to build between 90 to 98 percent.

So we can certainly get back to you and talk specifically about Texas, but I am not familiar with the 79 of 254. Our proposal is for a Nation-wide licensee to build for the entire country.

Mr. CUELLAR. Okay. I can understand when you have those general concepts. But when you go down to the details, unless this information is wrong, and I am looking at the map of the State of

Texas with only the counties that are included, you would have a lot of blank areas, if I can use that.

Mr. POARCH. Yeah. We would be happy to talk to staff about the map that you are using. I haven't seen it, so I am not really familiar with the data, but we will be happy to interact with the staff and get you an answer on that.

Mr. CUELLAR. Okay. Why don't we do this? Do that with the State of Texas and the Members that are here—including Mr. Dent—States so you can give them an idea, so the Members of the committee have an idea what this means also. The rest of the Members of this subcommittee also.

Mr. POARCH. Sure.

Mr. CUELLAR. Okay. Thank you. If there are no other questions, we are going to move onto the second panel. I would ask, I usually do this with the first panel, I would ask you not to leave. If you want to take a chair in the front row, Mr. Poarch, Mr. Essid, Dr. Boyd. The reason I do that is so you can listen to the second panel, and hopefully we can have a little interaction.

At this time I want to thank all the three witnesses, the three witnesses for being here. Thank you very, very much. I know there are questions, a lot more questions. I know it is a difficult issue, but it is one that we need to work together. Thank you very much.

If I could have the second panel. For the second panel, as you are coming in, there are two audiences here. One is the legislative audience, the ones that will be asking you questions; but I have also asked, as you know, Mr. Poarch, Mr. Essid, and Dr. Boyd to stay here. That is your secondary audience, if you know what I mean. As the witnesses are coming in here, we have given the background on the testimony, so we are going to go directly into the testimony.

I want to thank the witnesses for their presence here. I look forward to your testimonies. I now ask each witness to summarize his statement for 5 minutes. We will begin with Mr. Mirgon. So we would like to recognize you at this time.

**STATEMENT OF RICHARD MIRGON, FIRST VICE PRESIDENT,
ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS ORGANIZATION (APCO) INTERNATIONAL**

Mr. MIRGON. Good morning, Chairman Cuellar, Ranking Member Dent, and Members of the subcommittee for this opportunity to appear before you today on behalf of the Association of Public Safety Communications Officials, APCO. My name is Richard Mirgon. I have over 30 years of public safety experience. I currently serve as president-elect of APCO, and I would like to offer a synopsis of my written comments.

APCO was established in 1935, and is the largest public safety communications organization, representing nearly 16,000 public safety communications officials. Wireless broadband provide excellent—excuse me, wireless broadband has provided exciting new opportunities for improved public safety in an interoperable, all-risk environment. However, many of those benefits would be lost if public safety broadband systems are deployed in a proprietary, stove-pipe manner, as most land mobile systems have been deployed over the last 70 years.

I would like to highlight three of our six principles that have guided our policies on this issue. One, we support the development of a national interoperable broadband network. A national broadband network would ensure that all public safety agencies would have the same opportunities to take advantage of broadband communications.

Two, we strongly believe that this network has to be built to national standards, and must be interoperable with all broadband networks in 700.

Three, a successful D Block auction requires that the FCC establish more specific network requirements and D Block licensee obligations prior to the auction. While I understand that at times we may appear to be divided on how the system should be built and managed, we are united in the belief that there is an immediate and dire need to establish a public safety broadband network.

A national network would provide users with a single technology standard, giving them the ability to acquire off-the-shelf technologies at substantially less cost than today's land mobile radios, and freeing them from constructing costly and duplicative broadband infrastructure.

Currently, there are local public safety agencies that are eager to deploy systems in 700 MHz spectrum. These agencies have the resources to deploy and manage their own broadband networks, and they should be allowed to begin broadband deployment in their areas, subject to national network and data standards that are fully integrated and interoperable with the proposed broadband networks, and that they have coordinated with and received approval by the FCC and public safety broadband licensee.

On September 25, the FCC is expected to release the third and final notice of proposed rulemaking on the 700 MHz auction. APCO believes that before the FCC issues its orders to set a new date for the Commission, the Commission should begin working on creating technical and operational standards for the shared network. APCO helped to create the Public Safety Spectrum Trust, the PSST, and has devoted substantial time, money, and resources to its formation and activities. We greatly appreciate the tremendous dedication of the PSST board members and the organizations they represent.

However, APCO strongly supports the FCC's reexamination of the public safety broadband licensee requirements, and believes that fundamental changes are necessary to ensure that the public safety broadband licensee is a more effective and efficient organization. Organizations identified by the FCC have a right, pursuant to the PSST bylaws, to name individuals to serve on the board. APCO believes that the FCC needs to clarify that the organizations must be the actual members of the board. We hope that this minor distinction would prevent some organizations from becoming disenfranchised, and encourage them to provide organizational input into matters being voted upon by the PSST Board.

APCO believes that the public safety broadband licensee would be well-served to include in its board member composition the direct expertise needed to undertake this extraordinary task at hand. This should include experience in designing and operating public safety communications systems, expertise from the fields of business, finance, communications technology, all of which are critical

to the function of the broadband licensee. We believe that this experience will lead the PSST to rely less on the advice of the agent adviser, and improve its ability to engage in a thorough critique of all business functions.

None of these recommendations should be construed as negative toward any of the current members of the PSST. As one of the three founding members, we have been at the table from the beginning, and we wish to simply recognize, after almost a full year of experience, that there needs to be some positive and beneficial changes to the structure. This should be viewed as an opportunity for improvement.

Recent trade press has misrepresented APCO's policies by stating that APCO is looking to sever ties with the PSST. I want to make it very clear, in no way is APCO looking to sever ties with the PSST. We are working to make it stronger. Our commitment to building a national broadband network stands firm. We would like to thank the leadership of Chief Harlin McEwen, chairman of the PSST board, for his hard work and attention to addressing our concerns, and working with us toward a positive outcome.

In conclusion, APCO International remains committed to working with all the interested parties to make sure the construction, maintenance, and management of such a national broadband network of 700 spectrum meets the needs of public safety today and into the distant future. Thank you.

[The statement of Mr. Mirgon follows:]

PREPARED STATEMENT OF RICHARD MIRGON

SEPTEMBER 16, 2008

Thank you Chairman Cuellar, Ranking Member Dent, and Members of the Subcommittee on Emergency Communications, Preparedness, and Response for this opportunity to appear before you today on behalf of the Association of Public-Safety Communications Officials (APCO) International.

My name is Richard Mirgon and I currently serve as the President Elect of APCO International. I have recently retired with over 30 years of public safety experience. Most recently I served as the Director of Technology Services/911 for Douglas County Nevada where as a department head I managed all public safety communications, information technology and emergency management. Prior to that I work as a deputy sheriff for Jefferson County Colorado which encompasses the western metropolitan area of Denver.

APCO International was established in 1935 and today it is the Nation's largest public safety communications organization, representing nearly 16,000 members worldwide who build, supply, manage and operate communications systems and facilities for police, fire, emergency medical services and other State and local government public safety agencies. APCO International also serves the needs of more than 100,000 professionals in the public safety communications industry by providing training, frequency coordination, engineering, licensing, advocacy and networking opportunities. APCO International is the largest Federal Communications Commission (FCC)-certified frequency coordinator for Part 90, Public Safety Pool channels, and appears regularly before the FCC on a wide variety of public safety communications issues.

APCO International has been a major player in the Commission's numerous proceedings regarding the 700 MHz Public Safety Band, including the development of the public-private partnership approach to the D Block auction and the creation of a national public safety broadband licensee (PSBL) and is among the organizations that the FCC designated in the Second Report and Order for representation on the PSBL board of directors.

We applaud the committee for holding this very important and timely hearing on the auction of the 700 MHz D Block spectrum.

Wireless broadband communications provide exciting new opportunities for improved public safety operations. Broadband video, high speed images, Internet ac-

cess, and data of an endless variety would greatly enhance the ability of police, fire, EMS and other personnel to protect the public and respond to emergencies. However, many of those benefits could be lost if public safety broadband systems are deployed in a proprietary and stovepipe manner as most land mobile systems have been deployed over the last 70 years.

GUIDING PRINCIPLES

I would like to highlight six basic principles that guide APCO International's policies in working to build a national public safety broadband network.

1. APCO International believes that new and emerging technologies will greatly improve the way emergency services are able to protect and serve the public.
2. APCO International continues to support the development of a national, interoperable, broadband network that is designed, maintained, and operated to meet the requirements of public safety communications to the maximum extent feasible. A national broadband network would ensure that all public safety agencies, regardless of their size, location, expertise, or financial resources, would have the same opportunities to take advantage of the new world of broadband communications. Absent a national network, only those few agencies with substantial resources and expertise will be able to provide their first responders with state-of-the-art broadband communications. The result would be islands of robust, and probably incompatible, public safety broadband networks, surrounded by vast un-served areas.
3. APCO International strongly believes that this network has to be built to national standards and must be interoperable with all broadband networks built on the 700 MHz spectrum band.
4. APCO International strongly believes that the Federal Communications Commission must retain the public-private partnership model in the D Block auction, as it is the only approach likely to lead to the deployment of a national, interoperable, public safety broadband network.
5. APCO International believes that it is unrealistic to expect that the national broadband network will be able to provide sufficient coverage or reliability to replace "mission-critical" voice communications now provided over land mobile radio systems. The voice component of a broadband network is likely to eventually reduce the need for some public safety personnel to carry both a cell phone (generally used for routine, non-emergency communications) and a land mobile radio. However, land mobile radio will likely remain the principal means of providing mission-critical communications for the time being.
6. A successful D Block auction requires that the FCC establish more specific network requirements and D Block licensee obligations prior to the auction.

WHERE ARE WE TODAY?

Again, APCO International strongly supports the formation of a national, interoperable, broadband public safety communications network. We firmly believe that the most viable means of creating such a system is through a network-sharing agreement between a national public safety broadband licensee for the 700 MHz public safety broadband spectrum and the winner of the adjacent D Block of commercial spectrum. Absent extraordinary and unprecedented Federal grants, no other available approach can provide the funding for a Nation-wide public safety broadband network.

Recent articles in the press continue to highlight the failure of the previous D Block auction and question the potential for creating a private-public partnership that will build out a national broadband network to be used for public safety communications. It is unfortunate that the D Block did not receive a winning bidder, but the failure of the auction provides us with a new opportunity to make sure we create a balanced plan that will provide the building blocks for a truly robust and secure national public safety broadband network.

WHAT ARE THE CHALLENGES?

Public Safety has specific requirements that cannot be met by a purely commercial service provider. In general, public safety agencies need priority access, comprehensive coverage, high-capacity throughput levels to prevent delays in transmission of critical information, extremely low outage rates, hardened facilities, and redundancy to ensure service during emergencies. The challenge is to develop specifications for those requirements that are sufficient to meet public safety needs, but that are also economically viable for a shared, public/private network.

With more than 19,000 municipal governments, 16,000 town or township governments, 3,000 county governments, and 35,000 special district governments that have

their individual public safety needs, I can assure you the task of building a national broadband network is not going to be easy and the solution is not going to be one-size-fits-all.

While I understand that at times we may appear to be divided on how the system should be built and managed, we are united in the belief that there is an immediate and dire need to establish a public safety broadband network that meets the needs of first responders during mission critical incidents.

A national network would provide users with a single technology standard, giving them the ability to acquire off-the-shelf technologies at substantially less cost than today's land mobile radios. They would also be freed of the obligation to construct a costly and duplicative broadband infrastructure. A national broadband network might also provide a common link to improve interoperability among all types of public safety communications systems.

One of the challenges in designing a broadband network is that we will not know exactly how the network will be used until it is deployed. Just as even the most visionary of technologists could not have predicted 10 years ago the extraordinary array of Internet applications available today, we cannot predict with certainty how public safety personnel will use wireless broadband capability in the future. A clear deduction would be that the network will be used to transport video input and output, high-speed data services, complex engineering and building plans, schematics for electrical and gas service, multifaceted medical information, engineering drawings, geographical data, fire hot spot locations, firefighter monitoring, undercover services, chemical analysis, robotic control, and much more. Whatever the results we believe they will not only be meaningful but amazing.

What is clear is that public safety agencies will use the network only if it provides fast, reliable coverage when and where they need it at a cost they can afford. In a shared network environment, priority access will be especially important. APCO International's comments in response to the Second Further Notice of Proposed Rulemaking describes our recommendation that 50 percent of the capacity of the shared network should be subject to "ruthless preemption" for public safety use, and that 50 percent of the capacity should be available exclusively for commercial services, absent a catastrophic event requiring additional public safety capacity. This approach should give the D-Block licensee(s) and its customers sufficient certainty regarding network availability. With careful capacity management, the network will also be able to satisfy public safety service demands.

WHAT IS BEING DONE TO FIND SOLUTIONS?

On September 25, the FCC is expected to release the Third Final Notice of Proposed Rule Making on the 700 MHz auction. APCO International believes that before the FCC issues its Order to set a new date for the D Block auction the Commission should begin work on creating technical and operational standards for the shared network.

Let there be no doubt that there are local public safety agencies that are eager to begin deploying systems in the 700 MHz public safety spectrum. These agencies have the resources to deploy and manage their own broadband networks. The National Capitol Region has already deployed a system in the 700 MHz band and this system is in operation today. There are other States and local government that are also eager to start building out their own networks.

APCO International believes that local and State governments should be allowed to begin broadband deployment in their areas, subject to national network and data standards. All deployments of local and regional broadband networks must be able to fully integrate and become interoperable with the proposed national broadband network. Such localized efforts need to be coordinated with and approved by the FCC and the PSBL. These systems must also comply with all network sharing agreements between the national public safety broadband licensee and auction winner(s) of the D Block.

APCO International also believes that the FCC should strengthen its formal relationship with the FCC and the PSBL.

APCO International helped to create the Public Safety Spectrum Trust (PSST) and has devoted substantial time, money and resources to its formation and activities. APCO International also greatly appreciates the tremendous dedication of the PSST board members and the organizations they represent. However, APCO International strongly supports the FCC's re-examination of the PSBL requirements and believes that fundamental changes are necessary to ensure that the PSBL is a more effective and efficient entity.

Organizations identified by the FCC have the right pursuant to the PSST's bylaws to name individuals to serve on the board. APCO International believes that the

FCC needs to clarify that the organizations it names must be the actual members of the PSBL board. We hope that this minor distinction would prevent some organizations from becoming disenfranchised and encourage them to provide organizational input into matters being voted upon by the PSST Board.

APCO International believes that the PSBL would be well-served by including in its board member composition, the direct expertise needed to undertake the extraordinary tasks at hand. Such proficiency should include experience in designing or operating public safety communications systems, and expertise from the fields of business, finance, or communications technology, all of which are critical to the functions of the PSBL. We believe also that this experience will lead the PSST to rely less on the advice of its agent/advisor and improve its ability to engage in a thorough critique of all business functions.

APCO International has suggested that the FCC change the required composition of the PSBL board. We recommend a board of 8 to 12 members, with approximately half of the members being diverse organizations that represent potential users of the network and those with expertise in public safety communications matters. The organizations, not their individual representatives, should be members to the extent necessary to ensure input from the relevant organizations. The remaining PSBL board members should be individuals selected by the Commission who do not represent any particular organization but who would add critical knowledge and expertise to the PSBL's decisionmaking. Of course, the Commission must ensure that a clear majority of the board members directly or indirectly represent public safety entities. We also recommend that an FCC commissioner or high-level Commission official, such as the chief of the Public Safety and Homeland Security Bureau, should also serve as an ex-officio member of the PSBL board.

None of these recommendations should be construed as negative toward any of the current members of the PSST. As one of the three founding members who have been "at the table" from the beginning we wish to simply recognize after almost a full year of experience that there needs to be some positive and beneficial changes to the structure. This should be viewed as an opportunity for improvement.

Recent trade press has published articles that misrepresented APCO International's policies by stating that APCO International is looking to sever ties with the PSST. I want to make it very clear that in no way is APCO International looking to sever ties with the PSST. We are working to make it stronger. Our commitment to building a national broadband network stands resolute.

We believe that by continuing to work together we can make the PSST stronger and better. We would like to thank the leadership of Chief Harlin McEwen, chairman of the PSST board, for his hard work and attention to addressing our concerns and working with us toward a positive outcome.

In conclusion, APCO International remains committed to working with all the interested parties to make sure that the construction, maintenance, and management of such a national broadband network in the 700 MHz spectrum meets the needs of public safety today and into distant future.

Mr. CUELLAR. Thank you for your testimony.

At this time I would recognize Mr. Contestabile to summarize his statement for 5 minutes.

**STATEMENT OF JOHN M. CONTESTABILE, BOARD MEMBER,
PUBLIC SAFETY SPECTRUM TRUST**

Mr. CONTESTABILE. Thank you, Chairman Cuellar, Ranking Member Dent, and distinguished Members of the subcommittee for the opportunity to appear before you today. My name is John Contestabile. I am employed as the Director of the Office of Engineering and Emergency Services for the State of Maryland Department of Transportation.

I appear before you today as a member of the Board of Directors of the Public Safety Spectrum Trust Corporation. I serve on the Board as a representative of the National Governors Association. The Public Safety Spectrum Trust, or the PSST, is a nonprofit corporation that was formed in June of 2007, and consists of a board of directors representing 15 national public safety organizations.

In November 2007, the PSST was awarded the license for the 700 MHz public safety broadband by the Federal Communications Commission. That license is for 10 MHz of radio spectrum in the 700 MHz band that has been allocated by the FCC for public safety broadband purposes, and is intended to be half of the spectrum that will be used to develop a shared commercial public safety network. The other half will come from the 700 D block auction. The mission of the PSST is to represent the interests our Nation's first responders in the development of this shared network.

The proposed network is tremendously important to the public safety community, as it can give emergency responders the ability to do such innovative things as monitor vital signs of firefighters on scene of an incident, monitor patients' vital signs en route to emergency rooms, getting criminals off the street with real-time fingerprint scanning, streaming video on demand from emergency personnel and command centers, from fixed traffic cameras as well as mobile cameras in emergency vehicles.

Building a Nation-wide broadband wireless network will also permit interoperable voice communications, and we have talked about that in the earlier panel. We will ensure we will never have to repeat the challenges faced during 9/11 and Hurricane Katrina. Of course, we sit before you almost to the day from September 11, 2001. Following that event, there was significant outcry about the failures of public safety communications and the need to improve them throughout the country.

While there have been pockets of improvement, most of the rhetoric has not resulted in action. Today there is still no comprehensive next-generation wireless public safety solution that improves public safety communications Nation-wide. Fortunately, the FCC has proposed an innovative model, a public safety commercial partnership between the D Block licensee, and with the PSST serving as the licensee, that will join the interests of the business and public safety communities.

Just like consumers, public safety can benefit from the broadband technology. But we need a network that is hardened to withstand catastrophes, has power support, satellite backup, has other important features to make it available and reliable in a crisis. We also need a network that uses a common technological standard so that we can achieve interoperability across the dozens of separate groups that make up our first responders.

We also commend the city of New York for putting together the essential ingredients that have allowed it to deploy an advanced wireless broadband network. Unfortunately, the access to broadband funding that New York City has achieved is lacking for almost all of the other jurisdictions across the country. We believe a new public safety wireless broadband network is an important tool in rural America, just as it will be in major metropolitan areas.

We are disappointed that the earlier round of the D Block auction did not attract a winning bid, but we are pleased that the FCC chairman indicated he had circulated to the commissioners a draft Third Further Notice of Proposed Rulemaking, which will be taken up on September 25, 2008.

We would also be remiss in not mentioning that in order to meet our responsibilities as the PSST, we need a clear and appropriate

source of funding. The FCC orders have not identified funding for the PSST, the nonprofit entity selected by the FCC to serve as the licensee. There is no allocation in existing law for funding to meet the PSST's needs.

In conclusion, we in the public safety community wish to applaud the efforts of the Members of this subcommittee and of Congress, and of the FCC commissioners and staff, for their support of the public safety broadband network and the public safety commercial partnership approach. We ask for your continued help and support to make the public safety broadband network a reality in the near future. Thank you.

[The statement of Mr. Contestabile follows:]

PREPARED STATEMENT OF JOHN M. CONTESTABILE

SEPTEMBER 16, 2008

Thank you, Chairman Cuellar, Ranking Member Dent and distinguished Members of the subcommittee for the opportunity to appear before you today.

My name is John Contestabile. I appear before you today as a member of the board of directors of the Public Safety Spectrum Trust Corporation (PSST) and representing Chief Harlin McEwen who is the chairman of the board of directors and who had a scheduling conflict with this hearing. I serve on the board as a representative of the National Governors Association.

I currently serve on a number of national committees including Vice Chair of the American Association of State Highway and Transportation Officials (AASHTO) Security Committee, the Transportation Research Board's Security Oversight Panel, the Department of Homeland Security's SAFECOM Interoperable Communications Advisory Committee, and I chair the Maryland State Interoperability Executive Committee (SIEC) Working Group, which developed the Maryland State-wide plan for public safety voice and data communications.

The Public Safety Spectrum Trust Corporation is a non-profit corporation that was formed in June 2007 and consists of a board of directors representing 15 national public safety organizations.

In November 2007, the PSST was awarded the Nation-wide 700 MHz Public Safety Broadband License (PSBL) by the Federal Communications Commission (FCC). The license is for the 10 MHz of radio spectrum in the 700 MHz band that has been allocated by the FCC for public safety broadband purposes and is intended to be one-half of the spectrum that will be used to develop a shared commercial/public safety network. The other half of the spectrum will come from the 700 MHz D Block. The mission of the PSST is to represent the interests of the local, State and Federal public safety community. I and the other members of the PSST board of directors take this duty very seriously, and I appear today on behalf of not only the PSST, but also the public safety community we serve.

Advances in broadband telecommunications can give emergency responders the ability to do such things as monitor vital signs of firefighters on-site, monitor patients' vital signs on their way to emergency rooms, get criminals off the street with real-time fingerprint scanning and stream video on demand to emergency personnel and command centers from fixed traffic monitoring cameras and mobile cameras in emergency vehicles at the scene of incidents. These are only a few of the almost limitless number of innovative applications that can help public safety officials protect our lives and property and increase their personal safety. At the same time, these new capabilities can permit interoperability among first responders that we do not have today and will ensure that we never have to repeat the terrible communications deficiencies that we faced in events like 9/11 and Hurricane Katrina.

We sit before you almost 7 years to the day of one of the most tragic events on American soil: September 11, 2001. Following that event there was significant rhetoric about the failures of public safety communications systems and the need to improve them throughout the country. While there may have been small pockets of improvement in limited areas throughout the country, most of the rhetoric has not resulted in action. Today, there is still no comprehensive, next-generation, wireless public safety solution that improves public safety communications Nation-wide.

I am sure each of you can appreciate why having a secure, wireless, national public safety broadband network is so important. We applaud the willingness of the FCC to adopt this innovative approach in seeking a solution that does not require

Federal or local government funding and we strongly support the creation of this network. Any review of major crises such as 9/11 or Hurricane Katrina shows how much the personal efforts and effectiveness of our Nation's first responders—police, firefighters, emergency medical personnel, and others—are diminished or undermined when the communications infrastructure that supports our efforts fails or is insufficient for the needs of the public safety professionals. Just like consumers, public safety can benefit from wireless broadband technology, but we also need a network that is hardened to withstand catastrophes, that has power support for individual communications sites, satellite back-up and other important features so that it will be available and reliable in a crisis. And it must be available wherever we ask our first responders to go. We also need a network that uses one common technology standard so the dozens of separate groups making up our Nation's first responders in any area at any given time can communicate with each other. Establishing and building out the public safety broadband network will be a significant challenge, but it is one that very much needs to be done to meet our national security and public safety needs for years to come.

The PSST commends the city of New York for putting together the essential ingredients that have permitted it to deploy an advanced broadband network. If New York's access to funding could be replicated throughout the rest of the country, we would be facing a much less challenging future. Unfortunately broadband funding is lacking for almost all other local and State jurisdictions and history has proven that it will take a national effort to create Nation-wide seamless interoperability. We also know that an approach other than reliance on public financing is the only way to ensure sufficient, sustainable funding for a Nation-wide, broadband public safety-grade network and to keep it refreshed and continually updated. Indeed, the public safety broadband network will be an important tool in rural America just as it will be in major metropolitan areas.

Fortunately, the FCC has proposed an innovative model—a public safety/commercial partnership between the D Block licensee and the PSST serving as the Public Safety Broadband Licensee, that will join the interests of business and public safety. This partnership will permit emergency responders in metropolitan, suburban and rural areas to take full advantage of current and future telecommunications discoveries that otherwise would be limited to commercial applications. It will mean that, finally, we will have the communications capabilities and interoperability needed to protect our communities no matter the scale of the disaster.

For a public servant like me, who has been focused on improving emergency responder communications and preparing for disasters, I am convinced this partnership promises to deliver the network and communication capabilities the public safety community has long needed. But this kind of network requires a serious commitment from both a public and private partner if it is to be financed, built, operated, maintained and upgraded over time. Both sides—public safety and commercial—must be flexible as we embark together on this entirely new, historic undertaking.

The recent comments filed at the FCC on the D Block from companies like U.S. Cellular, Ericsson, Sprint Nextel and others are a very promising sign that those who know what is needed to make a wireless network commercially viable believe that the D Block/PSST partnership can succeed. They have proposed some intriguing concepts that deserve further investigation by the FCC. These ideas recognize that our old model for building public safety systems, individually and relying on Government funding, will not work for a network of this scale and ambition. The PSST will continue to work with them and with others who have a genuine commitment to the public safety/commercial partnership in exploring creative approaches to this challenging, but absolutely essential, endeavor.

The PSST is working very closely with the organizations that come under the umbrella of the National Public Safety Telecommunications Council and others to take a hard look at public safety requirements. A broadband network that doesn't go beyond what is available commercially today, in terms of coverage, capability, and reliability, would be a poor use of public safety's 10 MHz of broadband spectrum. On the other hand, we understand that we need to weigh our vision of an ideal network against the ultimate reality test—that there may be no Nation-wide interoperable broadband network unless commercial and public safety interests come into alignment. The technical standards the PSST proposed in its last FCC filing represented our best thinking at that time, but we remain open to discussing the right balance of technical, operational and, indeed, economic elements for public safety and for commercial users.

The FCC, the PSST and others who are committed to the success of this partnership have the dedication and the knowledge to make it work. What we do not have is the luxury of time. The D Block spectrum and the FCC's vision of a public safety/commercial partnership that delivers mobile interoperable broadband communica-

tions for public safety users—and also brings increased broadband capabilities to commercial users throughout the country—is the right idea at the right time. We cannot come this close and let slip away what is a once in a lifetime opportunity to address the communications requirements of the Nation's emergency responders.

We were disappointed that the D Block did not attract a winning bid in the 700 MHz auction concluded earlier this year. We had hoped by this time to have concluded the negotiation of a Network Sharing Agreement (NSA) with the winning D Block bidder and be embarking on the network deployment. Instead, we find ourselves in the midst of working toward a re-auction of the D Block spectrum, trying to find the approach that will enable the auction to be successful and also preserve requirements that will result in a network designed to deliver genuinely needed up-to-date, affordable and interoperable broadband communications capabilities to our country's first responders. The PSST has been working with the FCC as the FCC develops the rules for a follow-on D Block auction which will result in a winning bidder and furthermore meet the critical communications needs of the public safety community. The PSST intends to take advantage of the opportunity offered by the new auction to continue to make information available, to engage in a dialog with interested bidders, and to make sure its goals are consistent with the public policy objectives of the Congress and the FCC.

