

KEEPING THE NEW BROADBAND SPECTRUM LAW ON TRACK

HEARING BEFORE THE SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY OF THE COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

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KEEPING THE NEW BROADBAND SPECTRUM LAW ON TRACK

WEDNESDAY, DECEMBER 12, 2012

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 2123, Rayburn House Office Building, Hon. Greg Walden (chairman of the subcommittee) presiding.

Members present: Representatives Walden, Terry, Stearns, Shimkus, Rogers, Blackburn, Bilbray, Bass, Gingrey, Scalise, Latta, Guthrie, Kinzinger, Barton, Eshoo, Markey, Doyle, Matsui, Barrow, Christensen, Pallone, Rush, Dingell, and Waxman (ex officio).

Staff present: Ray Baum, Senior Policy Advisor/Director of Coalitions; Mike Bloomquist, General Counsel; Sean Bonyun, Communications Director; Matt Bravo, Professional Staff Member; Andy Duberstein, Deputy Press Secretary; Neil Fried, Chief Counsel, Communications and Technology; Debbie Keller, Press Secretary; David Redl, Counsel, Communications and Technology; Charlotte Savercool, Executive Assistant; Lyn Walker, Coordinator, Admin/Human Resources; Tom Wilbur, Digital Media Advisor; Roger Sherman, Democratic Chief Counsel; Shawn Chang, Democratic Senior Counsel; David Strickland, Democratic FCC Detailee; Margaret McCarthy, Democratic Professional Staff Member; and Kara van Stralen, Democratic Special Assistant.

OPENING STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. WALDEN. I would like to call to order the Subcommittee on Communications and Technology for our hearing on "Keeping the New Broadband Spectrum Law on Track."

I want to thank everyone for being here today.

And before I begin, I would like to start the hearing off, this subcommittee hearing, recognizing five hardworking members of our subcommittee who will be departing the United States Congress, including our colleagues Cliff Stearns, Mary Bono Mack, Brian Bilbray, Charlie Bass, and Ed Towns. We certainly appreciate the service that they have rendered to the people of the United States, to this full and our subcommittee, and the work they have done. And we appreciate both their service, and we wish them well in the next chapter of their lives.

We will also miss Phil Gingrey's presence in our subcommittee's hearings. Now, he won't be going far.

Phil, we wish you well in your new role as vice chair of the Environment and Economy Subcommittee.

Meanwhile, we will have some new members joining our full committee and subcommittee, including Billy Long, a member of the Missouri Professional Auctioneers' Hall of Fame. So, Commissioners, as you write your rules for these auctions, I humbly volunteer Billy to be your auctioneer.

Look, we are here today to check on the progress at the Federal Communications Commission at following the law and implementing the incentive auction legislation Congress passed last year.

Not only does this new law hold the potential to unleash new technology and create hundreds of thousands of American jobs, but it also is the source to fund the build-out of the interoperable broadband public safety network. That is an important process for our police and firefighters. It is important that we get this done. It was one of the remaining items of the 9/11 Commission that lingered for session after session after session until our subcommittee and our full committee finally got this across the line.

While I am not about to micromanage how the FCC operates your auction, I do expect the FCC will follow the law, including maximizing the proceeds from the auction. Not only does our leadership of the wireless world hinge on the agency's efforts, so, too, does the fate of the public safety broadband network. Making this a successful auction is a goal I know each and every one of us shares.

The U.S. has long led the world in spectrum auctions, with an auction model based on the elegant simplicity of one-course concept. Markets, not the whims of regulators, are best-suited to ensure that spectrum is put to productive and innovative use. I know from some of your testimony you have pointed out, I think, especially some of our newer Commissioners, the success the FCC has had over the years at doing good auctions.

However, we have also learned of overly prescriptive auction rules can lead to less than successful auction results. The FCC so encumbered the D block auction of the lower 700 meg band that a 10 megahertz license for the use of prime broadband spectrum failed to garner more than a few token bids, and those were well below the true value of that very important spectrum. So the FCC must avoid overly prescriptive auction rules and, instead, rely on market mechanisms that have a proven record of success.

Remember, the revenue generated, which was used in part to help pay for the middle-class tax cut and extension of unemployment benefits, will also be used to help pay for the interoperable public safety broadband network under FirstNet and to fund the Next Gen 911 service and to invest in public safety research and development. A broadcast incentive auction that fails to raise the revenue needed for these projects or that unnecessarily gives away billions in cleared spectrum will be considered a failure.

In particular, I would like a commitment that the Commissioners will honor the language of the act that requires guard bands to be, and I quote, "no larger than is technically reasonable to prevent

harmful interference between license services outside the guard bands.” That is a direct quote out of the statute.

As we discussed in last month’s receiver performance hearing, guard bands, although sometimes necessary to prevent interference between neighboring services, are a suboptimal use of spectrum. Their size should be minimized. Yet the Commission’s NPRM contemplates two guard bands of at least 6 megahertz and contemplates expanding them to as much as 10 megahertz. I want to see the engineering analysis that justifies such fat guard bands.

Is 6 megahertz the minimum size needed? Could the Commission use channel 37 as a guard band between mobile broadband and broadcasting to reduce the need for additional dedicated guard bands? Could the FCC reduce the need for guard bands by improving receiver performance? These are just a few of the unanswered and, in some cases, unasked questions from the Commission’s NPRM.

Finally, let me make it clear, I support the use of unlicensed spectrum to foster innovation and provide much-needed offload for congested broadband networks. That is why our bill that is now law expanded the amount of unlicensed spectrum by identifying an additional 195 megahertz in the 5 gig band, frequencies ideal for this kind of use. It also codifies the use of white spaces.

What I cannot support is the unnecessary expansion of unlicensed spectrum in other bands that are actually needed for license services, especially at the expense of funding for public safety.

So let me be clear: Every megahertz of broadcast television spectrum that the FCC doesn’t auction means less revenue to fund prerogatives already determined by this committee and this Congress, including prerogatives like FirstNet, Next Gen 911, and wireless research and development.

Thanks for joining us today. I Look forward to hearing your remarks and that of my colleagues.

Now I would like to recognize my friend from California, Ms. Eshoo, for an opening statement.

[The prepared statement of Mr. Walden follows:]

Opening Statement of the Honorable Greg Walden
Subcommittee on Communications and Technology
Hearing on "Keeping the New Broadband Spectrum Law on Track"
December 12, 2012
(As Prepared for Delivery)

Before I begin, I'd like start the last hearing of this subcommittee of the 112th Congress by recognizing five hard-working members of this subcommittee who are departing Congress, Cliff Stearns, Mary Bono Mack, Brian Bilbray, Charlie Bass, and Ed Towns. We appreciate your service and wish you well in the next chapter of your life.

We will also miss Phil Gingrey's presence in our subcommittee's hearings, but he won't be going far. Phil, we wish you well in your new role as vice-chair of our Environment and the Economy Subcommittee.

Meanwhile, we will have some new members joining our committee, including Billy Long, a member of the Missouri Professional Auctioneer's Hall of Fame. Commissioners—as you write the rules for these auctions, I am volunteering Billy to be your auctioneer.

We are here today to check on the progress at the FCC at following the law and implementing the incentive auction legislation Congress passed last year. Not only does this new law hold the potential to unleash new technology and create hundreds of thousands of American jobs, it also is the source to fund the build out of the interoperable public safety network for our police and firefighters.

While I'm not about to micro-manage how the FCC operates the auction, I do expect the FCC will follow the law, including maximizing the proceeds from the auction.

Not only does our leadership of the wireless world hinge on the agency's efforts, so too does the fate of the public safety broadband network.

The U.S. has long led the world in spectrum auctions with an auction model based on the elegant simplicity of one core concept: markets, not the whims of regulators, are best suited to ensure that spectrum is put to productive and innovative use.

Hopefully, we've learned that overly prescriptive auction rules can lead to less than successful auction results. The FCC so encumbered the D block auction of the lower 700 MHz band that a 10 MHz license for the use of prime broadband spectrum failed to garner more than a few token bids, and those were well below the true value of the spectrum. The FCC must avoid overly prescriptive auction rules and instead rely on market mechanisms that have a proven track record of success.

Remember, the revenue generated, which was used in part to help pay for the middle class tax cut and extension of unemployment benefits, will also be used to help pay for the interoperable public safety broadband network under FirstNet, to fund next generation 9-1-1 service and to invest in public safety research and development. A broadcast incentive auction that fails to raise the revenue needed for these projects, or that unnecessarily gives away billions in cleared spectrum, is a failure.

In particular, I would like a commitment that the commissioners will honor the language of the Act that requires guard bands to be "no larger than is technically reasonable to prevent harmful interference between licensed services outside the guard bands."

As we discussed in last month's receiver performance hearing, guard bands, although sometimes necessary to prevent interference between neighboring services, are sub-optimal use of spectrum. Their size should be minimized. Yet the Commission's NPRM contemplates two guard bands of at least six megahertz and contemplates expanding them to as much as 10 Mhz. I want to see the engineering analysis that justifies such fat guard bands. Is six megahertz the minimum size needed? Could the Commission use channel 37 as a guard band between mobile broadband and broadcasting to reduce the

need for additional dedicated guard bands? Could the FCC reduce the need for guard bands by improving receiver performance? These are just a few of the unanswered—and unasked—questions from the Commission's NPRM.

Finally, let me make it clear, I support the use of unlicensed spectrum to foster innovation and provide much needed offload for congested mobile broadband networks. That's why our bill expands the amount of unlicensed spectrum by identifying an additional 195 MHz in the 5 GHz band, frequencies ideal for this kind of use. It also codifies the use of white spaces. What I cannot support is the unnecessary expansion of unlicensed spectrum in other bands needed for licensed services, especially at the expense of funding for public safety.

Let me be clear: every megahertz of broadcast television spectrum the FCC doesn't auction means less revenue to fund prerogatives already determined by this committee and this Congress, including FirstNet, next-generation 9-1-1, and wireless research and development.

###

OPENING STATEMENT OF HON. ANNA G. ESHOO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. ESHOO. Thank you, Mr. Chairman. And good morning to you and to the Chairman of the FCC and the Commissioners. Welcome. It is wonderful to have you here.

Mr. Chairman, I would like to begin by requesting that the December 10th letter signed by more than 370 companies and organizations who care about the future of unlicensed spectrum be placed in the hearing record. This letter and a February 13th letter describe the importance of unlicensed technologies to innovation, job creation, and public safety.

And I would also like to request that a bipartisan letter I sent to the FCC Chairman yesterday with Chairman Darryl Issa be included in the record. The letter demonstrates the significant unlicensed developments that have taken place just in the last 9 months since the spectrum bill was signed into law.

So I ask for unanimous consent to place both of these in the record.

Mr. WALDEN. Without objection.
[The letters follow:]

December 10, 2012

The Honorable Greg Walden
Chairman
Subcommittee on Communications and Technology
Committee on Energy and Commerce
2182 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Anna Eshoo
Ranking Member
Subcommittee on Communications and Technology
Committee on Energy and Commerce
241 Cannon House Office Building
Washington, D.C. 20515

Chairman Walden and Ranking Member Eshoo:

The undersigned companies and organizations commend Congress and the FCC for working to unleash additional spectrum in the current broadcast bands. We are committed to working with all stakeholders on auction rules and a band plan that supports diverse, efficient, and innovative broadband services while protecting broadcast licensees. To accomplish this goal, it is critical that the FCC pursue policies that strike a productive balance between the need for more spectrum that accommodates both exclusive-use licensed *and* non-exclusive unlicensed technologies.

The nation's unlicensed bands are critical to innovation and have generated hundreds of billions of dollars in economic growth. Indeed, a recent study by economist Richard Thanki found that the economic value generated even by a subgroup of unlicensed broadband applications is between \$16-\$37 billion per year. Throughout 2012, we have seen further evidence of the importance of unlicensed technologies to innovation, job creation, and, most recently, public safety. For example, during the devastating Hurricane Sandy and its aftermath, when many wireless phone networks were overloaded, flooded, or completely offline, Wi-Fi provided access to the Internet for critical news and information (and continues to do so in some areas still recovering).

Demand for unlicensed services is growing at a higher rate than either wired or licensed wireless services. Cisco projects that by 2015, IP traffic originated over Wi-Fi networks will surpass traffic originated over wired networks. The number of intelligent connected devices is growing so quickly that it is likely to exceed 100 billion by 2020, potentially generating an economic contribution of \$1.4 trillion—five times greater than the Internet today. Technologies using unlicensed spectrum are set to provide *over 95%* of those machine-to-machine connections. This skyrocketing demand for unlicensed technologies is outstripping the supply of unlicensed spectrum and threatens to soon saturate the core 2.4 GHz band, leaving innovators and consumers with only the high-frequency 5 GHz band. While the 5 GHz band is extremely important, it is not a substitute for lower-frequency spectrum given its limited range due to higher attenuation and, over much of its range, lower power limits and more restrictive technical rules.

With additional unlicensed spectrum allocations, the FCC can enable innovators to create tremendous economic value for the country. But if the Commission does not designate more unlicensed spectrum, the fuel for this growth engine will be lost and consumers will face degraded service and slowed innovation. Fortunately, the current television broadcast spectrum presents the FCC with a once-in-a-generation opportunity to begin to address the unlicensed spectrum crunch by making powerful sub-1-GHz unlicensed spectrum available for innovative approaches to broadband access and machine-to-machine

services. A well-designed auction will allow the Commission to both free up new licensed spectrum and expand unlicensed spectrum resources. The undersigned companies and organizations therefore urge the FCC to designate an ample amount of spectrum for non-exclusive unlicensed technologies, and urge Congress to allow the FCC to accomplish this task unimpeded.

