RPTS KESTERSON

DCMN HERZFELD

This is a preliminary transcript of a Committee hearing. It has not yet been subject to a review process to ensure that the statements within are appropriately attributed to the witness or member of Congress who made them, to determine whether there are any inconsistencies between the statement within and what was actually said at the proceeding, or to make any other corrections to ensure the accuracy of the record.

LEGISLATIVE HEARING TO ADDRESS

SPECTRUM AND PUBLIC SAFETY ISSUES

FRIDAY, JULY 15, 2011

House of Representatives,

Subcommittee on Communications

and Technology,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to notice, at 9:17 a.m., in Room 2123, Rayburn House Office Building, Hon. Greg Walden [chairman of the subcommittee] presiding.

Present: Representatives Walden, Terry, Stearns, Shimkus, Blackburn, Bass, Latta, Guthrie, Eshoo, Barrow, Dingell (ex officio) and Waxman (ex officio).

Staff Present: Michael Beckerman, Deputy Staff Director; Neil

Fried, Chief Counsel, C&T; Kirby Howard, Legislative Clerk; Debbee Keller, Press Secretary, David Redl, Counsel, Telecom; Nicholas Degani, FCC Detailee (Attorney Advisor); Roger Sherman, Minority Chief Counsel; Shawn Chang, Minority Counsel; Jeff Cohen, Minority Counsel; Sarah Fisher, Minority Policy Analyst; Phil Barnett, Minority Staff Director; and Pat Delgado, Chief of Staff for Mr. Waxman.

Mr. Walden. We are going to go ahead and get started so that we can get our statements and the witnesses' statements. Today is a little challenging because we do have a series of votes on the floor, they estimate in about an hour and fifteen. So we will try to get through as much of this as we can.

Good morning. I welcome our witnesses. I appreciate your counsel, along with that of dozens of others whom I think we have all met with and I have met with, from whom we have received testimony at our four prior hearings on spectrum policy and the individual meetings that we have had and the information that has come in. It has all been helpful.

I am a firm believer that open and fair public processes can lead to better public policy outcomes, and the competing discussion drafts are a welcome addition to this process. Despite the differences on paper, the reality is we are not as far apart as it might seem, and we are personally committed to doing all within our power to write a bipartisan bill in the end.

I believe we share common goals on this subcommittee when it comes to spectrum policy. We want to finally answer the call of our public safety officials and ensure that they have the best, most innovative and affordable technology operating on a bulletproof network in an inoperable basis in times of need. And we will do our part as a Federal partner to make sure that that happens. We want to ensure that the scarce and valuable spectrum that the public owns is put to its best and highest use, with any proceeds enuring to the benefit of the public.

And we want to ensure that those who voluntarily help us achieve this goal are treated respectfully and appropriately for their assistance.

We all want to spur new American innovation and create high-paying jobs, especially in our own districts. We can enact the biggest jobs bill in the Congress that actually creates private-sector jobs throughout the land and results in deficit reduction at the same time. This is within the power of this committee to do. Chairman Upton has given us wide latitude as a subcommittee to achieve these goals. And throughout this process, he has encouraged us at every turn to find a bipartisan solution, and I thank him for his calm, and thoughtful and patient leadership.

And let us be honest, but for the President's call in February to allocate the D-block, we would be much further along today. After all, about a year ago, then-Chairman Waxman eloquently and forcefully argued that his discussion draft that auctioned the D-block was the right public policy. The National Broadband Plan calls for auctioning the D-block, and the principles endorsed by the 9/11 Commission Chair and Vice Chair last year, former Commission Chair -- or former Commission member Senator Slade Gorton this year, and is still supported by the current FCC Chairman. It is also current law. And any plan to allocate this prime spectrum opens a $3 billion hole in the Nation's budget.

I know there are arguments about how that was then, and this is now, and things have changed, but the heart of the matter, absent the President's proposal, D-block would not be quite the stumbling block

it has become.

Now, my comments are not intended to be partisan; however, they are intended to just state the political reality that has befallen our committee. I am just stating the obvious about the awkward. Our staffs on both sides of the aisle have joined us in healthy and vigorous discussions about other policy issues. Our product is strengthened by these discussions. When it became clear we could not reach agreement in time for this hearing, both sides chose to release their drafts in current form to facilitate further discussion and to solicit your input. Republicans have included the Inslee-Upton voucher government relocation bill from the last Congress in that same spirit. Our discussion draft reflects input from the minority, and that input is very much appreciated.

The Republican draft relies on the local expertise at the State level for implementation of the public safety network while providing for a strong Federal role in assuring interoperability. To capitalize on the United States' leading position in wireless broadband technology and services, it also relies heavily on the commercial sector's expertise through public-private partnerships.

We still have unresolved issues regarding the unlicensed space, interoperability requirements beyond those of public safety, and conditions on licenses, to name just a few. We will continue to work on these issues. Meanwhile, I welcome the input and counsel of my colleagues, our witnesses and others who can help us get this policy right for the public. But we all know the clock is ticking, and we

must close out this matter sooner rather than later.

With that, I would yield the balance of my time to the vice chair of the committee.

[The prepared statement of Mr. Walden follows:]

******** INSERT 1-A ********

Mr. Terry. Thank you. And I just want to commend you for the methodical and mature way of processing through very complicated and sometimes divisive issues. This is something we have to get done.

We have to have a comprehensive spectrum bill. There is no doubt everyone agrees with that. The dividing points have been public safety, D-block, and I think you took a path that addressed both of the issues. They need help, public safety, "they." You have tried to resolve the issues of the broadcasters, and I think you have taken a very good approach on there, resolving those issues.

So I encourage you to work with our Democratic side. I would like to see a bipartisan bill here. I do agree with you, I think we are close.

I also want to just say last that I feel that the debt talks do have an impact here in the sense that this is one way of auctioning spectrum that can actually be a revenue raiser for the Federal Government to offset our deficit, and I think we have a responsibility to follow through.

I yield back.

Mr. Walden. I thank the gentleman for his comments.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. I turn now to the ranking member of the subcommittee, my friend, Ms. Eshoo from California.

Ms. Eshoo. Thank you, Mr. Chairman, for not only having today's hearing, my thanks to all of the witnesses, especially those who had to travel long distances and endure interruptions in that travel, and to our respective staffs who have really worked very, very hard. But the work goes on. We are not done yet.

Three months ago this subcommittee began a major undertaking, the goal, to bring forward legislation to address our growing need for spectrum while providing our first responders with a nationwide interoperable broadband net. While the majority's discussion draft has provisions that I don't support, I remain optimistic. And I want to say that again. I remain optimistic that we can produce a bipartisan bill. We feel very strongly about that on our side as well.

To help with this effort, I joined with the full committee's ranking member Mr. Waxman to offer our preferred path in a discussion draft entitled he Public Safety Broadband and Wireless Innovation Act of 2011. The draft reflects the testimony heard during the subcommittee's four spectrum hearings, as well as the feedback of our fellow colleagues.

From the beginning of this effort, I have expressed my belief that a nationwide public safety network must have a strong governance structure, leverage the commercial sector, and be built in a cost-efficient manner. Our discussion draft reallocates the D-block to public safety and includes a carefully developed, effective and

efficient national governance mechanism with sufficient oversight and accountability.

In the area of voluntary incentive auctions, we shouldn't be overly prescriptive, I don't believe anyway, in our approach. We need to ensure that a process is fair to broadcasters and provides the FCC flexibility to carry out an auction and the subsequent repacking of the TV band. This discussion draft accomplishes, I believe, these goals.

To date, unlicensed spectrum has unlocked tremendous innovation. I see it in my congressional district every day. By one estimate, within the next 5 years, WiFi devices will use more bandwidth than wire devices. That is really extraordinary. And I love saying that because I really do think it is the American way. I mean, this is where we enjoy more than an edge. Our discussion draft recognizes the importance of this resource not just for established technology companies, but for the entrepreneurs that exist now and will in the future.

We also need to look at ways to spur innovation in the public safety device market and afford more opportunities for public safety to partner with a variety of commercial service providers, including small carriers. Our discussion draft supports the development and testing of new interoperable, nonproprietary broadband technologies that will help drive down the cost of public safety devices and applications, and that is very, very important.

Our draft also calls for an examination into the feasibility of

providing interoperability across the 700 megahertz band. In addition to supporting public safety, the 700 megahertz band interoperability would benefit the broader wireless ecosystem. It also will give consumers an expanded set of choices for commercially available devices like smart phones and tablets.

Finally, we can't forget about our Nation's 911 call centers. One said -- referred to me recently as "the 911 queen." I don't know about that, but I had been on it for a long time before it was -- it became popular. There was very little interest on either side of the aisle in the issue, but, of course, the attack on our country really raised the issue up and put a spotlight on it.

As a founder and current cochair of the NextGen 911 Caucus with Mr. Shimkus in the House, I have fought to modernize our 911 call centers. It makes sense as we build a nationwide public safety network that we develop a plan to update our public safety answering points and emergency operation centers to support a Next Generation 911 system. Such a system will enable first responders to receive photos, videos and text messages that can improve the quality and speed of emergency response. Our draft lays the foundation for such a transition, providing the resources to examine the costs, the specifications and the legal framework. So I think we owe it to our Nation's first responders, to our innovators and the American people to come together and complete a bill.