We cannot let this re-auction fail. If it does, then the individual Federal, State and/or local government agencies will be the only remaining source of the substantial funding needed to construct and operate a modern, dedicated, Nation-wide broadband communications network for public safety use. In today's economic climate, that would likely pose overwhelming challenges and no doubt result in balkanization of first responder communications capabilities around the country. I respectfully ask the members of this subcommittee to help us ensure that failure is not an option in a D Block re-auction.

As you may know, the 700 MHz auction far exceeded expectations in terms of revenue raised, netting nearly \$20 billion for the Treasury, well above the \$10.2 billion revenue target reflected in the Deficit Reduction Act of 2005. That performance should set to rest concerns regarding the possible undesirable budgetary impacts that could be associated with setting aside spectrum to craft a solution for public safety's critical communications needs.

We in the public safety community have come a long way in the last year—with the help of many of you here in Congress and of the FCC—to be in a position to play a constructive role in crafting a viable solution to our long-standing mobile communications problems. In June 2007, the Public Safety Spectrum Trust was formed and now holds the Public Safety Broadband License. The Trust has accomplished a lot without any Government funding and we have embraced the concept of sharing the use of spectrum, and sharing a network, with a commercial provider, with the understanding as set forth in the FCC's order that public safety portions of the network will be under public safety's control.

The FCC's Second Report and Order assigns important tasks to the PSST as the public safety broadband licensee to ensure that the needs of first responders are met. These tasks include working with the D Block auction winner(s) to develop and construct a seamless network that meets public safety's critical communications needs, both at the outset, over the entire term of the license, and into the future. For example, the FCC specifically assigned the PSBL responsibility to approve, in consultation with the commercial operator(s), equipment and applications used by public safety entities on the shared network. Public safety's needs, and technology available to meet those needs, will not remain static. There will be a continuing need for input from the public safety community with regard to network upgrades being implemented by the commercial operator(s) (as all commercial operators know, networks must be continually maintained and upgraded). We see the PSST in an on-going role as the public safety Ambassador and united voice in these matters.

There is also a very important role to be played with respect to the public safety community itself, to educate first responders and assist them in making the transition from the old reliance on voice-only communications to the broadband future. There are hundreds of public safety organizations around the country, and many have a strong need for support by someone who understands public safety and can explain how and why to embrace this new network. Additional FCC-assigned responsibilities include oversight and implementation of the relocation of narrowband public safety operations and reviewing requests for wideband waivers.

Finally, priority communications for public safety—expressed in the concept adopted by the FCC of preemption of spectrum on the network when public safety needs require it—has to be implemented in an effective and responsible manner by an organization rooted in public safety. No priority system of the type envisioned

by the FCC order exists today, and a lot of effort is being devoted by the PSST to develop this priority system and adopt procedures dedicated to it being used effectively and appropriately by public safety.

To meet these responsibilities, the Public Safety Broadband Licensee needs a clear and appropriate source of funding. The FCC order did not identify funding for the non-profit entity selected by it to serve as the Public Safety Broadband Licensee. There is no allocation in existing law for the funding to meet the PSST's needs. Although many core public safety organizations have contributed the time and knowledge of their executives and managers to assist the PSST, those organizations are challenged to meet their own budgetary needs, and cannot provide meaningful financial support to the PSST.

In the total absence of conventional funding alternatives, the PSST has made the suggestion that the commercial D Block operator(s), which will be using for its/their own commercial purposes and profit a significant portion of the spectrum allocated to public safety, be the primary source of that support by making a lease payment to the PSST for the spectrum it will be leasing from the PSST. The FCC order envisions that the use of public safety spectrum by the commercial D Block operator will be under a lease, and we have suggested that there be a lease payment, as there would be for any lease, that is reflective of the value of the public safety spectrum the commercial D Block operator will be using. The PSST is concerned by recent media reports that the FCC plans to cap funding for the PSST at \$5 million per year in the forthcoming proposed rules. As we have repeatedly pointed out, since it was organized, the PSST has been hampered with a lack of funding. While the PSST does not object to the FCC considering a cap, we believe it is premature to determine the amount of the cap until it is known how many private partners we may face following the auction and to more fully understand the complexity of the role of the PSST and the tasks before it.

We also understand that it is our role in the process to be the advocate for the needs of the public safety community. Public safety users need broader network coverage than is commercially available and they need "higher than commercial" levels of network reliability, survivability and redundancy. All of these things cost money that a commercial wireless operator would just as soon not spend, and it is the reason these things are not available to the public safety community today. Striking that right balance is the challenge we are faced with today.

So where do we go from here? We agree with the conclusions expressed by many Members of Congress and FCC Commissioners that the D Block auction rules need to be modified in ways that should produce a successful re-auction. We are grateful that the position of the FCC and Congress recognizes public safety's needs for a modern, Nation-wide, interoperable communications solution as in the best interests of our Nation, and a step that is long overdue. We continue to support the FCC's conclusion that a public safety/commercial partnership, shared network approach, in the absence of significant Federal funding, presents the best near-term potential solution.

Certain aspects of the rules that were applicable to the D Block have been cited as possible reasons for the absence of a satisfactory auction outcome. Among them was the possible forfeiture of the down payment amount if no mutually acceptable Network Sharing Agreement (NSA) is reached, the perception that the D Block's reserve price was set too high, and the claim that the PSST's intention to seek an annual spectrum lease payment drove potential bidders away. Let me be clear on these issues:

- (1) The PSST supports the elimination of a forfeiture penalty absent an FCC finding of bad faith. We did not seek a penalty to tip the negotiating balance in our favor and we have no desire to create undue risk for D Block bidders.
- (2) With regard to the reserve price, the PSST believes the focus should be on making long-term mission critical communications capabilities available to members of the public safety community Nation-wide. We realize that the public safety objective needs to be balanced with charging a fair price for the D Block spectrum, but we strongly support a mechanism for ensuring that the next auction does not fail, and that whatever reserve price is established for the D Block should reflect that most important public interest objective.
- (3) Now, it is a fact that the PSST needs a source of funding to fulfill its responsibilities. Any source of funding—so long as the amounts are adequate, committed and available on a timely basis—will do, whether Federal grant, lease payment or otherwise. What is not acceptable is that we are not provided the resources to discharge our responsibilities to the public safety community. Indeed, the PSST would welcome a Federal grant that would assist us in conducting the important work we are doing on behalf of the public safety community and the citizens we serve.

In conclusion, we in the public safety community wish to applaud the efforts of the Members of this subcommittee and of the Congress and of the FCC Commissioners and staff for their support of the public safety broadband network and the public safety/commercial partnership approach. We solicit your help and support in transforming FCC Chairman Kevin Martin's statement "My [D Block] proposal will help the Commission ensure that public safety keeps pace with the advances in communications and gives first responders the broadband capabilities they need to protect safety of life and property of the American public," into a reality. Commissioner Michael Copps echoed Chairman Martin's policy sentiments on this topic, supplying the sense of urgency as well: "The challenge is to make sure that this network actually works for public safety. To me, this means it is built to public safety standards and that its effectiveness cannot be curtailed by commercial decisions. We cannot—we simply cannot—fail."

We look forward to working with this subcommittee to make the public safety broadband network a reality in the near future. You can count on us for flexibility, focus on solutions and dedication to our one goal—an effective broadband communications network available to meet the needs of public safety in providing critical first responder services to our Nation.

Mr. CUELLAR. Thank you very much for your testimony.

I now recognize Mr. Carlson to summarize his statement for 5 minutes.

STATEMENT OF LE ROY T. CARLSON, JR., CHAIRMAN OF THE BOARD, U.S. CELLULAR

Mr. CARLSON. Thank you, Chairman Cuellar, Ranking Member Dent, Chairman Thompson, and the distinguished Members of the subcommittee for inviting me to appear here today. I am Ted Carlson, chairman of the board of the United States Cellular Corp.

Under a reasonable approach to the 700 MHz D Block, U.S. Cellular would be ready, willing and able to provide parts of the next-generation Nation-wide interoperable broadband network under a partnership of public safety agencies and commercial operators.

The Auction 73 rules were a barrier against bidding on the D Block license for our company and for many others. License areas based on States or existing public safety planning areas will help meet the goals of Congress and the FCC. U.S. Cellular today operates as part of a national interoperable network of networks.

We offer national service plans through roaming arrangements with other carriers, we coordinate call handoffs with many neighboring carriers, and our engineers participate in industry standard-setting bodies. We are prepared to play a significant role by operating part of a shared wireless broadband network meeting the needs of public safety for Nation-wide interoperable services.

Auction 73 showed that there is large unmet demand for 700 MHz spectrum. Future competition in broadband services depends on making the D Block available to a variety of commercial operators. In conjunction with partners, U.S. Cellular has been an active participant in recent spectrum auctions, yet with our own networks covering only about 15 percent of the Nation's population, a national license for the D Block was beyond our reach financially and operationally.

In the reaction of this spectrum, a national license would again be a bridge too far for us and for many other wireless operators. Instead, license areas corresponding to State boundaries, or the 55 public safety regional planning committee areas, offer a much better fit to our capabilities. The FCC's technical framework and the

network-sharing agreement will ensure that area licensees provide Nation-wide interoperability.

A common interface standard and Nation-wide technology platforms will coordinate and integrate the networks. Area licenses, we believe, offer several important advantages. First, they will draw the interest of many more operators. As shown in the 700 MHz auction held earlier this year, demand for smaller area licenses of the A and B blocks was far more intense and involved many diverse bidders compared to the mega regions of the C and D blocks. Greater demand for small area licenses will result in greater willingness of commercial operators to meet the network and service needs of public safety agencies, and will also result in more active bidding.

With smaller area licenses, operators already serving part of a license area can build on their existing network infrastructure and operations, making commercial opportunities to partner with public safety more attractive. Existing operators can also build on their current relationships with public safety agencies in such areas.

Second, smaller area licensees we believe will be more responsive to the varying needs of public safety agencies. State agencies and many public safety regional planning committees have been actively coordinating wireless services to their local public safety users for several years. Having licenses correspond to these existing public safety coordinators will promote effective uses of the newly available 700 MHz spectrum.

Third, with multiple operators building smaller area networks, network deployment will be faster and more extensive than under a Nation-wide licensee approach. More areas will be constructed simultaneously, as the financial strength of many operators is harnessed to get the job done.

Other advantages of area licenses include more innovation and services in operations, less risk from failure of a single operator, and more competition in commercial services. We believe that each smaller area license can be successfully auctioned. The auction rules must, however, not undermine bidders who prefer smaller area licenses. If the FCC offers a Nation-wide license as well as area licenses, the FCC's method for comparing bids in its rule on coverage requirements must not create a bias favoring a Nation-wide bidder.

We believe the area licensing approach is manageable. We have suggested a committee that would coordinate with the FCC and the Public Safety Spectrum Trust, a national committee of the licensees. Thank you for this opportunity to appear.

[The statement of Mr. Carlson follows:]

PREPARED STATEMENT OF LEROY T. CARLSON, JR.

SEPTEMBER 16, 2008

INTRODUCTION

I am Ted Carlson, chairman of the board of United States Cellular Corp. Under a reasonable approach to the 700 MHz D Block, U.S. Cellular would be ready, willing and able to provide parts of the next-generation Nation-wide, interoperable broadband wireless network under a partnership of public safety agencies and commercial operators. The Auction 73 rules were a barrier against bidding on the D Block license for our company and many others. We hope that the rules for re-auc-

tion of this spectrum will allow us to play a role in this important and challenging opportunity by providing fair bidding on area licenses. A network of area networks, with license areas based on States or existing public safety planning areas,¹ will help meet the goals of Congress and the FCC for this partnership with manageable roles for Government, public safety agencies and commercial operators.

U.S. Cellular is the sixth-largest mobile operator in the United States, serving over 6.2 million customers in urban, suburban, and rural markets in 26 States. We provide award-winning call quality as recognized in six consecutive J.D. Power awards. U.S. Cellular is proud to satisfy many public safety needs currently—hundreds of State and local public safety agencies subscribe to our services, we have deployed E911 service to over 1,000 PSAPs, and we participate in the Wireless AMBER Alerts Initiative. Also, U.S. Cellular operates as part of a national, interoperable network of networks—we offer national service plans through roaming arrangements with other carriers, we coordinate call handoffs with many neighboring carriers, and our engineers participate in industry standards bodies.

We are prepared to play a significant role by operating part of a shared wireless broadband network meeting the needs of public safety for Nation-wide, interoperable services. This approach to the D Block will serve the public interest. Competitive operators will efficiently use the D Block as well as excess capacity in the public safety spectrum. A shared network will benefit public safety agencies through economies in network infrastructure and operations, while providing added capacity in emergencies. Moreover, Auction 73 showed that there is large unmet demand for 700 MHz spectrum; future competition in broadband services depends on making the D Block available to a variety of commercial operators. Finally, while not a decisive factor, auctioning the D Block auction may yield substantial revenues to the U.S. Treasury.

In conjunction with partners, U.S. Cellular has been an active participant in recent spectrum auctions. Yet, with our own networks covering only about 15 percent of the Nation's population, a national license for the D Block was beyond our reach financially and operationally. In the re-auction of this spectrum, a national license or even one of the mega-regions would again be a "bridge too far" for us and many other wireless operators. Instead, license areas corresponding to State boundaries or the 55 public safety regional planning committee areas offer a much better fit to our capabilities and the public safety goals of the D Block.

AREA LICENSING FOR THE D BLOCK

The FCC's technical framework and the Network Sharing Agreement (NSA) will ensure that area licensees provide Nation-wide interoperability. A common air interface standard and Nation-wide technology platforms will coordinate and integrate the networks.

Area licenses will offer several important advantages. First, they will draw the interest of many more operators. As shown in the 700 MHz auction held earlier this year, demand for smaller area licenses of the A and B Blocks was far more intense, and involved many diverse bidders, compared to the mega-regions of the C and D Blocks. Greater demand for smaller area licenses will result in greater willingness of commercial operators to meet the network and service needs of public safety agencies, and will also result in more active bidding. With smaller area licenses, operators already serving part of a license area can build on their existing network infrastructure and operations, making the commercial opportunities to partner with public safety more attractive. Existing operators can also build on their current relationships with public safety agencies in such areas, making the partnerships more successful for all parties.

Second, smaller area licensees will be more responsive to the varying needs of public safety agencies. State agencies and many public safety regional planning committees have been actively coordinating wireless services to their local public safety users for several years. Having licenses correspond to these existing public safety coordinators will promote effective uses of the newly available 700 MHz spectrum for the public/commercial partnership.

Third, with multiple operators building smaller area networks, network deployment will be faster and more extensive than under a Nation-wide or mega-region licensee approach. More, and more diverse, areas will be constructed simultaneously as the financial strength of many operators is harnessed to get the job done. Other

¹For over two decades, the FCC has used 55 public safety regional planning committee areas to coordinate State and local public safety wireless communications, initially in the 800 MHz band and then also for 700 MHz narrowband spectrum.

advantages of area licenses include more innovation in services and operations, less risk from failure of a single operator, and more competition in commercial services.

U.S. Cellular believes that each smaller area license can be successfully auctioned. The A and B Blocks in Auction 73 attracted vigorous bidding, including for low-density areas, and there are carriers with existing networks and operations in each area that would be attracted to bid.

The auction rules must not undermine the benefits of having multiple operators by disadvantaging bidders who prefer smaller area licenses. If the FCC offers a Nation-wide license as well as area licenses, the FCC's method for comparing bids and its rules on coverage requirements must not create a bias favoring a Nation-wide bidder.

RULES TO MAKE THE AUCTION SUCCESSFUL

We believe the area licensing approach is manageable for the FCC, the Public Safety Broadband Licensee, public safety agencies and commercial operators. Regardless of the license size, a successful auction requires that technology specifications, performance obligations, spectrum lease payments, principles that would govern the future establishment of commercially reasonable rates for public safety users, and additional factors be disclosed to potential bidders before the auction.

The FCC's rules should address issues such as coverage, reliability, public safety preemption, back-up power, security, and major service features. These rules must be in a commercially reasonable range in order to attract commercial operators to the partnership. In particular, the standards for population coverage and reliability should be achieved over the license term, and the rules should allow reasonable differences in build-out and performance based on the population density of the various license areas. See the attached map showing four proposed tiers for population coverage based on density.

For the shared wireless broadband network, spectrum lease fees should help support public safety users. Commercial operators must be allowed to charge public safety users commercially reasonable rates. The competitive marketplace for wireless voice and data services has shown that public safety agencies do get commercially justifiable discounts when they make substantial commitments to use a network. On the other hand, forcing carriers to charge below-cost rates for public safety users would create incentives not to attract or satisfy these customers, and would create economic inefficiencies and controversies over who qualifies for these below-cost rates. Therefore, broad principles with regard to commercially reasonable rates must be adopted before the auction.

After the auction, each licensee would sign the NSA which would reflect the FCC's rules and principles, and would add any further terms and conditions that comply with the FCC's order. An area's public safety agencies and operator could discuss and agree on area-specific modifications to the NSA consistent with the national technical and service specifications. These modifications could reflect local priorities, operating conditions and service needs. Under no circumstances would modifications be allowed that would undermine Nation-wide interoperability.

A national committee of all area licensees, or NCAL, would elect a few national officers to work directly with the FCC and Public Safety Broadband Licensee in monitoring and, if needed, updating the NSA. This single point-of-contact with the licensees would facilitate maintenance of state-of-the-art standards for the network and services. Every licensee would be required to participate in and be governed by the decisions of the committee of licensees.

U.S. Cellular believes that this approach to re-auctioning the D Block is much more likely to succeed than either a national license or an RFP model. An RFP model would entail delays for use of this spectrum by public safety and commercial entities. RFPs would involve open-ended, hugely complex and detailed submissions, and time-consuming evaluations. Many potential operators would be deterred by the costs, uncertainty, and low transparency of an RFP model. An RFP approach may require legislation and generate litigation. The FCC's spectrum auctions have been widely praised as a huge advance over the comparative hearings of the first round of cellular licenses. The FCC should seek to improve on how it auctions the D Block, by adopting pre-auction specifications and smaller area licenses. The FCC should build on the clarity and speed of auctions and not return to the morass of RFPs and comparative hearings.

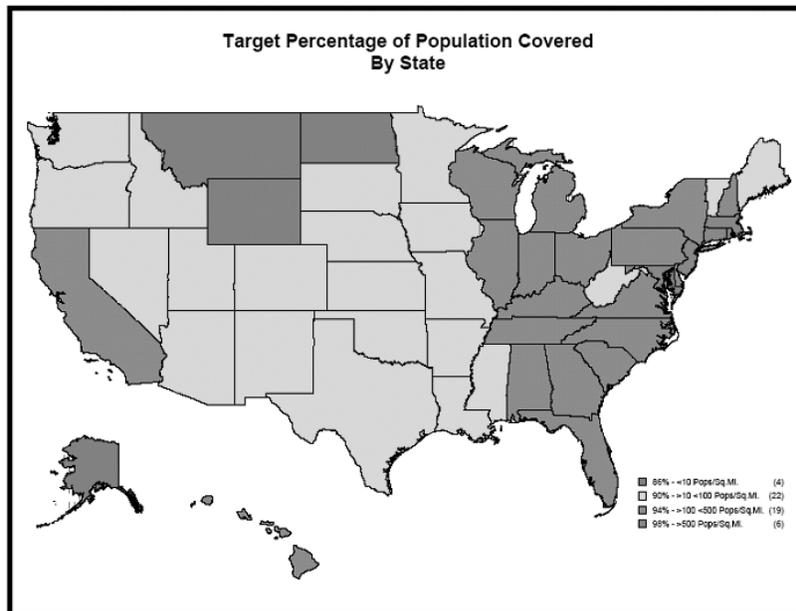
CONCLUSION

U.S. Cellular has advocated a solution to address many of the goals and issues of the public/commercial partnership for the 700 MHz D Block. Commercial operators should be able to use this spectrum to benefit commercial as well as public safe-

ty users. Smaller area licenses, ideally based on State boundaries or public safety regional planning committee areas, will help achieve a Nation-wide, interoperable network of networks that is sensitive to the needs of public safety. The auction rules should give smaller bidders a fair opportunity to win these area licenses, which will lead to a stronger shared broadband network.

The technical and service issues are manageable for the FCC, the Public Safety Broadband Licensee and commercial carriers. In order to attract commercial bidders, the FCC's rules must provide certainty before the auction on key network and service factors. Reasonable spectrum lease fees should help support public safety users of this network. By establishing broad principles for the rates charged to public safety users, the FCC can ensure that the NSA contains commercially reasonable rates and terms, including discounts reflecting public safety agencies' commitments to use the network. This approach will likely lead to a successful auction for licenses in all areas, followed by rapid deployment of a strong, interoperable shared wireless broadband network.

Thank you.



Mr. CUELLAR. Thank you, Mr. Carlson.

At this time I would like to recognize Mr. LeGrande to summarize his statement for 5 minutes.

**STATEMENT OF ROBERT LE GRANDE, II, FORMER CHIEF
TECHNOLOGY OFFICER, DISTRICT OF COLUMBIA**

Mr. LEGRANDE. Thank you, sir. Good afternoon, Mr. Chairman and Members of the subcommittee. My name is Robert LeGrande, and I am the former chief technology officer with the District of Columbia Government and former program executive for the National Capital Region's interoperability program. In this role, I led the District's land mobile radio network upgrade, and as a result the District of Columbia's first responders have one of the best interoperable land mobile communications systems in the country.

In addition, I also led the development of the Nation's first city-wide 700 MHz broadband wireless network for first responders.

This pilot network is considered a model for the Nation, and serves as a test bed for how applications can be shared securely among public safety agencies.

I recently resigned from the District of Columbia and formed LeGrande Technical and Social Services. My firm leverages lessons learned in the District to deliver similar high-quality technology solutions and services for governments and commercial clients throughout the country and abroad. In this role, I continue to support public safety in the development of the national 700 MHz broadband wireless network, and I appreciate the committee's ongoing efforts to address this critical issue.

Thank you for the opportunity present my views on "Interoperability in the Next Administration: Assessing the Derailed D Block Public Safety Auction." Given the complexity of this issue and the time allotted, I will keep my comments brief and focused on three key areas: What can we learn from what went wrong, what are we doing about it today, and what can we do today to ensure success tomorrow?

I have noted three lessons learned of what we can learn from what went wrong. First, as John mentioned earlier, we really need to fund the PSST. The job of figuring out how to solve America's most pressing communication problem by leveraging a complex public-private solution is hard enough. Trying to accomplish this while finding funding drains the PSST's resources and reduces their ability to focus on the real issue, which is public safety communications.

Second, we must as you said earlier, ma'am, you must also have a backup plan. Thirteen months have passed since the rules were set in place for the national network, and these rules prohibited States and local jurisdictions from deploying and operating their own 700 MHz networks using standard commercially available technologies. In other words, we put all of our eggs in one basket. As a result of the failed auction, we are in a worse place than we were 13 months ago. We are worse because of the need and the drive toward broadband communications for first responders has not stopped, and as a result, States and local jurisdictions are either deploying non-700 MHz networks or leveraging commercial networks. In other words, the eggs are leaving the basket.

Third, one size may not fit all. Several large jurisdictions, such as New York and others, have stated their desires to build and operate their own private 700 MHz broadband networks, which would seamlessly interoperate with the national or regional commercial networks.

Now, it appears that in the proposed forthcoming further notice for proposed rulemaking that this issue continues to be ignored. Now, I believe disregarding the views of cities and jurisdictions hardest hit by terrorists and national disasters is just simply not sound policy. What are we doing about it today?

Well, based largely on the reports, and I think we had heard some testimony earlier, it appears that we are offering the commercial market the same basic opportunity as we did before, with a few exceptions.

First, we will allow an option to do a regional commercial auction option, and continue to offer at the same time a national licensee

option. Second, we are lowering the reserve price. Third, we are lowering the public safety requirements.

Now, I am confident that someone can take advantage of this offer, but what will public safety get? In my view, public safety will either get a national commercial network or regional commercial networks. Either way, public safety users will likely pay \$48.50 per month per user for commercial services, with some public safety priority. Public safety will have given away \$2 billion of radio frequency spectrum and will get what we seemingly already have in return, which is a commercial network. We will have also disenfranchised several public safety customers who have already pledged to use different services. Worse, we would have divided the public safety marketplace among the commercial carriers.

There is a reason why I say that. Commercial carriers will likely make priority adjustments in their networks and continue to compete for that business. If they are successful, which likely they will be, the Nation's first responder communications will be split among the carriers. This is not win, win, win. This is win, win, lose.

Now, the FCC will win because it would have righted the wrong of the first auction. The commercial industry, however, will win because they found they were able to purchase some of the best available spectrum at market value or below market value. Public safety will lose because it didn't gain the full return off of its investment of \$2 billion of radio frequency spectrum.

Now, what can we do today to ensure success tomorrow? We should first fund the PSST. We should fund also State and local governments to deploy and operate networks using standardly available technologies in advance of the national and regional deployments. This will give immediate relief to jurisdictions who need to start today. In other words, we will be getting everyone all in the same swim lane, and swimming in the same direction.

This will also restart the public safety broadband technology device and applications marketplace. When the national regional network is prepared to deploy and operate in an early deployment jurisdiction, the jurisdiction should be compensated for its network assets and turn over operations to a national or regional licensee. This acts as a backup plan, which we mentioned we needed earlier in the event the second auction fails.

Three, we also are not ready for new rules. In last month's FCC's En Banc hearing, we had more questions than we had answers. We should take more time to comprehensively evaluate the best possible solution, leveraging the capabilities of investment from the Federal, State, and local government.

Now, one disturbing fact that keeps getting ignored is that the Federal Government is working on a completely separate communications solution. Now, during Katrina, the attacks of 9/11, and most recently the tragic hurricanes of this year, we deployed comprehensive Federal, State, and local responses. Shouldn't we empower our responders with a comprehensive communications system? We have the time to find a better way, and my recommendation is that we take it. Thank you for your time.

[The statement of Mr. LeGrande follows:]

PREPARED STATEMENT OF ROBERT LEGRANDE, II

SEPTEMBER 16, 2008

Good afternoon Mr. Chairman and Members of the subcommittee. My name is Robert LeGrande and I am the former Chief Technology Officer of the District of Columbia Government and former Program Executive for the National Capitol Region's Interoperability Program. In this role, I led the District's Land Mobile Radio (LMR) network upgrade and, as a result, the District of Columbia's First Responders have one of the best interoperable LMR communications systems in the country. In addition, I also led the development of the Nation's first city-wide 700 MHz broadband wireless network for first responders. This pilot network is considered a model for the Nation (http://www.ntia.doc.gov/ntiahome/press/2007/WARN_060807.html) and serves as a test bed for how applications can be shared securely among Public Safety agencies.

I recently resigned from the District of Columbia and formed LeGrande Technical and Social Services, LLC. My firm is leveraging lessons learned in the District to deliver similar high-quality technology solutions and services to Government and commercial clients throughout the country and abroad. In this role, I continue to support Public Safety in the development of the national 700 MHz broadband wireless network.