Sincerely,

Broadcom
 CompTIA
 Consumer Federation of America
 Consumers Union
 CSR Technology, Inc.
 Electronic Frontier Foundation
 Free Press
 Google
 Marvell
 MediaTek
 Microsoft
 National Hispanic Media Coalition
 Native Public Media
 Open Technology Institute, New America Foundation
 Public Knowledge
 XG Technology Inc.

101Netlink
 1635652 Ontario Limited o/a WaveDirect
 Telecommunications
 360 Communications, LLC
 ACCS, Inc.
 ADT Systems, Inc. / Rural Texas Broadband
 Adtech
 Advanced Automation
 Advanced Broadband LLC
 AeroVive LLC.
 Air Advantage, LLC
 Air Link Rural Broadband LLC
 Air Networks
 AIRbaud
 AirLink Internet Services
 AirLogic Internet Services
 Alamo Broadband Inc.
 AlasConnect
 AL-GA WIRELESS BROADBAND LLC
 Alluretech
 Aloha Broadband
 Altazip Inc.
 Altius Broadband
 Alyrica Networks, Inc.
 Amplex
 Antelecom, Inc.
 Aroostook Technologies Inc.

Aston Technology
 Atlas Broadband
 ATM-INTERNET LLC
 AVISP
 B2X Online, Inc.
 BackWoods Wireless
 Baltic Networks
 Battles Xtreme Networks, LLC
 Believe Wireless, LLC
 Bitlomat
 BitWind Communications
 BizVox Communications
 Blast Communications, Inc.
 Blaze Broadband
 Bloosurf LLC
 Blue Zoom Inc.
 BluegrassNet
 Boardman River Communications, LLC
 Bolt Internet
 BPS Networks
 Bright.net North Inc.
 Broadband Corp
 Broadband VI
 Bspeedy Wireless Inc.
 Business Only Broadband
 Business Systems Connection, Inc.
 Butch Evans Consulting

Cal.net, Inc.
 California Broadband Services,
 Carlson Wireless Technologies
 CBTR Services, LLC
 CCAonline, Inc., BroadTech, Inc.
 CellTex Networks, LLC
 Center for Innovative Technology
 Central Coast Internet
 Central States Security, LLC
 Central Valley Broadband
 Cherry Capital Connection, LLC
 Circle Computer Resources, Inc.
 City of Coffeyville
 City of Greenfield
 CKS Wireless, Inc.
 ClearTalk
 Cloud Alliance LLC
 CLOUDWYZE, INC.
 CMS Internet LLC
 CNSP, Internet
 Cnywireless
 Coast Networks, LLC.
 Coastal Sierra, Inc. - dba Skyline Broadband
 Service
 Coeur d'Alene Tribe
 Columbia Energy
 Columbia Wireless Inc.
 ColusaNET Inc.
 CommFunction, LLC
 Community Broadband
 Computer Dynamics of NW IL LLC
 Computer Sales and Services, Inc.
 Computers & Tele-Comm Inc.
 Comspeco.net
 Confederated Tribes of the Umatilla Indian
 Reservation (CTUIR)
 Contractdata
 Country Connections LLC
 CoxWireless
 Craig Williams Consulting
 CRESCOMM WIFI, L.L.C.
 CresComm WiFi, LLC
 Crestone Telecom
 Crossfire Media
 Crossroads WiFi
 CSInet Internet Access Corp.
 CTI Networks / PA.net
 Cue Band, LLC
 CV-Access, Inc.
 CVALINK Broadband
 Cyber Broadband Inc.
 Cyber Broadcasting, LLC
 Cybernet1, Inc.
 Cyberpine Cooperative, Inc.
 db Wireless, Inc.
 Desert Wireless, LLC
 Digital Wind, LLC
 DiMan Systems
 DMCI Broadband, LLC
 DSLbyAir, LLC
 East Allen High Speed Internet, LLC
 Eastern Indiana WIFI, Inc.
 Eastern Oregon Net, Inc.
 Eastern Shore Communications
 eCom Direct, Inc.
 ECSIS.NET, LLC
 Egan Technology Services
 Elevated Access LLC
 Elite Broadband LLC
 Elk Country Wireless
 Energy Innovation Foundation
 Estes Valley Networks, Inc.
 Exceed Technologies, Inc.
 Excel.Net, Inc.
 Exwire
 Farm to Market Broadband
 Fast-Air Internet, Inc.
 Fastnet Wireless LLC
 Fire2Wire
 Firenet1.com
 FireServe Broadband Internet
 First Step Internet, LLC
 Fluidmesh Networks
 Fourway Computer Products, Inc.
 Freeway Networks
 Freewire Broadband LLC
 Fullair Wireless
 Fullnet, Inc.
 Future Link of ILL.
 Future Wireless Technologies of Nebraska
 G Link Systems
 GBIS Holdings Inc, dba Great Basin Internet
 Services, Inc.
 Getwireless.net, Inc.
 Global Net, Inc.
 GlobalNet Internet Services
 Gonthier, Inc., dba Radio Communications
 Service
 Gozoe Wireless LLC
 Grand Avenue Broadband
 Grand County Internet Services Inc.
 Great American Broadband, Inc.

Guacamole Press, LLC (dba Solano Wireless & Yolo Wireless Internet)
 GVEC.net
 Haug Communications Inc.
 Helix Technologies, Inc.
 Highspeedlink.net
 Hstar, Inc.
 ICON Technologies Inc.
 Imagine Networks
 Indian Creek Internet services, Inc.
 Indigo Wireless
 Info Link Wireless, Inc.
 InfoWest, Inc.
 Intelligent Computing Solutions
 Intellilink Communications, LLC
 International Communication, R&C
 Internet Free Planet, Inc.
 Invictus Networks, LLC dBa Invictus Wireless
 InvisiMax Inc.
 Iron Goat Networks, LLC
 IT GROUP, INC (DBA HOOSIER INTERNET)
 IteLite Antennas, Inc.
 iWiSP LLC
 JAB Wireless, Inc.
 Jade Communications
 JKM Consulting, Inc. dba M2 Connections
 Jo-Carroll Energy, Inc. (NFP)
 Joink, LLC
 KC NAP, LLC
 Keenwire
 Ken-Tenn Wireless
 Kinex Telecom, Inc.
 Kiss My Tek
 Kitepilot Solutions LLC
 Knetworx LLC
 Kremmling Technology Services LLC
 KyWiFi
 LakeNet LLC
 Lease Corporation of America
 Lexsar Solutions, Inc.
 Lighthouse.Net
 Lobo Internet Services Ltd
 LocaLoop, Inc.
 Los Guys Wireless Internet
 M2 Connections
 Magnolia Wireless, LLC
 Magnum Wireless, LLC
 Mchenrycom Company / dba-mc.net
 MCM Systems
 McMinville Access Company
 Megagate Broadband
 Mercury Network Corporation
 Mercury Wireless
 Mesh.Net Internet
 MetaLINK Technologies, Inc.
 Methownet.com
 Mille Lacs Energy Cooperative
 Mobile Communications LLC
 MohaveBroadBand
 Mojavewifi.com LLC
 Monon Telephone Company, Inc.
 Mosier WiNet LLC
 Mountain Radio Systems, Inc.
 Mt. Vernon. Net, Inc.
 Muckleshoot Indian Tribe
 Myakka Technologies, Inc.
 NAP2 Networks
 Nature Coast Networks, LLC.
 Navigue.Com
 NCI Datacom, Inc.
 NetBee Wireless
 netBlazr Inc.
 Net-Change.Com
 NetsurfUSA, Inc.
 Network Business Systems, Inc.
 Network Tool and Die Company, Inc.
 NetX Internet, LLC.
 New Wave Net Corp.
 NEWBREAK COMMUNICATIONS
 NewWays Networking, LLC
 NexGenAccess Inc.
 Nextera Wireless
 North Branch Networks, LLC
 North Nova Cable Ltd.
 Northeast Oklahoma Wireless
 Northern Neck Wireless Internet Services, LLC
 Novarum
 NOW Wireless. LLC
 NTInet Inc.
 OACYS Technology
 OceanWiFi
 OINC Wireless
 On Ramp Indiana
 Orbit Broadband LLC
 Orchard Wireless
 OregonFAST.net
 Parallax Systems, Division of Richmond Power & Light
 PB Consulting
 PCS-WIN
 PEAK Internet, LLC
 Phoenix Internet

Port Networks
 Portative Technologies, LLC
 Precision Data Solutions, LLC
 Precision Wireless Internet
 Premier Systems Unlimited Inc.
 Premium Choice Broadband
 Quinault Indian Nation
 Q-Wireless, LLC
 Ranch Wireless, Inc
 Rapid Systems Corporation
 Rapidwave, LLC
 Razzo Link, Inc.
 Red Shift Internet Services
 Relay Networks, Inc.
 RelayServices
 Resonance Broadband
 Rio Verde Wireless, LLC.
 River Delta Wireless, LLC.
 Roadstar Internet Inc.
 Rowe Wireless Networks LLC
 Royell Communications, Inc.
 Rural iNet, LLC
 Rural Technology Group
 RuralConnection.ca
 Sandhills Wireless
 SCS, Ltd.
 Shelby Broadband
 Sierra Economic Development Corporation
 (SEDCorp)
 Skycom1
 SKYFREQUENCY, INC.
 Skywave Wireless, Inc.
 Slopeside Internet LLC
 SmarterBroadband, Inc.
 Snappy Internet & Telecom
 Sonic Spectrum, Inc.
 SonicNet Inc.
 Sooner Wireless LLC
 Sound Internet Services Inc.
 Southwestern Wireless, Inc.
 SpeedyQuick Networks
 SPITwSPOTS, Inc.
 St. Louis Broadband, LLC
 Star Telephone Membership Corporation
 STARTOUCH INC
 Stewart Computer Services
 Streakwave Wireless, Inc.
 Succeed.Net
 Summit Digital, Inc.
 SuperWiFi Conference
 SystemsOne, LLC

TecInfo
 Telebeep Wireless
 TeleSystem Services
 Teletec Communications
 Telpage, Inc.
 TerraNovaNet, Inc.
 Texas Cellnet, Inc.
 Texas Communications
 TG Ferguson Company, Inc.
 The Seimitsu Corporation / eSavannah LLC
 theWISP.net, CORP
 Thunderbird Broadband, Inc.
 Tincans Wireless Internet
 Tnet Broadband Internet, LLC
 Town of Warwick MA
 TransWorld Network, Corp.
 Triad Wireless
 Tucker Communications, Inc.
 Txox Communications LLC
 U.P. Logon
 Ultimate Internet Access, Inc.
 United, Inc.
 Universal Connectivity
 US Broadband
 Valnet
 Vector Data Systems, LLC
 Velocity Online
 Vergennes Broadband LLC
 Virginia Computer Guys
 Vistabeam
 Vistanet Telecommunications, Inc.
 Vue Inc.
 WasabiNet, LLC
 WaveDirect Telecommunications LLC
 Webformix Company
 Webhiway Communications LLC
 Wercs Communications Inc. DBA Mountain
 West Telephone
 West Michigan Wireless ISP
 Wheatland Electric Cooperative DBA
 Wheatland Broadband
 WhiteSpace Alliance
 Wildfire Broadband
 Williams Tel Data
 Wilson Creek Communications, LLC
 Winters Broadband LLC
 Wired or Wireless, Inc. dba AIR-PIPE
 Wired Waters, Inc.
 Wireless Beehive
 Wireless Data Net, LLC
 Wireless Etc.

Wireless Hometown LLC
WISPA
WISPA Emergency Communications Action
Team (WECAT)
Wisper ISP
Wisper, LLC
WISP-Router, Inc.
Worldwide Technologies, Inc. / TurboNet
WVVA.net Inc.
X1 Communications
Xpressweb Internet Services, Inc.
Yakama Nation Networks
YubaGold
ZigWireless LLC
ZIRKEL Wireless, LLC

February 13, 2012

The Honorable Harry Reid
522 Hart Senate Office Building
United States Senate
Washington, D.C. 20510

The Honorable Mitch McConnell
317 Russell Senate Office Building
United States Senate
Washington, D.C. 20510

The Honorable John Boehner
1011 Longworth House Office Building
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Nancy Pelosi
235 Cannon House Office Building
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Jay Rockefeller
531 Hart Senate Office Building
United States Senate
Washington, D.C. 20510

The Honorable Kay Bailey Hutchison
284 Russell Senate Office Building
United States Senate
Washington, D.C. 20510

The Honorable Fred Upton
2183 Rayburn House Office Building
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Henry Waxman
2204 Rayburn House Office Building
U.S. House of Representatives
Washington, D.C. 20515

Senators and Representatives:

The broad group of undersigned companies, trade associations, and public interest groups writes to reaffirm our support for spectrum reform legislation that will ensure that commercial users, public safety, and federal users all have access to wireless capacity to meet our ever growing needs. However, as Congress considers that legislation, it must ensure the Federal Communications Commission (FCC) maintains its flexibility as an expert independent agency to make more spectrum available for a diversity of uses and users.