I want to thank each one of our witnesses again, and I look forward to working with the chairman, with our respective staffs, with members

on both sides of the aisle of this important subcommittee to move forward with bipartisan legislation.

And, Mr. Chairman, I have a request to enter into the record from the Bipartisan Policy Center a letter that was sent to Senators Rockefeller and Kay Bailey Hutchison from Tom Kean and Lee Hamilton, who were the Commission Chairman and Vice Chairman of the 9/11 Commission. So with your permission, we can enter that into the record.

Thank you and I yield back.

Mr. Walden. Without objection.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. I thank you. The gentlewoman's time has expired.

I would now recognize the gentleman from Illinois Mr. Shimkus if he has any comments.

Mr. Shimkus. I will take time, Mr. Chairman, and then I will yield some to Cliff, if that is all right.

Spectrum is so much more than D-block, and I do appreciate your comments about it is obvious about -- stating the obvious about the awkward. And so all I would like to add is -- a couple of things -- is I do hope that the NextGen 911 Enhancement Act will be a part of this as we move forward; the NextGen Public Safety Technology Act, which Anna and I have been working on.

This political process is always kind of fun. You can claw and scratch on one day, and then you can give the good big hug on the next day as you work together on things that are important. I have been clawing and scratching a lot lately. But I appreciate the times when I can cross the aisle and give someone a hug. Anna is working real hard with me on this, and it makes up for some of my frailties, I guess.

The other thing is I am for private auction of the D-block regionally done. My concern is that if we don't do it in that way, we won't have deployment. Some of the worst cases of 911 lapses is where we don't have connectivity, where we don't have cellular connections, where we can't do identification location. And the stories that we heard when we started moving the stuff out about the people caught in the snowstorm in the mountains, calling and couldn't be found. The young kids in the rowboat in New York -- Island Sound,

that is -- I am not going to diminish the importance of that.

And if we truly want a bipartisan process to go forward, we can't have this fight between urban and rural. We just can't do it. And the rural areas have to be brought along, and the only way I see that that is done is if we have really a competitive atmosphere, and that we -- with strong requirements so that all the Americans can benefit from a new system.

With that, I will yield my time to Mr. Stearns.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Stearns. I thank my colleague.

Mr. Chairman, you and the staff, I want to compliment you on several provisions I particularly support in this draft legislation. First, I am pleased to see that the incentive auctions will be truly voluntary.

Second, it is important that broadcasters can maintain their service areas and are not forced into VHF.

Secondly, I am in strong support of preventing the FCC's ability to impose conditions on the auctions. Unencumbered auctions decrease in value and limit their full revenue potential. We simply cannot afford the expensive social policy the FCC will likely try to impose on these auctions if it is just simply given the authority.

And finally, as the clock continues to tick on the debt ceiling, and we just got back from a conference on this, and the government searches for ways to pull itself out of debt, we have a bill in front of us that can raise billions of dollars for this country. Therefore I hope, Mr. Chairman, we can move this quickly.

And I yield back.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Shimkus. I yield back my time, Mr. Chairman.

Mr. Walden. Does the gentleman from Ohio want to make any comments, Mr. Latta, in the remaining time before I go to Mr. Waxman?

Mr. Latta. Well, thank you very much. I appreciate the gentleman for yielding.

All I can say is I appreciate the hearing today, Mr. Chairman, and also how important it is, especially on the question of spectrum as to where we can go, especially the voluntary auction side. I think it is important that we can also bring dollars into the Treasury and help this deficit. So I appreciate the hearing today. Thank you.

Mr. Walden. Thank you.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. And now I will turn to Mr. Waxman for 5 minutes.

Mr. Waxman. Thank you, Mr. Chairman, for convening this hearing this morning to discuss how we can quickly provide public safety with a nationwide interoperable broadband network and make more spectrum available for wireless broadband. Both goals are critical to our country and require Congress to act quickly and decisively.

In less than 60 days, we will observe the 10th anniversary of the terrorist attacks on New York and Washington and the skies of Pennsylvania. Construction of a nationwide public safety broadband network remains critical unfinished business, and we should do everything possible to send a bill to the President that accomplishes this bipartisan objective.

After several constructive hearings on spectrum policy, today we will consider a Republican discussion draft. I am pleased that we will discuss specific details about incentive auctions, public safety governance and Federal spectrum relocation, and still hope we can find common ground on several other issues.

In order to highlight our areas of agreement and disagreement, yesterday Representative Eshoo and I released a discussion draft of the Public Safety Broadband and Wireless Innovation Act of 2011. Although many details of the bill we put forward differ from the Republican draft, Democrats on the committee hope we can develop one legislative vehicle that takes the best ideas from both proposals.

Senators Rockefeller and Hutchison did a commendable job on a bipartisan package to empower the FCC to conduct incentive auctions

for broadcast spectrum and create a nationwide broadband network for public safety. The Democratic draft builds upon the bipartisan work of the Senate Commerce Committee.

With regard to public safety, committee Democrats believe we must establish a strong governance structure to manage the highly complex undertaking of building and managing an advanced wireless network. Through a nonprofit corporation streamlined to act quickly and efficiently, we have put in place a number of policies and requirements designed to ensure we reach our primary goal of nationwide interoperability for first responders. This corporation could be statutorily required to operate in a fiscally responsible manner and to provide the technical and management expertise this network will need. Public safety will have a strong voice, but the network will rely heavily on commercial know-how, national standards and existing infrastructure.

The public safety community has indicated its strong support for the robust governance approach in the Senate bill and in the Democratic draft. It is on the basis of this strong governance model and public safety's commitment to this approach that I have come to support reallocation of the D-block for public safety's use. Reallocation is the best way to ensure that public safety has the leverage to incentivize the public-private partnerships and network-sharing arrangements that are essential through constructing a nationwide broadband network. Moreover, reallocation allows us to plan for public safety's transition to broadband, and the Democratic draft

requires the FCC to evaluate opportunities to gain additional efficiencies across all public safety spectrum, including the possible return of spectrum for future auction.

Finally, reallocation is the best chance we have to pass legislation into law. It has bipartisan support in the House and the Senate. The administration is strongly supportive, and the entire public safety community, including mayors, Governors and numerous other State and local officials, are united on this path forward. In my view, strong governance, oversight, accountability and smart spectrum management provide us with a good solution.

Although we have disagreements about the D-block, the specifics of a governance model and funding, Democrats and Republicans are not far apart on other details. We all agree that we need to leverage commercial networks, ensure that the public safety equipment market becomes more competitive, and allow State and local officials to play a significant role in the development of this network.

We also found a good amount of common ground on spectrum policy. Both Democrats and Republicans want to enable the FCC to conduct voluntary incentive auctions that are fair to broadcasters. We want the FCC to have sufficient flexibility to make auctions successful, although we have slightly different approaches to providing that flexibility. We don't agree on the future of -- we don't agree on the future of unlicensed spectrum or on limiting the FCC's ability to impose conditions on spectrum licenses in the future. These decisions must be made by the expert agency based on market conditions and other

factors.

I would like to thank our witnesses for being here. I look forward to your testimony. And thank you very much, Mr. Chairman.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. Thank you, sir. We appreciate your comments. We will continue to work together on this.

I would like to now turn to our panel of witnesses, and we will lead with the chief of police, San Jose Police Department. Mr. Christopher M. Moore, who had a wonderful transportation system getting him here. We appreciate you making it all the way through. Thank you, sir. And we welcome your testimony.

STATEMENTS OF CHRISTOPHER M. MOORE, CHIEF OF POLICE, SAN JOSE, CALIFORNIA; PETER CRAMTON, PROFESSOR OF ECONOMICS, UNIVERSITY OF MARYLAND; GORDON SMITH, PRESIDENT AND CEO, NATIONAL ASSOCIATION OF BROADCASTERS; MICHAEL CALABRESE, DIRECTOR, SENIOR RESEARCH FELLOW, OPEN TECHNOLOGY INITIATIVE, NEW AMERICA FOUNDATION; AND CHRISTOPHER GUTTMAN-MCCABE, VICE PRESIDENT, REGULATORY AFFAIRS, CTIA-THE WIRELESS ASSOCIATION

STATEMENT OF CHRISTOPHER M. MOORE

Chief Moore. Good morning, and thank you, Chairman Walden and Ranking Member Eshoo. My name is Chris Moore. I am the chief of police for the City of San Jose Police Department in California. I am one of the representatives of the Major City Chiefs Association to the Public Safety Alliance, which is a coalition of leading public safety associations that represent every law enforcement, fire, EMS, emergency management agency and first responder organizations in the country.

My comments today will be brief and to the point. I am here on behalf of the PSA and millions of first responders across the country to ask for your support of companion legislation that came out of the Senate, S. 911, the Public Safety Spectrum and Wireless Innovation Act of 2011, which was recently and overwhelmingly passed by a 21-to-4 bipartisan vote by your counterparts in the Senate Commerce, Science

and Transportation Committee.