I appreciate the committee's ongoing efforts to address this critical issue and thank you for the opportunity to present my views on "Interoperability in the Next Administration: Assessing the Derailed D Block Public Safety Spectrum Auction". Given the complexity of this issue and time allotted, I will keep my comments brief and focused on three key areas: What can we learn from what went wrong, what we are doing about it today, and what can we do today to ensure success tomorrow?

WHAT CAN WE LEARN FROM WHAT WENT WRONG?

I have noted 3 lessons learned:

(1) *We must fund the PSST.*—The job of figuring out how to solve America's most pressing communication problem by leveraging a complex public/private solution is hard enough . . . Trying to accomplish this while finding funding drains the PSST's resources and reduces their ability to focus on the real issue: Public Safety Communications.

(2) *We must have a backup plan.*—Thirteen months have passed since the rules were set in place for the national network. These rules prohibited States and local jurisdictions from deploying and operating their own 700 MHz networks using standard commercially available technology. We "Put all of our eggs in one basket" (reference LeGrande Testimony 08-16-08 Attachment 1.0), and, as a result of the failed auction, we are in a worse place than we were 13 months ago. We are worse because the need and drive toward broadband communications for first responders has not stopped and, as a result, States and local jurisdictions are either deploying non-700 MHz broadband networks or leveraging commercial networks. "The eggs are leaving the basket".

(3) *One size may not fit all.*—Several large jurisdictions have stated their desires to build and operate a private 700 MHz broadband network which would be seamlessly interoperable with a national or regional commercial networks. It appears that in the forthcoming "Further Notice For Proposed Rule Making", this issue continues to be ignored. Disregarding the views of the cities and jurisdictions hit hardest by terrorist and natural disasters is not sound policy.

WHAT ARE WE DOING ABOUT IT TODAY?

Based largely on press reports, it appears that we are offering the commercial market the same basic opportunity with a few exceptions. (1) We will allow a regional commercial auction option and continue to offer a national licensee option. (2) We are lowering the reserve price. (3) We are lowering the Public Safety requirements. I'm confident someone will take advantage of this offer, but what will PS get? My view: PS will either get a new national commercial network or new regional commercial networks. Either way PS users will likely pay \$48.50 per user per month for commercial services with some PS priority. PS will have given \$2 billion radio frequency spectrum; and will get what we already have in return. We will have also disenfranchised several PS customers, who have already pledged to use different services, and, worse, we will have divided the PS marketplace among the commercial carriers. Carriers will likely make PS priority adjustments in their networks and continue to compete for PS business. If they are successful, the Nation's first responder's communications will be split among carriers. This is not win-win-

win, this is win-win-lose, the FCC will win because it has righted the wrong of the first auction; the commercial industry will win because it will have purchased some of the best available radio frequency spectrum well below the market value, and PS will lose because it did not gain a full return off of its investment of \$2 billion in radio frequency spectrum.

WHAT CAN WE DO TODAY TO ENSURE SUCCESS TOMORROW?

(1) We should fully fund the PSST. (2) We should fund and allow State and local governments to deploy and operate networks using standard commercially available technologies in advance of the national/regional network deployments. This will give immediate relief to the jurisdictions who need to start now; while keeping them all in the same “swim lane” and swimming in the same direction. This will also re-start the PS broadband technology marketplace, and thereby get us on the path to test and refine PS broadband wireless devices and applications. When the national or regional network is prepared to deploy and operate in that “early deployment” jurisdiction, the jurisdiction should be compensated for its network assets and turn over operations to the national or regional licensee. This also acts as a backup plan in the event that the second auction fails . . . (3) We are not ready for new rules . . . In last month’s “FCC En Banc” hearing, we had more questions than we had answers. We should take more time to comprehensively evaluate the best possible solution leveraging the full capabilities and investment from Federal, State and local governments, public safety associations as well as private industry. One disturbing fact that is being ignored is that the Federal Government is working on a completely separate communications solution.

During Katrina, the attacks of 9–11, and, most recently, the hurricanes of 2008; we deployed comprehensive Federal, State and local responses. Shouldn’t we empower the responders with a Comprehensive Communications System? We have time to find a better way, and we should take it.

In summary, I recommend that:

The FCC:

- Grant permission for early deployment operations;
- Ensure reimbursement to jurisdictions that deploy early once the national or regional licensee takes over operations;
- Establish an accelerated waiver process;
- Take more time to find a comprehensive win-win-win solution for the national/regional network.

The Congress:

- Fully fund the PSST;
- Provide funding to help jurisdictions finance early deployments.

The PSST:

- Grant permission for early deployment operations.

I sincerely appreciate the opportunity to share my recommendations and the committee’s continued work on addressing this issue. I’m happy to answer any questions you may have. Thank you.



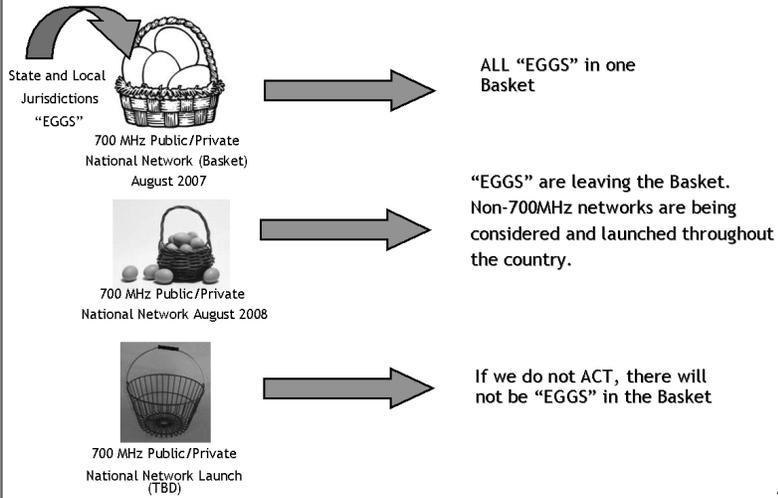
STATEMENT OF ROBERT LEGRANDE, II
PRESIDENT AND CEO OF
LeGRANDE TECHNICAL AND SOCIAL SERVICES, LLC
BEFORE THE
UNITED STATES HOUSE COMMITTEE ON HOMELAND SECURITY'S
SUBCOMMITTEE ON EMERGENCY COMMUNICATIONS,
PREPAREDNESS, AND RESPONSE
HEARING ON
"INTEROPERABILITY IN THE NEXT ADMINISTRATION: ASSESSING
THE DERAILED 700MHZ D-BLOCK PUBLIC SAFTEY SPECTRUM
AUCTION"

LeGrande Testimony 08-16-08
Attachment 1.0

1



**National Public Safety Broadband Communications:
"EGGS" are leaving the "BASKET"**



2

Early deployments will keep the eggs in the basket and driving towards the same goal

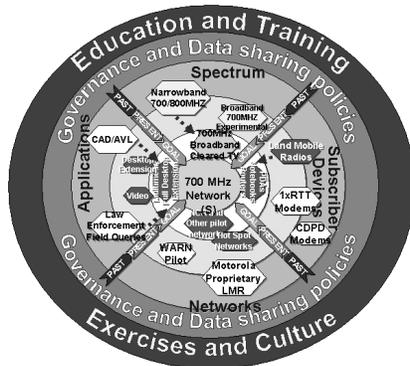


Benefits of Early Deployments

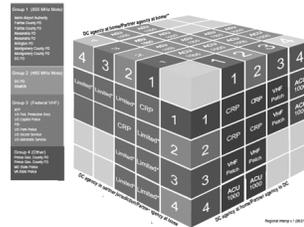
- > Creates real environments for the development of Governance, data sharing strategies, policies, requirements and procedures
- > Drives integration between LMR and Broadband
- > Ignites the PS 700 MHz broadband device marketplace
- > Allows for the maturing of existing applications for a broadband wireless world
- > Drives the development of data integration platforms
- > Provides an environment which the PSST will be able to derive and refine public safety network operation procedures and processes in advance of the national network
- > Acts as a back-up plan that can be leveraged if the public/private national network plans fail
- > Better protects our citizens...

The PS Spectrum should not sit idle while the national network details are worked out and 4G technology is developed (02/12)

National Public Safety Broadband Communications: If we do not keep our "EGGS" in the "BASKET"



Land Mobile Radio Interoperability Cube



- Many States and Local Governments will choose non-700MHz broadband solutions or competing Commercial Services
- We will NOT become interoperable at the device level
- We will NOT become interoperable at the data layer

➔ **WE WILL NOT BE INTEROPERABLE**

What we should do while we figure out what to do about the National Network



The FCC should:

- Grant permission for early deployment operations.
- Ensure reimbursement to jurisdictions that deploy early once the National/Regional Licensee takes over operations.
- Establish an accelerated waiver process.

Congress should:

- Provide funding to help jurisdictions finance early deployments.

The PSST should:

- Grant permission for early deployment operations.

These steps ensure that Jurisdictions will have the best available communications for first responders and Government operations far earlier and in the event that the Public/Private and the Federal funding opportunities fail, Jurisdictions are assured of reliable, private, and secure communications starting now.

Let's get in the same "Swim-Lane" and all swim in the same direction 5



LeGrande Technical and Social Services, LLC
INNOVATION THROUGH INTEGRATION AND INTEROPERABLE COMMUNICATIONS

LEGTSS is a small, minority owned business that specializes in advanced data and communications integration solutions for both government and commercial clients. Our unique team has extensive experience in solving some of America's most pressing issues, such as First responder communications interoperability, large scale Homeland Security application implementation and data integration. Members of the LEGTSS team led the District of Columbia's Land Mobile Radio (LMR) network upgrade and as a result the District's First Responders have one of the best interoperable communications systems in the country.

These advancements also led to the development of the nation's first city-wide broadband wireless network for first responders. This pilot network serves as a test bed for how applications can be shared securely among public safety agencies and provides insight to key requirements and operational issues regarding broadband technology. Cited by the Department of Commerce as a Model for the nation, LEGTSS is one of only a few companies in the country with the proven regulatory, governance and technical experience to solve America's public safety LMR and Broadband communications challenges.

The District's Wireless network is a model for the Nation
http://www.ntia.doc.gov/ntiahome/press/2007/WARN_090807.htm

STAFFING CAPABILITIES
 LEGTSS provides the following types of IT and business staffing services:

- Program and project solutions delivery
- Contract Staffing
- Temporary to Permanent Staffing
- Permanent Placements – Direct Hire

PORTFOLIO OF SERVICES
 We provide a spectrum of IT and Governmental services which fall within the following key service areas:

SERVICES SUMMARY	
Congressional and Regulatory, Technical advisors	Homeland Security Applications Development and Integration
Governance and operational process development	Interoperable communications solutions

LEGTSS, Inc
 2579 Venture Drive, Alexandria, VA 22315 Phone: (703) 344-1819
 Email: rlgrande@legts.com



Mr. CUELLAR. Thank you for your testimony, Mr. LeGrande. At this time I would like to recognize Chief Dowd for his 5 minutes, to summarize his statements in 5 minutes.

**STATEMENT OF CHARLES F. DOWD, DEPUTY CHIEF, CITY OF
NEW YORK, POLICE DEPARTMENT**

Mr. DOWD. Good morning, Mr. Chairman. Good to see you again, and Members of the committee. In listening to the testimony today, and I am going to leave my prepared statement, one of the things that glaringly has been left out here is the fact that the FCC already has an unfunded mandate out there for every public safety entity or agency in this country to retool their radio systems for spectrum efficiency, most commonly referred to as narrow banding. So when you hear comments about, you know, where is public safety and where is everybody going to get the funding, well, they have already been required to do that by the FCC on the voice side of things.

They have to narrow band their systems or find a spectrally efficient voice solution, mission-critical voice solution, in order to meet that requirement that the FCC has mandated, by 2013. Rather than doing that, what New York City and every other major city in the country so far—and by the way, we had a conference call yesterday with just about every other major city—I could list them for you if you want—believes that the solution for both things here, for the data and for voice is a broadband network. But it needs to be a network of networks.

Now, David Boyd is right when he says, you know, the legacy systems are not going to go away right away, and you need to address interoperability concerns. But if you want to be truly interoperable, the solution is a network of networks on the same technology, which we believe is broadband, and every other major city agrees with us, for both data and mission-critical voice.

So at the end of the day, when you hear comments like, you know, they can't fund it, where is the little guy going to get the money, the little guy has to get the money now. They have to narrow band now. So why invest that money in antiquated technology when we should be looking toward broadband technology for a full solution?

The national model, in our view, will not work. When I say in our view, I am not talking about New York City or the NYPD, I am talking about every major city that we have had a conversation with. We don't think, based on the experience of New York State, which just defaulted a major manufacturer on a State-wide system, that even a State-wide solution from the top down will work. This needs to be done from the bottom up. You have to get buy-in from public safety that these systems will be reliable and will provide the kind of coverage that they need.

We predicted in testimony in front of the FCC back in July that one of the ways that it would be proposed to make this more palatable to attract commercial entities would be reduction in coverage requirements. You know, as Derek Poarch pointed out—who I consider a very good friend and very sincere in his testimony today—he discussed the fact that you never know where that problem is going to be. You know, where did that hurricane hit? Was it going to hit in Louisiana, or did it hit Texas like it did a couple of days ago?

So at the end of the day, you need coverage that is public safety-appropriate, not commercial-appropriate. So the notion that rural

areas would need less coverage than urban areas just does not make sense from a public safety perspective. Why would we want to do that? The answer is nobody wants to do that that I have spoken to.

There are concerns. I know APCO is deeply concerned that, you know, the little guys would get hurt in this scenario. What we are suggesting as a public safety solution in broadband, the little guy makes out at least as well as the big cities. If that spectrum is allotted to us directly, that would allow us or any other public safety entity to negotiate directly, if we decided to, to make a public-private partnership, if that is what you wanted to do. If you wanted to build your own system, you could. If you wanted a hybrid of it, you could do that.

But to say, as some have in recent weeks, that, you know, the smaller agencies, public safety agencies would get hurt under the scenario that New York City and all the other major cities are proposing is just not the case. So at the end of the day, what we are asking is let's not rush into another auction to give away the best opportunity for public safety that has come along in a long time from a spectrum perspective. You have this spectrum across the country now that is available to public safety which would allow us to be interoperable at the front end.

In other words, police officers or firefighters from New York City say responding now to Texas in this scenario would be able to take their devices and be interoperable on a broadband network over time. The 15-year timeline, too long. You know, we have already built a system in New York City. We would like to use that spectrum. What we are proposing this week to the FCC is that the NYPD and the city of New York be allowed to use the 700 MHz system to make a proof-of-concept pilot project to build mission-critical voice on broadband.

I thank you for your time, and would be happy to answer any questions you my might have.

[The statement of Mr. Dowd follows:]

PREPARED STATEMENT OF CHARLES F. DOWD

SEPTEMBER 16, 2008

Good morning Chairman Thompson and Members of the committee. I am Deputy Chief Charles F. Dowd of the New York City Police Department and the Commanding Officer of the Communications Division. My command includes responsibility for New York City 911 as well as the police department's radio operations, which is the largest public safety radio system in our Nation. On behalf of Police Commissioner Raymond W. Kelly and Mayor Michael R. Bloomberg, I would like to thank you for the opportunity to appear before you today to discuss the 700 MHz. D Block auction, and the importance of the Federal Communications Commission's actions going forward.

The City of New York and the metropolitan area public safety agencies have struggled with spectrum shortages, technology issues and interference problems for over 30 years. Public safety agencies are still facing daunting technology challenges as they strive to meet the FCC's mandate requiring spectral efficiency. The efforts to encourage public safety to use their limited spectrum more efficiently have forced us onto a highway that only leads to limited features and functionality and to technology that is unproven in a complex environment. Public safety has always been asked to do more with less while commercial wireless carriers have been encouraged to develop feature rich systems using large blocks of clear spectrum.

For different reasons, the commercial wireless industry and the FCC share the common goal of spectrum efficiency. However, the pursuit of that goal has led the FCC and the commercial wireless industry in opposite directions. Whereas the FCC

has mandated a narrowband approach, the commercial wireless industry has embraced broadband technology. We believe that the broadband approach to spectrum efficiency is the correct approach particularly in an integrated voice and data network.

Since public safety is adopting broadband technology for critical data communications, the next logical step is to develop mission-critical voice capability on the same technology platform. This is the technology that the wireless industry has embraced. It makes sense to merge voice and data communications onto a single robust public safety network rather than to maintain two separate networks, one for mission-critical voice and another for broadband data. It is neither fiscally responsible nor technically feasible to continue in the current direction, we will not be able to stimulate the development of this technology if the spectrum is not made available to public safety for this purpose.

Converging voice and data applications onto a single technology platform in 700 MHz will also allow for greater flexibility and will be inherently interoperable in much the same manner as today's ubiquitous cell phone. Public safety should embrace new technology once it has been proven to meet public safety's stringent requirements, then drive equipment manufacturers to build feature rich devices that take advantage of the economies of scale enjoyed by the commercial wireless industry. This outcome can best be achieved by licensing the 700 MHz spectrum on a regional basis, and providing local jurisdictions with the necessary control to determine the appropriate level of public/private partnership that meets their local needs.

The NYPD prefers a regional direct licensing approach of the 700 MHz spectrum to allow early deployment of systems in regions that are prepared to move. This encourages the development of regional systems using common technology to build a Nation-wide network of networks. Indeed, if the NYPD is not granted the flexibility and control to deploy new technologies in the public safety 700 MHz in the city of New York, this spectrum will be unavailable for public safety when the DTV transition is complete in February 2009. Even if the FCC's proposed public private partnership auction plan is successful—and there is significant uncertainty on this point given the failure of the last auction to generate even a single qualifying bid—it is unlikely that the commercial partner would be prepared to provide services to public safety before 2012 at the earliest. Moreover, as I testified before the FCC at its hearing in New York City, even if this network were built it is unlikely that the NYPD would use the shared network because it would not provide us with the mission-critical level of service fundamentally necessary for first responders.

In the most recent NPRM reply comments from the PSST, they have proposed reducing the system design and priority access requirements to make the D Block spectrum more palatable to the commercial wireless industry. Public safety can not allow that to happen. Weakening of the standards, priority or coverage requirements will only serve to drive Public Safety away from the system altogether. Public Safety needs to maintain its more stringent requirements which cops and firefighters need and will expect.

If local jurisdictions are not granted direct access to 700 MHz, to deploy systems now, a unique opportunity to advance public safety communications will be lost. Rather than utilizing this spectrum in February 2009, public safety agencies will be required to wait for some uncertain date many years in the future before they can even evaluate whether the proposed service meets their needs. Seven years after 9/11, imposing this delay on jurisdictions that are ready to move now is simply unacceptable.

It is important to stress that New York is not the only jurisdiction desiring additional control and flexibility to define the terms of the public-private partnership in its own geography. The cities of San Francisco, Philadelphia, and Washington, DC all filed comments with the FCC seeking a greater degree of local control. Recently many other city and State public safety technology officials from around the country have voiced the same concerns to us regarding the FCC's proposal. Further, we have asked APCO International to assist us to engage this growing group in order to ensure that every public safety voice, large or small is heard on this critical issue. It is important to recognize that local control does not preclude broader public-private partnerships in jurisdictions that would benefit from a relationship with a commercial provider. Such an arrangement will be particularly advantageous in jurisdictions where there is less public safety demand for spectrum. Regional licensing with local control will also enable public safety agencies to migrate their networks onto a single converged voice and data communications network at their own pace. As different regions build out next generation wireless networks capable of supporting both broadband data and mission critical voice, public safety agencies will benefit

from a single communications network that can be accessed using a low cost handset.

To this end, New York City is proposing to conduct a proof of concept using 20 MHz of 700 MHz spectrum to determine the viability of next generation wireless technology for mission critical voice broadband communications. The goal will be to demonstrate the feasibility of a converged broadband mission critical voice and data network for first responders. If successful, the results of this effort could easily be applied to other jurisdictions throughout the Nation. To do so we need regulatory certainty that the public safety 700 MHz spectrum in the city of New York will not be encumbered by commercial carriers. We will be seeking this regulatory certainty from the FCC, and ask the support of this committee for this relief. Thank you for this opportunity to address these important issues, I will be pleased to answer any questions that you may have.

Mr. CUELLAR. Thank you, Chief. Again, good seeing you again.

First of all, I want to thank all the witnesses for their testimony. I would like to remind each Member that he or she will have 5 minutes to question the panel. I will now recognize myself for questions. We have had two panels, and I think you all heard from Mr. Poarch and Mr. Essid and Dr. Boyd.

What I would like to do is now, because for some of you all it might be the only time you have an opportunity to ask questions, I would like for each of you all to give me a question that you would want to pose to one of the gentlemen that I mentioned, either a question or an input. I do this, that you would all be directing the questions to us, and I would ask you to do this so we can have an opportunity, so you can have an opportunity to give some input or ask questions. For the three gentlemen, again I would ask you all or your staff to take some notes, and hopefully follow up on what the gentlemen will be asking.

Chief, I will start off with you because I think you kind of did what I was planning to do. I will start off with you. Do you want to add anything else to Mr. Poarch or any of the gentlemen? I heard you give some of your suggestions, but I will ask each of you all to either give me questions to pose to them or input.

Mr. DOWD. Well, again our belief—again, when I say “us,” you know, I am not talking about New York City, I am talking about a broad range of major public safety agencies and technology persons around the country. We believe that broadband technology is where all the technology is going. We don’t see it as, you know, needing to maintain, over time, the narrow band legacy radio systems. We believe that mission-critical voice can be done in broadband. We think it can be done and proved out in a relatively short time. That is what we are saying.

So at the end of the day, what we are saying is let’s not rush into this auction. Let’s take a big step back and let’s listen to the public safety voices that are out there that are voicing concerns over giving over, you know, this huge chunk of spectrum to commercial entities that, in our experience, really don’t get or understand what the public safety requirements are.

Don’t forget, you know, when we talk about coverage, you know, in existing radio systems, you know, the expectation is that you would get coverage wherever those police or firefighters would have to operate, not in 90 percent. Over time, we believe that the data side of things, streaming video, photos, those things will become as important to public safety first responders in their initial response as any mission-critical voice will.

Mr. CUELLAR. Are you saying that the Public Safety Trust doesn't speak on behalf of all the folks in your position?

Mr. DOWD. Well, I would suggest to you that—or just state the fact, as I already did that, you know, every major city kind of disagrees with the approach. So if every major city disagrees with the approach, you know, I guess the question would be who are they talking to?

Mr. CUELLAR. All right. On that note, Mr. LeGrande.

Mr. LEGRANDE. I would say first a statement and then kind of a question.

Mr. DICKS. Sound.

Mr. LEGRANDE. I did that again. I apologize. First a statement and then a question. I think everyone is working really hard to find a solution. But I think also that we are so focused on a successful auction that we may be forgetting that after that auction we need to make sure that we have a solution, and a solution that will satisfy major cities and the rural areas, and that we can depend on for the next generation. Because frankly, that is what we are talking about, a generational thing.

So my point that I would make is that within the folks in this room, and certainly at the FCC and those who are watching on-line, there are other alternatives to the one that is currently being proposed. My question would be: Can we take a step back, as the Chief has asked, and let's get together and let's try to find the solution that is win, win, win?

I think leveraging the commercial industry is the right answer. If you put all of the stuff together, all of the various equipment that exists right now, all the public safety equipment that exists now, we have already built out a network, quite frankly, four times over throughout the entire country. Now we are saying let's put a new network on top of that. I think the opportunity exists for us to rethink that and come up with a better proposal.

Mr. CUELLAR. Thank you. Mr. Carlson.

Mr. CARLSON. Yes. I think my comment would be this: that the Nation has waited since 9/11, all these years, to get a Nation-wide interoperable system started and moved forward. It has been my view that the FCC is very serious about moving this forward. We have done our best to provide detailed recommendations to them to help the process move forward with a common technology platform. We have recommended LTE because we think that will give public safety agencies low-cost equipment that can be used for big and small cities, small towns across the country.

Our recommendation has recommended a buildout that would cover all towns down to 3,000 in size and major highways across the country. We think it is time to get on with building this network. The time has passed for talking about it. The time is now.

Mr. CUELLAR. But it would be 7 years from 9/11 plus another 15, we are talking about 22 years since 9/11?

Mr. CARLSON. We, with all due respect to the FCC, we recommended that the network be completed in 10 years rather than 15.

Mr. CUELLAR. Okay. Next question or input.

Mr. CONTESTABILE. I think from the PSST perspective, we have two overarching issues or concerns, if you will. Our desire is that

we see Nation-wide interoperability. Whether that can be done under a Nation-wide license or whether that can be done under a series of regional licenses with the same technology, I am not sure it matters greatly to us, frankly.

We also would echo Mr. Carlson's comments that we would like to see an aggressive schedule. We think that we need to roll this out certainly to the urbanized areas, where the infrastructure lies, but also to the more rural areas as quickly as we can. So some incentives or ways to encourage that would be welcomed in our view.

The third point I would like to make and I mentioned earlier, is to ensure the PSST has the funds to do its job. We have been asked by the FCC to fulfill certain functions. There are about 10 activities in the original rule that the PSST has to fulfill in terms of approving equipment, improving applications that are going to run on this network, educating the first responders as to what is out there and what is available to them. We need some funding to do that work. So, taking care of that.

Last, I would mention that Chris Essid, a friend of mine as well, that I think one of the implications from this discussion is that future iterations of the State-wide plans, the SCIP plans need to consider how they will be interoperable with this national network. I think it is a little unfair perhaps to lay that at their feet at this juncture, not knowing what technology and not knowing what the architecture of that system is. But subsequent updates to the State-wide plans ought to be looking at how to be interoperable in that space. Thank you.

Mr. CUELLAR. All right. Thank you. Mr. Mirgon.

Mr. MIRGON. You know, I sit here kind of amazed at—I mean, some really bright people sitting in this room. I mean some of the best in the Nation. There is so much said—

Mr. CUELLAR. This includes the Members on this side also, right?

Mr. MIRGON. Absolutely. Absolutely.

Mr. CUELLAR. All right. Go ahead.

Mr. MIRGON. There is so much they say that I agree with. Before APCO does its next filing on any further comments, we will be meeting with more of our members. We have got commitments out there to talk to them to make sure we represent our 16,000 members fairly and equally.

But with that said, I keep falling back on the one single fallacy I believe, with some of this debate is, you know, APCO's been here for 75 years. We were started on the basis of interoperability issues. We understood this problem, you know, many times throughout our history. We attempted to create a standard for radio technology called P 25 because we saw the problem developing.

What happened was—the part that we are forgetting here is that manufacturers come up with proprietary equipment and say here, buy my widget. We don't like the P 25, buy mine. The next thing you know you have got jurisdictions buying products that don't talk to each other. As much as I believe if the major cities can get together and establish the right protocol, there is clearly some interesting dialog to go on as to how you get there. But our experience tells us that there are too many people who want it my way, that there will be engineers within local jurisdictions that will sit there

and say, gee, I like this guy's product better. It doesn't talk to this person over here, but I don't really need them.

You know, as time and hurricanes and 9/11 gets behind us, people tend to forget it. This is about protecting America, about protecting it in an all-risk environment, from terrorism, from hurricane, and from all the rest. We need to look at how we make this equal and usable across America; that when that policeman is driving from New York City to Houston that he has got coverage in between. I will tell you, I will take you to sites in New York City and Washington, DC that will put to shame some of the cellular companies' technology on how well they are built, how hardened they are. I will also take you to places in America that public safety people in America are mounting stuff on telephone poles, trees, and wouldn't withstand a strong wind. So I believe the approach we have taken is the best for America to develop this, based on our long history of trying other things and they just haven't worked. Thank you.