It is particularly critical that some of the “beachfront” spectrum located in the television bands remain available for unlicensed services, which are driving innovation, promoting rural broadband deployment, and creating new services in the wireless ecosystem. We need unlicensed access to ensure that commercial deployments like the one recently launched in Wilmington, North Carolina spread throughout the country. And we must ensure that the United States does not lose its global leadership position to other countries. Earlier this month, the UK regulator, Ofcom, released draft regulatory requirements for white space devices in the UHF TV bands in

anticipation for white spaces technologies to be launched there in 2013. The rest of the world is not waiting, and nor should we.

To that end, we reiterate our strong belief that compromise legislation should include language that gives the FCC clear flexibility to make appropriate spectrum allocation decisions that will raise revenue, support vibrant wireless competition and technological innovation, and promote rural broadband deployment. We urge Senate and House negotiators to include provisions that preserve the FCC's existing authority to respond to changes in this continually evolving and dynamic market.

Under its existing authority to find the right balance between licensed and unlicensed spectrum access, the FCC has successfully auctioned commercial licenses to use spectrum since the mid-1990s, raising over \$50 billion for the U.S. Treasury and driving growth of the wireless industry to over \$150 billion in annual revenue, with mobile phone penetration now at over 90% of the population. At the same time, the FCC's judicious use of flexible authority has simultaneously created an unlicensed industry that generates an estimated \$50 billion annually for the American economy, and has made America the world-leader in development of wireless technology from LTE to Wi-Fi to broadcast band white spaces technology.

We applaud both the Senate and House Committees, from both parties, for their tireless work to develop bipartisan legislation that will promote public safety, create jobs, enhance competition, and foster even greater innovation. We remain fully committed to working with Congress to pass legislation that allows us to fully unlock the power of the wireless revolution.

Sincerely,

3-dB Networks, Inc.
360 Communications, LLC
6Harmonics Inc.
Access Humboldt
Advanced Automation
Airity
AirLink Internet Services
Akaku: Maui Community Television
Alluretech

Avolve
BackWoods Wireless
Barrier Communications Corporation
Blast Communications, Inc.
Broadband Corp
Broadband Heaven
Broadcom Corporation
Cambridge Silicon Radio Limited
Carlson Wireless

Center for Rural Strategies
 Cherry Capital Connection, LLC
 Clear Talk
 Cloud Alliance LLC
 Com-Waves
 Communication Specialists Company of
 Wilmington, LLC
 Computer Sales & Services, Inc.
 Consumers Union
 Country Connections LLC
 CRESCOMM WIFI, LLC.
 CV-Access, Inc.
 Cyber Broadband / Advanced Broadband
 DC Access, LLC
 Digital Biz, Inc. / PopNet Wireless
 DMCI Broadband, LLC.
 e-vergent LLC
 Eastern Indiana WIFI, Inc.
 Eastern Oregon Net, Inc.
 eCom Direct, Inc.
 Environmental Support Services, Inc.
 FireServe Broadband Internet
 First Step Internet, LLC
 Fourway Computer Products, Inc.
 Free Press Action Fund
 Future Link of ILL.
 Future Technologies
 Google, Inc.
 Grand County Internet Services
 GVEC Net
 Haug Communications Inc.
 Info-Ed, Inc.
 Intelligent Computing Solutions
 InvisiMax Inc.
 Key Bridge Global LLC
 KWOM Internet
 LakeNet LLC
 Main Street Project
 Marvell Semiconductor, Inc.
 MCM Systems
 Mercury Wireless, LLC
 MetaLINK Technologies, Inc.
 Microsoft Corporation
 Mountain Area Information Network
 NAP2 Networks / WiMAX Broadband
 National Alliance for Media Arts & Culture
 National Cable & Telecommunications
 Association
 National Telecommunications Cooperative
 Association
 netBlazr Inc.
 NetsurfUSA, Inc.
 Neul Ltd.
 New America Foundation
 New Wave Net Corporation
 NexGenAccess Inc.
 North Branch Networks, LLC
 Northern Neck Wireless Internet Services,
 LLC
 NOW Wireless, LLC
 NTInet Inc
 NYSYS Broadband
 OACYS Technology
 Odessa Office Equipment
 On-Ramp Indiana, Inc.
 OnlineNW
 Oregon Fast Net
 PCSWIN / RC-WiFi
 Portative Technologies, LLC
 President - Electronic Solutions, Inc.
 Prometheus Radio Project
 Public Knowledge
 Qwireless Broadband
 Radiosoft
 Red Shift Internet Services
 Rock Solid Internet & Telephone
 Royell Communications, Inc.
 Rural Broadband Network Services LLC
 SmarterBroadband, Inc.
 SonicNet Inc.
 Spectra Access
 Spectrum Bridge, Inc.
 St. Louis Broadband, LLC
 TerraNova Telecom
 TerraNovaNet Internet Services
 Texas Communications
 Tucker Communications, Inc.
 TWIN Inc.
 United Church of Christ, Office of
 Communication, Inc.
 Vistabeam
 Washington Broadband, Inc.
 Wheatland Broadband Services

Wired or Wireless, Inc. dba AIR-PIPE
Wireless Data Net, LLC
Wireless ETC
Wireless Internet Service Providers
Association
WISP-Router, Inc.
xG Technology
ZigWireless LLC
ZIRKEL Wireless

U. S. House of Representatives
Washington, D. C. 20515

December 11, 2012

The Honorable Julius Genachowski, Chairman
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Dear Chairman Genachowski,

Earlier this year, 40 Members of the House of Representatives joined us on a bipartisan letter to Conferees on the Payroll Tax Cut Conference Committee, urging them to protect public access to unlicensed spectrum. Through our efforts and the support of entrepreneurs and innovators around the nation, the compromise included in the Middle Class Tax Relief and Job Creation Act of 2012 preserved, protected and enhanced access to this innovative public resource.

As the Federal Communications Commission (FCC) considers proposed rules implementing an incentive auction of broadcast television spectrum, the agency has a responsibility to adhere to the statute – recognizing the enormous economic value of both licensed and unlicensed spectrum in the television band. We support the proposed rulemaking adopted on September 28, 2012, as it recognizes that nationwide guard bands needed for interference protection can simultaneously provide unlicensed access, ensuring that every megahertz of spectrum is used efficiently. We also believe the Commission should implement the incentive auction and resulting reorganization of the band in a manner that optimizes the value of both licensed and unlicensed spectrum access.

In the nine months since the legislation was signed into law, we've seen several examples of the public benefits that unlicensed brings to consumers and businesses, as well as what lies ahead. A few examples include:

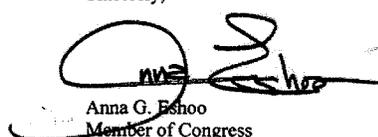
- During Hurricane Sandy, when many wireless phone networks were overloaded or completely inoperable, Wi-Fi provided access to the Internet for critical news and information.
- In September, Nottoway County, Virginia became the first FCC certified TV white spaces (TVWS) rural broadband deployment. One of the nation's more than 1,500 small business WISPs is using TVWS to extend connectivity to this heavily forested and mostly unserved area, including the Fort Pickett Army National Guard base.
- In August, Florida-based Spectrum Bridge, Inc. announced the launch of a TV White Space Certification Program that will assist radio manufacturers as they prepare for FCC approval of TVWS radios.

- In July, a cross-section of the unlicensed ecosystem convened at Stanford University, bringing together application developers, chip manufacturers, database developers, investors, academics, press and policymakers to discuss the extraordinary progress in the industry and hear from the innovators and engineers on the front lines of these developments.
- In June, AIR.U (Advanced Internet Regions University), a coalition of over 500 educational institutions announced an initiative using TVWS that would bring high-speed broadband to colleges and universities with limited existing service.

Following successful testing in Cambridge, England, the Cambridge TV White Spaces Consortium issued a recommendation to Ofcom, the U.K.'s telecommunications regulator, encouraging the agency to issue proposed regulations allowing for the use of TVWS. As U.S. mobile data traffic continues to increase, we cannot afford to fall behind other nations in the race to deploy new and innovative unlicensed technologies.

Thank you for your leadership and continued efforts to drive a 21st century spectrum policy.

Sincerely,



Anna G. Eshoo
Member of Congress



Darrell Issa
Member of Congress

cc: Commissioner Robert M. McDowell
Commissioner Mignon Clyburn
Commissioner Jessica Rosenworcel
Commissioner Ajit Pai

Ms. ESHOO. Thank you.

Mr. Chairman, ensuring that the FCC successfully implements the voluntary incentive auction, a mechanism that this subcommittee established, holds great potential to produce new jobs and to free up more spectrum at a time in which demand for wireless broadband continues to soar. The economic importance of this auction I don't think can be understated. Last month, a new study from the GSMA and Deloitte concluded that the doubling of mobile data use results in a 0.5 percentage point increase in GDP per capita growth.

As the FCC Chairman stated in adopting the proposed incentive auction rules, the Commission must engage in a process that is transparent, fact-based, data-driven, and draws on the leading experts in both engineering and economics. While I have confidence in the Commission's ability to carry out its process in such a manner, there are three key areas which I think deserve additional focus.

The first is the importance of constructing a band plan that maximizes the enormous economic benefits of both licensed and unlicensed spectrum. The proposed rulemaking adopted on September 28th of this year, consistent with congressional intent, recognizes that nationwide guard bands needed for interference protection can simultaneously provide unlicensed access, ensuring that every megahertz of spectrum is used efficiently. Simply put, nowhere in the act does it require the FCC to auction guard bands.

And as the title of today's hearing reflects, this subcommittee has a responsibility to keep the new broadband spectrum law on track. That is the title of this hearing. Not to go off track, but to remain on track. Attempts to rewrite the law through the rulemaking process should be rejected by the Commission and will only serve to delay the release of new spectrum.

Second, Congress crafted the spectrum law to ensure that the FCC, by rulemaking, can adopt rules enhancing competition, consumer choice, and innovation. With the potential to free up as much as 120 megahertz of beach-front spectrum, wireless carriers of all sizes, both regional and national, must have an opportunity to participate in the auction process. Promoting a competitive landscape can be furthered through the completion of the Commission's interoperability proceeding as well as a revision of the Commission's spectrum screen, the process used to determine how much spectrum anyone carrier can hold in a given market.

Finally, the Commission must be proactive, I believe, in its approach to educating broadcasters. Without voluntary broadcaster participation, there will be no new spectrum to repurpose. The FCC's Learning Everything About Reverse-Auctions Now, the LEARN program, is an important step in this process.

And I encourage the Commission to engage in individual outreach that ensures that broadcasters fully understand the benefits of participation. Ultimately, this is going to have to be a collaborative process that brings together broadcasters, wireless carriers, and technology companies for the purpose of revolutionizing the mobile broadband marketplace.

I thank Chairman Genachowski and every member of the Commission for your tireless efforts to ensure a successful auction, the

first in the history of our country that is voluntary, and to each Commissioner for being here today to share your perspectives.

And I yield back, Mr. Chairman.

Mr. WALDEN. The gentlelady yields back the balance of her time. The chairman recognizes the gentleman from Nebraska, Mr. Terry.

OPENING STATEMENT OF HON. LEE TERRY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Mr. TERRY. Thank you, Mr. Chairman.

And for this Congress, this I expect to be my last official business as your vice chair. I want to thank you for a fun and good year. But even though I may lack that title on this subcommittee, it won't change my enthusiasm and activity on this committee in the 113th.

This incentive auction, if it is successful—and I expect it will—will accomplish a number of goals that will benefit consumers. As the Commission drills down to a set of final rules, I have confidence that it can balance the concerns of this stakeholders.

In doing so, I want to be sure that the intent of the Spectrum Act is respected. And in doing so, I want to be sure that this means that the Commission must raise the revenue necessary to pay for the FirstNet public safety network; it means that the guard bands must be no longer than technically reasonable to avoid interference. It also means that all bidders must be able to follow and participate in the forward auction. Finally, a faithful interpretation of the Spectrum Act requires the Commission to ensure that the auction spectrum is not encumbered with value-sapping restrictions on use or alienability.

I look forward to working with the Commission and my colleagues on the subcommittee in the coming months to make sure that this opportunity is not wasted and that we, along with the FCC, get it right.

At this time, I will yield to the gentleman from Texas, Mr. Barton.

OPENING STATEMENT OF HON. JOE BARTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. BARTON. Thank you, Mr. Terry.

I want to compliment the chairman, who is not here, for the new seats up here on the dais. They are very comfortable. I guess it is intentional that the Commissioners still are in the uncomfortable seats. I am not sure.

I appreciate the subcommittee holding this hearing.

The Digital Television Transition and Public Safety Act of 2005 was passed when I was chairman. That created 84 megahertz of spectrum to be auctioned. Since then, we have also had the Middle Class Tax Relief and Jobs Creation Act of 2012, which requires that 65 megahertz of this spectrum be auctioned by 2015.

When it is my turn to ask questions to the Commission, I will have two issues: One is what happens to the low-power television stations in the major metropolitan markets who don't have Class A licenses. They are very concerned that they may lose their license and be left out in the cold. And, secondly, I am very puzzled

about this three-way simultaneous auction. I really don't understand how that is going to work, and I hope one of the Commissioners can explain that to me.

With that, Mr. Chairman, I yield back.

Mr. WALDEN. The Chair now recognizes Mr. Latta.

OPENING STATEMENT OF HON. ROBERT E. LATTA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Mr. LATTA. Well, thank you, Mr. Chairman. And, also, I appreciate the FCC Commissioners for being here at the committee with us today.