This act does what public safety and State and local governments have requested Congress to sponsor and support as a top priority for more than 2 years. This legislation allocates the D-block to public safety; provides necessary funding for the build-out of a nationwide public safety broadband network, especially in rural areas; and establishes the governance to oversee and manage the build-out, maintenance, operation and upgrade of a network for decades to come. We urge the committee to act now as if a 9/11 or a Hurricane Katrina event were to have occurred just yesterday and fulfill the last recommendation of the 9/11 Commission by allocating the D-block, as recently endorsed in testimony this year by the cochairs of the 9/11 Commission.

The PSA is greatly encouraged by the Democratic discussion draft that was circulated by Congresswoman Eshoo and Congressman Waxman just this week, and we urge swift introduction and committee consideration to move this matter to the House floor. The PSA strongly believes that this language, as developed within the committee of jurisdiction, builds and improves upon H.R. 607, which has garnered bipartisan support of 43 cosponsors so far this year. Indeed, legislation to allocate the D-block to public safety introduced in the House in the 111th Congress last year garnered 80 bipartisan cosponsors.

Mr. Chairman and members of the committee, the PSA representatives have testified before this committee as recently as this April and May to press for a nationwide public safety broadband

network. We emphasize that this is a unique and truly one-time opportunity to change our operations of the past, a past highlighted by trying to, quote, make due by linking and patching together communication systems on thin slices of spectrum spread out over at least six different bands in order to acquire interoperability and achieve spectral efficiency.

We also stressed the need for adequate capacity of a network with public safety control and mission-critical capabilities from the outset. The PSA strongly believes that allocation of the D-block with funding is the only proposal that establishes those baseline principles and needs. We need the upfront funding to jump-start investment and build out of the network, and to attract and encourage commercial interests and competition. We will partner with the private sector, with utilities and with critical infrastructure to leverage and to make maximum use of existing infrastructure that exists today. We do support a strong governance structure as proposed in the Senate's bipartisan bill, S. 911.

Mr. Chairman, the majority staff discussion draft, as currently written, does not meet those conditions as we have outlined previously in both the House and in the Senate. In fact, if passed into law as currently written, it would leave the public safety worse off than it is today. Mr. Chairman, we cannot support that draft legislation.

While the PSA is opposed to the majority's discussion draft on key points, including one, the auction of the D-block; two, multistate licensing; three, the governance structure; and, four, the lack of

specified funding as the top priority of any auction proceeds, we do appreciate the ongoing dialogue and consideration of our views, experience and perspective.

And on a personal and professional note, I would like to thank the staff members from both sides of the aisle, whether they were in the majority or in the minority, for their steadfast and thoughtful discussions with public safety over the last 2 years.

We are committed to continuing to work with the committee to bring to the floor a bill in the House to achieve the final enactment of legislation on this critical matter this year. Indeed, the PSA continues to seek enactment before the 10th anniversary of the tragic events of 9/11.

Over the past 2 years, numerous hearings have been held on public safety spectrum and a nationwide public safety broadband network by this committee in addition to the Homeland Security Committee; the Senate Homeland Security and Government Affairs Committee; the Senate Commerce, Science and Transportation Committee. Congress has asked many good questions, and we in public safety and State and local government have worked hard to provide you with answers. We are not here asking for the spectrum and funding to make a profit. We are not here asking for the spectrum and funding for some personal gain or reward. We are here asking for spectrum and funding in order for us to better serve and protect the American people. We are here to make sure that our first responders who do put their lives on the line every day have the resources they need to do their jobs more efficiently and

effectively, armed with real-time data, video and other information that can only be accessed in the latest and best mobile broadband technology.

I am here to let you know that the Public Safety Alliance will strongly oppose any legislative action that will require auctioning the D-block. This is not an acceptable solution and ignores everything we have been advocating long before 9/11. Auctioning the D-block will put public safety at risk and will considerably limit our first responders' ability to do their jobs.

In conclusion, I would like to thank you for your continued time and commitment to finding a solution that will meet the communication needs of our first responders for decades to come. The time has come for Congress to act, and we urge that you pass legislation before the 10th anniversary of 9/11. And I will be happy to answer any questions that you have.

[The prepared statement of Mr. Moore follows:]

******** INSERT 1-1 ********

Mr. Walden. Mr. Moore, thank you for making your position very clear. And we look forward to working with you. I am serious about that.

We are going to go to Dr. Cramton now, professor of economics for the University of Maryland. We are delighted to have you here as well, and we look forward to your testimony.

STATEMENT OF PETER CRAMTON

Mr. Cramton. Mr. Chairman and members of the committee, I am honored to appear before you today. My remarks are about spectrum policy, especially a much-needed enhancement, incentive auctions. Incentive auctions would allow the Federal Communications Commission to conduct two-sided auctions, auctions that simultaneously free up encumbered spectrum and put it to its best use.

We are in the midst of a communications revolution. Spectrum is an essential input in this revolution. The success of the revolution hinges on making the best use of this essential resource. From 1994 until today, the FCC spectrum auctions have done a superb job of putting the spectrum to its best use; however, it is becoming increasingly difficult for the FCC to find suitable spectrum to satisfy demand.

The best spectrum for mobile broadband has already been allocated, much of it many decades ago for over-the-air TV broadcasts. In recent decades the value of over-the-air broadcast TV has declined as more and more viewers receive their TV signals via cable and satellite.

At the same time, there has been an explosion in growth and use of smart phones and tablets. These devices use the latest communications technology and do amazing things. These devices are used nearly 24/7 by my students and are fueled by spectrum. This is the future.

This shift in demand away from over-the-air TV and toward mobile broadband has created a huge disparity in value. Spectrum used for mobile broadband generates much more economic value than spectrum used for over-the-air TV; hence the need to reallocate much of the TV spectrum from its current low-value use to the high-value use of mobile broadband. The FCC understands this need and has proposed incentive auctions to accomplish this exchange of spectrum from TV to broadband.

There is a consensus among economists and other experts that incentive auctions are the best approach. Unlike the FCC's prior auctions, the incentive auction is a two-sided auction in which TV broadcasters voluntarily offer to sell some or all of their spectrum rights, and mobile operators bid to buy large blocks of spectrum that the latest technologies require. The FCC plays an essential role in this process, repacking the remaining broadcasters to free up as much spectrum as possible, and then clearing the market at a quantity that maximizes social welfare and guarantees positive revenue for the Treasury.

The simple economics of the incentive auction can be explained with the most basic tool of economics, supply and demand. The supply of spectrum comes from the broadcasters' offers to relinquish spectrum, and the demand comes from the mobile operators who bid for the blocks of spectrum. Once offers and bids are received, the FCC can clear the market at a quantity that generates maximum economic value. Although this may appear simple, the incentive auction is complex in its details and requires a great deal of study by experts to get the important

details right. The incentive auction is a new and essential innovation. Its development will have a positive transformative impact both in the United States and worldwide, similar to the impact of the FCC's initial spectrum auctions in 1994.

Let me summarize my main points. The incentive auction is an essential innovation that will provide broad benefits to TV broadcasters, mobile operators, public safety, taxpayers and, most importantly, the vast majority of Americans. The incentive auction will create jobs and stimulate long-term growth for the economy.

The incentive auction is complex. Its design is best left to experts. The FCC has an outstanding record of innovation in the auction arena and requires only limited guidance from Congress. On the basic objectives and principles, it would be a mistake for Congress to prevent the FCC from adopting the best auction design by mandating auction details and other restrictions in enabling legislation. There are such mistakes in the draft legislation, which I note in my written testimony. All of these problematic mandates are easily fixed by omitting the auction details and keeping the focus on basic principles.

It is important to understand that not all constraints are bad. For example, restrictions that promote competition in the auction improve both revenues and efficiency.

Given the FCC's outstanding record in designing and implementing auctions, the legislation should provide the FCC with broad auction authority, focused on basic objectives and principles. To me, there are two key objectives, transparency and economic efficiency. What

is needed is a statement of these objectives. Including specific details is apt to do more harm than good.

I urge Congress to adopt streamlined legislation for incentive auctions as soon as possible. Only then can the full benefits of the communications revolution be realized. The time to act is now. Then the FCC can accelerate its work on designing and implementing an innovative auction approach to put the radio spectrum to its best use. Thank you.

Mr. Walden. Thank you for your testimony. We appreciate that.

[The prepared statement of Mr. Cramton follows:]

******** INSERT 1-2 ********

Mr. Walden. We are going to turn now to the Honorable Gordon Smith, president and CEO of the National Association of Broadcasters. Senator, we are delighted to have you back before the committee. We look forward to your testimony.

STATEMENT OF GORDON SMITH

Mr. Smith. Thank you, Mr. Chairman, Ranking Member Eshoo, members of the subcommittee. My name is Gordon Smith. I am president and CEO of the NAB. Thank you for inviting me here today to discuss your draft spectrum legislation and in particular the voluntary incentive auction provisions.