Mr. CUELLAR. Thank you, Mr. Mirgon.

At this time I will recognize the Ranking Member, Mr. Dent, from the State of Pennsylvania.

Mr. DENT. Thank you, Mr. Chairman.

Mr. LeGrande and Mr. Carlson, my question is directed to you. What are your thoughts regarding the concerns voiced by the New York City Police Department, Deputy Chief Dowd, regarding the spectrum auction and the eventual development of the network? Based on your work in the field, what approach to the next auction do you believe will result in the best outcome for public safety communications? I'm really interested to hear from Mr. Carlson and Mr. LeGrande.

Mr. LEGRANDE. First, the goals are the right goals, national interoperability. Really what we are talking about is how best to get there. So having built out a 700 MHz network, or at least led the building of a 700 MHz network here in the District, I think the way to approach this is in two ways.

First, I believe we should start now, not in a year-and-a-half after we have auctioned. I think we can start with early deployments now. As a result of the early deployments in places like New York and other areas, that will get us all focused on achieving that goal because guess what, the technology is not the question, because the technology is already built today that we can migrate to if we want to go to LT or anything else. So I think that is an important thing.

I think also when you have such divergent needs, meaning major cities need to control or have actually a financial incentive to control their networks, and you say rural areas don't have as much of an incentive, I think that there are opportunities and potential proposals that would bring those two things together that would allow carveouts for major cities, and at the same time allow for the network to be built for the rural areas. The good news is the technology, as long as we stay on the standard technology, it will all work together.

Mr. DENT. Mr. Carlson.

Mr. CARLSON. I would anticipate that in an auction that is conducted on a regional area basis that the license for New York City

would most likely be won by one of the two largest national operators, either AT&T or Verizon. It would be my anticipation that one of those operators, whoever was the winner, would do their level best to work with Chief Dowd to create a network that could be integrated with his existing network. If there were a need for some reason to delay the build in a big city like New York, that there could be, you know, a prior build by the New York City agency itself that then could be contributed to a subsequent build, down the road, by one of those national carriers. I think that can be made to work.

Mr. DENT. At this time I would like to yield back the balance of my time to the Chairman.

Mr. CUELLAR. Thank you, Mr. Dent. At this time, so we can have each Member ask at least one question, recognize Mr. Dicks from the State of Washington and then Ms. Lowey, and then we will conclude the meeting.

Mr. DICKS. Chief, you talked about an unfunded mandate here. You think Congress should put up the money for this? Where should the funding come from? Does there need to be a national program authorized and money funded through the—

Mr. DOWD. What I am talking about is that there is already existing and it has been out there for years a requirement and it still stands with the FCC for public safety spectrum to be especially more efficient. So they already have the obligation to spend the money, which is not being mentioned. That is out there. What we are suggesting is that rather than spend it on old technology, that the funds that you would have had to spend anyway should be focused on the new technology, and that is broadband. Clearly that is where, you know, nationally and internationally, that is where the technology is going. So why continue down a road of requiring public safety entities to build one type of system for voice and then however this shakes out you are going to have a broadband system built by whoever for everything else? It doesn't make any sense.

Mr. DICKS. Because you could do both, both voice and data.

Mr. DOWD. That is what we are proposing. You know, to us and to every other major city that has looked at this, you know, that has the technology people to look at this kind of thing and because they have those resources, that is what they are looking at. Look, the FCC years ago looked to be more efficient in spectrum and broadband didn't exist. So they did the next best thing. They tried to suggest that narrow banding, cutting, continuing to cut thinner slices of spectrum in order to get more into the spectrum was the way to go. They were probably right 10 or 15 years ago, but not today. So there needs to be some real thought on this, and what technology—

Mr. DICKS. Is the problem at the FCC with what they are proposing? Is that where the problem is?

Mr. DOWD. Look, the FCC has done a wonderful thing by clearing the spectrum because you know you now have public safety spectrum across the country that we can use. The problem is, we don't believe—and neither do any of the major cities—that the commercial entity will build a network to the types of requirements that we have. So when you view that—and what I would point to as a good indicator of that, I think part of the reason the first auc-

tion failed was because there was such a high public safety requirement for coverage. So what has happened now—and again, I think I mentioned earlier that what we have predicted is that they would reduce that for the second auction, which is we think a very wrong thing to do. You know—and how you would have different standards for rural versus urban as far as coverage is a little confusing to me. Only to the fact that you never know when an emergency is going to happen.

Now you know from a terrorist perspective, obviously New York and other major cities are the big targets. But you know a hurricane doesn't discriminate that way. So you have to look at this from the perspective of, you know, the little people, the little agencies need the same type of coverage that the big cities would. I just don't see—you know and from the comments we have had, I don't see major cities buying into a commercial network.

Mr. DICKS. So you think trying to put the commercial and the public safety together, it should all be public safety, is that what you are really saying?

Mr. DOWD. You can do the whole solution in broadband on that public safety spectrum. Now that is going to take time. So when David Boyd—and he has done tremendous work on interoperability—when he talks about multi-band radios, for now, you know those are necessary things. But hopefully as we progress, they would become less and less necessary, if not unnecessary, in that, you know, you just don't want to be connecting systems at the back end to be interoperable. You want to be interoperable at the front end.

Mr. DICKS. Let me yield back.

Mr. CUELLAR. Thank you. A minute-and-a-half for questions and answers and then we will close up.

Mrs. LOWEY. Chief Dowd, just to clarify. So if the FCC were to go forward with the process that created a national network, No. 1, how would this impact New York City? How much has the city spent and committed to the wireless data network and the 2 gigahertz band?

Mr. DOWD. The 2.5. The city has already committed \$500 million to that. By the way, we are paying for the use of that spectrum that the City of New York uses on that system. What we are saying is, you know, for a public safety system, you know, we would like to use our spectrum, which is the 700 MHz spectrum. The comment was just made, well, you know, in New York City, whoever wins it there could then negotiate with the city and make them happy. Well, we are already happy. We are building our own system. How about giving us our spectrum, you know, and let us decide whether we want to partner with somebody. I think that is the model that the FCC would be more prudent to follow. Now that I built a system, why do I want to pay someone to let me use my spectrum? I don't understand why public safety would want to do that.

Mrs. LOWEY. I get it. I just want it on the record. Since we all have to go vote, thank you. Thank you all for appearing before us. Thank you, Mr. Chairman.

Mr. CUELLAR. Again, I want to thank all of the witnesses for being here today. I would ask you all to spend a little bit of time

with the other witnesses and spread some wisdom to each other. I want to thank all of you all for being here.

Members of the subcommittee may have additional questions, and we ask those questions in writing. Please respond as soon as possible.

Hearing no further business, the hearing is adjourned. Thank you very much.

[Whereupon, at 12:10 p.m., the subcommittee was adjourned.]

APPENDIX

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR DEREK K. POARCH,
CHIEF, PUBLIC SAFETY AND HOMELAND SECURITY BUREAU, FEDERAL COMMUNICA-
TIONS COMMISSION

Question 1. The initial auction of the D Block in the 700 MHz band was perceived to have failed due to the lack of clarity concerning the requirements and standards of the public safety community. Some have singled out the Public Safety Spectrum Trust (PSST) for failing to represent the public safety community with one voice and sending mixed signals during the auction proceedings. As you know from the organization of the PSST board, public safety entities are understandably protective of their spectrum.

Please detail with some specificity what the FCC has done and is doing to encourage more transparency by the PSST.

Answer. In the Commission's recently adopted Third Further Notice of Proposed Rulemaking (Third Further Notice), the Commission proposed "significant steps to insulate the Public Safety Broadband Licensee from undue commercial influence, and additional reporting and auditing requirements to provide greater oversight of the Public Safety Broadband Licensee's activities."¹ Specifically concerning the steps the FCC is taking to encourage more transparency by the PSST, the FCC proposed:

- With respect to funding of the PSST's administrative and operational expenses, the FCC found merit in:

"ensuring that the administrative and operating expenses of the Public Safety Broadband Licensee are finely tuned to its core mission and fully transparent to key stakeholders," and tentatively concluded that the PSST, as the Public Safety Broadband Licensee, "shall establish an annual budget and submit this budget to the Chief, [Wireless Telecommunications Bureau] and Chief, [Public Safety and Homeland Security Bureau], on delegated authority, for approval."² The Commission added that "the proposed annual budget to be submitted by the Public Safety Broadband Licensee would enable the Commission to ensure that the Public Safety Broadband Licensee is acting in a fiscally responsible manner and not engaging in activities that exceed the scope of its prescribed roles and responsibilities. The Public Safety Broadband Licensee already is required to submit a full financial accounting on a quarterly basis, which helps serve the same purpose. As an additional measure, the PSBL also would need to have an annual audit conducted by an independent auditor. In addition, we are proposing to provide that the Commission reserves the right, as delegated to the Chief, PSHSB, to request an audit of the Public Safety Broadband Licensee's expenses at any time."³

- Concerning the PSST's organizational structure, the FCC agreed with comments submitted in the record that it should revise the PSST's:

"organizational structure to enhance the Public Safety Broadband Licensee's operational efficiency and transparency."⁴ The Commission stated that "[i]n light of the unique representative nature of the license, which the Public Safety Broadband Licensee holds on behalf of those public safety entities eligible to utilize this spectrum, the public interest favors any changes to the Public Safety Broadband Licensee's organizational structure that will better ensure that its

¹Service Rules for the 698–746, 747–762 and 777–792 MHz Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, WT Docket No. 06–150, PS Docket No. 06–229, *Third Further Notice of Proposed Rulemaking*, FCC 08–230 (rel. Sept. 25, 2008), ¶1346.

²*Id.* at ¶359.

³*Id.* (citation omitted).

⁴*Id.* at ¶407.

actions reflect due consideration of the broad panoply of public safety interests it represents. We also consider it important to hold the PSBL to a standard of transparency that will ensure that its obligations are met in a manner that instills public confidence in both the process and the outcome of its actions. We believe improvements in these areas can be achieved with a few modifications to the Public Safety Broadband Licensee’s current organizational structure, along with other modifications we are proposing with respect to the Public Safety Broadband Licensee’s Board’s meeting and voting requirements.”⁵

Among the measures proposed by the Commission, it agreed that:

“the position of Chairman of the PSBL board of directors should be separated from the position of Chief Executive Officer (CEO) because of the very different responsibilities of the two positions.”⁶ Thus, the Commission tentatively concluded that “the Public Safety Broadband Licensee’s positions of Chairman of the Board and Chief Executive Officer must be filled by separate individuals,” noting that “[s]eparating these positions would allow for a discrete focus on two very different responsibilities, and thus increased efficiency.”⁷ The Commission also proposed “to require the PSST board to elect a new executive committee—i.e., the PSST must elect a new Chairman, Vice-Chairman, and Secretary/Treasurer within 30 days of adoption of an Order issuing final rules in this proceeding” and that “these executive committee members: (i) must be limited to a term of 2 years; and (ii) may not serve consecutive terms in the same position.”⁸ The FCC further proposed “that no current executive committee member may be re-elected to the same position on the committee” and to “prohibit the PSBL from expanding its executive committee beyond these three offices.”⁹ The Commission also tentatively concluded to “require three-fourths supermajority voting on all major decisions by the PSBL board of directors,” which it believed “will further ensure that the PSBL will only undertake major actions that have the broad support of the PSBL’s representative constituents.”¹⁰

- Last, with respect to PSST board meetings, the Commission stated:

“We thus tentatively conclude that we will require PSBL board meetings to be open to the public, except that the board will have a right to meet in closed session to discuss sensitive matters. Further, we propose that the PSBL must make the minutes of each board meeting publicly available, including portions of meetings held in closed session, but that the published minutes of closed sessions may be redacted. We further propose that the PSBL must provide the public with no less than 30 days advance notice of meetings. Relatedly, we tentatively propose to require that the PSBL present its annual, independently audited financial report (which is a new financial reporting obligation we are proposing elsewhere in this Third Further Notice) in an open meeting. We expect that all of these measures will improve the efficiency and transparency of the PSBL’s actions, and seek comment accordingly.”¹¹

Question 1b. What metrics does FCC use to assess PSST’s effectiveness as the public safety licensee? How has the PSST measured against the specific metrics?

Answer. The Commission’s *Second Report and Order* included a number of features and requirements intended to provide oversight over the PSST.¹² As discussed above, the Third Further Notice contained additional detailed proposals related to improving the transparency of the Public Safety Broadband Licensee and increasing oversight. The Third Further Notice also contained proposals relating to the roles and responsibilities of the PSST in the use of the 700 MHz broadband network, eligible users of the public safety broadband spectrum, clarifications on the PSST’s non-profit status, restrictions on the PSST’s business relationships, funding of the PSST’s administrative and operational expenses, budget submission and audit re-

⁵ Id.

⁶ Id. at ¶ 411.

⁷ Id.

⁸ Id. at ¶ 412.

⁹ Id.

¹⁰ Id. at ¶ 413.

¹¹ Id. at ¶ 414.

¹² Service Rules for the 698–746, 747–762 and 777–792 MHz Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, WT Docket No. 06–150, PS Docket No. 06–229, *Second Report and Order*, 22 FCC Rcd 15289 (2007) at ¶¶ 373–374 establishing baseline criteria for selecting the Public Safety Broadband Licensee; ¶¶ 375–376 (requiring certain minimum provisions of the licensee’s articles of incorporation and bylaws); ¶¶ 376–377, 506–507, 530 (imposing reporting requirements during and following the negotiations of the network sharing agreement).

quirements, restrictions on financing, changes to the PSST's organization structure including its articles of incorporation and by-laws, and oversight of the PSST's activities.¹³ Staff from the Bureau have attended the PSST's board meetings, and otherwise frequently interacted with representatives of the PSST and its member organizations. The PSST has been and remains subject to the terms and conditions of its license and is subject to the Commission's enforcement authority.

Question 1c. Please detail FCC's plan to collaborate with public safety entities to turn over control of their spectrum to the PSST? In your response please list the public safety entities, discuss timetables, identify milestones and goals, and share corresponding charts that illustrate the "turn over" of the spectrum to the PSST.

Answer. The FCC has no plans to require public safety entities to turn over control of spectrum they hold to the PSST. Individual public safety entities have been and remain eligible to hold licenses in the narrowband portions of the 700 MHz public safety spectrum, as well as other bands. In the *Second Report and Order*, the Commission reallocated 700 MHz public safety spectrum from wideband use to broadband use, and assigned the broadband spectrum as a single Nation-wide license to the PSST. Neither the prior wideband nor current broadband spectrum was previously assigned to any other public safety entities.

Question 2. The Homeland Security Act, which first directed the FCC to study the possibility of a national broadband public safety network, also directed the Department of Homeland Security and the FCC to work together to develop State-wide communications interoperability plans (SCIPs).

Has the FCC considered the possibility of having State-wide licenses for a 700 MHz broadband network given that SCIPs were the vehicle by which States had to plan for and justify homeland security grants?

Answer. With respect to the 700 MHz public safety narrowband spectrum, the FCC already has allocated and granted licenses for certain channels on a State-wide basis. In the Third Further Notice, the Commission further stated:

"we tentatively conclude that the public safety broadband spectrum should continue to be licensed on a nationwide basis to a single Public Safety Broadband Licensee. However, we seek comment on whether we should license the public safety broadband spectrum on a regional basis rather than a nationwide basis. Further, if we were to license the public safety broadband spectrum on a regional basis, we seek comment on the procedures and selection criteria for assigning such licenses, and how multiple public safety broadband licensees would be able to ensure a nationwide level of interoperability and otherwise satisfy the roles and responsibilities of the public safety broadband licensee we discuss elsewhere."¹⁴

Question 3a. Has the FCC assessed whether the delay of the D Block auction will impact the implementation of the State Communications Interoperability Plans (SCIPs) and the National Emergency Communications Plan, released on July 31, 2008?

Answer. In the Second Further Notice and Third Further Notice, the Commission has sought comment broadly, and then with more specificity, concerning how it should proceed following the results of the initial D Block auction. In response to the Second Further Notice, the Commission received no public comments concerning any impact to SCIPs. With comments and reply comments due November 3, 2008 and November 12, 2008, respectively, in response to the Third Further Notice, all interested parties will have the opportunity to address issues related to the D Block auction and potential impact on SCIPs or the National Emergency Communications Plan (NECP).

Question 3b. In your description, please include the specific collaborations that occurred between the FCC and the Department of Homeland Security's Office of Emergency Communications as it relates to the bureau's assessment.

Answer. Now that the Commission has proposed specific rules and frameworks for the implementation of a Nation-wide, broadband, interoperable public safety network, and as it evaluates the record developed in response to the Third Further Notice, the Bureau will continue its ongoing interactions with the DHS OEC on any and all issues of mutual interest, including any assessments of the potential impacts or synergies between the 700 MHz public/private partnership proceeding and the SCIPs and the NECP.

Question 3c. In your response, please detail how the FCC assessed that the 58 FCC public safety regions can operate in a manner consistent with the SCIPs and the NECP.

¹³ See *Third Further Notice* at ¶¶ 175–202, 312–374, 394–419.

¹⁴ *Id.* at ¶ 426.

Answer. As presently proposed, the 700 MHz broadband spectrum will continue to be held under a single Nation-wide license assigned to the PSST. Among its roles and responsibilities, the PSST is charged with being as representative of the public safety community as possible. The PSST meets this role through its component board members which include, for example, the National Governors Association, as well as through its interactions with all State and local levels of public safety entities. In the Third Further Notice, the Commission recognized that “since the auction of the D Block did not result in a winning bid, there has been an associated delay in the deployment of the nationwide broadband network, which may impact the extent to which some public safety agencies may desire to construct their own networks before a new auction is completed.”¹⁵ The Commission then sought comment on how it “can ensure that a public safety entity engaging in such early build-out selects a compatible technology that is fully interoperable with the Shared Wireless Broadband Network(s), meaning consistent with our tentative conclusions elsewhere concerning interoperability requirements for all operations in the 700 MHz public safety broadband spectrum, and thus not via gateways and bridges.”¹⁶ Accordingly, interested parties have the opportunity to file comments on how public safety can operate in a manner consistent with the SCIPs and the NECP.

Question 4a. The FCC’s original proposal for the D Block called for building out the system to public safety specifications (coverage, capacity, reliability during disasters, etc.), which exceed those for the typical commercial network and add costs which are not borne by a commercial network.

If the FCC plans to relax these requirements, what changes are under consideration and how will these impact the mission-critical nature of the proposed network?

Answer. In the Third Further Notice, the Commission has proposed to modify some elements concerning public safety requirements for coverage, capacity, and reliability. The FCC tentatively concluded to “modify the population-based performance requirements and the length of the license term that we adopted in the *Second Report and Order* for the D Block spectrum in order to make this spectrum more commercially viable while at the same time ensuring that public safety needs are met.”¹⁷ Specifically, the Third Further Notice proposes to reduce the final network coverage benchmark from 99.3 percent to between 90 and 98 percent, depending on the population density of each region, and proposes to extend the period for achieving full coverage from 10 to 15 years.¹⁸ Comment is also sought on whether to require a flat 95 percent population coverage as a final benchmark.

The Third Further Notice also specifically addresses “requirements pertaining to: the broadband technology platform; interoperability; availability, robustness and hardening of the network; capacity, throughput and quality of service; security and encryption; power limits/power flux density limits/related notification and coordination requirements; and the satellite-capable handset requirement.”¹⁹ In this regard, the Commission tentatively concluded that it “should establish more detailed technical requirements for the shared wireless broadband network” which “will provide additional certainty regarding the obligations of the D Block licensee(s) and the costs of the shared wireless broadband network.”²⁰ The Commission added that “specifying the technical requirements as completely as possible at this time, and reducing the issues that will be left to post auction negotiation, will provide greater assurance to potential bidders regarding the commercial viability of the shared wireless broadband network while ensuring that the network meets public safety’s needs.”²¹

Question 4b. Please provide the committee a detailed chart that explains the FCC’s coverage proposal and the impact of a national broadband network build-out on each subcommittee Member’s State (including Chairman Bennie G. Thompson of Mississippi).

Answer. Under the Commission’s coverage proposal, a licensee of D Block spectrum must meet three coverage benchmarks, which apply at the fourth, tenth, and fifteenth years after the grant of the license, and which must be met in each Public Safety Region (PSR) in which the carrier is licensed (regardless of whether it has received a regional PSR license or a single Nation-wide license). As discussed further below, PSRs are regions that largely mirror State boundaries. In addition,

¹⁵ Id. at ¶ 297.

¹⁶ Id. at ¶ 302.

¹⁷ Id. at ¶ 148.

¹⁸ Id. at ¶ 149.

¹⁹ Id. at ¶ 102.

²⁰ Id. at ¶ 103.

²¹ Id.

there are also a number of PSRs for territories such as the U.S. Virgin Islands, and one for the Gulf of Mexico.

The three benchmarks are as follows. By the end of the fourth year, the licensee must cover at least 40 percent of the population. By the end of the tenth year, it must cover 75 percent. For the final benchmark at 15 years, the Commission has also proposed to adopt a “tiered” approach, applying one of three benchmarks depending on the population density of the PSR: (1) For PSRs with a population density equal to or greater than 500 people per square mile (Tier I), the licensee will be required to cover at least 98 percent of the population by the end of the fifteenth year; (2) for PSRs with a population density equal to or greater than 100 people per square mile and less than 500 people per square mile (Tier II), the licensee will be required to cover at least 94 percent of the population; and (3) for PSRs with a population density less than 100 people per square mile (Tier III), the licensee will be required to cover at least 90 percent of the population.

The attached chart entitled “Geographical Boundaries of the 58 Public Safety Regions” specifies the geographic area covered by each of the 58 PSRs. These areas correspond to the boundaries of the 700 MHz Regional Planning Committee Regions, and as the chart indicates, in most cases, they follow State boundaries. Some States, however, encompass multiple PSRs and certain PSRs encompass portions of more than one State.

The second attached chart, entitled “Performance Tiers by Public Safety Region,” details for each PSR the final 15-year benchmark, whether 98 percent (for “Tier I” regions), 94 percent (for “Tier II” regions), or 90 percent (for “Tier III” regions), as applicable to the PSR.

A Nation-wide map of the PSRs entitled “Public Safety Regions By Tier,” is also attached, which depicts the Tiers for each PSR graphically, with each PSR color-coded to show the applicable final benchmark. This map also shows where PSR boundaries do and do not follow State boundaries, by depicting the boundaries of the PSRs in black and the boundaries of the States in pink. Thus, combined black/pink lines indicate where the boundaries of PSRs follow State boundaries, pure black lines indicate PSR boundaries that do not follow State lines, and pink lines indicate State boundaries that do not follow PSR lines.

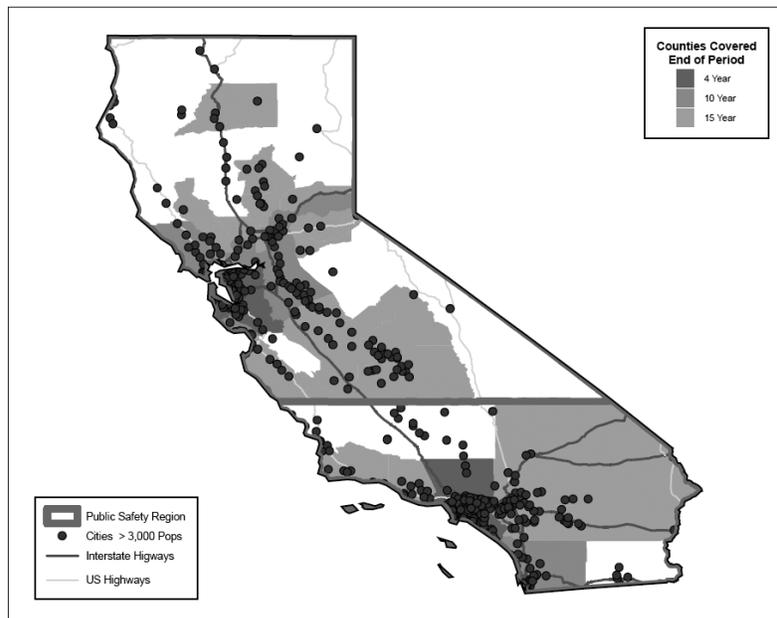
Created by SCPD, WTB, Oct. 2008

Public Safety Regions by Tier



Finally, 13 additional maps are attached, with each map depicting one of many possible build-out options that may be chosen to meet the Commission's specific population benchmarks for each one of the 13 States of the Members of the Subcommittee on Emergency Communications, Preparedness, and Response.²² Specifically, these maps show, for each State, the estimated coverage at the fourth, tenth, and fifteenth years, assuming that build-out in the relevant PSR proceeds from counties with higher population density to those with lower population density. For example, the map of the District of Columbia indicates complete coverage by year 4, reflecting an estimate that, by the fourth year, build-out in PSR 20, which includes the District, Maryland, and Northern Virginia, would have already extended to all of the District's geographic area. Thus, they illustrate a method that covers maximum population without regard to geographic coverage.

Public Safety Regions Build-Out Requirements - CA



Created by SCPD, WTB, FCC, Oct. 2008

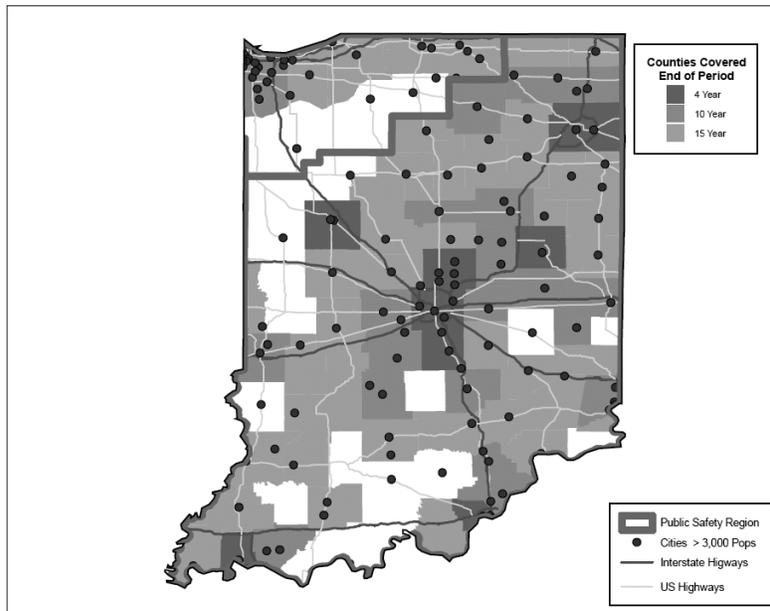
²² Thus, the maps cover: (1) Texas, (2) California, (3) Pennsylvania, (4) Washington, (5) Indiana, (6) New York, (7) Tennessee, (8) Virginia, (9) Michigan, (10) North Carolina, (11) Mississippi, (12) the District of Columbia, and (13) the U.S. Virgin Islands. Specifically, these maps show, for each State, the estimated coverage at the fourth, tenth, and fifteenth years, assuming that build-out in the relevant PSR proceeds from counties with higher population density to those with lower population density. For example, the map of the District of Columbia indicates complete coverage by year 4, reflecting an estimate that, by the fourth year, build-out in PSR 20, which includes the District, Maryland, and Northern Virginia, would have already extended to all of the District's geographic area.