The Spectrum Act was a landmark legislation by authorizing volunteer incentive auctions. Everyone knows that the success of the auction is critical for deployment of a public safety network, for bringing spectrum to a competitive marketplace for mobile broadband, and the continued vitality of our Nation's broadcasters.

This is truly an issue of global competitiveness. In fact, a recent study by Deloitte using Cisco data revealed a doubling of mobile data use leads to an increase of 0.5 percentage points in GDP per capita growth rates. And while the incentive auction is a key component to our Nation's spectrum policy, we must remember that it is only one component. The administration needs to work with Congress to look at ways to clear Federal spectrum, particularly the 1775 to 1780 megahertz band.

Once again, Mr. Chairman and Commissioners, we thank you for being here today, and we appreciate your transparency and openness as the incentive auction proposal is developed. We look forward to hearing your testimony.

And, Mr. Chairman, I yield back. Thank you.

Mr. WALDEN. The gentlelady from Tennessee, Ms. Blackburn.

OPENING STATEMENT OF HON. MARSHA BLACKBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Mrs. BLACKBURN. Thank you.

And I want to welcome our Commissioners. We are so pleased you are here for your Christmas visit.

And, Chairman Walden, I thank you for holding the hearing.

The spectrum auctions have been authorized, and they should maximize the amount of spectrum that is available for licensed commercial mobile use and maximize revenues to the Treasury. Everywhere we go, all of our innovators to the broadband are saying, Let's maximize this, let's get these auctions out there. And the voluntary auctions will be easier if the Commission is faithful to the statute that Congress passed.

Commissioner Pai, we are delighted that you recognized that in your testimony. So we thank you for that.

We know that it is going to be necessary to get the spectrum out there if we are going to achieve our shared goals: mitigating our Nation's spectrum crunch; improving public safety; generating billions in revenue to help pay down this massive debt that we are facing in this country; creating good-paying, sustainable, long-term jobs. And we need to maximize participation among all interested parties.

So we welcome you. I am looking forward to the hearing.
And I yield back.

Mr. WALDEN. The Chair recognizes the gentleman from California, Mr. Waxman, for 5 minutes.

OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. WAXMAN. Thank you very much, Mr. Chairman, for holding this important hearing on the FCC's implementation of spectrum legislation that Congress passed with strong bipartisan support. And I am grateful for the chairman and all of the members of the Commission's work in this with regard.

The Public Safety and Spectrum Act implemented one of the last remaining recommendations from the 9/11 Commission and created a nationwide interoperable public safety broadband network for first responders. It also provided new authority to the FCC to conduct the incentive auctions, with the purpose of alleviating the spectrum crunch fueled by the ever-growing demands for mobile broadband services and providing a downpayment for the public safety network. Overall, the new law will help drive our national economic growth while keeping the American people safe through state-of-the-art communications infrastructure for public safety.

The act was the result of months of bicameral, bipartisan negotiations that included many elements of compromise. The Federal Communications Commission is now grappling with several of these areas, and I would like to highlight two in particular.

The first is unlicensed spectrum. Unlicensed spectrum has been an incredible economic success story. Innovative services like Wi-Fi and Bluetooth are now ubiquitous parts of our communications system. They came about because of the use of unlicensed spectrum.

The law advances unlicensed use in several ways: It allows the FCC to use the existing white spaces in the broadcast band for unlicensed use; it gives the FCC authority to reorganize these existing white spaces to maximize their value; and perhaps most important, it allows the FCC to create guard bands in the repurposed broadcast television spectrum that may be used for new unlicensed services like Super Wi-Fi. This is smart spectrum policy that recognizes the increasingly interdependent nature of licensed and unlicensed operations.

The guard bands will both enhance the value of the spectrum to be auctioned by protecting it from interference and create a nationwide band of prime spectrum that can be used for new innovations in unlicensed use. That is why I am pleased that the FCC's proposed rules are faithful to congressional intent to promote innovation in unlicensed use.

Second, the law preserves the FCC's ability to use auction rules to promote competition in the wireless industry, while ensuring no single carrier is unfairly excluded from the auction process. As the steward of the public's airwaves, the FCC must have the authority to write auction rules that aim to avoid the concentration of spectrum in the hands of just a small group of companies.

The act strikes the proper balance in recognizing that while every carrier should be eligible to participate in some fashion in a system of competitive bidding, the FCC can continue to promote competition through its spectrum policies. To implement this part of the law, the FCC is appropriately seeking comment on whether to establish spectrum aggregation limits or other rules to achieve these aims.

The conferees on the Public Safety and Spectrum Act spent significant time debating and ultimately rejecting other proposals on unlicensed and bidder eligibility. No conferree's position was accepted outright, and our carefully crafted compromise is what became law. So I am troubled by attempts by some to relitigate issues that were resolved earlier this year when the bill passed Congress with widespread support. After-the-fact spin that unfairly twists the language of the law deserves little weight by the Commission or the courts.

My judgment is that the FCC is off to a good start in proposing incentive auction rules. I commended Chairman Genachowski and his colleagues on the Commission for these efforts. And I look forward to hearing all of your testimony today.

And I have 30 seconds if anybody wants it. Otherwise, I will yield it back so we can hear from our witnesses.

Mr. WALDEN. The gentleman yields back the balance of his time.

And with that, we will proceed to hear the testimony of our witness. And we will start with the Chairman of the Federal Communications Commission, Mr. Julius Genachowski.

We welcome you back before our subcommittee, Mr. Chairman, and we look forward to your statement and commend you on all the work your commission is doing. Please proceed.

STATEMENTS OF JULIUS GENACHOWSKI, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION; ROBERT M. MCDOWELL, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; MIGNON L. CLYBURN, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; JESSICA ROSENWORCEL, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; AJIT PAI, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

STATEMENT OF JULIUS GENACHOWSKI

Mr. GENACHOWSKI. Thank you, Chairman Walden, Ranking Member Eshoo, members of the committee.

Mr. WALDEN. We seem to have a spectrum problem here.

Mr. GENACHOWSKI. There we go.

Mr. WALDEN. There we go.

Mr. GENACHOWSKI. I think it is unlicensed.

It is a pleasure to be here, and thank you for the many opportunities both to testify here and to work with all members of the committee outside of the hearing process on work in this very important area.

I do want to take a minute to thank Congressman Terry and Congressman Doyle for coming to the FCC last week when we adopted our Low Power FM Order, implementing a bipartisan act

of Congress. It was a very special day for the Commission, the Commission staff, and I thank both of you for joining us.

This past week, Commissioner McDowell and I were part of the U.S. delegation to the WCIT in Dubai, where we worked together to defend a free and open Internet. I would note that members of the committee staff on a bipartisan basis were there, as well, and on a bipartisan basis were fighting for Internet freedom and openness.

The situation in Dubai right now is fluid. People are literally meeting right now. We have a strong American delegation on the ground led by Ambassador Kramer and including representatives from across government and the private sector. As I said, the situation is fluid. The issues are important. And I think we all understand that this will not be the last conference at which these important issues arise. And fighting for Internet freedom and openness globally will be something that we will all be working on together for quite some time.

In the U.S., the broadband sector is strong, and the U.S. has regained global leadership in mobile communications. We have more 4G LTE subscribers than the rest of the world combined, and we are setting the pace globally on innovation in mobile software, apps, and devices.

This leadership means that we face a particularly acute challenge to meet exploding mobile demand, the “spectrum crunch,” and that we must use all policy levers at our disposal to address it. That is why a few months ago at the Commission we freed up 30 megahertz of WCS spectrum for broadband. It is why yesterday we unanimously adopted an order freeing up 40 megahertz of underutilized satellite spectrum for land-based mobile broadband, and a proposal setting the stage for an auction of an additional 10 megahertz, the H block, in 2013. It is why later today I expect my colleagues and I to approve a proposal to make 100 megahertz of spectrum in the 3.5 gigahertz band available for broadband.

And, of course, Congress recognized the importance of innovative policy solutions to the spectrum crunch in authorizing the Commission to conduct incentive auctions. As a result of this important legislation, landmark legislation, the U.S. will be the first country in the world to conduct incentive auctions.

Of course, our obligation is to implement the legislation in accordance with the statute. With our vote on a notice of proposed rulemaking in September, the Commission launched formal implementation of the new law. Implementation is on track.

Key goals and principles include maximizing the overall amount of spectrum freed up, including by maximizing broadcaster opportunities for participation in the auction; enabling the continued role of a healthy broadcast industry; generating very substantial revenue, including providing funding for FirstNet; driving private investment and innovation and ongoing U.S. leadership in mobile; focusing on the engineering and the economics; engaging with all stakeholders in a transparent process; and doing everything we can to make a complex, multipart process as simple as possible.

In my written testimony, I outline the significant steps taken since enactment of the statute to ensure success. The new incentive

auction concept poses a long list of new challenges, but we are focused together on smart solutions.

For example, our proposed wireless band plan for 600 megahertz consists of 5-megahertz building blocks to allow for the greatest amount of flexibility and efficient optimization for the new mobile data world. Specifically, we are anticipating for the first time the possibility that we might have more spectrum for downlinks than uplinks, which in a data world could make sense as compared to the symmetrical uplinks and downlinks in a voice world.

In addition, the notice proposes to free up a significant amount of unlicensed spectrum for Wi-Fi-like uses and other innovations. Both licensed and unlicensed spectrum have contributed to U.S. leadership in mobile. Like auctioned licensed spectrum, unlicensed spectrum has a powerful record of driving innovation, investment, and economic growth—hundreds of billions of dollars of value creation for our economy and consumers.

Our proposal sets out a balanced approach designed to drive investment innovation for years to come and drive continued U.S. leadership.

We are also engaging broadcasters in a constructive dialogue to meet statutory directives concerning repacking.

We look forward to comments on all of these proposals as well as ways to implement the post-auction transition with minimal consumer disruption and within the timetable set by the law.

To make clear, as we all know, the implementation is now in the notice stage. We put out a concrete proposal designed to generate concrete and efficient response from stakeholders. We will be looking very carefully at the responses that we get, deciding issues on a record and consistent with the statute.

With that, thank you again for the opportunity to testify, and I look forward to answering your questions.

Mr. WALDEN. Thank you, Chairman.

[The prepared statement of Mr. Genachowski follows:]

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI
HEARING ON “KEEPING THE NEW BROADBAND SPECTRUM LAW ON TRACK”
HOUSE SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY
COMMITTEE ON ENERGY AND COMMERCE
DECEMBER 12, 2012**

Chairman Walden, Ranking Member Eshoo, members of the Committee, thank you for the opportunity to be here today.

I will focus my remarks on the implementation of incentive auctions, but will first briefly update you on some of the Commission’s work since my fellow Commissioners and I were last before this Committee.

Mobile and other communications technologies are creating enormous opportunities and challenges in connection with natural disasters and other public safety emergencies, as Hurricane Sandy recently reminded us. The agency worked around the clock to monitor the impact on communications networks and broadcasters, and to coordinate with local, state, and federal authorities to support disaster response and recovery, including by helping get resources such as fuel and generators where they were needed to sustain communications services. After the storm, I announced a series of field hearings to help inform recommendations and actions to improve network resiliency during natural disasters, and we will also soon release a report on the 911 outages that followed last summer’s Derecho.

Last week, I was pleased to announce that the nation’s four largest wireless carriers, working with leading public safety organizations NENA and APCO, will accelerate the availability of text-to-911, with major deployments expected in 2013 and a commitment to nationwide availability by May 15, 2014. This agreement ensures that over 90 percent of the nation’s wireless consumers, including millions of consumers with hearing or speech disabilities, will be able to access emergency services by sending a text message to 911. At our Commission meeting later today, we will consider further actions to advance text-to-911.

We have also moved forward with our initiative to crack down on cell-phone theft. Answering calls from major city police departments and members of Congress, the Commission announced the creation of a new mobile industry database to blacklist stolen cell phones. Last month, I signed agreement with the Mexican government to extend the database across our borders, so that mobile phones stolen in the U.S. can’t be activated in Mexico, and vice versa. These actions send a clear message to criminals: cell phone theft is a crime that doesn’t pay.

Also last month, the Commission adopted final rules to implement the Local Community Radio Act, authorizing thousands of lower power FM radio stations. This will empower community

voices, promote media diversity, and enhance local programing. We were pleased to have the two key sponsors of the law, Congressmen Doyle and Terry, speak at the Commission meeting. It is a great example of Congress and the FCC working together, and of Democrats and Republicans working together.

This past week Commissioner McDowell and I were part of the U.S. delegation to the World Conference on International Communications in Dubai, where we defended the free and open Internet by opposing efforts by some nations to impose new rules that would radically change the existing model of Internet governance.

While in Dubai, conversations with many of my foreign counterparts drove home the fact that we are living in a flat, competitive world, where capital and talent can flow anywhere, and where broadband infrastructure—wired and wireless—is critical to attracting capital and talent. We're in a global bandwidth race, similar to the space race in that success will unleash waves of innovation that will go a long way toward determining who leads our global economy in the 21st century.

In the last few years, America has regained global leadership in mobile communications. We have more 4G LTE subscribers than the rest of the world combined, and we are setting the pace on innovation in mobile software, apps, and devices. This leadership means that we face a particularly acute challenge to meet exploding mobile demand—the spectrum crunch—and that we must use all policy levers at our disposal to solve it.