Mr. Chairman, let me tell you at the outset that the NAB is heartened that this discussion draft recognizes the need for a balance in raising revenues for the Treasury, in making spectrum available for wireless broadband, and in protecting television viewers and broadcasters through the process of voluntary incentive auctions.

Of course, intrinsic in the word "voluntary" is the notion that you will not be penalized for not participating. Ensuring incentive auctions are voluntary is of paramount importance to the NAB. So first and foremost, let me tell you that broadcasters appreciate the inclusion of the concept of truly voluntary incentive auctions in your draft.

While participation in an auction is voluntary, the subsequent repacking of broadcast stations to new channels following the auction

is not voluntary. Based on the spectrum goal set by the FCC in the National Broadband Plan, a total of 672 full-power stations, including commercial and noncommercial stations across the United States, would be forced onto a new channel. That is nearly 40 percent of all TV stations in America. Contrast that with 174 stations that were cleared from the spectrum during the DTV transition. I know my phones lit up in my Senate office just with that. Imagine the 672.

Clearly this new round of repacking would result in significant disruption and confusion for our viewers and your constituents, who recently went through that DTV transition. For this reason we have focused on four elements that NAB believes must be included in any voluntary incentive auction to protect both television viewers and broadcasters.

We ask that broadcasters be given the same opportunity as other industries to innovate with our spectrum, which means preventing the FCC from involuntarily moving stations from the U to the V band. Your legislation does that.

We ask that legislation provide certainty to broadcasting and that those investing in broadcasting by requiring or permitting one auction so that this doesn't happen year in, Congress after Congress, year in and year out. Your proposal achieves that, Mr. Chairman.

We ask for reimbursement for station costs associated with relocating broadcast stations, and your legislation does that as well. But we may ask your indulgence for a slight adjustment in the language to achieve the goal of holding harmless those who did not participate

in the auction.

Finally and most importantly, we ask that legislation preserve viewer access to over-the-air signals by replicating existing station service areas and covered populations. We also want to ensure that signals reach cable and satellite head-ins that rely on over-the-air delivery so that viewers continue to receive their broadcast channels. To this point, we believe the bill's language could use a little bit of enhancement, because as drafted, the FCC is required to make reasonable efforts to preserve viewer access to over-the-air.

I underscore the importance of having access to broadcast channels when we see weather seasons like we are currently having, when tornadoes are literally ripping through communities. While public safety is the first responder, broadcasting is the first informer. And so as you help one, our brethren and sisters and first responders, don't hurt the first informers. We are partners in public safety. So we ask that. We thank you for that.

And then to this point, and frankly to the professor's point, of highest and best use, what is the value of a soul when a tornado is ripping through his or her community; when their only access is not this, it is their television set or their radio? Broadcasters is the one thing that stays up and on the air, and which can literally be the difference of life and death and getting the information to the first responders. That is what I think highest and best use must include, not just purely an economic supply-and-demand calculation.

For this reason, we prefer language that directs the FCC to

preserve viewer access to stations to the maximum extent possible. I don't think that is unreasonable, given the stakes. Because the broadcasters have the benefit of experience in the repacking process used during the DTV transition, we ask that the final bill include a requirement that the FCC utilize the same protection criteria, the same protection criteria used in the final table of allotments for digital television service.

Before I conclude, let me take a moment, Mr. Chairman, to thank Chairman Emeritus Dingell and Congressman Green for their work in also putting together a strong bill that protects viewers and broadcasters through the incentive auction process, as well as Ranking Members Waxman and Eshoo for their spectrum bill released just yesterday. We appreciate the fine work of all on both sides of the aisle trying to get this balance right. And this is a most important issue. It does involve economics. It involves life and death as well.

And so I would like to introduce into the record two letters, one from America's 50 State broadcaster associations to the House leadership, a second letter from the 4 network-affiliated associations to House leadership. Thank you again, Mr. Chairman.

Mr. Walden. Without objection, they will be entered into the record.

[The information follows:]

******** COMMITTEE INSERT ********

[The prepared statement of Mr. Smith follows:]

******** INSERT 1-3 ********

Mr. Walden. We turn now to Mr. Christopher Guttman-McCabe -- sorry. Oh, I guess I did. We will turn now to Mr. Michael Calabrese, senior research fellow, Open Technology Initiative, of the New America Foundation. We welcome your comments here, sir. And please go ahead.

STATEMENT OF MICHAEL CALABRESE

Mr. Calabrese. Good morning, Chairman Walden, Ranking Member Eshoo, and members of the subcommittee. My name is Michael Calabrese, director of the Wireless Future Project at the New America Foundation's Open Technology Initiative here in Washington. I am testifying on behalf of the Wireless Innovation Alliance, a coalition of both large and startup high-tech firms, rural, wireless ISPs, and consumer and public interest groups.

Most of the debate about incentive auction authority, as we have heard today, has focused on protecting local broadcasters, promoting public safety and auctioning licenses to wireless carriers. But another critical public interest should be safeguarded as well, unlicensed use of the TV white space channels.

It is essential that any incentive auction authority give the FCC the ability and obligation to preserve substantial access to unlicensed spectrum in every local TV market. Under the FCC order adopted unanimously in 2008, after years of study, WiFi-type devices are allowed to operate on an unlicensed basis on unused DTV channels,

provided that the devices have GPS and periodically check an on-line database to find out what channels can be used without risking interference with DTV reception.

Investment and trial deployments of a wide range of innovative devices and services is well under way. My testimony describes a half dozen successful white space trials; for example, a smart city deployment in Wilmington, North Carolina; a smart grid deployment in California's Sierra Mountains; a rural broadband deployment in Claudville, Virginia; a public safety and tribal lands deployment in northern California, and so on.

While the voluntary incentive auctions in the discussion draft strike a reasonable balance, we have very serious concerns with section 104, which for the first time would require auctions for unlicensed spectrum. Under section 104, the FCC could make spectrum available for unlicensed use only through an auction where the highest bidders, rather than the expert agency, determine whether the service rules for a particular band in a particular area will be exclusively licensed or unlicensed.

Requiring auctions for unlicensed spectrum is unstudied, untested, unworkable and virtually certain to ensure that no new unlicensed spectrum is actually allocated. It will effectively preclude the FCC from repacking the TV band in a manner that maintains access to unlicensed channels for super-WiFi services that industry is in the process of deploying.

If this provision had been in place before WiFi and before the

FCC designated the 2.4 gigahertz band for unlicensed use, America's invention of today's multibillion-dollar WiFi industry would never have occurred. If this bill had been law then, today there would not be more than 2,000 wireless ISPs using unlicensed spectrum to bring broadband Internet service to 2 million Americans living in rural, remote and small-town areas. If this bill had been law, today consumers would not be saving roughly $15 billion per year because WiFi allows multiple users at home and work to share a single wired line. WiFi would not be offloading 20 to 30 percent of the mobile data traffic from smart phones and tablets, helping to ease the spectrum crunch. AT&T Wireless would not have 24,000 WiFi hotspots to help its customers get faster and free broadband access in public places. The three largest cable companies would not have combined to blanket New York City with WiFi; and universities, hospitals, libraries and other public spaces would not be hotspots, helping millions get Internet access cheaply, easily and without wires.

The auction model mandated in the draft bill is also unworkable and seems more likely to decrease Federal revenue than to increase it. Putting service rules up for auction creates tremendous uncertainty about how much of a band will end up licensed or unlicensed. This undermines the revenue-raising potential of the auctions and could lower the score that CBO could put on what would be an unpredictably contingent set of auctions.

Unlicensed spectrum is something fundamentally different from licensed. A license gives a company exclusive use at high power and

protection from interference. Unlicensed bands are open to anyone at very low power, with no protection from interference.

Even the FCC economists who outlined the draft's proposed mechanism 3 years ago identified a series of problems that make this idea unworkable in the real world. The primary one is the free rider problem. Because unlicensed spectrum is a public good available to anyone, even the largest companies that rely on unlicensed have an incentive to hold back and let others pay the government. These noncarrier firms say they would not even bid. They are not in that business. They are only indirect beneficiaries, just as trucking companies are with respect to interstate highways.

To conclude, I will just say that the U.S. economy and consumers will continue to benefit most from a balanced and complementary mix of licensed and unlicensed spectrum. Unlicensed technologies pioneered here in America are increasingly so complementary and critical to the wireless ecosystem that Congress can best optimize the TV band spectrum for broadband, for job creation and innovation by ensuring continued unlicensed access to substantial amounts of TV white space spectrum in every local market and nationwide.

Thank you.

Mr. Walden. Thank you for your comments.

[The prepared statement of Mr. Calabrese follows:]

******** INSERT 1-4 ********

Mr. Walden. And we will now move to Mr. Christopher Guttman-McCabe, who is vice president for regulatory affairs, CTIA - The Wireless Association. We look forward to your comments.

STATEMENT OF CHRISTOPHER GUTTMAN-MCCABE

Mr. Guttman-McCabe. Thank you. And good morning, Mr. Chairman, and Ranking Member Eshoo, and members of the subcommittee. On behalf of CTIA, thank you for the chance to speak to you this morning about the discussion drafts released this week. CTIA believes that this process represents a positive step towards addressing the looming spectrum crisis and ensuring that America's wireless industry remains the world's leader in wireless broadband.