Public Safety Regions Build-Out Requirements - DC



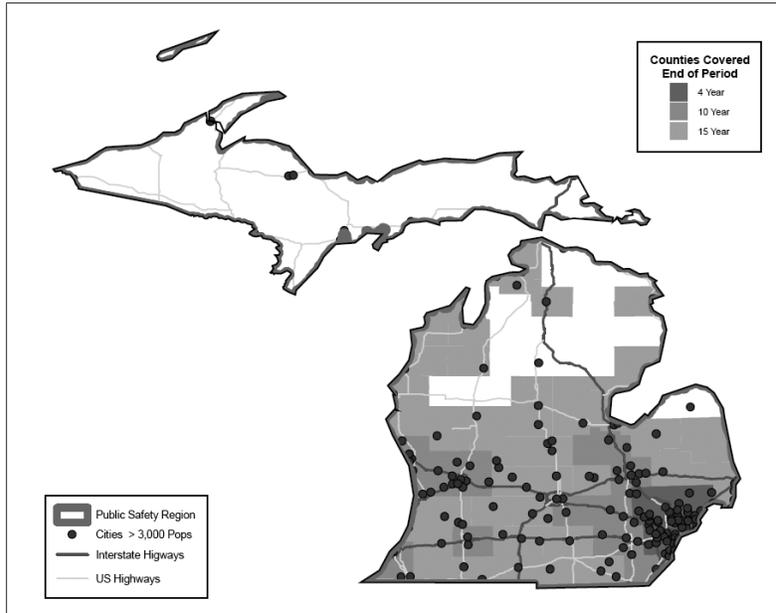
Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - IN



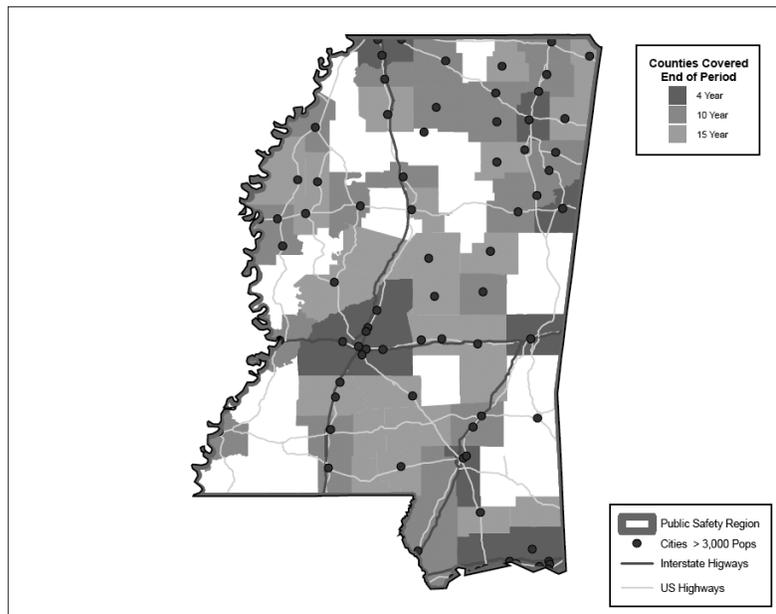
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Public Safety Regions Build-Out Requirements - MI



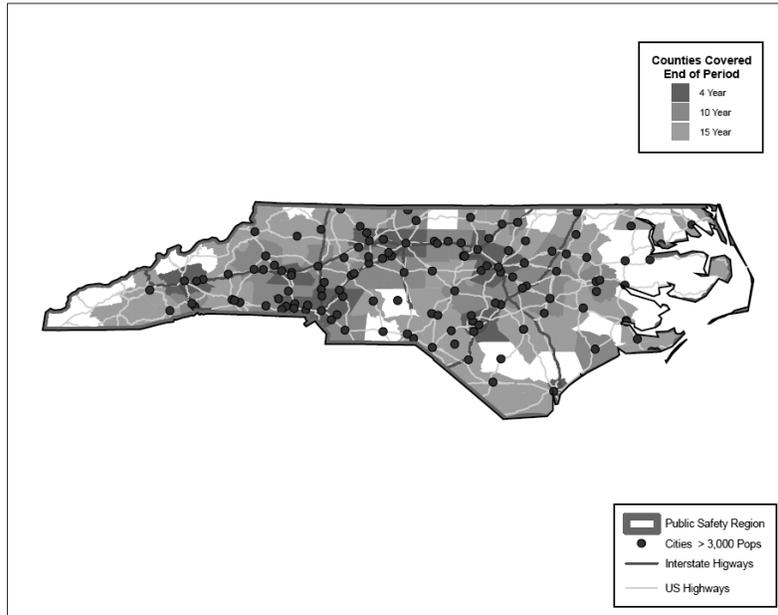
Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - MS



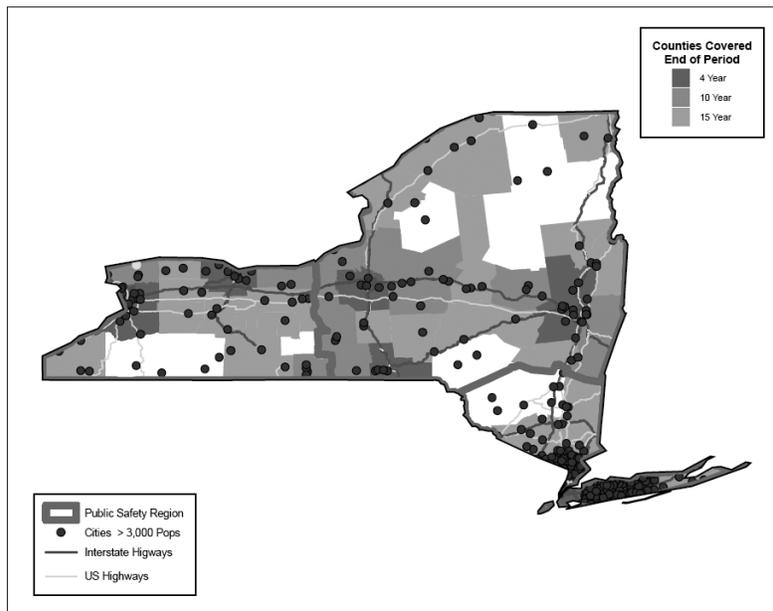
Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - NC



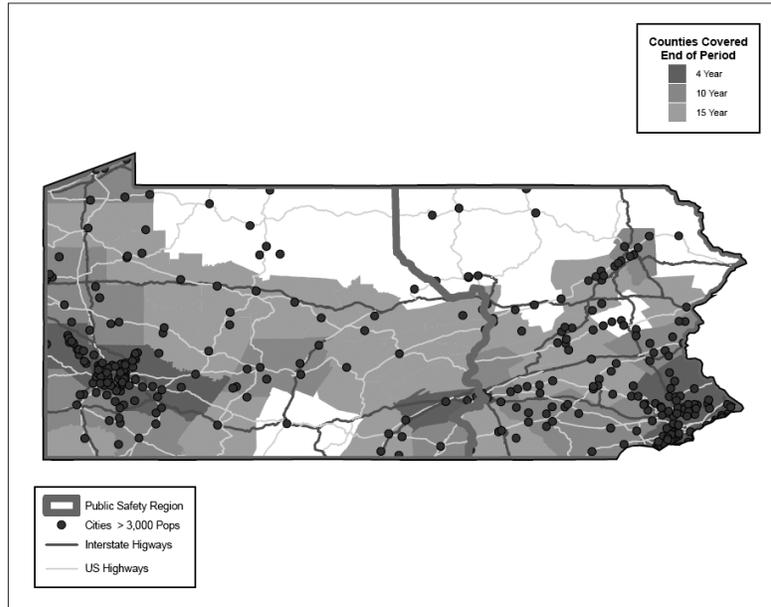
Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - NY



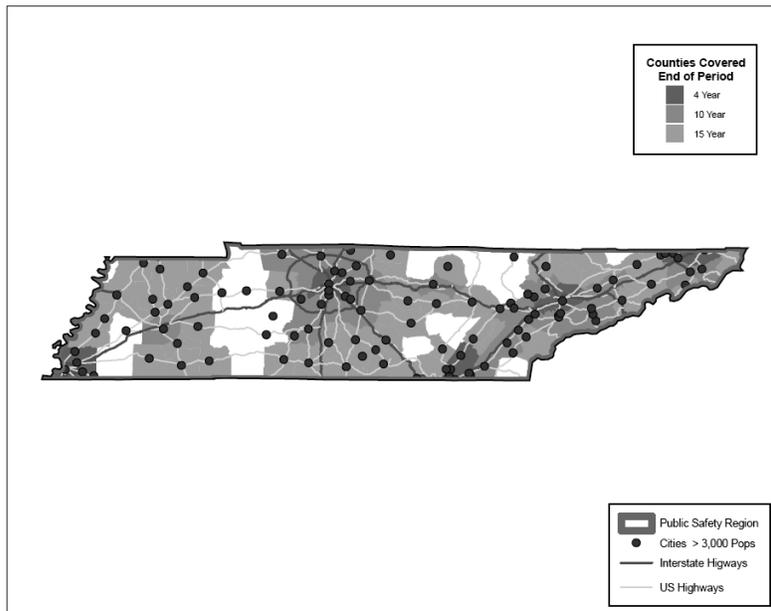
Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - PA



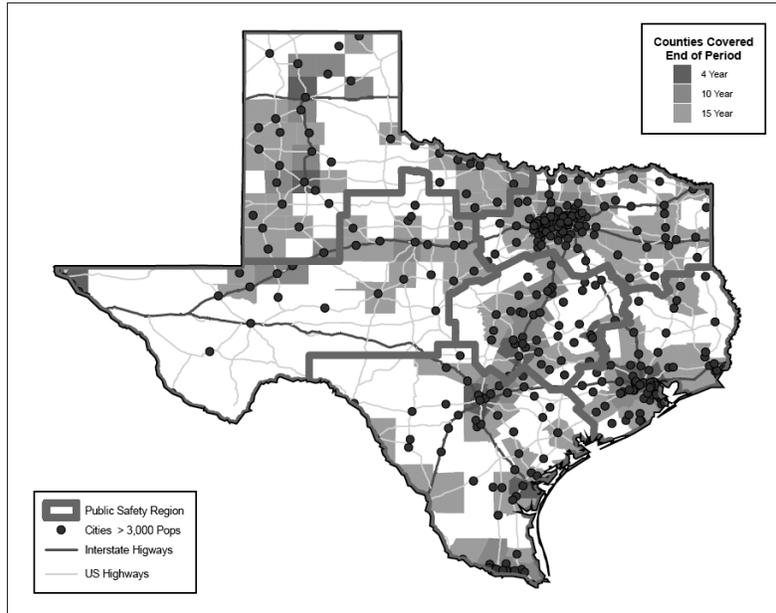
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Public Safety Regions Build-Out Requirements - TN



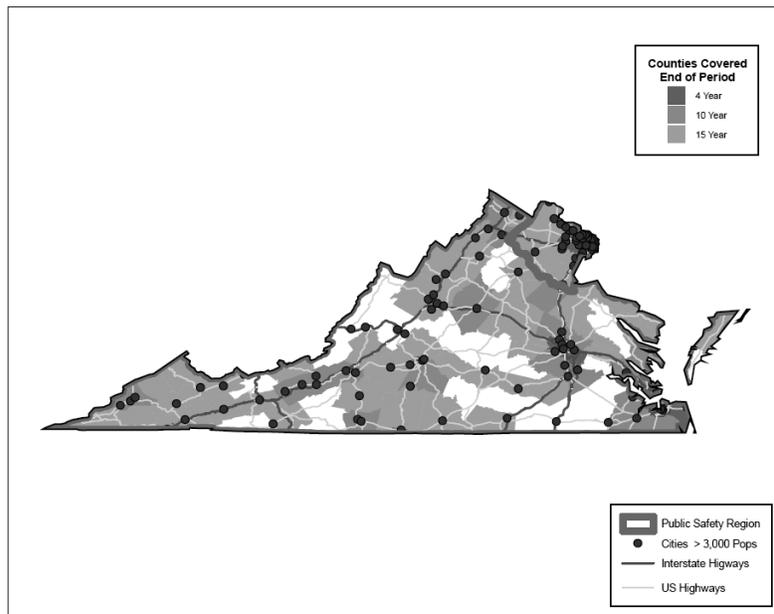
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Public Safety Regions Build-Out Requirements - TX



Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - VA



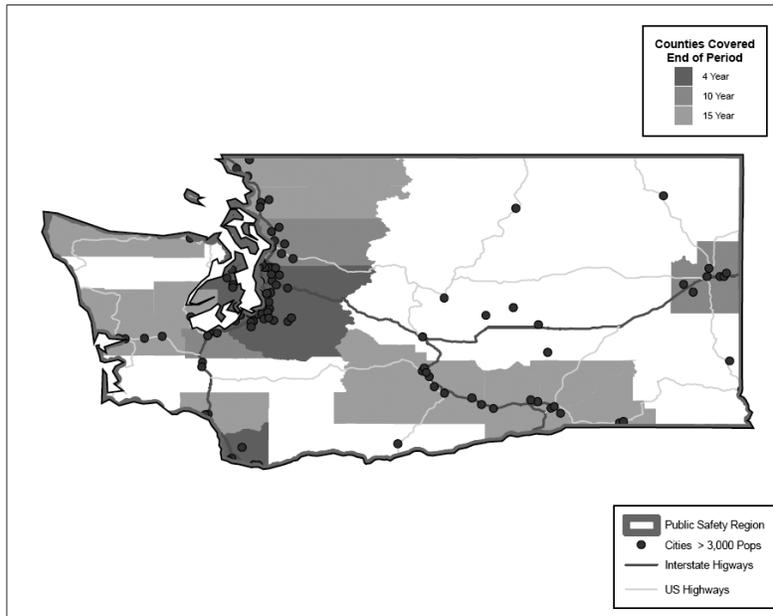
Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - VI



Created by SCPD, WTB, FCC, Oct. 2008

Public Safety Regions Build-Out Requirements - WA



Created by SCPD, WTB, FCC, Oct. 2008

These maps cannot, however, fully reflect the scope of the Commission's proposed coverage requirements or the coverage choices that a licensee may make. The Commission has recognized that having D Block licensees meet the population benchmarks is not by itself sufficient to satisfy all our public interest objectives in this proceeding, and that the needs of first responders are also important in less populous areas. Thus, the Commission has proposed to require that the Network Sharing Agreement (NSA) negotiated between the Public Safety Broadband Licensee (PSBL) and D Block licensee(s) include detailed build-out schedules identifying specific areas to be built out and the respective time frames. The Commission has also proposed to require coverage for major highways and interstates, as well as coverage for all incorporated communities with a population in excess of 3,000, unless the parties determine, in consultation with a relevant community, that such additional coverage will not provide significant public benefit. The NSA, including the build-out schedule, must also be approved by the Commission.

Thus, a D Block licensee will not be free to build its broadband network unilaterally along the lines suggested in the maps, but must move forward with the agreement of the PSBL and subject to additional coverage requirements. As a result, we would expect that the actual areas within a PSR that will be built out would in fact differ from the coverage depicted.²³

Question 4c. In your charts, please distinguish how the coverage would differ under a regional license as compared to a national license.

Answer. As noted above, within each PSR, the coverage requirements are the same regardless of whether that PSR has been licensed as a regional PSR license or as part of a single Nation-wide license. Regardless of whether the license is Nation-wide or regional (PRS)-based, coverage requirements must be met on a PSR basis. In other words, a Nation-wide licensee must cover the specified percentage of the population within each of the 58 PSRs in its license area, while a PSR licensee must cover the specified population percentage in the PSR in which it is licensed.

Question 5. Has the FCC considered providing early deployment and operation of interoperable broadband networks in the 700 MHz broadband spectrum prior to the auction and build-out of the network?

How will early deployments positively and negatively impact the benchmarks that the FCC has proposed in the 15-year build-out?

Answer. In the 700 MHz Second Report and Order, the Commission adopted rules to provide public safety entities with options for early build-out of broadband networks in advance or in lieu of build-out of the Nation-wide broadband network. In general, these rules allow a local public safety entity to deploy a network early, provided that the network uses a technology that is fully interoperable with the Nation-wide broadband network so that the local network can be integrated into the Nation-wide network when the latter is deployed.

In the Third Further Notice, the Commission has proposed to retain these early build-out rules, and has sought comment on alternatives. The Third Further Notice notes that "unlike our current rules, which only contemplate the early build-out of systems utilizing the same technology as the D Block licensee, a public safety entity that engages in early deployment risks choosing a technology that is not compatible with the technology that will be deployed later by the D Block licensee."²⁴ Given the tentative conclusion in the Third Further Notice that the Nation-wide interoperable network should have the same air interface technology, the Commission has sought comment on "how we can ensure that a public safety entity engaging in such early build-out selects a compatible technology that is fully interoperable with the Shared Wireless Broadband Network(s), meaning consistent with our tentative conclusions elsewhere concerning interoperability requirements for all operations in the 700 MHz public safety broadband spectrum, and thus not via gateways and bridges."²⁵

GEOGRAPHICAL BOUNDARIES OF THE 58 PUBLIC SAFETY REGIONS

Number	States, Counties & Territories Included In Regions
1.	ALABAMA
2.	ALASKA
3.	ARIZONA

²³ *Second Report and Order*, 22 FCC Rcd 15289 (2007) at ¶453; *Third Further Notice of Proposed Rulemaking* at para. 163.

²⁴ *Id.* at ¶302.

²⁵ *Id.*

GEOGRAPHICAL BOUNDARIES OF THE 58 PUBLIC SAFETY REGIONS—
Continued

Number	States, Counties & Territories Included In Regions
4.	ARKANSAS
5.	CALIFORNIA—SOUTH (to the northernmost borders of San Luis Obispo, Kern, and San Bernardino Counties)
6.	CALIFORNIA—NORTH (that part of California not included in California—South)
7.	COLORADO
8.	NEW YORK—METROPOLITAN—NEW YORK: Bronx, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Dutchess, and Westchester Counties; NEW JERSEY: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, Warren, Middlesex, Somerset, Hunterdon, Mercer, and Monmouth Counties
9.	FLORIDA
10.	GEORGIA
11.	HAWAII
12.	IDAHO
13.	ILLINOIS (all except area in Region 54)
14.	INDIANA (all except area in Region 54)
15.	IOWA
16.	KANSAS
17.	KENTUCKY
18.	LOUISIANA
19.	NEW ENGLAND—MAINE; NEW HAMPSHIRE; VERMONT; MASSACHUSETTS; RHODE ISLAND; CONNECTICUT
20.	MARYLAND; WASHINGTON, DC; VIRGINIA—NORTHERN (Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford Counties; and Alexandria, Fairfax, Falls Church, Manassas and Manassas Park Cities)
21.	MICHIGAN
22.	MINNESOTA
23.	MISSISSIPPI
24.	MISSOURI
25.	MONTANA
26.	NEBRASKA
27.	NEVADA
28.	NEW JERSEY (except for counties included in the New York—Metropolitan, Region 8, above) PENNSYLVANIA (Bucks, Chester, Montgomery, Philadelphia, Berks, Delaware, Lehigh, Northampton, Bradford, Carbon, Columbia, Dauphin, Lackawanna, Lancaster, Lebanon, Luzerne, Lycoming, Monroe, Montour, Northumberland, Pike, Schuylkill, Sullivan, Susquehanna, Tioga, Wayne, Wyoming and York Counties); DELAWARE
29.	NEW MEXICO
30.	NEW YORK—ALBANY (all except area in New York—Metropolitan, Region 8, and New York—Buffalo, Region 55)
31.	NORTH CAROLINA
32.	NORTH DAKOTA
33.	OHIO
34.	OKLAHOMA
35.	OREGON
36.	PENNSYLVANIA (all except area in Region 28, above)
37.	SOUTH CAROLINA
38.	SOUTH DAKOTA
39.	TENNESSEE
40.	TEXAS—DALLAS (including the counties of Cooke, Grayson, Fannin, Lamar, Red River, Bowie, Wise, Denton, Collin, Hunt, Delta, Hopkins, Franklin, Titus, Morris, Cass, Tarrant, Dallas, Palo Pinto, Parker, Rockwall, Kaufman, Rains, VanZandt, Wood, Smith, Camp, Upshur, Gregg, Marion, Harrison, Panola, Rusk, Cherokee, Anderson, Henderson, Navarro, Ellis, Johnson, Hood, Somervell and Erath)
41.	UTAH
42.	VIRGINIA (all except area in Region 20, above)

GEOGRAPHICAL BOUNDARIES OF THE 58 PUBLIC SAFETY REGIONS—
Continued

Number	States, Counties & Territories Included In Regions
43.	WASHINGTON
44.	WEST VIRGINIA
45.	WISCONSIN (all except area in Region 54)
46.	WYOMING
47.	PUERTO RICO
48.	U.S. VIRGIN ISLANDS
49.	TEXAS—AUSTIN (including the counties of Bosque, Hill, Hamilton, McLennan, Limestone, Freestone, Mills, Coryell, Falls, Robertson, Leon, San Saba, Lampasas, Bell, Milam, Brazos, Madison, Grimes, Llano, Burnet, Williamson, Burleson, Lee, Washington, Blanco, Hays, Travis, Caldwell, Bastrop, and Fayette)
50.	TEXAS—EL PASO (including the counties of Knox, Kent, Stonewall, Haskell, Throckmorton, Gaines, Dawson, Borden, Scurry, Fisher, Jones, Shackelford, Stephens, Andrews, Martin, Howard, Mitchell, Nolan, Taylor, Callahan, Eastland, Loving, Winkler, Ector, Midland, Glasscock, Sterling, Coke, Runnels, Coleman, Brown, Comanche, Culberson, Reeves, Ward, Crane, Upton, Reagan, Irion, Tom Green, Concho, McCulloch, Jeff Davis, Hudspeth, El Paso, Pecos, Crockett, Schleicher, Menard, Mason, Presidio, Brewster, Terrell, Sutton, and Kimble)
51.	TEXAS—HOUSTON (including the counties of Shelby, Nacogdoches, San Augustine, Sabine, Houston, Trinity, Angelina, Walker, San Jacinto, Polk, Tyler, Jasper, Newton, Montgomery, Liberty, Hardin, Orange, Waller, Harris, Chambers, Jefferson, Galveston, Brazoria, Fort Bend, Austin, Colorado, Wharton, and Matagorda)
52.	TEXAS—LUBBOCK (including the counties of Dallam, Sherman, Hansford, Ochiltree, Lipscomb, Hartley, Moore, Hutchinson, Roberts, Hemphill, Oldham, Potter, Carson, Grey, Wheeler, Deaf Smith, Randall, Armstrong, Donley, Collingsworth, Parmer, Castro, Swisher, Briscoe, Hall, Childress, Bailey, Lamb, Hale, Floyd, Motley, Cottle, Hardeman, Foard, Wilbarger, Wichita, Clay, Montague, Jack, Young, Archer, Baylor, King, Dickens, Crosby, Lubbock, Kockley, Cochran, Yoakum, Terry, Lynn, and Garza)
53.	TEXAS—SAN ANTONIO (including the counties of Val Verde, Edwards, Kerr, Gillespie, Real, Bandera, Kendall, Kinney, Uvalde, Medina, Bexar, Comal, Guadalupe, Gonzales, Lavaca, Dewitt, Karnes, Wilson, Atascosa, Frio, Zavala, Maverick, Dimmit, LaSalle, McMullen, Live Oak, Bee, Goliad, Victoria, Jackson, Calhoun, Refugio, Aransas, San Patricio, Nueces, Jim Wells, Duval, Webb, Kleberg, Kenedy, Brooks, Jim Hogg, Zapata, Starr, Hidalgo, Willacy, and Cameron)
54.	CHICAGO—METROPOLITAN—ILLINOIS: Winnebago, McHenry, Cook, Kane, Kendall, Grundy, Boone, Lake, DuPage, DeKalb, Will, and Kankakee Counties; INDIANA: Lake, LaPorte, Jasper, Starke, St. Joseph, Porter, Newton, Pulaski, Marshall, and Elkart Counties; WISCONSIN: Kenosha, Milwaukee, Washington, Dodge, Walworth, Jefferson, Racine, Ozaukee, Waukesha, Dane, and Rock Counties
55.	NEW YORK—BUFFALO (including the counties of Niagara, Chemung, Schuyler, Seneca, Erie, Chautauqua, Cattaraugus, Allegany, Wyoming, Genesee, Orleans, Monroe, Livingston, Steuben, Ontario, Wayne, and Yates)
56.	GUAM AND THE NORTHERN MARIANA ISLANDS
57.	AMERICAN SAMOA
58.	GULF OF MEXICO

PERFORMANCE TIERS BY PUBLIC SAFETY REGION

PSR	PSR Name	Total Pops*	Land Area (SqM)*	Density	Coverage Required at End of 15th Year of License Term
8	New York—Metropolitan	19,092,214	9,841	1,940.1	Tier 1: 98 percent coverage required for PSRs with a population density equal to or greater than 500 pops per square mile
47	Puerto Rico	3,808,610	3,425	1,112.1	
48	U.S. Virgin Islands	108,612	134	810.5	
57	American Samoa	57,291	77	744.0	
54	Chicago—Metropolitan	12,685,330	17,100	741.8	
20	Maryland; Washington, DC; Virginia—Northern	7,831,327	12,070	648.8	
56	Guam and the Northern Mariana Islands.	224,026	389	575.9	
28	New Jersey, Pennsylvania, Delaware.	10,526,480	22,729	463.1	Tier 2: 94 percent coverage required for PSRs with a population density equal to or greater than 100 pops per square mile and less than 500 pops per square mile
5	California—South	20,637,512	56,512	365.2	
9	Florida	15,982,378	53,927	296.4	
33	Ohio	11,353,140	40,948	277.3	
55	New York—Buffalo	2,852,351	11,780	242.1	
51	Texas—Houston	5,618,958	25,166	223.3	
19	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.	13,922,517	62,809	221.7	
40	Texas—Dallas	6,503,125	30,589	212.6	
11	Hawaii	1,211,537	6,423	188.6	
21	Michigan	9,938,444	56,804	175.0	
36	Pennsylvania	4,801,690	27,672	173.5	
31	North Carolina	8,049,313	48,711	165.2	
14	Indiana	4,763,619	31,283	152.3	
10	Georgia	8,186,453	57,906	141.4	
39	Tennessee	5,689,283	41,217	138.0	
42	Virginia	5,115,733	37,360	136.9	
37	South Carolina	4,012,012	30,109	133.2	
6	California—North	13,234,136	99,447	133.1	

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR
DEREK K. POARCH, CHIEF, PUBLIC SAFETY AND HOMELAND SECURITY BUREAU,
FEDERAL COMMUNICATIONS COMMISSION

Question 1. If the D Block auction proceeds in auctioning the spectrum licenses on a regional basis, how will the FCC ensure that there is consistent national guidance to provide uniformity among communications systems across the country?

Answer. If the D Block is licensed on a regional basis, the Third Further Notice proposes a number of measures to ensure that all regional D Block licensees will deploy their networks in a manner that is consistent with the Commission's goal of establishing a fully interoperable Nation-wide broadband public safety network.