Congress recognized this in authorizing the Commission to conduct incentive auctions. As a result of this important legislation, the U.S. will be the first country in the world to conduct incentive auctions. Our obligation is to implement the legislation in accordance with the statute.

With our vote on a Notice of Proposed Rulemaking in September, the Commission launched formal implementation of the new law.

Key goals and principles include:

- Maximizing the overall amount of spectrum freed up, while enabling the continued role of a healthy broadcast industry.
- Maximizing broadcaster participation in the auction by making the auction process as transparent and easy to understand as possible.
- Providing funding for the FirstNet broadband network for first responders.
- Focusing on engineering and economics by drawing on the expertise of the world's leading economists, auction design experts, and engineers, both inside and outside the agency.

- Engaging with all stakeholders in a transparent process in which we will learn from the public record we are building, aim for simplicity, and adjust our proposals as necessary to ensure the auction succeeds.

In addition to the NPRM, we have taken significant steps since enactment of the statute to ensure success.

Shortly after passage of the legislation, I assembled a cross-agency team, including the Wireless Bureau, Media Bureau, Office of Engineering and Technology, and Office of General Counsel to coordinate implementation.

In March, the Commission announced the retention of leading experts in auction theory and implementation. We are delighted to have this world-class team of experts advising the Commission on this historic undertaking. The knowledge and experience of this team complements the substantial expertise of agency staff and will help us meet the statute's goals.

During the summer and fall, we expeditiously took the actions necessary for NTIA to stand up FirstNet, including transfer of the D Block license. We continue to coordinate with NTIA and assist them in bringing FirstNet into existence.

We established the Broadcaster LEARN (Learning Everything About Reverse Auctions Now) Program, which is designed to inform and empower broadcaster decision-makers as they participate in our comment process and consider the business opportunities that incentive auctions create.

We have already conducted more than 40 webinars to inform and empower broadcasters and their investors, attracting 2,500 attendees.

We have begun coordination with our Mexican and Canadian counterparts to address cross-border issues, as the statute requires.

And as I mentioned in September the Commission adopted a Notice of Proposed Rulemaking with detailed proposals and draft rules. Comments from stakeholders are due in the first quarter of 2013. We anticipate going to order in 2013 and conducting the auction in 2014.

The new incentive auction concept poses a long list of new challenges, but we are focused on smart solutions. For example, our proposed wireless band plan consists of 5 MHz "building blocks" to allow for the greatest amount of flexibility and efficiency, including allowing for additional downlink blocks that could be auctioned separately. In developing this proposal, we're optimizing for the new mobile data world.

In addition to unleashing a substantial amount of licensed spectrum, the NPRM proposes to free up a significant amount of unlicensed spectrum for Wi-Fi-like uses and other innovations. Both licensed and unlicensed spectrum have contributed to U.S. leadership in mobile, and I believe both will be essential parts of the landscape in the future. Unlicensed spectrum has a powerful record of driving innovation, investment, and economic growth – hundreds of billions of dollars of value creation for our economy and consumers.

As part of our implementation of incentive auctions, we are also engaging broadcasters in a constructive dialogue to meet statutory directives concerning repacking. Our notice describes specific ways in which we could implement the Act’s directive to preserve broadcasters’ coverage areas and population served, and we look forward to comments on those proposals, as well as ways to implement the post-auction transition with minimal consumer disruption and within the timetable set by the law.

* * *

Incentive auctions are one of a number of vital tools to address the spectrum crunch. Later today, the Commission will formally launch an effort to free up 100 MHz of spectrum in the 3.5 GHz band for broadband use. That action promotes two major policy and technology innovations that will advance our global competitiveness, and demonstrate our leadership in mobile: spectrum sharing and small cells, both innovations that will help us seize the opportunity of wireless broadband, economic opportunities as well as advance healthcare, education, energy and other uses yet to be discovered that touch people’s lives every day.

We are also on track to initiate a proceeding in early 2013 to free significant amounts of additional spectrum in the 5 GHz band for unlicensed use.

This year we’ve already taken steps to free up about 30 MHz of spectrum for wireless broadband by removing unnecessary regulatory barriers from spectrum in the wireless communications service bands, and we are committed to final action to free up an additional 40 MHz in the mobile satellite service band. We’re moving forward with new auctions that will result in about 65 megahertz of newly available spectrum by early 2015, in addition to the substantial spectrum from incentive auctions. I expect the Commission to hold the first of those auctions – of H block - in 2013.

We’ve also unleashed more spectrum for broadband by approving efficiency-enhancing transactions that will enable the use of previously underutilized spectrum. And we’re pursuing spectrum sharing, small cell use, and next-generation database-driven unlicensed spectrum use.

* * *

I was at the FCC in the days of the first spectrum auctions. I remember how the auction design evolved from a simple oral outcry – like a cattle auction - to today's sophisticated simultaneous ascending auction format.

I recall the concerns that spectrum auctions would never work, but thanks to the incredible work of FCC staff, the auctions turned out to be a major success.

Working with my colleagues and FCC staff, I hope and expect that incentive auctions will be another major success for the country.

Thank you and I look forward to your questions.

Mr. WALDEN. And just for the record, thank you for thanking my colleagues for coming down to the FCC. As a licensee of the FCC in the broadcast world for 22 years, I made sure to do everything possible to make sure I never had to go before the FCC in person, and so I am glad they went.

We will go to Commissioner McDowell now for your testimony.

STATEMENT OF ROBERT M. MCDOWELL

Mr. MCDOWELL. Thank you, Mr. Chairman and Ranking Member Eshoo and all members of the subcommittee. It is terrific to be back here today. Thank you for inviting us.

I share your goals of putting more spectrum into the hands of American consumers while raising funds for the Treasury and a nationwide broadband public safety network.

It is important for all of us remember today that the FCC is at the earliest stages of developing rules to implement Congress's will regarding incentive auctions—auctions that will literally be the most complex in world history. Initial comments are not even due until next month. We will have to cull through a plethora of ideas and new questions we did not contemplate when we launched the rulemaking last September. And so, consequently, it would be premature for me to offer a final opinion on where the Commission should go with new auction rules until it is time for us to vote on them.

Nonetheless, being the only Commissioner before you today who is also a veteran of two of the largest spectrum auctions in American history, as well as the digital television transition—seems just like yesterday—I have learned a lot through trial and error, sometimes more error than anything else. In our conversation today, I hope I can help illuminate a path forward based on past successes and failures.

My entire testimony could be boiled down to one sentence: The FCC should approach these auctions with simplicity, humility, and regulatory restraint. But with almost 4 minutes left, what the heck, I will go on further.

Through intelligently designed band plans and auction and service rules, we could provide opportunities for all stakeholders and potential new entrants to successfully participate in the auctions. Similarly, we should avoid micromanaging the wireless market through unnecessary rules that would deter bidders and reduce auction revenue. The goal of maximizing revenue is especially important here due to the congressional mandate that part of the auction proceeds fund the construction of the new nationwide public safety network.

Furthermore, we should keep in mind that technology advances constantly, and what may seem impossible to achieve today may be routine tomorrow. So let's not underestimate market innovation, or, worse, let's not inadvertently preempt it.

Beyond the spectrum auctions, American policymakers should continue their vigilance against encroachments upon Internet freedom, especially internationally. Chairman Genachowski, as he mentioned, and I worked together with the rest of the U.S. delegation in Dubai last week, and members of your committee staff, to

prevent the International Telecommunication Union from expanding its reach into the Internet's complex ecosystem.

And as the chairman mentioned, right now is a crucial time. Literally, as we sit here, it is nighttime in Dubai. And it is at a crucial intersection, and the next 12 to 24 hours will determine the fate of things. But if we are lucky enough to have Internet freedom escape the WCIT this year, we have to remember there is a much more fundamental negotiation in the year 2016. And there is a big meeting in May that lays the foundation for that. So we should all keep that in mind.

But I would like to thank this committee for its unanimous and bipartisan resolution opposing even the smallest of international encroachments on Internet freedom.

In the meantime, I hope we could all share a New Year's resolution to close the Title II docket at the FCC. Now, my hopes may not be realized, I realize, but ending this proceeding would send a strong signal around the globe that the U.S. opposes subjecting the Internet to late-19th-century industrial policy.

Instead of new regulation in this space, we should revive a concept that I proposed nearly 5 years ago, and that is to use the tried and true multi-stakeholder model to resolve alleged anticompetitive conduct that would threaten the open Internet. Supported by the backstop of existing antitrust and consumer protection laws, the multi-stakeholder model could spotlight market failures and cure them more quickly and probably more effectively than antiquated telephone laws. If this concept is good enough for us to preach abroad, shouldn't we also practice it at home?

Thank you, and I look forward to your questions, with 46 seconds left on the clock.

Mr. WALDEN. We will make note of that. Thank you.

[The prepared statement of Mr. McDowell follows.]

**STATEMENT
OF
COMMISSIONER ROBERT M. McDOWELL
FEDERAL COMMUNICATIONS COMMISSION**

**BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON
COMMUNICATIONS AND TECHNOLOGY**

**OVERSIGHT
OF THE
FEDERAL COMMUNICATIONS COMMISSION**

Keeping the New Broadband Spectrum Law on Track

DECEMBER 12, 2012

Thank you Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee for inviting us to appear before you today. I share your goals of putting greater amounts of spectrum into the hands of America's mobile consumers and setting aside some of the auction proceeds for constructing a nationwide broadband public safety network. I am pleased to accept your invitation to discuss ideas on how to keep the new broadband spectrum law¹ on track.

As set forth below, I will discuss ideas on what the Commission should do to advance these goals, as well as avenues the Commission should avoid. The overarching goals of the law are to auction all reclaimed spectrum to offer consumers more opportunities to harness wireless broadband, while raising badly needed funds for the U.S. Treasury and attempt to fund a nationwide, interoperable, mobile broadband public safety network.

Specifically, the Commission must: (1) ensure that the rulemaking and auction processes are transparent and the final rules intuitive so that *all* stakeholders – no matter their technology preference or size – have a meaningful opportunity to understand and participate; (2) avoid imposing anything that functions as a spectrum cap; (3) refrain, for now, from reserving new airwaves to create a “nationwide unlicensed spectrum band” within the new 600 MHz Band; (4) pragmatically balance the tension between flexible-use spectrum policies and adequate interference protections to account for the technological improvements that will undoubtedly develop while the proceeding is underway and after the rules are implemented; and (5) steer clear of encumbrances that scare away bidders and lead directly to unintended harmful consequences.

¹ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, §§ 6402-6404, 126 Stat. 156, 224-230 (2012) (broadband spectrum law).

Next, I will highlight recent Commission actions on media ownership and special access. Finally, I will briefly discuss ideas regarding an overhaul of America's outdated communications laws and the peril of increasing attempts by a growing number of countries to establish international regulations over the Internet.

Implementing the Broadband Spectrum Law

Transparency and simplicity. As required by statute, the Commission launched a comprehensive notice of proposed rulemaking regarding incentive auctions in September.² Comments on the Incentive Auction Notice are due on January 25, 2013. At the outset, I acknowledge and thank Chairman Genachowski for his willingness to accommodate edits and suggestions to improve the document. We agree that working together is especially important given the unique characteristics and complexities of the project. We will have to cull through a plethora of proposals and new questions. At this early stage, some ideas appear to be better than others. Nonetheless, I'm pleased that we included questions designed to capture comments regarding *all* concepts and practicable ideas.

As we are discussing an open proceeding, I must reserve final judgment until at least the time that the comment period closes in the spring and more likely until final rules issue. That said, learning from my experience with the AWS-1 and 700 MHz auctions, the general thoughts that I have offered for some time now merit repeating today: Quite simply, the incentive auctions will be the most complex in world history and the entire process may take the greater part of a decade. I urge the Commission to work in a deliberate and transparent manner, with an eye toward simplicity, humility and

² See *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, WT Docket No. 12-268, Notice of Proposed Rulemaking, 27 FCC Rcd 12357 (2012) (Incentive Auction Notice).

restraint. The agency's historic light touch regulatory policy for mobile technologies has enabled the U.S. wireless sector to flourish and *consistently* lead the world. I am hopeful that the Commission will not put America's positive momentum in the wireless area at risk as we explore the myriad options related to the incentive auctions.

History teaches us that past regulatory efforts to micromanage the wireless market, despite presumed good intentions, have resulted in harmful unintended consequences. Problems resulting from bad decisions *always* return to the Commission and ultimately harm consumers. Similarly, Members of Congress must spend valuable time dealing with such regulatory failures. As a result, uncertainty lingers over markets and inhibits investment while spectrum lies fallow. For these reasons and more, we must avoid the temptation to design rules that may be fashionable-at-the-moment, but fail to attract new entrants. When it comes to spectrum policy, simplicity works best.

Avoid imposing the functional equivalent of a spectrum cap. Auction rules should present realistic opportunities for small, medium and large entities – no matter their preferred technology – to bid for and secure licenses without excluding *any* interested participant. While the broadband spectrum law explicitly prevents the Commission from excluding entities that meet the prospective auction rules, as well as the long-standing technical, financial, character and citizenship requirements,³ the law also clarifies that the Commission may adopt and enforce new rules concerning spectrum aggregation.⁴ Consequently, some may be tempted to adopt the functional equivalent of a spectrum cap, which, assuredly, would be given a different name.

³ See broadband spectrum law § 6404.