I will not belabor the urgent need to make additional spectrum available. You have seen the studies and heard our analysis, which has been echoed by many others in the wireless and high-tech industries, academia and government. The subcommittee records show that the commercial demand for spectrum is real and pressing, and we are pleased that you are responding. We look forward to supporting you in this effort, which can help us maintain U.S. leadership in this critical industry and stimulate the sort of innovation, economic growth and job creation that our country so desperately needs.

As we read the drafts, we are pleased that they begin the process of addressing the spectrum demand targets below 3 gigahertz articulated in the National Broadband Plan.

We fully support authorizing the FCC to conduct incentive auctions to facilitate the repurposing of bands currently used for broadcast television and other services. The outstanding propagation characteristics associated with the broadcast bands in particular make them ideal for licensed wireless broadband services, and as such would be highly valued by bidders in an auction.

We also strongly support efforts to make the frequencies between 1755 and 1780 megahertz available for commercial use, and to pair that with a band of frequencies between 2155 and 2180 megahertz. A symmetrical pairing of those bands represents the ideal use of this spectrum. We are concerned, however, with any provisions in legislation that do not require that pairing or that may backload the introduction of spectrum identified. Failure to make 1755 to 1780 available or other 3-subgigahertz bands available in the near term will exacerbate the spectrum crisis and encourage consequences that policymakers may find suboptimal.

Providing for spectrum to become available at more predictable intervals will promote certainty, maximize the benefit to the government, and ensure that the U.S. keeps pace with our international trading partners.

We also are concerned about the potential for NTIA to shared use of government spectrum. While the sharing approach is clearly an NTIA priority, CTIA's carrier members consider cleared licensed spectrum that is internationally harmonized and in sufficient block sizes to support mobile broadband applications to be the gold standard.

As a general matter, CTIA believes strongly that auction valuations and, in fact, certainty for bidders will be enhanced by adoption of provisions that limit the ability to condition licenses. Flexible use, unencumbered fungible licenses will drive not only the greatest level of return, but also the greatest level of participation in the auction. The 700-megahertz C-block experience demonstrates clearly that the imposition of regulatory encumbrances not only reduces competition at auction, but also the revenue derived from that auction.

CTIA also strongly supports efforts to address infrastructure issues beyond spectrum. Helping to provide a path to building the tower and antenna infrastructure necessary to make use of that spectrum is extremely important.

We also support steps to provide for cost-based fees for accessing easements and rights-of-way on Federal land, as well as a streamlined access and process to property owned by the Federal Government.

Finally, we urge the subcommittee to include in any bill it moves on this subject additional language that makes improvements to the spectrum relocation process created by the Commercial Spectrum Enhancement Act. Adoption of the template included in the Spectrum Relocation Improvement Act will significantly improve the process of relocating government users.

We believe that addressing these issues will enhance the ability of wireless providers to access additional spectrum, invest in new networks, create jobs and stimulate the economy. We also believe these changes will have a positive impact on the score associated with the

legislation.

In closing, let me reiterate a point I made to you when I testified last month, that making spectrum available will pay dividends not just for the wireless industry, but also for the broader American economy. Auction revenues, substantial as they may be, are only part of the equation. Bringing spectrum to market will require investment, both in infrastructure and in jobs, two things our economy can't get enough of at this time. Additionally, the more rapid deployment of high-speed wireless broadband services will encourage innovation and productivity not just in the telecom sector, but across the economy. We have seen this in the areas of smart grid, mobile education, mHealth, intelligent transportation and more.

Thank you again for the opportunity to appear today. We anticipate providing specific editorial suggestions to the subcommittee in the coming days, and we look forward to working with you to move forward with this effort. I look forward to your questions. Thank you.

Mr. Walden. Mr. Guttman-McCabe, thank you for being here.

[The prepared statement of Mr. Guttman-McCabe follows:]

******** INSERT 1-5 ********

Mr. Walden. I want to thank all of our witnesses for your testimony. And I would just like to note based on something I read this morning about the hiring that is taking place since our draft came out to deal with the unlicensed spectrum piece in the lobby community, we are already creating jobs --

Mr. Guttman-McCabe. Agreed.

Mr. Walden. -- in the private sector. Discussion drafts can have an effect.

I want to start with you, Mr. Guttman-McCabe. First of all, I have got a series of questions, and I am really looking for a yes or no. And this is not a trick. Has the demand for wireless broadband lessened in the last year?

Mr. Guttman-McCabe. No.

Mr. Walden. Has the amount of spectrum available for commercial use increased?

Mr. Guttman-McCabe. No.

Mr. Walden. Has the amount of spectrum available to public safety decreased?

Mr. Guttman-McCabe. No.

Mr. Walden. Nothing has changed. Why would we deviate from the consensus last year that the best way to accomplish our public safety and spectrum goals is to auction the D-block and use the auction proceeds to help fund the public safety network? I can ask that rhetorically.

Mr. Guttman-McCabe. Thank you.

Mr. Walden. I request --

Mr. Guttman-McCabe. I appreciate it, sir.

Mr. Walden. I request unanimous consent to enter the following into the record, the following documents all endorsing the FCC's conclusion the National Broadband Plan, that is 24 megahertz, the DTV transition legislation already cleared for first responders is enough, and we should auction the D-block. To wit, a March 2010 FCC blog post from former 9/11 Commission Chair Thomas Kean and Vice Chair Lee Hamilton; and a January 2011 editorial by former 9/11 Commissioner Slade Gorton. Without objection, they will be entered into the record.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. Mr. Guttman-McCabe, I want to ask you another question. Chief Moore referenced in his testimony the need to act, which we concur with. I have been chairman of this subcommittee for about 6-1/2 months now or so, and I think we have had four hearings, a legislative hearing. We have got working documents. We get it. And I am trying to do my best to move this forward in an open, transparent and participatory way so we can get it right, because it is more than just public safety, as you can well appreciate, we are dealing with.

In Mr. Moore's testimony, he urges us to act as if a 9/11 or Hurricane Katrina event had happened just yesterday and fulfill the last recommendation of the 9/11 Commission by allocating the D-block. Could you speak to what happened with the public safety network during 9/11 versus -- and I am going to ask Senator Smith this, too -- broadcasters during Katrina and the public safety network as it relates to what happened in the cellular network world? What worked and what didn't?

RPTS COCHRAN

DCMN MAGMER

[10:11 a.m.]

Mr. Guttman-McCabe. Yes, thank you, Mr. Chairman.

I think this is an area where, too often, people misinterpret what happened on September 11th or what happened in Katrina.

On September 11th, the wireless networks processed more calls than they had ever done, 1,400 percent higher above their highest previous busy time. So they processed calls at an unprecedented rate.

In Katrina -- and I was in Gulfport and Biloxi the following day. The day after I had the ability to travel down there with some folks from the Federal Communications Commission. We gave out 40,000 handsets to first responders and others that were down there. So the networks were working.

Mr. Walden. Did the public safety network stay up?

Mr. Guthrie. To some extent yes, and to some extent no.

Mr. Walden. Did your networks stay up?

Mr. Guthrie. Our networks did stay up and were pieced back together. Again, that happened in Katrina, and it has happened since then. They are somewhat self-healing networks, and there is the ability for carriers to share spectrum and to share towers, mutual aid agreements, and those were in place and worked very quickly.

Mr. Walden. So you were able to have a public-private partnership here to help public safety and help others in that event.

Mr. Guthrie. Yes.

Mr. Walden. Senator Smith, do you want to comment on the role of broadcasters, briefly?

Mr. Smith. Clearly, the wireless broadband signal is one-to-one. It is an important piece of the telecommunications world. The uniqueness of the broadcast signal is one to everyone in an area.

A recent example of the power of broadcasting over broadband in an emergency was seen in Alabama, where, according to their Governor, had it not been for live television and radio, the death toll would not have been 250, it would have been many multiples of that. The first thing that went down was broadband. The thing that stayed constant was broadcast. The world of the future must include them both.

Mr. Walden. Mr. Guttman-McCabe, didn't the network neutrality and public safety conditions on the C and D blocks in the '08 auction of the 700 meg band reduce the proceeds by billions of dollars and drive smaller wireless carriers out of the market?

Mr. Guttman-McCabe. Absolutely, Mr. Chairman.

Mr. Walden. And wouldn't prohibiting restrictive license conditions, as our staff draft does on the Republican side, be both good for spectrum policy and U.S. taxpayers?

Mr. Guttman-McCabe. Yes, Mr. Chairman.

And just a quick -- the C-block license, which was encumbered, went for $4.7 billion; and it was 22 megahertz, which is a very large license. The immediately adjacent D-block, which was unencumbered and half the size, went for $9 billion. So a license half the size went

for twice the price.

Mr. Walden. My time has expired. I am going to turn now to my colleague and friend from California, the ranking member of the subcommittee, Ms. Eshoo, for 5 minutes.

Ms. Eshoo. Thank you, Mr. Chairman.