First, the Commission has proposed "to offer simultaneously three alternative sets of licenses that vary by geographic license area and by conditions regarding the technology platform that must be used by the licensee(s). Specifically, under this proposal, the Commission would offer: (1) A single license for service Nation-wide with the technology platform to be determined by the licensee; (2) a Nation-wide set of PSR licenses conditioned on the use of Long Term Evolution (LTE) by the licensees; and (3) a Nation-wide set of PSR licenses conditioned on the use of Worldwide Interoperability for Microwave Access (WiMAX) by the licensees."²⁶ Thus, a regional auction will result in the selection of a common air interface technology (either WiMax or LTE-based) that all regional licensees will be required to deploy.

Second, the Commission has proposed detailed performance requirements and technical standards that will uniformly govern construction and operation of the shared wireless broadband network by all regional D Block licensees. These clarifications and revisions address: "(1) the use of spectrum in the shared wireless broadband network, including requirements regarding public safety priority access to commercial capacity in emergencies; (2) the technical requirements of the shared wireless broadband network; (3) the performance requirements of the D Block licensee(s); and (4) the respective operational roles of the D Block licensee(s) and the Public Safety Broadband Licensee."²⁷

With regard to the technical requirements of the network, the Commission has stated that "in addition to our proposal regarding the broadband technology platform, we make detailed proposals regarding (1) interoperability and public safety roaming; (2) availability, robustness, and hardening of the network; (3) capacity, throughput, and quality of service; (4) security and encryption; (5) power limits, power flux density limits, and related notification and coordination requirements; and (6) ensuring the availability of a satellite-capable handset."²⁸

Question 2. It is not uncommon for some licenses in an auction to remain unsold. If the auction proceeds on a regional basis, how will the FCC ensure that all areas of the country are eventually covered by the 700 MHz network?

Answer. In the Third Further Notice, the Commission has proposed a series of measures to encourage full Nation-wide coverage and minimize the risk that some regions will remain unsold. Specifically, the proposed auction rules are designed to favor the bidder or bidders who seek to cover the most population. The Commission tentatively concluded, "as an initial matter, that we will not award any licenses unless the total population covered by licenses with high bids meets or exceeds fifty percent (50 percent) of the U.S. population. Setting the requirement at half of the population should help assure that sufficient licenses are assigned after the next auction to facilitate the ultimate success of a nationwide interoperable broadband network for public safety."²⁹

The Commission further tentatively concluded that, "if the fifty percent (50 percent) population threshold is met, winning bidders will be determined according to the following criteria. If there is no nationwide bid and there are not high bids on all regional licenses in either set, the bidder(s) with high bid(s) on the D Block license(s) in the technology alternative covering the greatest aggregate population will become the winning bidders after the close of bidding. Similarly, if there is a nationwide bid but not high bids on all licenses in either regional set, the bidder for the nationwide license will become the winning bidder by covering the greatest aggregate population. In the event that there is a bid on the nationwide license and on all licenses in either regional set, the set of licenses with the highest aggregate gross bid(s) will become the winning bidder(s). Similarly, in the event that there is no nationwide bid and the greatest aggregate population is covered equally by the high bids in the two sets of regional licenses, the high bidder(s) for license(s) in the

²⁶Id. at ¶ 4.

²⁷Id. at ¶ 5.

²⁸Id. at ¶ 6.

²⁹Id. at ¶ 246.

set with the highest aggregate gross bid(s) will become the winning bidder(s). Thus, we will look first to population coverage to determine the winning set of licenses, and to the highest aggregate bid amounts only if the population coverage is equal.”³⁰

The proposed rules also include “procedures to reduce minimum opening bids on unsold regional licenses during bidding. . . . First, if there is a bid for the nationwide license, neither alternative set of regional licenses has received bids on all 58 licenses, and the sum of the provisionally winning bids for either set of regional licenses is greater than the amount of the nationwide license bid, then the Bureau will lower the minimum opening bids for the regional licenses that do not have bids. Second, if there is not a bid for the nationwide license and there are bids in either set of regional licenses that cover at least half the nation’s population, then the Bureau will lower the minimum opening bids for the regional licenses that do not have bids.”³¹

The Commission also proposed “to take prompt action to assign any licenses remaining unsold if an auction meets the minimum coverage requirement and yet there is no winning bidder in some regions.”³² First, “[i]n order to realize the benefits of a truly nationwide network, we propose that under such unique circumstances, . . . the Commission should depart from its standard approach of offering commercial licenses to the applicant making the highest bid without reference to the applicant’s particular business plan and instead conduct a Request for Proposal (RFP) process, incorporating consideration of applicant’s proposals together with their bids.”³³ Alternatively, the Third Further Notice seeks comment on whether to “re-allocate the spectrum so that it can be assigned to the Public Safety Broadband Licensee. The PSBL would then request the submission of detailed proposals from would-be licensees regarding how they would deploy an interoperable broadband network useable for public safety in the applicable region in partnership with the D block licenses won at the auction.”³⁴

Question 3. Why did the FCC decide to lower the reserve price for the D Block from \$1.33 billion to \$750 million? How did the FCC determine that \$750 million is an appropriate price?

Answer. Because no bidder met the reserve price in Auction 73, lowering the total amount that would have to be paid by winning bidders in an upcoming auction should increase the likelihood that the next auction will attract a winning bidder or bidders to develop an interoperable shared broadband network for the public-private partnership.

For Auction 73 the reserve price for the D Block was \$1.33 billion, and the minimum opening bid for the D Block license was \$472,042,000. One bid was placed for the D Block license at the minimum opening bid amount in the first round, but no higher bids were placed for that license.

The minimum opening bids proposed in the Third Further Notice for each D Block regional licenses range from approximately \$0.02–\$0.45 per MHz-pop. In addition, as described above, the Commission tentatively concluded that it would substantially reduce minimum opening bids during the auction under specific circumstances. Since licenses that were won in Auction 73 sold for approximately \$0.02–\$9.19 per MHz-pop, with a weighted average of \$1.28 per MHz-pop, the Commission’s proposed minimum opening bids for the D Block fall at the lower end of this range, consistent with the objectives of promoting auction participation.

Question 4. Is the FCC aware of the work that the Office of Command, Control, and Interoperability, of the Science and Technology Directorate at the Department of Homeland Security, is doing with regard to technology development? Is there regular coordination between your respective offices?

Answer. Yes, the FCC is aware of the work that the Office of Command, Control, and Interoperability (OCCI) is doing with regard to technology development. Bureau staff regularly interacts with staff from OCCI as well as with NTIA’s Institute for Telecommunication Sciences, which the OCCI funds for performing much of the engineering and technical work particularly concerning the 700 MHz public safety broadband proceeding.

Question 5. How is the FCC ensuring that its efforts to achieve a successful re-auction of the 700 MHz spectrum are adequately considering the varied and diverse needs of first responders across the country?

³⁰ Id. at ¶247.

³¹ Id. at ¶¶248–249.

³² Id. at ¶255.

³³ Id.

³⁴ Id. at ¶256.

Answer. In developing its proposals for re-auction of the 700 MHz spectrum, the Commission has sought extensive input from the public safety community at each step in the process. When the Commission issued the Second Further Notice, it not only sought comment on a broad variety of options for reaucting the D Block and potentially reconfiguring the public/private partnership, but it also committed to issue a detailed proposal and request an additional round of comments before reaching a final decision. The Commission has followed through on that commitment in the Third Further Notice, which proposes a number of significant changes to the rules governing the D Block, the Public Safety Broadband Licensee, and the public/private partnership based on ideas and recommendations received from public safety organizations and officials, government representatives, wireless carriers, and manufacturers across the country. Based on the final comments it receives, the Commission will seek to adopt final rules that further the goal of deploying a fully interoperable Nation-wide broadband network while remaining responsive to the diverse needs of local first responders.

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR MR. CHRIS ESSID, DIRECTOR, OFFICE OF EMERGENCY COMMUNICATIONS, DEPARTMENT OF HOMELAND SECURITY

Question 1a. What is OEC doing to provide technical assistance to assist States who are prepared to implement their State Communications Interoperability Plans (SCIPs) and the National Emergency Communications Plan (NECP), in a matter consistent with the 700 MHz auction?

Answer. The Office of Emergency Communications (OEC) will continue to provide a variety of technical assistance services to help States, urban areas, and territories implement the goals and initiatives outlined in their Statewide Communications Interoperability Plans (SCIPs) and to assist them in aligning their State-wide plans with the National Emergency Communications Plan (NECP). OEC's technical assistance offerings include governance, engineering services, and operational and communications training. As part of its engineering offerings, OEC works with the States in supporting land mobile radio and provides assistance with system migration, which can include 700 MHz spectrum.

Availability of standard operating procedures, governance, available funding, usage and technology were just a few of the factors taken into consideration during the development of the technical assistance prioritization plan. Each State technical assistance request was reviewed by OEC, and its impact on the goals and initiatives listed in the NECP and the State's SCIP were taken into consideration during the prioritization process. Additionally, States with a low level of communications capability but a high threat level will receive a greater level of support from OEC than those with similar threat levels but higher capabilities.

Question 1b. How does the Department foresee the implementation of the NECP, released on July 31, 2008, if the D Block auction is further delayed?

Answer. OEC will continue to maintain the current NECP implementation schedule. If there were to be any further delays of the D Block auction, OEC does not anticipate a negative impact on the NECP implementation given the strategic nature of the plan and its delivery schedule, and because the NECP does not set out any specific recommendations or milestones for that particular band. The NECP does recognize that advanced broadband services and emerging communications technologies are tools to aid in cross-jurisdictional communications.

Question 2. Please detail the specific collaborations and analysis that occurred between the Office of Emergency Communications and the FCC as it relates to the claim that the 58 FCC public safety regions can operate in a manner consistent with the SCIPs and the NECP.

Answer. The Federal Communications Commission (FCC) participated in the development of the National Emergency Communications Plan (NECP) as part of its close collaboration with the Office of Emergency Communications and other Federal agencies in the Emergency Communications Preparedness Center Working Group on the NECP. Going forward, one of the challenges in implementing the NECP, building upon the work already accomplished through the development of the SCIPs and improving emergency communications at all levels of government, is to ensure greater coordination on a regional basis. The OEC also worked with the National Public Safety Telecommunications Council Spectrum Committee to ensure that the FCC issues were addressed from the stakeholders' perspective. OEC will continue to work closely with the FCC, the Federal Emergency Management Agency (FEMA), and other stakeholders to foster such regional coordination in the FCC public safety regions, the FEMA-administered Regional Emergency Communications Coordination

Working Groups, and other regional forums such as the National Capitol Region to ensure that such regional efforts align consistently with the SCIPs and NECP.

Question 3a. As you know from the make-up of the PSST board, public safety entities are understandably protective of their spectrum.

How does OEC plan to collaborate with public safety entities to turn over control of their spectrum to the PSST?

Question 3b. How has the OEC coordinated with the PSST in the past and what level of collaboration is needed to ensure a successful re-auction in the future?

Answer. The Office of Emergency Communications (OEC) has worked with the Public Safety Spectrum Trust (PSST), as the public safety broadband licensee, in coordination with the Federal Partnership for Interoperable Communications to ensure that the PSST was aware of the views of Federal user members concerning access to the proposed Nation-wide broadband public safety network by Federal emergency responders. OEC is not aware of any proposed requirements in the Federal Communications Commission's pending rulemakings for this band that would oblige public safety entities to transfer control of their licensed spectrum to the PSST. Instead, the PSST is envisioned to be the sole public safety licensee for the Nation-wide broadband public safety network, through which public safety access to the network would be coordinated.

As stated at the hearing, OEC stands ready to offer whatever assistance it can to ensure the successful conclusion of the FCC's rulemaking, the re-auction of the commercial spectrum in that band, and any other steps needed to successfully deploy the network.

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR MR. CHRIS ESSID, DIRECTOR, OFFICE OF EMERGENCY COMMUNICATIONS, DEPARTMENT OF HOMELAND SECURITY

Question 1. What is your perspective on the 700 MHz D Block and how do you envision it will assist our Nation's first responders? Do you believe the approach being taken by the FCC to auction the spectrum (i.e. a national versus regional auction) is consistent with the "bottom-up" approach to first responder communications as advocated in the SAFECOM continuum?

Answer. Response was not provided at the time of publication.

Question 2. Communications technologies have rapidly evolved over the years, and ensuring that first responders have access to state-of-the-art communications capabilities is critical. The National Emergency Communications Plan appears to recognize this fact and established as one of its objectives the need to integrate emerging technologies with current emergency communications capabilities.

Does the Department of Homeland Security plan to promote the use of "commercialized" technologies like those widely deployed by the wireless industry? What benefits and challenges might this present to first responders?

Answer. The National Emergency Communications Plan (NECP) is a technology-neutral strategy—it does not favor a particular communications device nor does it identify a preferred swath of spectrum for public safety use. It recognizes that technology is just one element in the overall "fix" to improve interoperability, along with standard operating procedures, governance, planning, and training and exercises.

The plan, however, does recognize the benefits of getting advanced broadband services, including commercially available technologies, into the hands of our Nation's first responders and proposes solutions to spur the deployment of emerging communication technologies. In addition, the plan recognizes the importance of coordination and partnership among the public and private sectors. The NECP also encourages the aggregation of emergency response agencies' user requirements during the development of emerging technologies to increase the effectiveness of the private sector in developing standardized products and services.

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR DR. DAVID BOYD, DIRECTOR, COMMAND, CONTROL, AND INTEROPERABILITY DIVISION, SCIENCE AND TECHNOLOGY DIRECTORATE, DEPARTMENT OF HOMELAND SECURITY

Question 1. Do you believe that the public-private partnership network for public safety broadband communications can be successfully built and operated as a commercially viable system without some form of public subsidy?

Answer. It is the administration's position that the Federal Communications Commission's (FCC) proposed public-private partnership is a unique framework for balancing public safety and commercial broadband capabilities. There are many factors that will determine the commercial viability of this model. To aid its prospects for success, we understand that the FCC is seeking to clarify through a rulemaking the terms of the partnership in advance of a re-auction of the 700 MHz "D block". We

understand that no explicit public subsidy has been proposed, therefore, commercial viability is central to ensuring that the potential benefits of this model are realized. Of course, bid prices for the spectrum being auctioned reflect the value to the private sector under the partnership model and, to the extent they are below prices for spectrum that is solely used for commercial purposes, represent an implicit form of taxpayer support for the partnership. Furthermore, the FCC notes that the comment period in question closed on November 12, 2008, and that a number of commercial entities filed comments expressing interest in bidding on the D block.

Question 2. As you know from the make-up of the PSST board, public safety entities are understandably protective of their spectrum.

How does DHS plan to collaborate with public safety entities to turn over control of their spectrum to the PSST? In your response please list the public safety entities, discuss timetables, identify milestones and goals, and share corresponding charts that illustrate the “turn-over” of the spectrum to the PSST.

Answer. The congressionally mandated digital television transition will free vital spectrum for use by the emergency response community as television broadcasters return the analog broadcast spectrum they currently occupy. Through this transition, which is to occur no later than February 17, 2009, the FCC has proposed that a single Nation-wide license be issued for 10 MHz of the 700 MHz public safety band that has been designed for broadband use. The FCC has issued a single Nation-wide license for the public safety 700 MHz broadband allocation to the Public Safety Broadband Licensee (PSBL). This transition does not affect any existing public safety spectrum currently being used by emergency responders across the Nation, nor does it affect that part of the 700 MHz band that will be directly licensed to public safety agencies. To be clear, while some 700 MHz narrowband public safety operations will be relocated due to a change in the band plan for this spectrum, these licensees will retain the same number of channels they currently hold once relocated. The FCC has proposed to require the D Block licensee to fund this relocation. The Department of Homeland Security does not have jurisdiction over this process; the FCC is the lead on this transition.

The Office of Emergency Communications has worked with the Public Safety Spectrum Trust (PSST) in coordination with the Federal Partnership for Interoperable Communications to ensure that the PSST was aware of the views of Federal user members concerning access to the proposed Nation-wide broadband public safety network by Federal emergency responders. DHS is not aware of any proposed requirements in the Federal Communications Commission’s pending rulemakings for this band that would oblige public safety entities to transfer control of their licensed spectrum to the PSST. Instead, the PSST is envisioned to be the sole public safety licensee for the Nation-wide broadband public safety network, through which public safety access to the network would be coordinated.

As stated at the hearing, DHS stands ready to offer whatever assistance it can to ensure the successful conclusion of the FCC’s rulemaking, the re-auction of the commercial spectrum in that band, and any other steps needed to successfully deploy the network.

Question 3. What are the biggest technological impediments to achieving full coverage of a jurisdiction under a national network and regional network?

Answer. There are no unsolvable technological impediments to achieving full coverage of a jurisdiction under either a national or a regional network. The overarching impediment is cost. The central question on whether we use a national or a regional network depends upon whether there will be enough subscribers to pay for the infrastructure required to provide coverage in a given area. Furthermore, the FCC docket considering the issues raised remains open and the commission has sought comment on the costs of either approach.

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR DR. DAVID BOYD, DIRECTOR, COMMAND, CONTROL, AND INTEROPERABILITY DIVISION, SCIENCE AND TECHNOLOGY DIRECTORATE, DEPARTMENT OF HOMELAND SECURITY

Question 1. Are there certain technologies that would function more efficiently if the 700 MHz network were to be built on a national versus a regional basis?

Answer. It is the administration’s position that in the context of a regional system approach in the 700 MHz band, common standards would be beneficial to the interoperability of the network during incidents that cross regional licensing boundaries. The DHS Science and Technology Directorate’s Office for Interoperability and Compatibility has supported a system of systems approach whereby each regional system would work as part of a larger national system. The system of systems approach allows separate agencies to join together using interface standards, compat-

ible procedures, and training exercises without having to discard major investments in their existing systems.

Question 2. Will most of the communication devices currently used by first responders work on a future 700 MHz network or will jurisdictions be required to purchase new devices?

Answer. It is the administration's position that most communication devices currently in use in the field were never intended for broadband use on the 700 MHz band. Therefore, very few of the current communication devices will be functional on the 700 MHz band. To the extent that public safety agencies desire to use the 700 MHz band and do not possess devices that operate on those frequencies, they will need to consider purchasing new equipment, using patching technologies, or possibly modifying their existing equipment. Investment decisions will vary depending on circumstances, and DHS will work with its State and local partners to evaluate equipment needs and cost-effective investment approaches. It is worth noting that the National Baseline Survey on Interoperability found that agencies tend to be more developed in technology than in other areas of interoperability, such as standard operating procedures. DHS is using these findings to focus its grant funding in areas that will bring about effective approaches toward advancing interoperability.

Question 3. The National Capitol Region received a waiver from the FCC in order to develop its 700 MHz network. Do you believe that the FCC should grant a similar waiver to New York City which would allow the city to build a network on its own but within the guidelines established by the FCC?

Answer. The National Capitol Region was granted a temporary waiver to operate on the 700 MHz band. The FCC has continued to grant renewable Special Temporary Authority for the operations of the National Capitol Region in the 700 MHz band, consistent with its *Second Report and Order*, which will allow this network to operate until such time as the Nation-wide network is deployed in the area. The FCC has also sought comment on permitting early local public safety broadband build out, so long as such networks would be fully interoperable with, and ultimately fully integrated into, the Nation-wide public safety network. It is the administration's position that the public-private partnership proposed by the FCC represents a potential means to enhance public safety interoperability and broadband capability. It would be premature to recommend waivers for local jurisdictions until the viability of the proposed partnership model is fully assessed.

Question 4. What is your perspective on the 700 MHz D Block and how do you envision it will assist our Nation's first responders? Do you believe the approach being taken by the FCC to auction the spectrum (i.e. a national versus regional auction) is consistent with the "bottom-up" approach to first responder communications as advocated in the SAFECOM continuum?

Answer. The emergency response community has long sought additional spectrum for mission-critical activities. The additional 700 MHz spectrum is essential to the emergency response community and helps to satisfy these needs. The public safety broadband spectrum in the 700 MHz band, which has the ability to support voice, text, imagery, schematics, video, and other broadband applications, has already been licensed to the Public Safety Spectrum Trust on a Nation-wide basis. Additional 700 MHz narrowband spectrum is available for local licensing and use. The Commission has also proposed licensing the commercial spectrum as part of the public/private partnership to be paired with the public safety broadband allocation either on a Nation-wide basis, or on the basis of 58 regions. The Commission has proposed to assess the winning set of licenses based first on the greatest population coverage, followed by the highest aggregate bid(s). Emergency responders have a compelling interest in broadband communications on the 700 MHz band. Whatever decision is made on the broadband network, it is essential that spectrum remain available to emergency responders.

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR MR. RICHARD MIRGON, FIRST VICE PRESIDENT, ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS OFFICIALS

Question 1. Do you believe that the public-private partnership network for public safety broadband communications can be successfully built and operated as a commercially viable system without some form of public subsidy? Please detail the supporting argument for APCO's position.

Answer. Response was not provided at the time of publication.

Question 2a. As you know from the make-up of the PSST board, public safety entities are understandably protective of their spectrum.

What is APCO's plan to collaborate with public safety entities to turn over control of their spectrum to the PSST? In your response please list the public safety enti-

ties, discuss timetables, identify milestones and goals, and share corresponding charts that illustrate the “turn-over” of the spectrum to the PSST.

Answer. Response was not provided at the time of publication.

Question 3. Please state clearly for the record, whether APCO supports a national or regional deployment of a public safety communications network. In your response, please detail the policy reasons that support APCO’s position.

Answer. Response was not provided at the time of publication.

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR MR. RICHARD MIRGON, FIRST VICE PRESIDENT, ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS OFFICIALS

Question 1. Several months ago there were reports that the Association of Public Safety Communications Officials (APCO) was threatening to cut ties with the current Public Safety Spectrum Trust (PSST) over discussions regarding the on-going 700 MHz auction. What is APCO’s position with regard to the Public Safety Spectrum Trust’s handling of the 700 MHz D Block auction?

Answer. Response was not provided at the time of publication.

Question 2a. In August, APCO suggested changes to the FCC rules that would significantly enhance the incentive for potential bidders by doubling the spectrum available from a 10-MHz block to a 20-MHz block.

Please discuss why APCO believed this proposal would increase the likelihood of success in a second D Block auction.

Answer. Response was not provided at the time of publication.

Question 2b. Is this still the stance of APCO?

Answer. Response was not provided at the time of publication.

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR MR. JOHN M. CONTESTABILE, BOARD MEMBER, PUBLIC SAFETY SPECTRUM TRUST

Question 1. Please state clearly for the record, whether the Public Safety Spectrum Trust (PSST) advocates a national or regional deployment of a public safety communications network. In your response, please detail the policy reasons that support the PSST’s position.

Answer. Although the PSST, the Public Safety Broadband Licensee (PSBL), retains a preference for a single, Nation-wide “D Block” spectrum (D Block) license, it has begun exploring the merits of a State or regional licensing approach for the commercial D Block spectrum that will be paired with the PSBL spectrum to create the public safety-commercial partnership for the shared wireless broadband network (SWBN). The PSST strongly believes that the country’s first responders need a Nation-wide, interoperable broadband network. However, the PSST also believes that goal can be achieved under a regional licensing approach for the D Block, as long as the Federal Communications Commission (FCC) mandates a single air interface technology to be used throughout the Nation-wide network and a legally binding governance structure among any multiple regional D Block licensees to facilitate the interactions among the D Block licensees and the PSBL, and to ensure interoperability and Nation-wide roaming. Although deployment of a single air interface technology and the need to work with a single D Block licensee would be a given if a single bidder were to acquire a Nation-wide D Block license, the PSST believes that since such a result cannot be assured, it is prudent—with the requirement of a single technology and common commercial licensee governance structure noted above—to offer to prospective D Block regional license bidders an alternate route to reach the PSST’s desired Nation-wide interoperable broadband network goal.

The PSST believes assigning the D Block spectrum to local or regional entities without the provisions stated above would be a serious mistake. Without a requirement for a common air interface, different localities or regions could opt for technologies that would be incompatible with each other. As noted above, a legally binding governance structure among multiple regional D Block licensees provides an effective mechanism for communications with the PSBL and would facilitate roaming for first responders among the regions.

Question 2. As you know from the make-up of the PSST board, public safety entities are understandably protective of their spectrum. In your response please list the public safety entities, discuss timetables, identify milestones and goals, and share corresponding charts that illustrate the “turn-over” of the spectrum to the PSST.

Answer. In 1997 Congress passed the Balanced Budget Act of 1997, and the President signed into law, legislation designating 24 MHz of spectrum in the upper 700 MHz band to public safety. The FCC designated 12 MHz of this spectrum for narrowband voice communications channels and 12 MHz of the spectrum for wideband communications. With the gains in technology over the next 10 years which

introduced broadband technologies, the FCC re-designated the 12 MHz of wideband spectrum for broadband use and subsequently issued a Nation-wide license for that 12 MHz broadband spectrum to the PSST for use in a public-private partnership. Specifically, the partnership would combine the PSST's license with an adjoining 10 MHz of spectrum (the D Block) in which to build a Nation-wide mobile broadband network and enable Nation-wide public safety communications interoperability. This 12 MHz of broadband spectrum was originally licensed by the FCC directly to the PSST on November 19, 2007, and has never been licensed to any other public safety entity or entities. The FCC is completing its rulemaking concerning the build-out requirements and other requirements for this spectrum, and the PSST will begin planning its deployment timetables and milestones once the FCC releases its final order and rules and consistent with a subsequent Network Services Agreement to be negotiated with the D Block winner[s].

Question 3. In several instances—at a hearing before the Energy and Commerce Committee in March 2008, in several publications, and in the second D Block notice of the FCC—there have been calls for the PSST to improve its transparency with regard to organizational structure. There have also been calls for the PSST to clarify its position regarding the D Block.

Please identify the specific steps that the PSST has taken to demonstrate transparency. In your response, please demonstrate how those specific steps have improved the auction process.

Answer. Only incorporated in June 2007, the PSST took many steps to demonstrate transparency well before the March 2008 hearing. Even before the PSST became an FCC licensee, it launched a robust public web site (found at www.psst.org) on or about November 13, 2007 (within days of it becoming the PSBL upon formal award of the Nation-wide public safety broadband license in accordance with an open application and qualification process as prescribed in a public rule-making process by the FCC) that contained extensive information about the PSST and the contemplated public safety network. Under the "About the PSST" link on that web site, the PSST posted a description of the PSST, a list of its 15 member organizations, the names of the board representatives of those member organizations, the names and bios of the members of its Executive Committee, its Articles of Incorporation and its Bylaws. The PSST web site also set forth a history of public safety communications leading up to the FCC decision to create a public safety-commercial partnership to establish a Nation-wide, interoperable public safety broadband network as well as a summary of that FCC decision and a description of the PSST's vision of such a public safety broadband network. In addition to providing contact information and a link to all the PSST's news releases, the PSST web site also included much additional information on the future public safety broadband network.

Per the FCC's 2nd Report and Order adopted in July 2007 (2nd Report and Order), the FCC required the envisioned Nation-wide D Block auction winner to negotiate an NSA with the PSBL. In response to requests from potential D Block bidders,¹ but without any FCC requirement to do so, the PSST also demonstrated great transparency by devoting significant resources to create and post on its public web site a detailed Bidder Information Document (BID). The BID set forth the PSST's expectations and preferences for the SWBN, subject to negotiation of the NSA. The PSST released BID version 1.0 on the PSST web site on November 15, 2007 so all interested parties would understand public safety's expectations and preferences prior to the filing deadline to participate in the auction.²

The PSST initiated the BID process in a transparent way by asking the National Public Safety Telecommunications Council (NPSTC) to create a draft set of technical expectations. Many public safety and industry representatives contributed to the NPSTC work product, including industry representatives of potential bidders.³ NPSTC published its set of technical specifications on its own web site. In addition, the PSST sought—and held—numerous meetings with potential bidders in connection with the development of the BID.