⁴ See *id.*

Indeed, a proposal to cap spectrum holdings is discussed at length not only in the Incentive Auction Notice, but in a companion Spectrum Aggregation Notice⁵ adopted on the same September day. I am concerned that reviving the concept of a spectrum cap under any moniker could create harmful uncertainty and may reduce the pool of auction participants. Until now, spectrum caps were a dead and buried 20th century industrial policy relic. Let's not exhume them.

By way of brief background, in 2001, the Commission adopted the current case-by-case analytical process after determining that spectrum aggregation limits were no longer necessary due to meaningful competition among providers of telecommunications services. Since that time, the Commission has analyzed commercial wireless spectrum holdings on the basis of the transaction as a whole, oftentimes in close consultation with the Department of Justice. The current approach was created to result in narrowly-tailored, transaction-specific spectrum remedies that safeguard against anticompetitive behavior, encourage increased investment, and spur the creation of innovative consumer offerings.

I voted to concur on the substance of the Spectrum Cap Notice because I cannot agree with the view that the Commission's current flexible approach, which examines spectrum holdings on a case-by-case basis and within the unique context of each auction or proposed transaction, is broken at its foundation. Further, I question whether the proposals discussed in the Spectrum Cap Notice are compatible with the goal of the broadband spectrum law: to make spectrum more abundant in the mobile marketplace by

⁵ See *Policies Regarding Mobile Spectrum Holdings*, WT Docket No. 12-269, Notice of Proposed Rulemaking, 27 FCC Rcd 11710 (2012) (Spectrum Cap Notice).

allowing it to flow to its highest and best use as quickly as possible. As the new law makes clear, spectrum, which ultimately ends up in the hands of our nation's wireless broadband consumers, is *the* path to some of the best innovations that boost broadband adoption and economic growth. Adopting a one-size-fits-all cap, or some functional equivalent, will reduce auction proceeds, therefore undermining efforts to build the nationwide broadband public safety network mandated by Congress.

Refrain, for now, from reserving a new spectrum band for unlicensed use. I

have long been an ardent supporter of unlicensed uses of the television white spaces.⁶ That said, I respectfully disagree with calls to create within the new 600 MHz Band the world's first nationwide unlicensed spectrum band suitable for robust wireless broadband on contiguous low-band frequencies.⁷ As a preliminary matter, any action in this regard would be premature. I wholeheartedly agree that unlicensed spectrum, no matter where it exists, plays a critical role in the context of mobile broadband services. Nonetheless, at this early stage in the incentive auction process, it is not apparent that we should stop the progress well underway in the TV white spaces arena to create a solution for a problem – an alleged shortage of unlicensed spectrum in lower spectrum bands – that may never exist. The timeline for identifying, auctioning and ultimately clearing additional licensed spectrum within this new band is unclear, let alone the timeline for setting aside and reserving a given amount of channels for unlicensed use. In any event, over-the-air

⁶ See e.g., *Unlicensed Operation in the TV Broadcast Bands*, ET Docket No. 04-186, *Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, ET Docket No. 02-380, Second Memorandum Opinion and Order, 25 FCC Rcd 18661 (2010); *Unlicensed Operation in the TV Broadcast Bands*, ET Docket No. 04-186, *Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, ET Docket No. 02-380, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd 16807 (2008).

⁷ *FCC Launches First-in-the-World Incentive Auction to Repurpose Broadcast Television Spectrum for Mobile Broadband; Auction Set to Unleash Wave of Economic & Innovation Opportunities for U.S.*, FCC News Release (rel. Sept. 28, 2012).

television broadcasting, and its associated white spaces, will still be with us in a post-incentive auction world giving consumers approximately the same amount of white spaces that were available prior to the passage of the incentive auction legislation.

More importantly, reserving a large unlicensed slice of spectrum would go directly against the Commission's goal in the TV white spaces effort – to maximize efficiency and gain consumer benefits from an undefined and under-used resource. Put another way, a contiguous swath of spectrum *would* be clearly defined, exclusive and easily transferable – everything the white spaces are not. Given today's unprecedented budget deficits and the consumer benefits of exclusive-use licenses, I question whether the U.S. can afford *not* to auction any and all spectrum recovered in this band. Would reserving a large swath of unlicensed spectrum frustrate Congress's express directive that the Commission attempt to raise at least \$7 billion for a nationwide, interoperable public safety network?

Carefully balance flexible-use with interference protections. Similarly, I question whether the proposed five megahertz channel blocks discussed in the Incentive Auction Notice would result in a band plan that reserves too much spectrum for unlicensed use, contrary to Congress's explicit intent. Or, would auctioning spectrum in six megahertz channels, that is, on a broadcast channel-by-channel basis, be more intuitive and thus lead to a more efficient and fruitful auction? I am eager to learn from all interested stakeholders during the public comment process.

I also wonder whether the proposed six megahertz guard bands are in fact "no larger than technically reasonable to prevent harmful interference between licensed

services outside the guard bands.”⁸ Are six megahertz guard bands truly necessary to prevent harmful interference given the technological improvements that may come over the horizon after we adopt rules? As technology advances, smaller guard bands could end up being more practical not to mention more spectrally efficient. We certainly would not want to prevent such a beneficial byproduct from coming forth tomorrow as an unintended consequence of our actions today.

Likewise, I will work to ensure that, consistent with the statute’s explicit call for “flexible-use” spectrum allotments,⁹ the new licensing rules are intuitive, appropriately minimal and “future proof,” which will draw bidder interest and, ultimately, more easily lead innovators to develop and design devices and services that we cannot imagine today. We must keep in mind that technology and user preferences evolve quickly. For example, no one had heard of the iPhone, e-readers, wireless tablets, or SmartTV just six short years ago when I first joined the Commission. Yet these devices are part of everyday life today.

While we may collectively acknowledge the scientific tension between flexible-use licensing and the appropriate size of guard bands, all policymakers have an obligation to provide entrepreneurs the freedom to run with their imaginations and bring new experiments to the marketplace. I am hopeful that we will proceed with humility and invest the necessary time and energy to think carefully and thoughtfully before we act. As none of us can predict the next disruptive technology, or where its spectrum home will be, I caution against inadvertently preventing further innovation and stifling future uses of spectrum based on trends, including: labeling certain spectrum as “prime” (*i.e.*, that

⁸ broadband spectrum law § 6407(b).

⁹ *See e.g., id.* §§ 6401(b)(1)(B), 6402.

located below 1 GHz); classifying other bands as “junk;” or prejudging the “value” of spectrum bands that have yet to be auctioned. History shows us that today’s “junk” is often tomorrow’s “prime.”¹⁰

No encumbrances. Many of us recall the 700 MHz auction that concluded in early 2008, which raised a record amount of revenue, over \$19 billion. The auction also succeeded in reallocating this valuable slice of the airwaves to licensees who have since been rolling out new and exciting “fourth generation” wireless broadband services, such as “Long Term Evolution” (LTE). Nonetheless, two important objectives of the auction were not met. First, the Commission failed to entice a winning bidder to build a state-of-the-art nationwide, interoperable network for America’s public safety personnel. Second, even after satisfying the demands of potential new entrants by imposing an “open access” condition on a 22 megahertz swath known as the “C” Block, the Commission failed in its quest to attract a new national broadband provider. Now four years later, today’s discussion gives us an opportunity to recall and reanalyze the lessons learned.

With respect to the public safety partnership, the FCC’s order included a plan to spark a public/private partnership by allocating 10 megahertz of spectrum for public safety use, known as the “D Block.” The Commission created this framework after working closely with the public safety community, and I supported it. Hopes were high that this additional spectrum would provide an incentive for a private entity to construct a

¹⁰ Relinquished by the federal government and commonly known as a “junk band,” the FCC allocated the 2.4 GHz band for unlicensed use in 1995. Among other ubiquitous devices such as digital cordless telephones, utility metering devices, fire and security alarm systems, wireless bar code readers, wireless local area networks and baby monitors, entrepreneurs deployed “wireless fidelity” or “Wi-Fi” in the 2.4 GHz band. In 2011, more than 37% of all U.S. Internet traffic flows over unlicensed Wi-Fi at some point. See CISCO, VNI FORECAST HIGHLIGHTS, http://www.cisco.com/web/solutions/sp/vni/vni_forecast_highlights/index.html#~Country (last visited Dec. 11, 2012) (filter using United States and Network Connections).

nationwide, interoperable, broadband public safety network all of us have been discussing since at least the attacks of September 11, 2001. We did this to try to create an incentive for the private side of the public/private partnership to invest risk capital to build a nationwide public safety network suitable for 21st century challenges. In the aftermath of the auction, we learned that potential bidders were deterred by onerous build-out and service rules that would have required the eventual licensee to incur massive costs in an atmosphere of extreme uncertainty regarding how many, if any, public safety entities might actually sign up as paying customers.

Of course, Congress has given new life to the D Block and we are grateful for your leadership. Based on this experience, the lesson learned is that encumbrances on spectrum and prescriptive rules tend to scare off bidders.

With respect to the “open access” requirements for the “C” Block, I cast the only dissent because the evidence in the record told me that the market was already headed toward open access through natural evolution. I also did not think that the plan would achieve the advertised goal of attracting new broadband competition. Additionally, as I pointed out in my dissent, I was concerned that larger carriers would avoid the encumbered C Block and outbid smaller players in the smaller, less-regulated spectrum blocks. Sadly, all of my fears proved to be correct.

Here again, I am hopeful that the Commission will keep these lessons in mind as we develop new auction and licensing rules for spectrum located in the 600 MHz Band. The “open access” encumbrance was unnecessary and, ultimately, harmful. Wireless “openness” is prevalent today – consumers have a choice of no fewer than three operating

systems, plus unlicensed Wi-Fi. Yet, we must wonder whether that condition led to a lack of interoperability within the 700 MHz band.

We should all remember that we are at the beginning of what will surely be a lengthy and complicated process. All of the hard decisions lie ahead. I am eager to contribute to the Commission's ongoing effort and will greatly appreciate the thoughts and insights of the members of this subcommittee and all involved.

Liberating Federal Spectrum for Auction

Finally, the Executive Branch must do more to relinquish spectrum occupied by the federal government and send it to auction for exclusive use licenses. The federal government occupies a majority of the most useful spectrum. Without a doubt, much of it is used for important purposes such as national defense, air traffic control and law enforcement. But does anyone believe that all federal spectrum is being used efficiently? We don't have clear answers to these questions because the process can be opaque and the incentives encourage inefficiencies.

History teaches us that exclusive use licenses are the best vehicle to promote the most efficient development of spectrum. Although policies regarding spectrum *sharing*, the cornerstone of the Administration's federal spectrum policy, could offer a few benefits, they are anemic when compared with the strengths of exclusive use licenses allocated through auction. Accordingly, Congress, the Executive Branch and the FCC should all work together to implement policies that would give federal users of spectrum an incentive to relinquish it for auction. This scenario could be a win-win-win for the government, the economy and consumers alike. With progress in spectrum policy all too often measured in decades, however, we should implement constructive new ideas will

all deliberate speed. America's mobile broadband marketplace, and especially its consumers, cannot afford to wait.

Special Access

During both my career in the private sector and my six and a half years at the Commission, I have spent countless hours working on public policy concerning "special access" services and facilities. I have digested competing, and often conflicting arguments, hypotheses and scenarios. During this time, I have maintained that the only way to conduct a proper assessment of the current rules is to first conduct a comprehensive and granular data collection followed by a *bona fide* market analysis. Ideally, we should have before us a current and detailed building-by-building, cell-site-by-cell-site map of the variety of facilities and services available and their price. Furthermore, we should know what new facilities and services may have arrived in the market that may be substitutable for what was dubbed "special access" in the late 20th century. Although such a large data collection may seem daunting, the Department of Justice was able to gather such valuable information during its review of the SBC/AT&T and Verizon/MCI mergers in the last decade. If this information was necessary for transaction reviews then, it is surely needed for potential important rule changes now.

Unfortunately, none of the FCC's previous voluntary data collections yielded enough data to build an adequate evidentiary record.¹¹ The FCC admitted as much in a

¹¹ See *Parties Asked to Comment on Analytical Framework Necessary to Resolve Issues in the Special Access NPRM*, WC Docket No. 05-25, RM-10593, Public Notice, 24 FCC Red 13638 (2009); *Data Requested in Special Access NPRM*, WC Docket No. 05-25, RM-10593, Public Notice, 25 FCC Red 15146 (2010); see also *Clarification of Data Requested in Special Access NPRM*, WC Docket No. 05-25, RM-10593, Public Notice, 25 FCC Red 17693 (2010); *Competition Data Requested in Special Access NPRM*, WC Docket No. 05-25, RM-10593, Public Notice, 26 FCC Red 14000 (2011).

court filing last year.¹² Despite this incomplete record, in August, the Commission "temporarily" suspended – in other words, *changed* – its special access rules.¹³ Precisely because the Commission changed a substantive rule before building a sufficient evidentiary record to support such a pivot, I dissented from that order and continued my call for a comprehensive data collection.

The Commission is now in the process of finalizing and releasing a comprehensive data collection. Since the order has not yet been released to the public, I am prevented from providing details. Nevertheless, I am pleased that the order is mandatory and will be conducted largely on a nationwide basis.

This important exercise will require the cooperation of all the players in what I hypothesize to be a complex special access market. Accordingly, it is my hope that the Commission will work with all affected parties to ensure that the burdens of this data collection are as minimal as possible. I am also supportive of the Commission's efforts to protect confidential and sensitive data. Our work should help ensure that any additional rule changes are legally sustainable.