I want to thank all of the witnesses. I think each one of you, whether I agree or disagree with some parts of what you said, really have offered excellent testimony today and are helping us move forward with this.

To Chief Moore, thank you again for your service to San Jose, California, and the broader Bay area community. I don't represents the City of San Jose, but your leadership is felt throughout the Bay area.

Chief, there have been some recent high-profile disputes involving public safety broadband communications projects, which you are very well aware of. One problem that resonates is a failing of local governance to either preclude such disputes from occurring in the first place or to quickly resolve problems that arise.

In the Democratic draft, you are familiar with what we have placed in that draft relative to governance? Are you confident that the newly created Public Safety Broadband Corporation will be able to maintain national level standards for interoperability?

Chief Moore. Yes, Congresswoman. And I must say it is rare that you are going to hear a State, local, either public safety or the mayors and nationally the cities, say we want more governance from the Federal

Government. It is very rare indeed.

Ms. Eshoo. Be careful what you ask for.

Chief Moore. Given what we have experienced over the years, particularly with respect to interoperable communications, it became clear to all of us in the last 2 years that there needs to be some level of national presence in respect to governance to make sure that interoperability standards are set and met before large -- literally billions of dollars are spent. Otherwise, we are going to see a patchwork like we have seen in the past, and everybody is comfortable with that.

Ms. Eshoo. Thank you.

To Professor Cramton, thank you for your excellent, excellent work, all that you have done, all that you have published. It is really quite stunning, the work you have done. I haven't read all of it. I have read some of it, and I am glad that you are devoted to this in your professional life.

As we all know, the wireless industry is moving toward using LTE for 4-G communication throughout the 700 megahertz band. As an expert economist -- and that you are -- what are the specific economic benefits of device interoperability across the spectrum -- as quickly as you can.

Mr. Cramton. So the main thing is competition. To get auctions to work, we need competition. And in fact that was the problem with the price disparities in the 700.

Now, to get markets to work, we need competition, and that is a

challenge in network industries where there is enormous fixed costs of building networks. What interoperability does is it fosters competition by creating a more level playing field.

What we have seen in the 700 megahertz auction is, when the auction was conducted, the bidders all expected interoperability, because that is the way it was in all the prior auctions. In this auction -- and so nobody thought that there needed to be a requirement of interoperability. It was just assumed that it would be there. In this auction, after the auction, one of the large winners, AT&T, lobbied and created a new band, band 17, that excludes the A-block winners. There is a band 12 that includes both the A-block and the D-block, and what happened was AT&T decided to build devices that were just specific to the spectrum that it won, and Verizon did the same thing.

This is problematic because it basically makes the spectrum won by the A-block winners worthless. They can't get equipment because of the enormous economies of scale in the building of equipment. So that is the big problem.

Ms. Eshoo. Do you think that the majority's discussion draft allows enough flexibility for the FCC to conduct an efficient incentive auction?

Mr. Cramton. I think there are a number of clauses that need to be eliminated that are restrictions that get in the way of an efficient auction. The reality is that this is an extremely complicated auction and no one, not even the best experts, knows right at this instance how all the questions should be resolved.

So it is very important for the legislation to focus on the broad principles and I would say only address these broad principles given the outstanding track record that the FCC has with respect to its auction program. And especially I know, on the incentive auctions, they have actually been working hard for the last couple of years, you know, getting ready for this, and they are actually all set to engage the experts and really make this work. But we can't have things stand in the way.

Ms. Eshoo. Thank you.

I have other questions that I would like to ask, but I am out of time, so I will submit them in writing. But I want to thank those that I didn't get to ask questions of for your excellent testimony.

Mr. Walden. We will probably all have those going forward, depending upon our time today.

Mr. Shimkus for five.

Mr. Shimkus. Thank you, Mr. Chairman.

Mr. Chairman, I want to congratulate you for putting a panel that all agrees -- they all agree there is something they don't like. I was back in the back room with staff, and it is a great panel.

The spectrum is a great asset. We all need to use it effectively. There is just obviously a divergence into what that is. So I applaud you all and the testimony.

Just before I go into my question, our national debt is really the threat, and that is really what is encumbering all our discussions here in Washington right now. I mean, we are doing all our other work.

And the reality is our budget consists of Medicare, Medicaid, Social Security, interest on the debt, and discretionary budget. And if we don't address the entitlement programs, regardless of what we do, they are going to consume all the discretionary budget. In fact, we could take away the discretionary budget and we are still going to have a debt threat in this country.

So that is just a plain economic fact of the challenges that we are facing. That is kind of rolling into this debate. We have to understand, if we want money to go to public safety, if we don't control the debt, there is not going to be additional money.

I am a big Fire Act grant guy. It has been great for rural America and my small communities. So that is why I think this might be part of it, if and when we get to a vote on some solution to this. But I do appreciate all of the panel, because it is very enlightening.

I would like to ask unanimous consent, Mr. Chairman, to enter into the record the FCC Office of Plans and Policy Working Paper Number 43 on unlicensed auctions.

Mr. Walden. Without objection.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Shimkus. Why I do that -- my question will go to Mr. Guttman-McCabe -- what do you think of the unlicensed provisions in the Republican staff draft which are based upon the document I just entered in the record?

If a coalition advocating unlicensed use cannot outbid a single wireless carrier for a particular band or spectrum, doesn't that suggest the particular spectrum is more useful for licensed services? If the particular spectrum is better suited to unlicensed use, as in Mr. Calabrese's -- your opening statement kind of addressed this -- wouldn't the people who support that be able to pull enough capital to free that up? And this goes into my opening comment. The debt is the threat, and isn't spectrum too valuable to give away for free, especially in this economy?

Mr. Guttman-McCabe. Thank you, Congressman.

This is an extraordinarily difficult question and issue. At CTI, we believe unlicensed needs to be part of the solution. It currently is part of the solution, and we look at it. Yet if I take off my CTI hat and I put on my economist hat, which is what I was for half a dozen years before I went to law school, I recognize the conflict of societal good being auctioned on one hand and being given away on another hand.

And I think that issue is further complicated when you look at incentive auctions and that the incentive auction and the prices that are brought from those auctions, from the licensed bidders, would be used to clear spectrum that would then be given to other companies. So it becomes incredibly complicated once you begin, from an economics,

perspective to look at that.

I think we need to at least consider what other mechanisms are out there, recognizing -- obviously, absolutely recognizing the importance of unlicensed. So we are looking at the discussion draft from the chairman. But it is a complicated issue.

Mr. Shimkus. It is. And I am pretty intrigued by it, because I do think you get the benefits of both. You do get the free use to be able to go in places where it is not there but at a return.

I am going to end, because my time is fastly ending here, and just again highlight to my friends in public safety that one of the things that Congresswoman Eshoo and I are trying to do is understand that, as we go to new technologies, there is going to be a cost, and I would submit that what Anna and I are doing is to make sure we have the ability to help you get there.

Now, where Anna and I disagree is that I think we do that by auctioning and getting money, with your friends behind you. We have had these discussions before. And that is where we really want to get to, is the financial considerations.

With that, I yield back my time.

Mr. Walden. I thank the gentleman.

Obviously, putting this unlicensed spectrum issue in the bill brings it to the floor, and we can have this debate and discussion and find out what the best course of action is.

I turn now to the gentleman from California, Mr. Waxman, for 5 minutes.

Mr. Waxman. Thank you very much, Mr. Chairman.

Chief Moore, I was taken by surprise by one of the statements you made. It caught my attention. You said that, if passed into law as currently written, the Republican draft would leave public safety worse off than it is today. That is alarming. Because our primary goal is to address the difficult problem of making an interoperable nationwide broadband national communications network a reality, and the last thing any Member wants is to make things worse.

Can you explain this concern in more detail? How would the Republican discussion draft make things worse than it is today for public safety?

Chief Moore. Certainly, Congressman. Thank you, Congressman. I thought I was beyond the day that I could surprise any member of Congress, but I appreciate that.

It is not my intention to alarm anybody with the statement other than to say a couple of things.

Number one, as the proposed majority draft reads, it talks about suspending any future 700 narrow band deployments. There are a number of jurisdictions around this country, their existing land mobile radio systems are end-of-life today, and they need to be refreshed, and they are in the process of doing that.

We cannot basically stop those processes now. That would be the equivalent of saying to large swaths of our country, we can't protect you. That is not going to happen. I just can't see that. And I don't think that is the intent of the draft. So, again, without much

discussion with the membership to talk about that, I think we would find ourselves in a difficult spot.

We also do believe that auctioning the D-block will make us less safe. Now, current law does say that. We acknowledge that. But we believe definitely if we move forward and stop all deployments -- planned deployments of 700 in the narrow band in the short term, it will make America less safe.

Mr. Waxman. Do you have any specific thoughts about how the draft might be modified to address your concern?

Chief Moore. I think there are a couple of things. Obviously, reallocate the D-block to public safety, which would be extremely helpful, and we would be grateful.

Mr. Waxman. That comment did not take me by surprise.

Chief Moore. But, also, the notion that the current 700 systems that exist today and those that are in the pipeline are critical to keeping us safe today. And the reality is it may be 10 years, 12 years down the line that we may be able to migrate some of those to broadband, but that is not today, and that is not in the near term.