All of the above demonstrations of transparency by the PSST helped the initial auction process by giving potential bidders information about the PSST, the entity

¹Potential bidders requesting guidance on public safety expectations for the SWBN included AT&T, Frontline Wireless and Verizon.

²After further input from potential bidders, the PSST released version 2.0 (the final version) of the BID on its web site on November 30, 2007.

³NPSTC published a list of more than 50 public safety contributors and more than 20 industry contributors to its technical expectations document available at <http://www.npstc.org/documents/700%20SoR%20Participants%20v2.pdf>. The industry participant list includes wireless vendors and carriers such as Airvana, Alcatel-Lucent, AT&T, Ericsson, Frontline Wireless, Inmarsat, Motorola, Nortel, Northrop Grumman, Tyco Electronics, Qualcomm and Verizon.

with whom the D Block auction winner would negotiate the NSA, to reduce uncertainty about its negotiating partner. The PSST actions also assisted the auction process by providing very specific information regarding the PSST's expectations and preferences regarding the SWBN in advance of the auction so potential bidders could consider those factors when they analyzed the business case for a possible D Block bid.

After the auction, the PSST continued to demonstrate further transparency by considering enhancements to its corporate governance procedures despite the fact that it had been in existence only a few calendar quarters. Those changes under consideration by the PSST board include opening board meetings to the public, making minutes of board meetings available to the public and posting annual financial statements on-line. Such changes would provide additional transparency that could help a future auction by providing additional information about the PSST to potential bidders.

Of course, transparency must be balanced against the reality that the PSST also must consider the interests of the prospective public safety users on the contemplated Nation-wide network, some of which may be safeguarded by FCC rules, and some of which may be protected in the process of arms' length negotiation to reach an NSA between the PSST and the D Block licensee(s). So, the PSST should not be compelled to disclose all of its deliberations, negotiating strategies and potential areas of compromise or tradeoff publicly—thereby making that information available to bidders that the PSST might find “on the other side of the negotiating table”, any more than such bidders should be required to disclose their true minimally acceptable positions on all important issues to participate in the D Block auction. The PSST believes that it has provided and continues to provide guidance and relevant reasoning as to its positions and has made those publicly available, both in its publicly filed comments in FCC proceedings and through the materials posted on its web site, and has earnestly solicited and received equally candid and helpful input from potential D Block bidders.

Question 4. Do you believe the public-private partnership network for public safety broadband communications can be successfully built and operated as a commercially viable system without some form of public subsidy?

Answer. To answer the question, it is useful to look at the SWBN as what it is—a commercial network and a public safety network using a common infrastructure. I will defer to others with more expertise on the economics of a commercial network, but I have no reason to believe that the commercial network portion of the SWBN would require any public subsidy to be successfully built and operated. The public safety network, however, will require public expenditures. At a minimum, State and local government first responders will need public funds to buy wireless broadband equipment for the network⁴ and pay monthly access charges.⁵ Further governmental assistance would be welcome in other areas such as: for PSST operating expenses, subsidization of public safety devices, subsidization of public safety service access charges and assistance for network construction in places where such construction may not be otherwise economically viable.

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR MR. JOHN M. CONTESTABILE, BOARD MEMBER, PUBLIC SAFETY SPECTRUM TRUST

Question 1. How does the PSST ensure that its policy recommendations represent all public safety concerns, including those of the major cities like New York?

Answer. The PSST is a nonprofit corporation established to provide public safety leadership an organizational structure through which decisions can be made to guide the construction and operation of a Nation-wide wireless broadband network for public safety. The PSST works hard to represent all State and local public safety concerns. One way the PSST represents the broad array of State and local public safety organizations, such as those serving in a major city like New York, is through the membership of its board of directors. The PSST board of directors consists of representatives of organizations representing local, county and State public safety organizations and the local, county and State governments who employ them. Through its rulemaking process, the FCC mandated the representation of each such

⁴ Given the potential economies of scale (see, e.g., ¶370 of 2nd Report and Order) of a Nation-wide public safety system using commercial hardware, the costs of SWBN devices should compare favorably to public safety devices used today on balkanized largely local networks.

⁵ In the 2nd Report and Order, the FCC stated it believed the public safety service fees “will in fact be lower than typical commercial rates for analogous services.” 2nd Report and Order at ¶451.

organization on the PSST board. The organizations represented on the PSST board are:

1. American Association of State Highway and Transportation Officials (AASHTO)
2. American Hospital Association (AHA)
3. Association of Public-Safety Communications Officials—International (APCO)
4. Forestry Conservation Communications Association (FCCA)
5. International Association of Chiefs of Police (IACP)
6. International Association of Fire Chiefs (IAFC)
7. International City/County Management Association (ICMA)
8. International Municipal Signal Association (IMSA)
9. National Association of State Emergency Medical Services Officials (NASEMSO)
10. National Association of State 9–1–1 Administrators (NASNA)
11. National Emergency Management Association (NEMA)
12. National Emergency Number Association (NENA)
13. National Fraternal Order of Police (NFOP)
14. National Governors Association (NGA)
15. National Sheriffs' Association (NSA)

As demonstrated by the nature of the above organizations, the directors represent groups with thousands of first responders and local government officials in major cities.

Another way the PSST seeks to represent varied public safety concerns is through the expertise and job experience of its board members. Members of the PSST board bring decades of critical and directly relevant experience in many types of public safety organizations to their PSST assignment and, through that experience, have a keen understanding of public safety needs. That understanding provides the PSST with essential tools to help direct policy recommendations.

Yet another way the PSST works to represent all public safety concerns is through its outreach activity in general and communications with State and local public safety groups in particular. PSST board members and service providers to the PSST have attended and spoken at dozens of public safety conferences and meetings during the last 12 months. At these events, PSST board members and its service providers have sought input from conference and meeting leaders—and rank-and-file members—to inform them on current needs, trends and opinions from the public safety community. Furthermore, the PSST board members and its service providers have been speakers and members of presentation panels to help explain the proposed Nation-wide public safety broadband system and the opportunities it presents.

Apart from conferences and meetings, PSST board members communicate directly with Federal, State and local public safety officials to help PSST board members understand the needs of those officials.⁶ For example, the PSST Chairman recently traveled to New York City to discuss New York City's public safety needs directly.

As hard as the PSST works to represent all public safety, however, it of course cannot guarantee unanimous support among all public safety entities on a PSST policy decision any more than a congressional representative can count on 100 percent agreement among his or her constituents on any given issue or vote. To that end, I realize my fellow hearing witness from New York city offered a different view from the PSST on the need for a Nation-wide interoperable public safety broadband network even though that network has received wide and strong support from public safety organizations around the country. At the hearing, I specifically commended the city of New York for putting together the essential ingredients that have permitted it to deploy an advanced broadband network. As I also said at the hearing, however, if New York's access to funding could be replicated throughout the rest of the country, we would be facing a much less challenging future. Unfortunately, funding for comparable dedicated public safety-only networks is lacking for almost all other State and local jurisdictions and history has proven it will take a national effort to create Nation-wide seamless interoperability. The PSST therefore respectfully disagrees with the city of New York's current position on the Nation-wide, interoperable public safety broadband network.

Question 2. If the FCC proceeds with the spectrum auction based on 58 regions, how would the PSST manage its relationship with these regional licensees?

Answer. Subsequent to the hearing, the FCC adopted its 3rd FNPRM concerning the Nation-wide public safety broadband network on September 25, 2008. In that

⁶To help communicate with public safety organizations, the PSST also established a robust web site (found at www.psst.org) to provide background information on the PSST, to explain further the proposed Nation-wide, interoperable broadband public safety network and to identify PSST contact information.

3rd FNPRM, the FCC proposed offering the D Block at auction as both a single, Nation-wide license and as regional licenses covering 58 regions.⁷ If the D Block spectrum is licensed on a regional basis, no one of course can know at this time the number of distinct regional licensees that would result from such an auction. But, I would expect that the number of D Block licensees will be fewer than the number of regions since it seems likely that an entity or entities will win more than one region if they are interested in this spectrum. That said, managing the PSST's relationship with multiple regional licensees will be challenging and frankly will likely require more PSST resources than just interfacing with one national licensee.

The PSST notes that the FCC's 3rd FNPRM seeks comment on a proposal that if the D Block is licensed on a regional basis to multiple entities, the FCC adopt a "legally binding governance structure" among the multiple regional D Block licensees "to facilitate interactions among multiple D Block licensees and the PSST, and to ensure interoperability and nationwide roaming."⁸ If the FCC grants regional D Block licenses to multiple entities, the PSST believes that such a governance structure will be essential to help it manage its relationship with such licensees in an effective and efficient manner.

Question 3. Would public safety communications benefit if the FCC were to grant more spectrum waivers similar to the waiver issued to the National Capital Region? Provided that these 700 MHz networks are eventually amalgamated into the national network, would these waivers facilitate faster network deployment?

Answer. FCC authority to permit interim temporary deployments similar to the system built by the National Capital Region may or may not benefit public safety communications and/or facilitate a faster rollout of a Nation-wide, interoperable public safety broadband network. Such grants of special temporary authority by the FCC will only benefit public safety communications if the jurisdiction seeking such authority has sufficient resources to design, build, maintain and hopefully upgrade a network that will effectively work and will allow first responders to talk and share data on that network. That is, until the shared commercial-public safety network replaces that interim, temporary network. In other words, FCC permission itself without a funded and workable follow-through plan will not itself benefit public safety communications. Moreover, if the jurisdiction wishes to recover a substantial part of the cost of its early network deployment—consistent with the PSST's preference for a smooth and rapid transition from that network to a shared commercial-public safety network—there would need to be close coordination and agreement between the jurisdiction and the relevant D Block licensee. In particular, the relevant D Block licensee needs to ensure that network design and construction in the affected area is done in such a way as to allow for easy integration into the Nation-wide, interoperable broadband network that the D Block Licensee(s) deploys in other areas. [Network design and construction—particularly in large, urban areas—is not a rapid process, but funding is more readily available for such construction in the largest markets. It is worth noting that while it is very likely that only major metropolitan areas could assemble the funding needed to construct a modern, commercial open standard broadband network, it is in precisely those same markets where the commercial D Block licensee(s) would have strong economic incentives to deploy the shared commercial-public safety network the earliest.]

Therefore, the capability to fund and implement a system under a waiver would also be essential for such FCC authority to facilitate faster network deployment. In addition, such FCC authority would only help quicken network deployment if the local system is built with an air interface compatible with the system used by the D Block licensee(s)—such that it is therefore later able to be part of the larger Nation-wide, interoperable network. If the local system is built with an incompatible technology, or with a customized public safety-specific operating system, it will do little to hasten the Nation-wide interoperable broadband network's deployment.

Thank you for the opportunity to answer your questions and please contact me if you need any additional information regarding these matters.

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR MR. LEROY T. CARLSON, CHAIRMAN OF THE BOARD, U.S. CELLULAR

Question 1. On page 4 of your testimony, you recommend that the FCC rule for the D Block address issues such as "reliability, coverage, public safety preemption, back-up power, security, and major service features." You argue that if the rules are commercially reasonable, then companies will be inclined to invest in the partnership.

⁷ 3rd FNPRM at ¶ 63.

⁸ 3rd FNPRM at ¶ 173.

As a representative of the private sector, please provide the subcommittee with specific examples of what would attract a company to invest in a regional plan as compared to a national model.

Answer. A company would be more likely to make operating a D Block license commercially viable if the company can leverage its existing network infrastructure and operations in the area covered by the license. Such geographic overlap will yield cost efficiencies and speed network and service deployment.

United States Cellular Corporation ("USCC") operates wireless systems covering about 15 percent of the Nation's population. It would have substantial efficiencies in the areas covered by its existing systems and in some adjacent areas. In contrast, it would have much higher network construction and operating costs outside these areas, including in about 85 percent of the broad geography covered by a national license. In addition to lacking existing infrastructure to leverage in geographic areas distant from its existing service areas, USCC simply could not finance the much larger acquisition, construction and operating costs for a national license. Accordingly, selected regional licenses (for example, some of the 58 public safety regions) would be much more likely to attract investments from a company like USCC than would a national license.

There are many other regional wireless operators with systems covering certain metropolitan or rural service areas, but far less than the entire Nation. Moreover, there are many other potential bidders that could finance the costs of selected regional systems but not a national system. One expert, Dr. Coleman Bazelon, testified before the House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, on April 15, 2008 that he estimated the unfilled demand for regional licenses in the A and Blocks of the 700 MHz auction held in early 2008 (Auction 73) at \$9.346 billion.

Question 2. On page 3 of your testimony, you state that smaller area licenses will attract more bidders.

How would this approach avoid uneven investments in various jurisdictions?

Answer. I anticipate that each area will attract one or more bids. Each area has existing wireless operators who would be candidates to acquire additional spectrum at a reasonable price and could leverage their networks and operations to satisfy efficiently the requirements of the shared broadband wireless network. Also, new entrants and operators serving other areas of the Nation may be attracted to bid on area licenses that have low minimum opening bids.

For the areas that are likely to be less economically attractive, the FCC has proposed a slightly lower coverage requirement that would have to be achieved by the end of the license term. This approach would decrease the costs of serving low-density areas and help attract bidders to them, while still achieving very high coverage levels. Also, the FCC has recently proposed an auction mechanism that would, during the auction, decrease the minimum bid on areas that have not attracted bids prior to a certain point in the auction. USCC supports these proposals and expects that they will help avoid unsold area licenses.

Once a license is sold at auction, the winning bidder will be required to build a network that will interoperate with the other networks in the public/private partnership, with aggressive coverage requirements. Each licensee will be required to make investments in its areas that are necessary to provide uniform Nation-wide high levels of network service features, quality of service and reliability for public safety users.

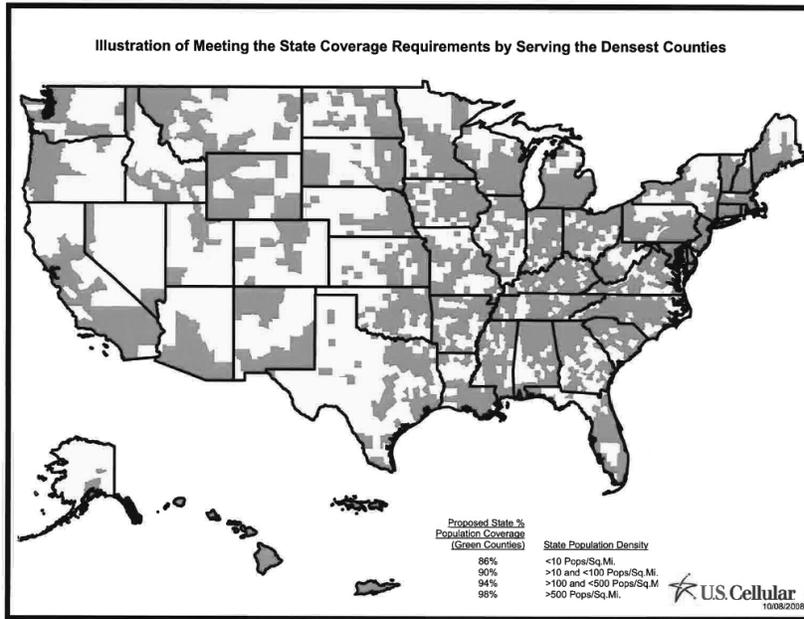
Question 3. Do you believe that the public-private partnership network for public safety broadband communications can be successfully built and operated as a commercially viable system without some form of public subsidy?

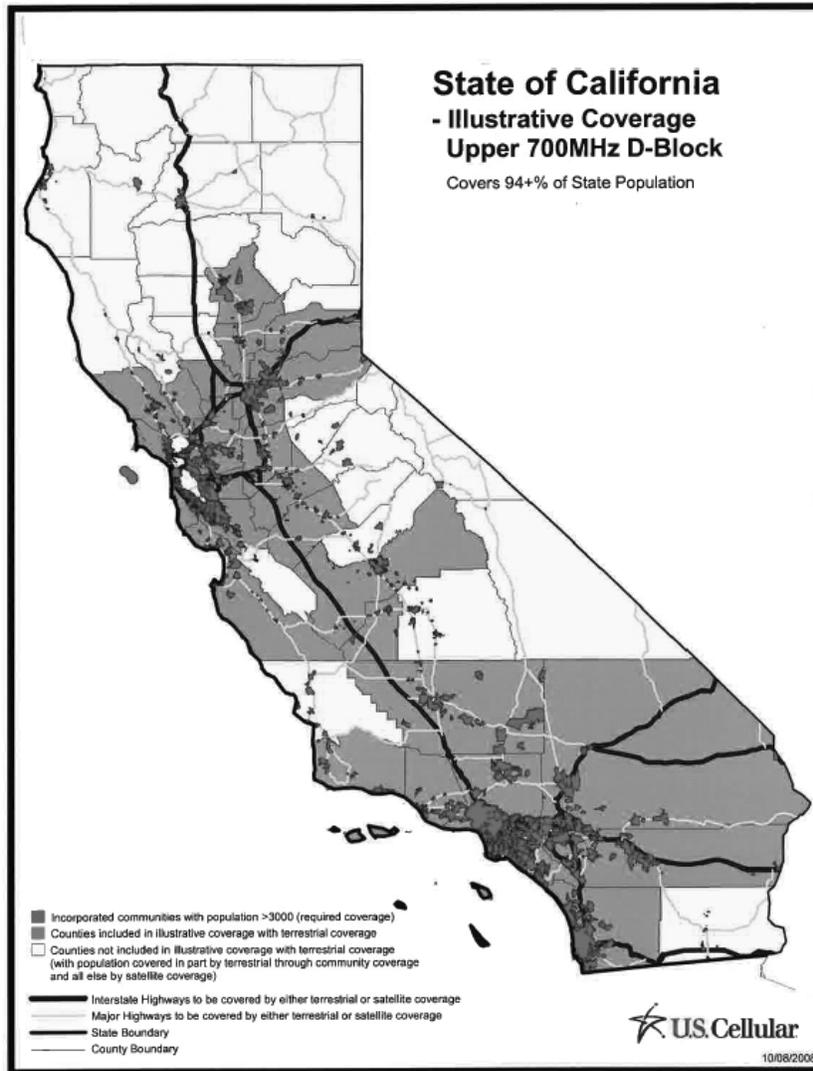
Answer. Yes, because the shared broadband network will yield substantial economies. With reasonable auction rules, technical requirements, pricing and spectrum lease obligations, this network can be built and operated without congressional funding. Many public safety users will find the shared broadband network attractive and affordable, and the systems will be commercially viable for the licensees. Yet, many public safety entities operate under limited budgets and some form of public support or subsidy may help them afford conversion to, handsets for and services on the shared broadband network. Additionally, public support or subsidies could help public safety entities order upgrades to the network features and services that the licensees would be required to provide. Spectrum lease payments from the commercial operators for use of the spectrum assigned to the Public Safety Spectrum Trust (PSST) could represent one source of such support or subsidy.

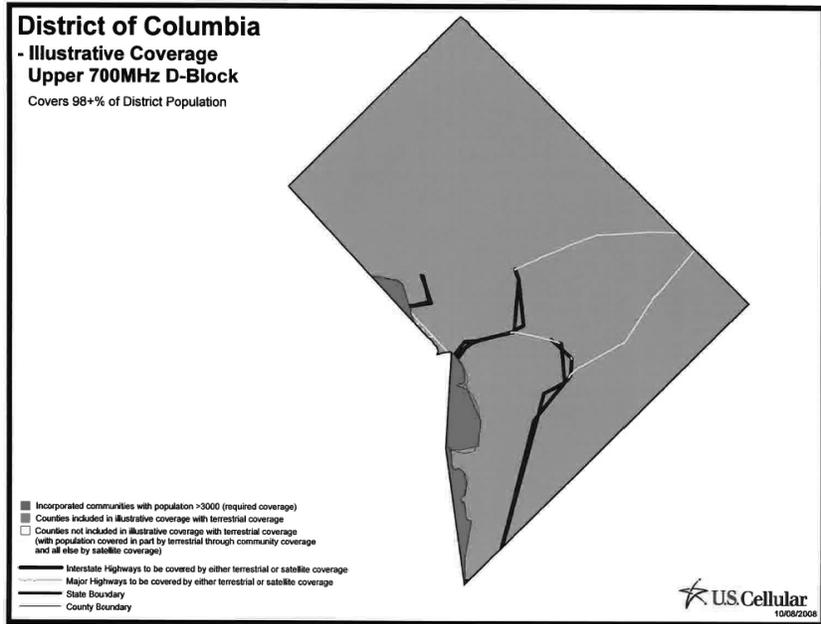
Question 4. Please provide the committee with a detailed chart that explains the U.S. Cellular coverage proposal for each subcommittee Member's State (including Chairman Bennie G. Thompson of Mississippi). In your charts, please identify the percentage and scope of the coverage area.

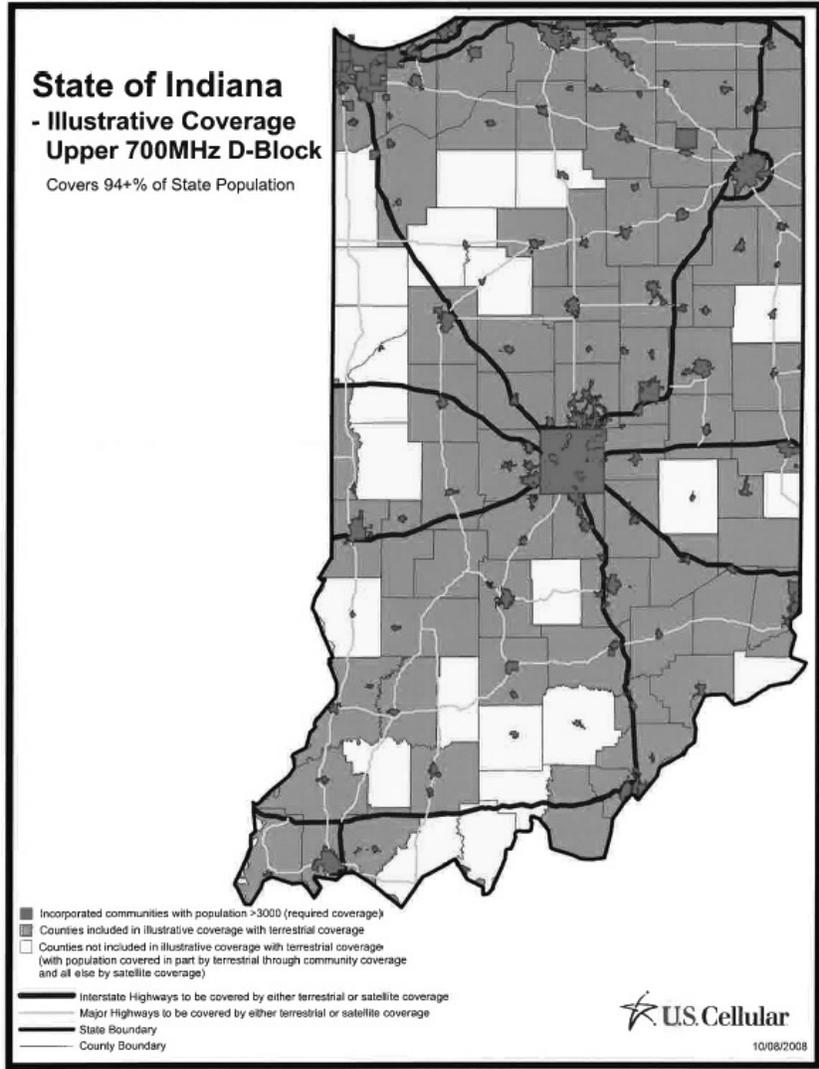
Answer. In the pages that follow, we have provided maps for each of the States requested, based on the State-level licensing approach and population coverage tiers proposed by U.S. Cellular. As you review these maps, it is important to realize that it is impossible to predict in advance the specific coverage design that a winning licensee would adopt to satisfy the population coverage requirement. In preparing these maps to show one way the coverage requirement could be satisfied, we have taken the approach of assuming that the more dense counties would be covered before the less dense counties. We recognize that this is a simplification and deployments wouldn't likely be "all or nothing" at the county level. Actual coverage plans would result from negotiations between public safety and each D Block licensee and would likely be based on local public safety priorities as well as opportunities for the licensee to leverage its existing network assets (e.g. towers) in the areas to be covered. Our maps have also noted major highways and communities with greater than 3,000 population. In addition to satisfying the population coverage requirement, our proposal (and the FCC's) includes a requirement to provide coverage to these communities and to the most heavily traveled interstate and State highways.

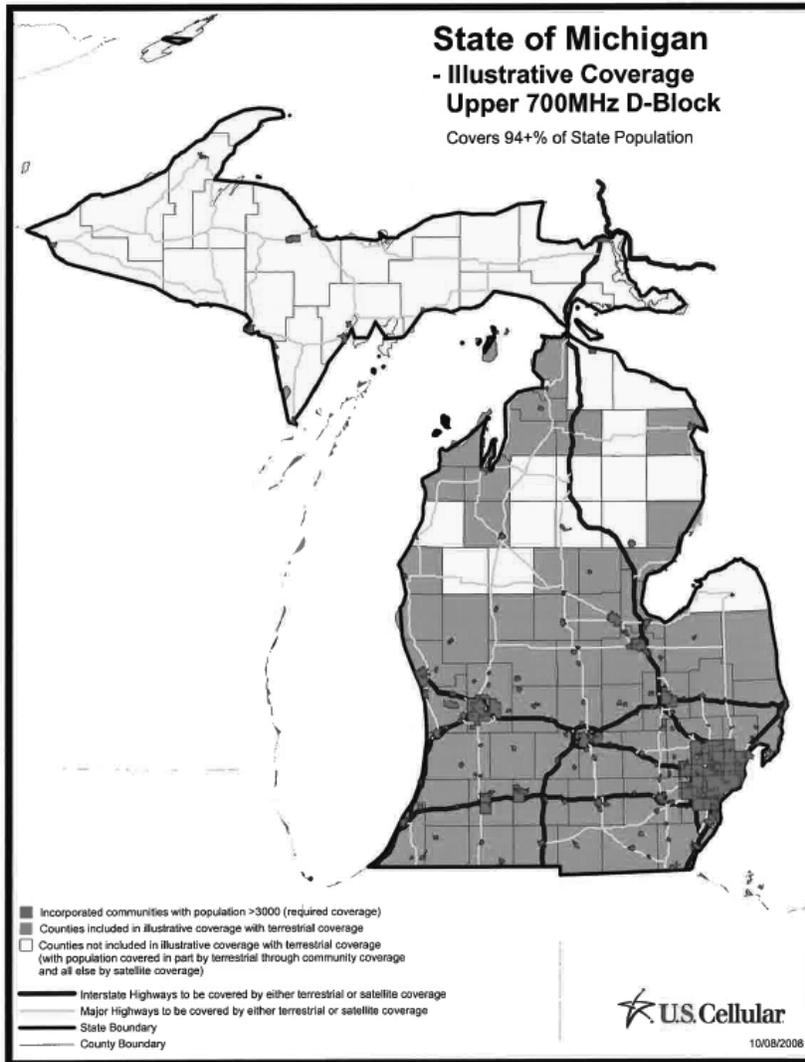
Please feel free to contact me if you or your colleagues require any further information or clarification concerning U.S. Cellular's proposals.