In the meantime, I thank Chairman Genachowski, and all of my colleagues, for their willingness to incorporate many of my numerous edits along the way.

Modernizing the Commission's Media Ownership Rules

I am hopeful that the Commission will conclude the quadrennial media ownership proceeding as soon as possible. As is required by Section 202(h) of the Communications

¹² Opposition of the Fed. Commc'ns Comm'n to Petition for Writ of Mandamus at 1, *In re COMPTTEL, et al.*, No. 11-1262 (D.C. Cir. filed Oct. 6, 2011).

¹³ *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593, Report and Order, 27 FCC Rcd 10557 (2012).

Act, the FCC must modernize its media ownership rules to reflect the current economic realities of the marketplace and eliminate any and all unnecessary mandates.¹⁴ Because of today's competitive media landscape, the Commission should resist proposals that would result in new and unnecessary regulation, such as restricting broadcasters from entering into some forms of contracts that could provide efficiencies ultimately benefiting consumers.

Evidence continues to mount that the 1975 newspaper-broadcast cross-ownership ban should be largely eliminated. Although the Commission proposed a relaxation of the ban on newspaper-television ownership for the largest markets and considered eliminating restrictions on newspaper-radio combinations, these proposals are anemic and do not reflect marketplace realities. Over the past decade, broadcast stations and daily newspapers have grappled with falling audience and circulation numbers, diminishing advertising revenues and resulting staff reductions,¹⁵ as online sources gain in

¹⁴ Section 202(h) of the Telecommunications Act of 1996 states that:

The Commission shall review its rules adopted pursuant to this section and all of its ownership rules quadrennially . . . and shall determine whether any of such rules are necessary in the public interest as the result of competition. The Commission shall repeal or modify any regulation it determines to be no longer in the public interest.

Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 111-12 § 202(h) (1996); Consolidated Appropriations Act, 2004, Pub. L. No. 108-199, § 629, 118 Stat. 3, 99-100 (2004) (amending Section 202(h) of the 1996 Act). I concurred in the December 2011 notice of proposed rulemaking, because the Commission appears to be prepared to accept a regulatory *status quo* while I think major changes are necessary and required by Section 202(h).

¹⁵ Although some sectors of the news industry have experienced a slight resurgence, newspapers continue to face decline with both advertising and circulation revenues continuing on a downward path. In 2011, network and local news viewership increased for the first time in years; however, local TV station advertising revenues still experienced a decline. See PEW RESEARCH CTR'S PROJECT FOR EXCELLENCE IN JOURNALISM, THE STATE OF THE NEWS MEDIA 2012, KEY FINDINGS, <http://stateofthemediamedia.org/2012/overview-4/key-findings/> (last visited Mar 14, 2012) ("THE STATE OF THE NEWS MEDIA 2012"); THE STATE OF THE NEWS MEDIA 2012, LOCAL TV, <http://stateofthemediamedia.org/2012/overview-4/key-findings/> (explaining that some of this loss is due to a reduction of political and automotive advertising from 2010 and that these revenues will rebound during a busy election cycle).

popularity.¹⁶ This trend has led many prominent daily newspapers to declare bankruptcy, while others have faced more dire circumstances. In fact, over the past five years, an average of 15 daily papers, or about one percent of the industry, have shuttered their doors *each year*.¹⁷

Regardless of any rule changes we may implement, traditional media owners are now choosing to invest in new, *unregulated* digital outlets rather than acquire more heavily-regulated traditional media assets. Many dailies are experimenting with new business models, such as reducing the number days that the newspaper is printed,¹⁸ moving to online-only formats¹⁹ or partnering with online distributors.²⁰ These rules are truly remnants of a bygone era. Once again, the marketplace has moved quickly past obsolete communications laws.

¹⁶ In fact, the White House's Council of Economic Advisors has found that newspapers are one of America's fastest-shrinking industries losing approximately 28.4 percent of its workforce between 2007 and 2011. Online publishing job growth, on the other hand, increased by more than 20 percent in the same time period. *See, e.g.*, ECONOMIC REPORT OF THE PRESIDENT TOGETHER WITH THE ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISORS 188 (February 2012) (citing a LinkedIn study), *available at* http://www.whitehouse.gov/sites/default/files/docs/erp_2012_complete.pdf; Matt Rosoff, *Newspapers Are The Fastest Shrinking Industry In The U.S.*, BUSINESS INSIDER (Mar. 8, 2012), http://articles.businessinsider.com/2012-03-08/tech/31135175_1_linkedin-job-growth-newspapers#ixzz1us0z9Urf.

¹⁷ THE STATE OF THE NEWS MEDIA 2012, MAJOR TRENDS, <http://stateofthedia.org/2012/overview-4/major-trends/>.

¹⁸ For instance, the 175-year-old daily New Orleans *Times-Picayune* is now printed only three times per week. *See, e.g.*, Maya Rodriguez, *Former and Current Times-Picayune Staffers Bid Farewell to Daily Paper*, WWLTV.COM, <http://www.wwltv.com/news/local/Former-and-Current-Times-Picayune-staffers-bid-farewell-to-daily-newspaper-171955991.html> (Sept. 30, 2012).

¹⁹ Currently, 172 newspapers have launched online subscription plans or placed content behind a paywall. This represents a 15 percent increase since January alone and more papers are expected to follow suit in the coming months. Papers with Digital Subscriber Plans/Paywalls, NEWS & TECH (May 10, 2012), http://www.newsandtech.com/stats/article_22ac1efa-2466-11e1-9c29-0019bb2963f4.html (last visited May 14, 2012); THE STATE OF THE NEWS MEDIA 2012, NEWSPAPERS, <http://stateofthedia.org/2012/newspapers-building-digital-revenues-proves-painfully-slow/> (stating that roughly 150 newspapers have instituted a "metered model").

²⁰ THE STATE OF THE NEWS MEDIA 2012, OVERVIEW, <http://stateofthedia.org/2012/overview-4/> (stating that Reuters is producing original news shows for YouTube; Facebook has entered into partnerships with *The Washington Post*, *The Wall Street Journal* and *The Guardian*; and Yahoo! paired with ABC News to be its sole provider of news video).

Further, evidence before the Commission demonstrates that in-market combinations do not negatively affect viewpoint diversity²¹ and may actually increase the quantity and quality of local news and information provided by commonly-owned outlets to benefit the American consumer.²² More than likely, the FCC ban on broadcast-newspaper cross-ownership has hastened a decline in newsgathering across the country. We must ensure that the heavy hand of government regulation does not continue to distort the marketplace or limit the options of broadcasters and the newspaper community to attract investment, increase efficiencies, and share the costs of news production.

Second, the Commission must resist calls for limiting the use of joint sales, shared service, and local news service agreements. These agreements provide efficiencies lowering the operation and production costs for broadcasters enabling them to deploy economized resources to the benefit of consumers. By creating new overly-regulatory attribution rules targeting these agreements, the FCC may cause the unintended consequences of raising expenses and reducing the amount of local programming provided by a broadcaster. Further, the Commission should not regulate without a full understanding of how these agreements are used in the marketplace and whether there are

²¹ See, e.g., Newspaper Association of America, Comments, MB Docket No. 09-182, at 18-20 (Mar. 5, 2012) (“NAA Comments”); Adam D. Renhoff and Kenneth C. Wilbur, Local Media Ownership and Viewpoint Diversity in Local Television News, at 3, 15 (June 12, 2011), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-308596A1.pdf (“[T]hese findings show that under the proposed definition of viewpoint diversity, variation in television station co-ownership and cross-ownership is generally found to [have] negligible effects on viewpoint diversity. However, it is important to note that the data are limited to the degree of media co-ownership and cross-ownership currently allowed under FCC rules.”).

²² See, e.g., 2010 Quadrennial Regulatory Review – Review of the Commission’s Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MB Docket No. 09-182, Notice of Proposed Rulemaking, 26 FCC Rcd 17489, 17519 ¶ 85, n.185 (2011); NAA Comments at 15-18; Diversity and Competition Supporters, Initial Comments, MB Docket No. 09-182, at 40-43 (Mar. 5, 2012); Adam D. Renhoff and Kenneth C. Wilbur, Local Media Ownership and Media Quality, at 3, 15 (June 12, 2011), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-308504A1.pdf; Jack Erb, Local Information Programming and the Structure of Television Markets, at 4, 27-28, 40-41 (May 20, 2011), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-308508A1.pdf.

systemic abuses that have limited competition and viewpoint diversity in broadcast markets. In the face of an intensely competitive new media marketplace, placing new rules on these agreements could violate the spirit and letter of Section 202(h).

Finally, the Commission needs to move forward soon on reviewing our policies and rules regarding diversity in broadcasting built upon the firm foundation of new diversity studies. As part of the FCC's media ownership review, the Commission requested comment on a myriad of proposals to enhance media diversity. For those proposals aimed at expanding opportunities for minorities and women, however, we have to be mindful that any action the Commission would undertake regarding race- and/or gender-based regulations must satisfy the rigorous demands of the Constitution's Equal Protection Clause, including the strict scrutiny standard under the Supreme Court's *Adarand*²³ line of cases. Although the Commission has made improvements in its collection of minority ownership data and taken the initial steps to acquire information regarding the information needs of communities, it should conclude badly needed studies to assist us in supporting any new race- and/or gender-based regulations to determine the best approaches to increase media diversity, in accordance with the Constitution. As a matter of good government, the Commission should act quickly. We are long overdue for such action.

Broadcast Indecency

In June, the Supreme Court held that the Commission failed to provide fair notice regarding the application of its broadcast indecency standards to cases involving fleeting

²³ *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995).

expletives and momentary nudity.²⁴ When the Court ruled, the Commission had approximately 1.5 million indecency complaints pending involving about 9,700 broadcasts. I am pleased that the dedicated staff of the Enforcement Bureau has begun to tackle this monumental undertaking and has already reduced the backlog to approximately a half million complaints involving about 5500 broadcasts. We owe it to American families and the broadcast licensees involved to carry out our statutory duties by resolving the remaining complaints with all deliberate speed. Going forward, the Commission must ensure that its indecency standards are clear, that broadcasters have the requisite notice and that Americans, especially parents such as myself, are secure in their knowledge of what content is allowed to be broadcast.

Modernizing FCC Procedures and Regulations

Reform of our communications laws and FCC procedure have been an important topic of debate for many years. Many have suggested that the Commission streamline its procedures and ensure that unnecessary, outdated or harmful FCC rules are repealed. Chairman Genachowski has taken notable steps in reforming various procedures at the agency, but more can be done.

I commend your Committee for its work on FCC reform legislation which includes many constructive ideas. For example, requiring the Commission to include in its rulemaking process cost benefit analyses to support any future rules would result in a

²⁴ *FCC v. Fox Television Stations, Inc.*, No. 10-1293, slip op. (U.S. June 21, 2012). The Court also denied certiorari in *FCC v. CBS Corporation*, No. 11-1240, slip op. (U.S. June 29, 2012), bringing an end to the litigation over the momentary exposure of Janet Jackson's breast. In vacating the Commission's order, the Third Circuit held that the Commission's decision was arbitrary and capricious, because the agency departed from its policy of excusing the broadcast of fleeting moments of indecency. *CBS Corp. v. FCC*, 663 F.3d 122 (3rd Cir. 2011).

smarter rulemaking process. Additionally, updating the Government in Sunshine Act²⁵ in a way that improves the FCC's efficiency and ability to negotiate while preserving its transparency is something that has also gained wide support. Also, requiring that future regulatory proceedings start with a thorough market analysis that examines the state of competition would be a positive change. In the absence of market failure, adopting unnecessary regulations in the name of serving the public interest can have the perverse effect of harming consumers by inhibiting the constructive risk-taking that produces investment, innovation, competition, lower prices and jobs. I look forward to working with all of you in pursuit of these worthy goals.

Regarding updating and repealing outdated regulations, the Commission should focus on the market's transition from telecom networks that were built for analog voice services to state-of-the-art data networks that convey an infinite slurry of ones and zeros (the "IP transition"). Comments filed at the FCC indicate that within at least the 22 states where AT&T operates, 70 percent of the residential customers with access to plain old telephone service over aging copper networks are projected to have chosen a competitive alternative by the end of 2012.²⁶ As in so many cases, while our statute and rules stay firmly rooted in the 20th century, the market is whizzing past us. We are overdue for a fresh look at how our laws may be hindering rather than helping such market evolutions.

Complex questions abound and they will need to be answered prior to the completion of this transition. How do we encourage continued investment in the networks supporting an IP transition? What can the Commission do to speed the

²⁵ 5 U.S.C. § 552b.

²⁶ See Comments of AT&T, *In the Matter of Connect America Fund*, WC Docket No. 10-90 (February 24, 2012).

transition along? What happens with legacy infrastructure? How can we ensure that the Commission remains faithful to the Act and Commission precedent, both of which treat broadband Internet access as an information service? These questions, and many more, require careful and focused consideration by the Commission and all stakeholders.

Protecting Internet Freedom

The Commission could start with a much-needed modernization by closing the Title II docket with no action taken.²⁷ Closing this proceeding would send a strong signal to investors and regulators around the world that the United States rejects the notion of subjecting nimble Internet innovations to late 19th century industrial policy that is the foundation of the Communications Act of 1934. We can do better. We can adopt new policies that provide entrepreneurs the freedom to invest and innovate without fear of suffocation from obsolete laws written for a monopoly analog voice world. If approached intelligently, consumers would be the ultimate beneficiaries of a powerful explosion of entrepreneurial brilliance.