Mr. Waxman. Dr. Cramton, in your testimony you emphasize that Congress should focus on basic principles in enacting legislation to authorize incentive auctions. You say the easiest mistake Congress can make is to prevent the FCC from adopting the best auction design by including auction details and other restrictions in the enabling legislation. This is consistent with what we have heard from other economists that have testified before this subcommittee and was the

central message in the 112 economists' letter sent to President Obama.

How do you balance your suggestion with broadcaster concerns about the structure and shape of the auction? You want Congress to list principles, but the broadcasters want specific protections. Do you think there is a middle ground we can all agree on and do either of the discussion drafts get there?

Mr. Cramton. Well, I hope there is a middle ground, but I do think that you have to be very careful in thinking about all these issues. There are a lot of things that interact in the auction design, so I do think that there are -- in addition to the broad principles, one could introduce in the legislation assurances -- basic features that assure the major stakeholders that they will be treated fairly. So that can be done.

A lot of it are intricate details, such as one thing that really protects people in an auction are bid deposits to make the bids binding commitments. That is very important in an auction. That sort of detail is clearly left for -- the setting of bid deposits is left set by the expert. However, the provision for these kinds of instruments to be put in place in the final rule is I think the sort of thing that the stakeholders are looking for. And that can be done. It is a delicate business.

Mr. Waxman. Let me ask one of the stakeholders. Senator Smith, how do you respond?

Mr. Smith. Well, Mr. Chairman, it just really is important to us that, as you balance the public safety component, that the first

informers not lose their business model. What that means is the contours. And if the FCC is unfettered and able to move contours as they will, you are affecting 40 percent of the TV stations across this country. There will be blackouts. There will be people left out.

We think if you can protect our contours, there will still be those who volunteer, there will be spectrum available, but you won't damage in a permanent way an industry that many Americans, a rising number of Americans but particularly disadvantaged Americans, economically disadvantaged Americans, will not be denied free over-the-air television.

Mr. Waxman. Thank you.

Thank you, Mr. Chairman. My time has expired.

Mr. Walden. I thank the gentleman.

I now recognize the gentleman from Ohio, who was here when the gavel fell, apparently, Mr. Latta, for five.

I would just tell our members, too, that they anticipate votes on the House floor sometime to be called between 10:45 and 11:00 and that we would not walk off the floor until 1:30, which makes it really unlikely we would resume this hearing. So to the extent we can move through the questions, that is the latest news.

Mr. Latta. Well, thank you, Mr. Chairman; and again thanks for our panel for being with us today.

I am a true believer in the incentive auctions, especially within the bill. I have a piece of legislation out there to auction on the spectrum.

But I do find it interesting, especially in Senator Smith's opening remarks, I think everyone out there, when you have to say "truly voluntary" -- and I put that in quotation marks -- I think there is some mistrust for some reason around Washington that things that are voluntary aren't truly voluntary. That is why I think it is very, very important that we make sure that it is truly voluntary and we don't have to put those quotation marks around what we want to do around this place.

If I could, moving right along, on page 3, Mr. Cramton, of your testimony, you cite that there are three good features of the draft legislation that are worth mentioning; and you go on to say that the draft does not impose restrictions on which broadcasters can participate in the auction. Restrictions of this form would destroy competition in the reverse auction among broadcasters.

Can you expound a bit upon how the reverse auction work will work under the incentive auctions provided under the bill?

Mr. Cramton. Sure. Essentially, it is a two-sided auction, so we need competition on both sides. One important aspect of the competition is on the supply side, from the broadcasters.

So you come to a market like Washington, D.C. There is lots of different over-the-air broadcasters in Washington, D.C. They are put a simple question: You can stay on the air as is; you can turn over, say, half your spectrum, share with another; or you can completely shut down your over-the-air business. Now, we need to have competition among those broadcasters in order to get a competitive price for the

willingness to relinquish spectrum. Otherwise, they could exercise market power.

We need the same thing on the demand side coming from the operators. This is why the competition and things like interoperability are really important. Because, right now, the industry has been moving towards a duopoly on the demand side, with the two dominant carriers commanding over 90 percent of the earnings in the industry right now. The small players, the regional players, and the smaller national players play a very important role in creating the competition that creates the auction revenues on the demand side.

Now, if we have got the competition on both sides of the auction, what that does is creates an enormous amount of value for the taxpayer and for society at large. So that is the goal, and that is why you have to be very careful with any provisions that you introduce, make sure that the provision is pro-competitive, rather than otherwise. Sometimes these things are subtle.

Mr. Latta. Again, how do you think this is going to affect the revenue that the auction might produce? And, again, what is your estimate for what that might bring in?

Mr. Cramton. Well, I can tell you that the demand is exploding on the demand side. So this is a few years off. It would take 2 years -- even if you pass legislation today, it would take probably 2 years to line everything up and make it happen. By then, there is going to be much, much more demand than there is now as people discover the wonderful, amazing things that these phones can do. And as a

result -- and it is not just phones. It is tablets, everything.

So, as a result, I am quite confident that it will command a very high price. That is what we are seeing in auctions around the world for the 4-G spectrum. I have been involved in many of the auctions in Europe and continue to be involved in those, and other countries are talking about them now as well. And the amounts the bidders are putting on the table, even in countries much, much smaller than the United States, are in billions.

So I have to believe that this spectrum is going to be worth -- if there is competition on both the supply side and the demand side, it is going to be worth tens of billions and possibly much, much more. That is very important, especially given the debt problems that we are facing in our economy right now.

Mr. Latta. Thank you very much.

Mr. Chairman, in the interest of time, I will yield back.

Mr. Walden. I thank the gentleman for yielding back.

I turn now to Ms. Matsui from California for five.

Ms. Matsui. Thank you, Mr. Chairman; and I would also like to thank the witnesses for being here today.

I strongly support preserving unlicensed spectrum for American innovators, and an auction I believe will put American innovators and American innovation at a competitive disadvantage. I recently introduced legislation that will allocate additional spectrum at 5 gigahertz to spur innovation and support the growing demand for Wi-Fi in this country. I thank the Ranking Members Waxman and Eshoo for

including this proposal in their draft, and I look forward to working in a bipartisan manner on this moving forward.

Mr. Guttman-McCabe, if the 5 gigahertz spectrum identified by the Republican draft were made available for auction, do you think there would be more than one wireless carrier bidding on it and how much revenue do you think auctioning this spectrum would generate?

Mr. Guttman-McCabe. Congresswoman, I think when you look at spectrum above 5 gigahertz, our carrier licensees wouldn't likely participate, because it is outside the sweet spot for mobility. So getting it up above 3 gigahertz is something that puts it sort of outside the technology scope right now.

The upside is it could be used for unlicensed, which, as I said earlier, is and will be part of the solution to moving data through our networks.

Ms. Matsui. Okay. Mr. Calabrese, what would the impact of American innovation be if the unlicensed spectrum were to be auctioned off?

Mr. Calabrese. As I mentioned earlier, I think it would be really a terrible blow when you look at all the things we have done with Wi-Fi, which nobody expected. When this was allocated for unlicensed, it was known as the junk band, because it was just for toys and baby monitors and things where the transaction costs were too high to have people go and get a license or buy a subscription. Then Wi-Fi grew up, and now we have -- what is rolling out now is super Wi-Fi on the TV white space channels.

There is already talk -- Ericsson, for example, has estimated that the Internet of things will be 50 billion devices by the end of the decade, almost all of that unlicensed. So there is just going to be tremendous innovation fueled that we can't afford to sacrifice.

I wish Mr. Shimkus were still here, because one response I would have to his point -- and I think it was made otherwise -- well, gee, shouldn't we collect some money from companies that use unlicensed spectrum in creative ways? Of course, almost every workplace, every home, every business is using unlicensed spectrum, and that would be difficult.

But even the ones that are most innovative at using it, if you are going to do that, don't do it at the front end in a one-time auction, because -- for all the reasons in my testimony, the free rider problem, et cetera, that is not going to work. I mean, if you really need money that badly, you can always put a device certification fee. There could be 20 cents on every chip or device that is certified for unlicensed. There are billions of them out there. But an auction is the worst idea.

Ms. Matsui. Thank you.

On the idea of governance, there is billions of dollars at stake in public funding and the safety of life and property at sake, and I think there is a wide agreement that governance is the absolute key to the success of the public safety broadband network. So there must be a national governance standard that ensures the primary goal of achieving a nationwide level of interoperability for the Nation's first responders who are exercising the fiscal responsibility and technical

and operational expertise demanded of this national asset.

Chief Moore, as an initial matter, please explain why you believe a national governance model is key to the success of this network and also why you might believe that our governance model might be better, and it is modeled on the S. 911. And I will say right up front, I don't believe that the Republican draft provides the right type of governance for a project of this scope, complexity, and national importance.

I will let you answer the question.

Chief Moore. Thank you, Congresswoman.

We do believe that a national governance piece is critical to making sure that this is deployed on a nationwide level.