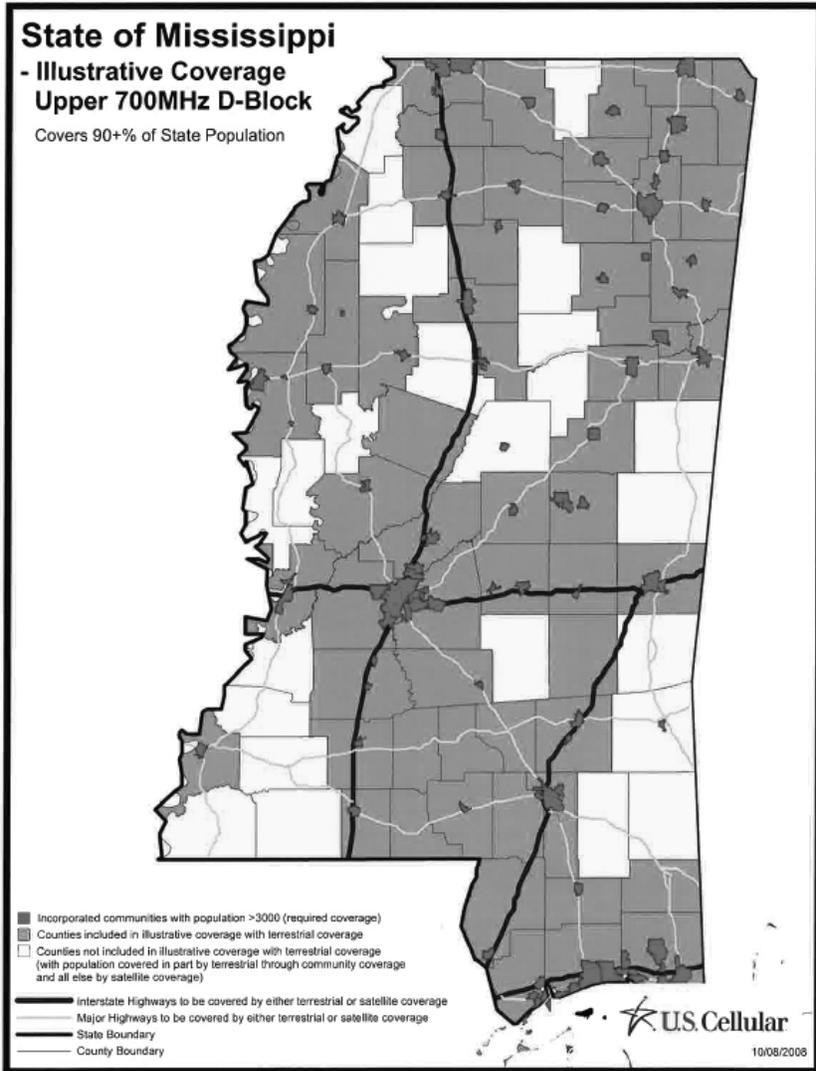


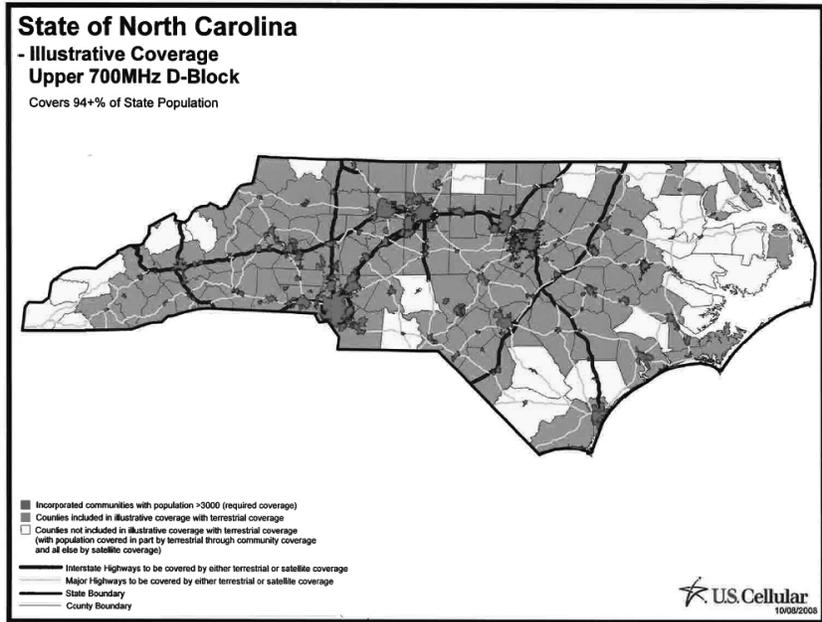
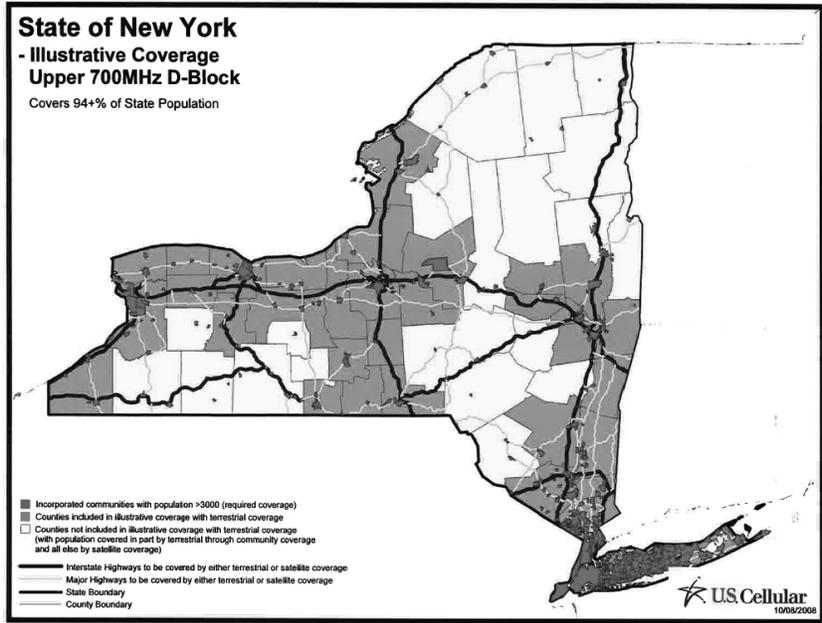


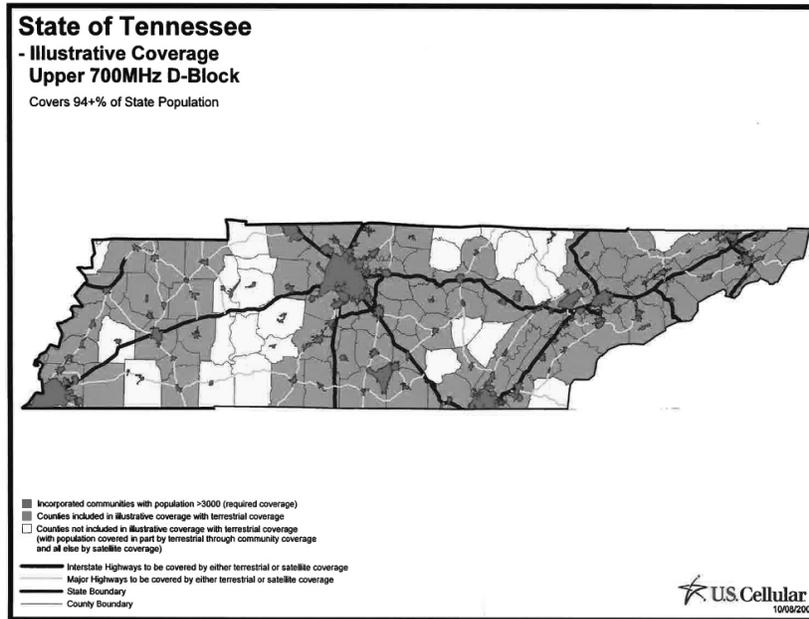
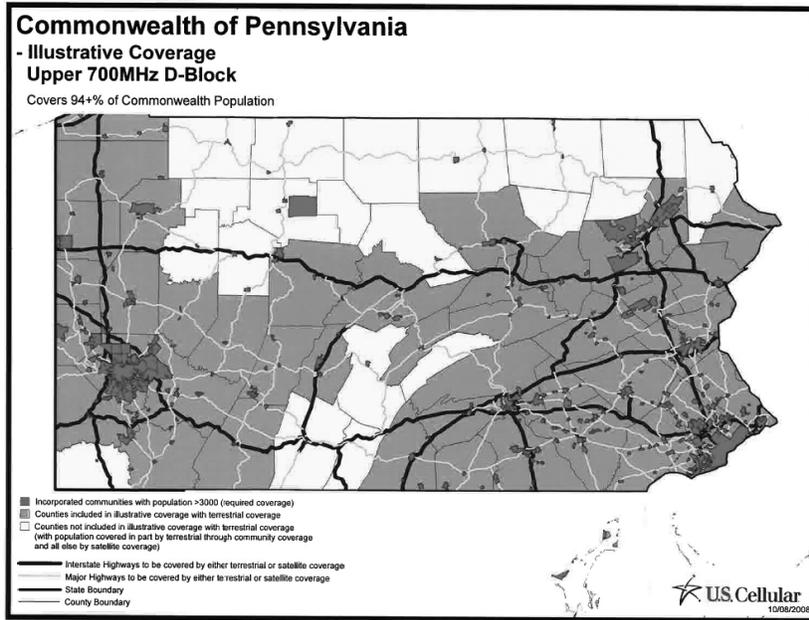


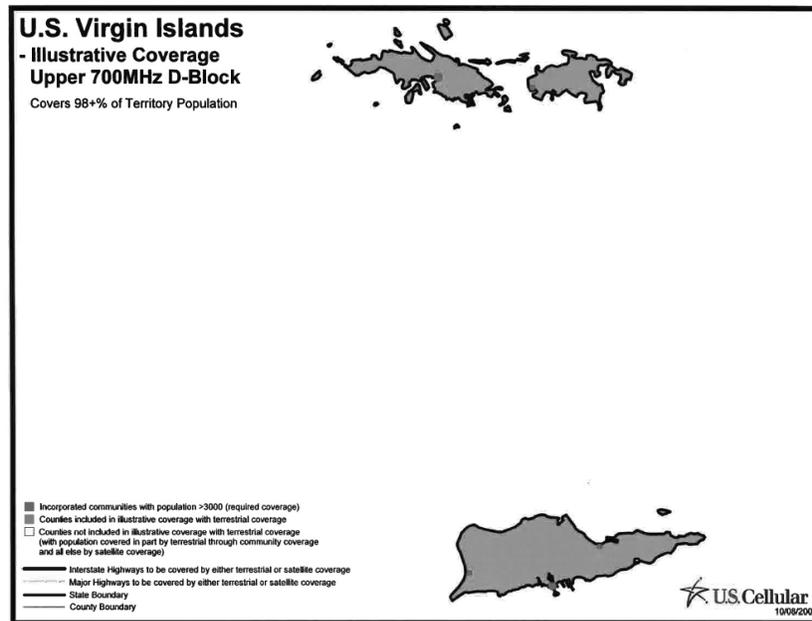
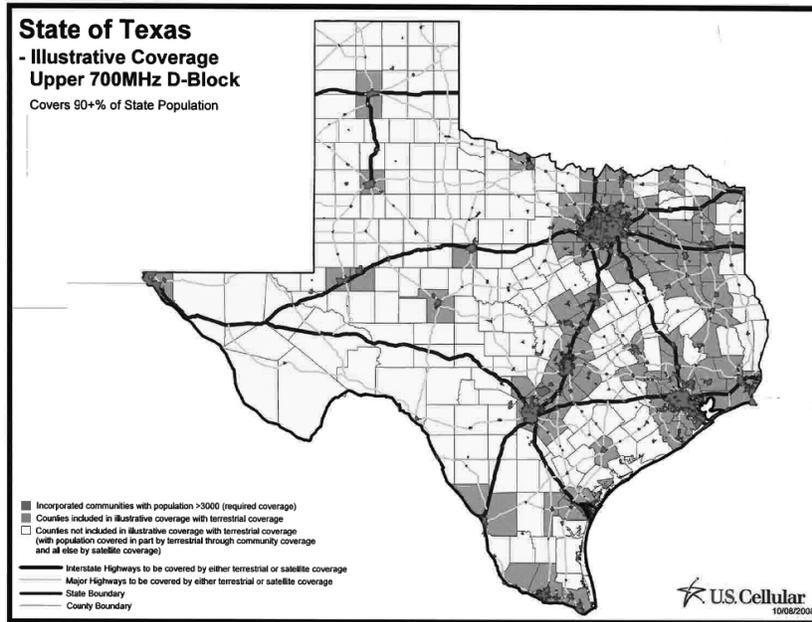


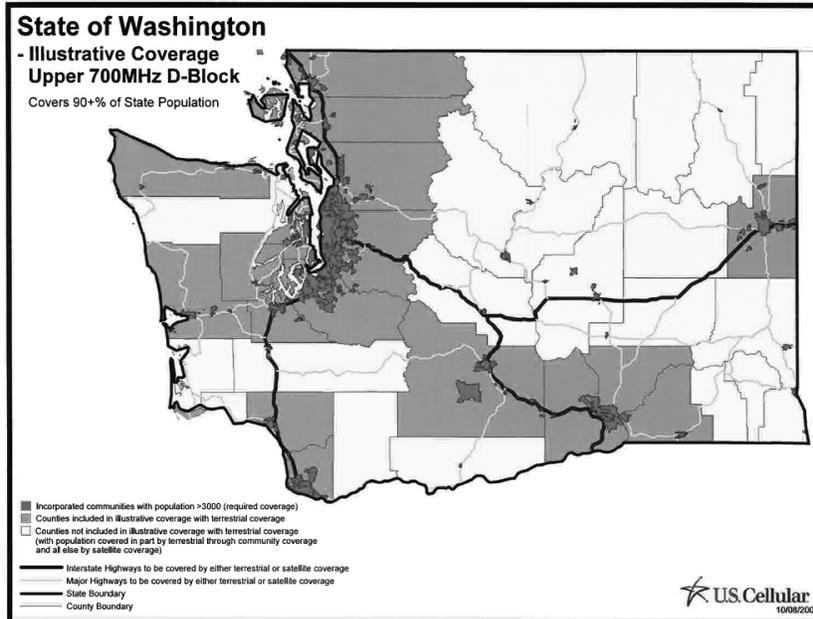
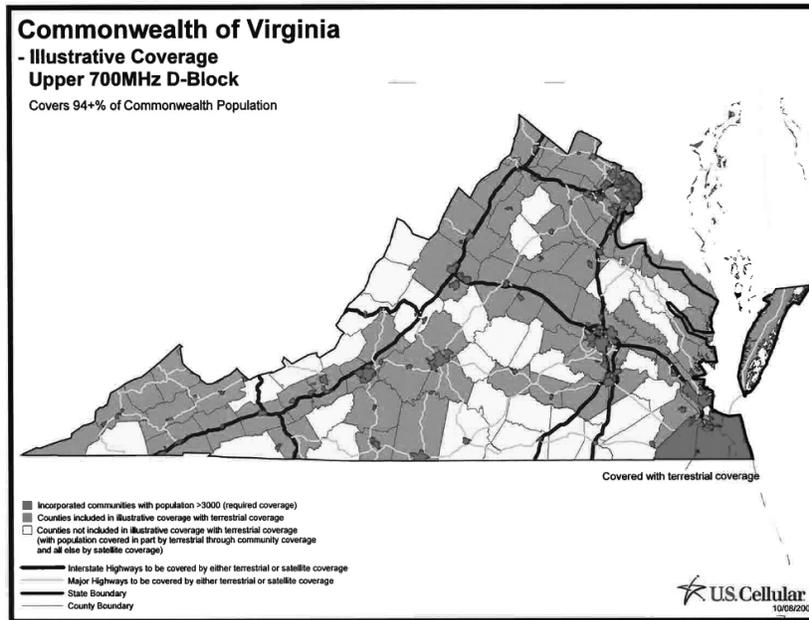












QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR MR. ROBERT
LEGRANDE, II, FORMER CHIEF TECHNOLOGY OFFICER, DISTRICT OF COLUMBIA

Question 1. You are to be commended for moving out ahead of the Federal Government and building out the National Capitol Region's broadband, interoperable network.

Do you think the FCC should set specific transmission standards or simply require that broadband public safety networks have the ability to interoperate?

Answer. Chairmen Thompson and Cuellar, thank you for your kind acknowledgment of our efforts in the National Capitol Region. I'm very proud of how our 19 jurisdictions came together and solved voice interoperability and also attempted to avoid the same problems with video and data interoperability. I believe it is critical that we set standards for broadband data networks immediately. Many States and local jurisdictions lack direction on how to provide their public safety users with wireless data communications. As a result, they are choosing non-interoperable solutions. Many will argue that in an IP-based world, we can more easily tie together networks. This is true, but short-sighted. First Responders and all other users carry devices, not networks. Once they roam out of a coverage area, it will be critical that the area in which they are roaming has the same technology using the same frequency. The easiest and most efficient way to achieve this level of interoperability is standards. The second and obviously the most difficult, is to try to fund and build a national network. We should try both and what is the worse we will do? Build several "interoperable" networks in our most targeted jurisdictions. This is far better than nothing which is what we have done to date.

Question 2. Why did the National Capitol Region (NCR) stop building its regional broadband network and what lessons does it hold for the Nation as we contemplate a regional or national approach?

Answer. In my opinion, the NCR officials stopped investing in the regional wireless broadband network because they were promised that the national network would finish the job. With many other competing priorities, it was an easy decision not to invest if a third party was going to build it for "free". Obviously, there was over-commitment and now each jurisdiction is using a different form of wireless data communications.

It is important to note that the regional plan being considered by the FCC is not the same as the plan developed in the NCR. The FCC's plan would merely auction the spectrum in smaller chunks and not cover many of the rural areas in the country. The NCR network would be built and operated by the jurisdictions who agreed to use the same technology and frequencies. I think the most significant lesson from the NCR is that jurisdictions can work together for the greater good. We established a standard and were well on our way to achieving the highest level of communications interoperability in the country.

Question 3. Do you believe that the public-private partnership network for public safety broadband communications can be successfully built and operated as a commercially viable system without some form of public subsidy?

Answer. I think that if a public-private network is built, there will be a public subsidy in one form or the other. If the Federal Government does not help the winning bidder with the up-front costs of building the network(s) to public safety standards, then the State and local jurisdictions will have to pay a high user fee. If neither of these happens, I do not believe the bidders will have a viable business model, especially since they will have to compete with the existing commercial carriers for public safety's business.

Question 4. On page 5 of your testimony, you state that "we should fully fund the public safety spectrum trust." Why do you advocate for the Federal Government to fund the PSST?

Answer. As mentioned in my testimony, finding funding (even if it is just for start-up costs) is time-consuming and takes away time that should be spent finding the best possible solution. The PSST has to remain void of the appearance of improprieties. This past year has been difficult for the PSST and many questions of conflicts of interest placed a dark cloud over their efforts. The best way to remove that cloud is to fund the PSST.

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR MR.
ROBERT LEGRANDE, II, FORMER CHIEF TECHNOLOGY OFFICER, DISTRICT OF CO-
LUMBIA

Question 1. As the Former Chief Technology Officer for the District of Columbia Government, does the National Capitol Region's 700 MHz network meet the necessary requirements for first responders or are there any areas that fell short of expectations or warrant further improvement?

Answer. The NCR's network leverages the best and most widely-used commercial technology today (EVDO Rev A). Many first responders throughout the country are already leveraging this technology through their Verizon and Sprint wireless broadband services. I believe that public safety should start deploying commercially proven technology today (3G) versus deploying and operating new emerging technologies (4G) tomorrow (2012). The good news is that migration path to the 4G technology is not difficult and is going to be made easier by the carrier investment. The longer we wait, the more non-interoperable we become and the less prepared we will be when we have to respond.

Question 2. Would you advocate that other urban areas pursue the development of their own 700 MHz network? If so why?

Answer. As mentioned in my testimony, I'm a strong advocate for early deployments by urban areas. I think many have the maturity and capabilities to design, procure, deploy, and operate 700 MHz networks at a commercially available standard starting today. I also stated that the current FCC proposal has many unanswered questions from the Commissioners, members of Public Safety associations, as well as States and local jurisdictions. Universal support for the plan will take time and I'm very concerned that we are focusing on ensuring that the spectrum will be auctioned instead of finding a win-win-win solution. The FCC should immediately rule to allow States and local jurisdictions to build and operate their own 700 MHz broadband networks starting today. If and when we reach universal agreement on the national network plan, and if it is in best long-term interest for all jurisdictions large and small, then the early deployed networks should be integrated into the national network and the jurisdictions should be compensated for their network assets. As I highlighted above, every day we delay is a day we are less prepared to respond.

QUESTIONS FROM CHAIRMAN HENRY CUELLAR OF TEXAS FOR MR. CHARLES F. DOWD, DEPUTY CHIEF, CITY OF NEW YORK, POLICE DEPARTMENT

Question 1. Given the decisions of Philadelphia, San Francisco and New York City to build and operate its own public safety network on the 700 MHz, what assurances can you give this subcommittee that these cities will not contribute to the lack of connectivity across regions or nationally?

Answer. Two primary factors contribute to the lack of interoperability among public safety first responders: (1) Public Safety agencies operate on disparate frequency bands; (2) Public Safety agencies use different and sometimes proprietary air interfaces.

Speaking for New York City, if we are permitted to construct our own Public Safety Broadband Network on 700 MHz we will adapt the same over-the-air interface as the Nation-wide 700 MHz broadband network. Since the frequency band will be the same (700 MHz) and the air interface will also be the same, interoperability will be greatly enhanced. The New York City network would be connected to the adjacent regional networks by linking their respective Network Operations Centers. Authorized units roaming to another network would affiliate with the local site in a manner similar to cell phones that roam between competitive wireless networks. Roaming agreements would be established and protocols put into place to allow this level of transparency. This is standard practice in the commercial wireless industry; the technical issues have long since been resolved. The result will be much greater interoperability, Nation-wide.

Question 2. Do you believe that the public-private partnership network for public safety broadband communications can be successfully built and operated as a commercially viable system without some form of public subsidy?

Answer. The public subsidy will come in the form of user fees paid to the network operator by public safety agencies. Once a national network is established, the FCC will not permit it to fail financially. It will, in effect, become a regulated monopoly similar to the Bell System prior to divestiture. If user fees prove inadequate, they will be increased to ensure the continued viability and profitability of the network. Public Safety agencies Nation-wide will effectively bear the cost of the network deployment and will continue to pay indefinitely to access spectrum that has been allocated to them by Congress.

Question 3a. In your testimony, you state that a national public safety network model needs to be done by the "bottom-up approach." You also mentioned that every other major city agrees that a commercial entity will not build a network to public safety requirements.

What are the reasons that most major cities disagree with the national network that the Public Safety Spectrum Trust supports?

Answer. Commercial broadband wireless networks already exist in large cities. If a public safety agency wished to subscribe to a commercial broadband wireless network they could do so today, without any action by the Commission. Many large cities also maintain that the Commission's proposal would not result in a network built to rigorous public safety standards.

Most large cities would prefer to construct their own broadband networks in order to have control of the network and to build the network to their standards. In addition many believe that the proposed Public Private Partnership will simply result in another commercial network deployment, and that the spectrum allocated by Congress to Public Safety will effectively be donated to the D Block auction winner who will use it to generate profits, subverting the intent of Congress.

In addition, many large city officials believe that profits gleaned in large cities would subsidize the network build-out in less populated regions, and although that may be a laudable goal from a national perspective, large cities feel that they are being exploited.

Question 3b. How has the PSST failed to coalesce the public safety community and represent them with a single voice?

Answer. The PSST has made no attempt to build a consensus among Public Safety agencies regarding the 700 MHz public private network proposal. In fact, there may not be a consensus, as demonstrated by the diverse opinions expressed in recent hearings. As to who the PSST actually represents, that is a question best answered by the PSST; certainly they do not represent the views of the NYPD, the City of New York or other large cities who filed comments in opposition to the Commission's proposal to mandate that the D Block auction winner construct a single Nation-wide public/private broadband network.

QUESTIONS FROM RANKING MEMBER CHARLES W. DENT OF PENNSYLVANIA FOR MR. CHARLES F. DOWD, DEPUTY CHIEF, CITY OF NEW YORK, POLICE DEPARTMENT

Question 1. Would you please describe efforts underway to ensure that New York City agencies are fully interoperable with regional and State first responder agencies? What frequency range is being used to achieve this level of interoperability?

Answer. For Public Safety agencies using the UHF band, interoperability is conducted on six New York Metropolitan Area Committee (NYMAC) channels in the UHF band. These channels are shared between New York City, Nassau and Suffolk Counties. New York City is in the process of establishing one of these channels as a Regional Simulcast Channel which will provide coverage throughout New York City and Westchester County.

Interoperability for public safety agencies that operate radio systems on the 800 MHz band is provided through the use of the NPSTC national interoperability channels.

Interoperability is also provided to Federal agencies operating in the VHF band through the use of a gateway which, when activated, patches the VHF Federal Interoperability channel to the NYPD channel most appropriate for the incident.

Question 2a. Back in June, and again at the September 16 hearing, the NYPD stated that the FCC should not attempt to re-auction a piece of wireless spectrum that failed to sell, but instead should give that spectrum to emergency response agencies.

If the FCC were to give the 700 MHz spectrum license to New York City, how would the city finance the construction of the network, as well as its ongoing maintenance and upgrades?

Answer. The city is already in the position of having to fund the NYPD radio system conversion from 25 kHz channels to 12.5 KHz channels (or equivalent spectral efficiency) by 2013 due to an FCC mandate. This conversion amounts to nothing less than a forklift replacement of the existing NYPD radio system that will cost the city hundreds of millions of dollars. We believe that we could better spend this money by investing in a more modern approach to spectral efficiency, namely an integrated broadband voice and data network. We also believe that emerging 4G technology such as Long Term Evolution can make this vision a reality prior to the 2013 FCC deadline.

Question 2b. How would surrounding areas participate in a city-built 700 MHz network?

Answer. The barriers to interoperability are a lack of a common air interface and agencies operating on disparate frequency bands. The FCC has chosen a frequency band (700 MHz) for the public safety broadband network, and has stated that there will be a common technology deployed nationally. The New York City-built 700 MHz broadband network would adhere to these standards and therefore be interoperable with surrounding networks built to the same standards. Interoperability would be

seamless in much the same way as commercial wireless network providers provide seamless coverage.

The ability for users to operate outside of their home network requires roaming agreements between networks. Roaming agreements between the New York City 700 MHz network and surrounding networks would be established to permit public safety users from other jurisdictions to use the New York City 700 MHz network, and conversely to permit New York City public safety users to use the broadband 700 MHz network built within their jurisdictions to support public safety. These technical issues have been resolved years ago in the commercial wireless industry. We would adapt similar technologies and practices.