I will say this, though, that our vision would be, from a public safety standpoint and from the State and local government, is there needs to be local control and input into that governance. That has got to be a key piece. Hence, the number of seats on that particular board needs to be there so that we have the requisite input.

But the truth of the matter is when you are talking tens of billions of dollars and you are talking about making sure that standards are set on a nationwide level, you do need that nationwide presence, and we do believe, based on our experience locally, the model that is in the Democratic draft bill is what we would support. And the same thing, it mirrors S. 911.

Ms. Matsui. Thank you.

Mr. Walden. I now recognize the gentlewoman from Tennessee, who will be I think our last questioner, because they called the votes.

There are 18 of them. We will go to Mrs. Blackburn.

Mrs. Blackburn. Thank you, Mr. Chairman.

I promise that I will give you all the opportunity to submit in writing any further detail in the questions, but I do want to get a couple of things out here.

Mr. Guttman-McCabe, to you first. The draft doesn't call for any delineated timeline in these auctions except to say within 10 years and then within 5 years. As we go through this discussion draft, do you think we need more clarity, should there be more delineation, and how will it help the market? And do you think that if we were to more clearly delineate the schedule, would it have a positive or negative effect on the Treasury?

Mr. Guttman-McCabe. Thank you, Congresswoman.

I think the clearer you can be, the better. To the extent that you are recognizing and trying to derive benefits to the budget and scoring, we understand that. But front loading this rather than back loading it will be better. Having a timeframe laid out as to when spectrum will come to market will be better. It will help our carriers, who will have to spend billions.

Mrs. Blackburn. Let me interrupt you there, because I know there may be a couple of other questions that want to come in.

Dr. Cramton, I want to bring you in on this discussion. The Upton-Walden draft precludes the FCC from imposing conditions. Waxman-Eshoo does not. I want to hear from each of you about what you think conditions will do to these auctions.

We have had all these net-neutrality discussions. Professor Cramton, I have to tell you, it looks like you were against it before you were for it, or for it before you were against it. I have got your July '07 and your February '11 paper, and you take both sides of the issue when it comes to net neutrality and how you think it would affect the auction. So I think a little bit of clarification -- do you still think that net neutrality conditions will increase revenues received from the auctions? That is what you laid out in your '07 paper. So you have been on both sides of that issue.

Mr. Guttman-McCabe, I want to hear from you about the conditions and what you think. So very briefly.

Mr. Cramton. Very briefly, respectfully, I haven't been on both sides of the issue. Net neutrality, I have actually tried to stay away from that. In fact, the C-block in '07, the issue was not net neutrality. It was open access. And I was a big fan of open access at the time, and the bidders were big fans of open access at the time.

Mrs. Blackburn. Okay, let me then interrupt you and ask you to submit in writing some clarification. If you want to go back and look at these two papers and then provide us some clarity, I think that might help in informing the record.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Guttman-McCabe. Dr. Cramton has mentioned numerous times -- and I agree completely -- about the need to drive competition in the bidding, and we fully support that. We are concerned that adding encumbrances will do the exact opposite.

Dr. Cramton suggested that the bidders like the open access requirement. The reality is there were two bidders on that license. If you go immediately next door to the other license, there were 50, 60, 70 bidders. A bigger license with an encumbrance went for half the price.

The most stark illustration is Los Angeles without the encumbrance -- Los Angeles without the encumbrance sold for significantly more than the entire West Coast with the encumbrance, and the West Coast license was twice as big. So the non-encumbered license drew multiple competing bids.

Mrs. Blackburn. Senator Smith, I just can't get let you go without asking you a question today. You mentioned the DTB chip, and I think it was last month at a hearing that one of your broadcasters raised a similar issue. So is NAB seeking a technology mandate that all mobile phones carry a mobile DTB chip?

Mr. Smith. No, we are not seeking a mandate.

Mrs. Blackburn. You are not seeking a mandate. I thank you for the clarification.

I yield back.

Mr. Walden. The gentlelady yields back her time.

I turn now to the distinguished gentleman from Michigan, Mr.

Dingell, for 5 minutes.

Mr. Dingell. Mr. Chairman, you are most courteous; and I thank you.

To Senator Smith, these will be yes or no questions.

Is it your understanding that the Federal Communication Commission's national broadband plan recommends reallocating the 120 megahertz of broadcast television frequencies for wireless broadband access? Yes or no?

Mr. Smith. Yes.

Mr. Dingell. Now, again, Senator, it is also true that the NAB has expressed grave reservations about granting the Commission unfettered authority to reclaim this much spectrum for fear of unfair treatment to broadcasters, is that correct?

Mr. Smith. Yes, that is correct.

Mr. Dingell. Now, is it your understanding -- well, let me say this. Detroit is the 10th-largest broadcast market in the country. It has 14 stations licensed in its DMA. Now, is it your understanding that if the Canadian channel reservations are taken into account and the FCC moves ahead with its goal of reallocating the 120 megahertz of broadcast spectrum, there will be no channels available for any of Detroit's 14 stations? Yes or no?

Mr. Smith. Yes.

Mr. Dingell. Now, Senator, so you are telling me that, absent stringent protection for broadcasters and explicit limitations on the FCC to conduct incentive auctions, my people in Detroit won't be able

to get free over-the-air broadcasting?

Mr. Smith. Not just your people, Congressman, on the northern tier but also those members on the southern tier, similar treaties with Mexico.

Mr. Dingell. Every border city has the potential of having that problem.

Mr. Smith. Of having no broadcast television.

Mr. Dingell. And that would also potentially include things like Cuba?

Mr. Smith. Absolutely.

Mr. Dingell. Now, it is also true that American DMAs along the Canadian and Mexican border will suffer similar reductions. We have already addressed that, and you agreed.

Now, I have asked the FCC for all of these answers to the questions I have raised and haven't gotten a satisfactory answer. Absent compelling national security related concern, have you heard of a Federal agency not answering a congressional request for information? Yes or no.

Mr. Smith. Congressman, in 12 years in the U.S. Senate, they always answered; and the House of Representatives is an equal body to the United States Senate.

Mr. Dingell. I am going to try and see that they are pounded about the head and shoulders until they come forward with these answers.

Now, do you think my skepticism about granting the Commission limitless authority to conduct incentive actions is justifiable?

Mr. Smith. Well, we are for incentive auctions. We believe there are reasonable protections to preserve broadcast as we promote broadband --

Mr. Dingell. Remember, my time is running.

Mr. Smith. If we don't do that, America will regret; and your phones will light up as few things do when you affect people's TVs.

Mr. Dingell. This is a question about NAB support. Does the NAB support explicitly prohibiting the FCC from involuntarily reclaiming spectrum from broadcasters as well as from revoking their licenses or otherwise penalizing them for not taking part in the auctions? Yes or no.

Mr. Smith. We support prohibiting that kind of action.

Mr. Dingell. Now, Senator, furthermore, does NAB believe that FCC's incentive auction authority should be structured with clear limitations on its ability to repack and co-locate signals as well as an explicit mandate to protect broadcast contours? Yes or no.

Mr. Smith. Yes.

Mr. Dingell. Now, Senator, does NAB believe that broadcasters, both directly and indirectly affected by incentive auctions, should be fully compensated for their expenses relative to such auctions?

Mr. Smith. Yes, sir.

Mr. Dingell. Now, these questions to Chief Moore.

Chief, I have got to get a yes or no out of you, because I have 51 seconds.

Now, I have a simple question for you with respect to public

safety. You have had many years of experience protecting and serving the public. Is relocating the D-block free of charge to the public safety the best way to ensure our country's first responders can do their jobs most effectively and save lives?

Chief Moore. Yes.

Mr. Dingell. Thank you.

Mr. Chairman, I have 25 seconds to yield back.

Mr. Walden. Thank you. Nobody has mastered that better than you.

I have a number of things to enter into the record. Before I do that, though, we will have questions from other committee members who were otherwise detained in other committees. We would really appreciate a very rapid turnaround, because we actually value your response as we go through this process. So, to the extent we make questions available -- and I know Mr. Bass had some -- we would like a quick turn.

We thank you for your testimony, by the way, and your answers to our questions.

I will enter into the record unanimous consent statements from the High Tech Spectrum Coalition, which represents the major high-tech companies; the National Association of Broadcasters; CTIA; the Wireless Association; Verizon and AT&T statements lauding the majority's discussion draft. We always like to put those in the record. To enter into the record letters from Tech America, the National Association of Manufacturers, the Information Technology

Industry Council and the Telecommunications Industry Association, as well as quotes from the FCC filings of Qualcomm, Motorola, and LG opposing a mandate on the manufacture of 700 megahertz wireless devices, and an FCC working paper from June, 2010, that finds 10 megahertz provides more than the regional required capacity for day-to-day communications for public safety.

Without objection.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. Actually, let's go into the work session now, and we will move on through.

We appreciate all your testimony and comments. We will continue to work on these drafts in a quest to find a bipartisan solution for our public safety friends and for all Americans.

[The information follows:]

******** INSERT 2-1 ********

Mr. Walden. With that, we are adjourned.

[Whereupon, at 10:53 a.m., the subcommittee was adjourned.]