Furthermore, should the FCC's 2010 regulation of Internet network management be overturned by the court, in lieu of resorting to the destructive option of classifying, for the first time, broadband Internet access services as common carriage under Title II, the FCC should revive a concept I first proposed nearly five years ago – that is to use the tried and true multi-stakeholder model for resolution of allegations of anti-competitive conduct by Internet service providers. A multi-stakeholder forum, where governments can have a seat at the table, supported by the backstop of existing antitrust and consumer

²⁷ *Framework for Broadband Internet Service*, GN Docket No. 10-127, Notice of Inquiry, 25 FCC Rcd 7866 (2010).

protection laws, could spotlight market failures and cure them more quickly – and more effectively – than antiquated telephone laws.

If we are going to preach the virtues of the multi-stakeholder model at the pending World Conference on International Telecommunications (WCIT) in Dubai, we should practice what we preach. Not only would the U.S. then harmonize its foreign policy with its domestic policy, but such a course correction would yield better results for consumers as well.

And while I am on the important topic of the WCIT, Chairman Genachowski and I were in Dubai last week and we can report that our delegation is working hard to prevent an expansion of the ITU's jurisdiction into any aspect of the Internet. The WCIT has not yet concluded, but I welcome any questions on this topic. I have attached a recent op-ed on the WCIT for your reference. See attachment A.

If Internet freedom survives the Dubai talks, however, we should not let our guard down. The next conference is in May and it will lay the foundation for a more fundamental and far-reaching negotiation on these and other matters in 2014 in Korea. Accordingly, I strongly urge all of us to maintain our vigilance because freedom's foes are patient and persistent incrementalists.

Conclusion

Thank you for having us before you today, and I look forward to your questions.

ATTACHMENT A

POLITICO

Staring down Internet freedom's foes

By: Robert M. McDowell
November 30, 2012

On Monday, representatives from 193 countries are convening in Dubai in the United Arab Emirates, to renegotiate a treaty that could give an arm of the United Nations new powers over the Internet. Despite increased scrutiny of these talks, many countries seem more determined than ever to turn the supremely bad idea of establishing international regulation of the Net into reality. American diplomats will have to navigate a torrent of formal proposals that would curtail Internet freedom, limit consumers' choices and increase costs for all Net users. How the negotiations end will shape the future of the Net, as well as the prospects for global freedom and prosperity.

The purpose of the Dubai talks, known as the World Conference on International Telecommunications, is to re-examine a 1988 treaty that loosened rules covering telephone and computer communications. The regulatory framework adopted in 1988 took a "hands off" approach to emerging technologies, such as what later became the Internet. As a result, the Internet is now the greatest deregulatory success story of all time. For instance, in 1995, shortly after it was privatized, only 16 million people used the Net. That number has spiked to more than 2.5 billion today with upward of a half million people becoming first-time Internet users each day. If, however, some key regimes have their way, such soaring positive trend lines will flatten.

For a decade, countries such as Russia and China, plus dozens of others from Arab and African regions, have pushed with increasing intensity for the International Telecommunication Union, a treaty-based organization operating under the U.N., to expand its authority over the Internet. In fact, Russian Prime Minister Vladimir Putin candidly revealed last year in a meeting with the ITU secretary general that he has a goal to establish "international control over the Internet" through new ITU rules. Net users everywhere should take Putin and his allies quite seriously.

Months ago, chatter intensified that some countries were going to propose expanding the ITU's rules to cover many corners of the complex Internet ecosystem. Yet many of these same countries, and ITU leaders, continue to issue vehement denials of an ITU Internet power grab. In recent days, however, the truth has been revealed in irrefutable, black and white diplomatic proposals to regulate key aspects of the Net. Stranger than fiction, here are just a few of the most recent submissions:

- Changing the treaty's definitions of terms so the ITU and its member states can regulate the Internet economy like an ancient telephone monopoly;
- Eliminating anonymity for Internet consumers through new international "registration records" (in the name of "privacy") allowing government monitoring of consumers' Net activity;

- Replacing existing nonprofit private-sector groups that keep the Net working with global government agencies that would regulate vital Web naming, numbering, addressing and identification functions that allow every Web-connected device (such as mobile phones, tablets and personal computers) to work; and
- Creating global rules so foreign phone companies or governments could charge fees to consumers' favorite websites (costs ultimately passed on to consumers), perhaps on a "per click" basis.

Increasingly, pro-regulation forces are shrouding their proposals in seemingly innocuous sales pitches, such as the need for better cybersecurity, more stable markets or ubiquitous Internet access. ITU leadership and some member states have even brazenly argued that the 1988 rules already give the ITU jurisdiction over the Net and give legitimacy to censorship. If these aggressive regulatory expansionists are conspiring today to trash long-standing international consensus to insulate the Net from regulation by conjuring limitless ITU authority where plainly none exists in current treaty text, think of how they would contort a new pact that gave them even the tiniest hook into the Internet's affairs.

If new regulatory ideas gain steam, the ensuing uncertainty is likely to inhibit Net entrepreneurs' constructive risk taking, investment and innovation because engineering and business decisions would become politicized within intergovernmental bodies. Consequently, consumer costs would rise and fewer Net-powered products and services would emerge. Furthermore, the Net could become divided between countries opting for the ITU regulatory structure versus those that choose to stick with the current hands-off approach. In addition to creating an engineering nightmare for the Net, a borderless and global network of networks, the result would be a lower-quality and more expensive Internet for everybody. Each Internet consumer in the world would suffer the effects of the ensuing confusion.

Ironically, some of the most energetic proponents of expanded ITU powers hail from the developing world, which would be hurt the most by increased costs resulting from more Net regulation. Several independent studies, including a World Bank report, show that an open and freedom-enhancing Web grows developing world economies faster than those of industrialized nations, all while giving individuals an information gateway to escape poverty and oppression. Preserving an unfettered Net is the best way to continue this positive trend. Yet whether hoping new rules would steer cash from popular websites into their treasuries or whether a new paradigm could provide insidious ways to track and crack down on political rivals, authoritarian regimes resent an unregulated Net.

Some rays of hope have crested the horizon, however. Our diplomats' efforts are fueled by a rare unwavering consensus emanating from Washington. Recently, both houses of a divided Congress unanimously passed bipartisan resolutions championing Internet freedom and directing our diplomats to oppose even the smallest expansion of ITU authority. Our negotiators should avoid at all costs agreeing to seemingly minor, technical or harmless treaty "tweaks" that most likely would be used later to undermine Net

freedom.

Slightly encouraging are a few recent statements from ITU leadership asserting that changes to the rules will emerge only if they are “agreed upon by all participants through consensus,” and “[the WCIT] cannot empower governments to exercise greater regulation of the Internet.” Curiously, however, ITU leaders take a giant step backward when they also claim, “there have not been any proposals calling for a change from the bottom-up multi-stakeholder model of Internet governance to an ITU-controlled model.” The explicit language of several proposals on file at the ITU, as well as in official ITU documents, contradict this misleading assertion — leaving observers wringing their hands over leadership’s ultimate designs.

A successful WCIT would produce a treaty that not only eschews expanded regulation of any aspect of the Internet but also commits to free markets, freedom of speech, competition and deregulation. The people of every nation, but especially tomorrow’s first-time Net users in the developing world, deserve no less.

After the December WCIT, new talks commence in May. Defenders of Internet freedom should never let their guard down, for freedom’s foes are patient and persistent incrementalists. To be continued ...

Robert M. McDowell is a commissioner of the Federal Communications Commission and a member of the U.S. delegation to the WCIT.

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Mr. WALDEN. Now we will go to Honorable Commissioner Clyburn.

Thank you for being here today. We appreciate all you do at the Commission. Look forward to your testimony.

STATEMENT OF MIGNON L. CLYBURN

Ms. CLYBURN. Thank you, Chairman Walden, Ranking Member Eshoo, and distinguished representatives. Good morning. Thank you for the opportunity to discuss the FCC's efforts in implementing the historic legislation you passed earlier this year.

I respectfully request that my full statement be admitted in the record of this proceeding.

Mr. WALDEN. Without objection.

Ms. CLYBURN. Over the past few years, consumer demand for wireless services has increased by startling rates. These realities require that the Nation put in place targeted yet nimble legislative and regulatory policies in order to keep pace.

It is sometimes hard to believe this, but when I first started at the Commission in the summer of 2009, tablet devices had not even been introduced to the U.S. consumer. And now, according to the most recent data for this year, 22 percent of American adults own such a device.

When you consider these statistics, together with the fact that tablets consume 121 times more spectrum than ordinary cellphones, then you realize that two elements of spectrum management have become critical policy priorities: First, we must find quicker ways to repurpose spectrum for commercial mobile services, and, second, we must promote more efficient uses of spectrum.

Congress understood this when it passed the JOBS Act of 2012. The plain language of the statute makes clear that through a voluntary incentive auction we have the authority to find a quicker tool to reallocate spectrum.

Congress directed that the incentive auction of broadcast television spectrum consist of three major features: a reverse auction, a repacking of the broadcast TV band, and a forward auction. For those broadcast TV licensees who want to continue to use their spectrum to provide services, the Commission must make all reasonable efforts to preserve their coverage area and populations served.

I am pleased to report that the Commission has been moving quickly to implement these statutory directives. Just 2 months after enactment, a unanimous three-member commission released an order that put forth some basic ground rules for the channel-sharing aspects of the incentive auctions.

This past September, the Commission at full complement unanimously adopted a notice of proposed rulemaking on the full range of procedural and technical rules that it could adopt. That notice proposes a band plan with 6 megahertz guard bands that meet the statutory requirement that they are no larger than technically reasonable to prevent harmful interference between licensed services. It seeks comment on the proposal.

I believe it was important for the notice to propose a band plan with an appropriate balance of licensed and unlicensed spectrum.

Section 6407 of the act correctly authorizes the Commission to permit the use of such guard bands for unlicensed use.

Unlicensed spectrum has played a critical role in helping the wireless industry use its valuable resource more efficiently. Commercial wireless carriers are increasingly using unlicensed Wi-Fi services to offload their smartphone traffic, resulting in wireless carriers not having to construct an estimated 130,000 cell sites at a savings of more than \$25 billion each year.

The unlicensed spectrum proposals in the notice would also encourage development of wireless services that can make effective use of unused spectrum or white spaces in the broadcast TV band.

It is also clear that continued innovation in the unlicensed service industry is important to our national economy. As Representatives Eshoo and Issa pointed out, it is estimated that unlicensed spectrum generates between \$16 billion and \$37 billion each year for the U.S. economy.

The incentive auction notice also appropriately seeks comment on ways the Commission could design the incentive auction to accomplish all of the funding goals of the act, including funds for a national first responder network.

Thank you all for allowing me to make these opening remarks. I look forward to any questions you may have.

Mr. WALDEN. Commissioner Clyburn, thank you for your testimony.

[The prepared statement of Ms. Clyburn follows:]

Statement of FCC Commissioner Mignon L. Clyburn
Committee on Energy and Commerce
Subcommittee on Communications and Technology
United States House of Representatives
Wednesday, December 12, 2012

Chairman Walden, Ranking Member Waxman, and distinguished Representatives, good morning. Thank you for the opportunity to discuss spectrum policy and the efforts of the Federal Communications Commission to implement the historic legislation you passed in February of this year.

Over the past few years, consumer demand for wireless services has been increasing at a startling pace and the Nation needs legislation and regulation that can promote deployment of services. It's hard to believe that when I first started at the Commission in the summer of 2009, tablet devices had not yet been introduced to the U. S. consumer. And now, according to the most recent data for this year, 22 percent of American adults now own such a device. That figure is up from 11 percent in 2011. When you consider these statistics, with the fact that tablets consume 121 times more spectrum than ordinary cellphones, you immediately realize that our Nation's demand for wireless spectrum is on such an exponential trajectory that two elements of spectrum management have become critical policy priorities. First, we must find quicker ways to repurpose spectrum for commercial mobile services. Second, we must promote more efficient uses of spectrum.

Congress understood this when it passed, on a bipartisan basis, the Middle Class Tax Relief and Job Creation Act of 2012. The plain language of the spectrum management and public safety communications sections of that Act make clear that, through a voluntary incentive auction, Congress was giving the Commission authority to find a quicker tool to reallocate spectrum from broadcast TV services to wireless services. Congress directed that the incentive auction of broadcast television spectrum have three major pieces: a "reverse auction" in which broadcast television licensees submit bids to voluntarily relinquish spectrum usage rights in exchange for payments; a reorganization, or "repacking" of the broadcast television bands in order to free up a portion of the ultra-high frequency (UHF) band for other uses; and a "forward auction" of initial licenses for flexible use of the newly available spectrum. For those broadcast TV licensees who want to continue to use their spectrum to provide those services, the Act mandates that the Commission make all reasonable efforts to preserve, as of the date of the enactment of this Act, the coverage area and population served of each broadcast television licensee.

The Act also had clear directives for the proceeds from the forward auction. The Act requires that the incentive auction result in proceeds that are greater than the sum of the total amount of compensation the Commission must pay successful bidders in the reverse auction, the cost of administering the broadcast television spectrum incentive auction, and the estimated amount of the relocation cost reimbursements. The first \$1.75 billion of the proceeds would go into a fund to repay broadcast TV licensees reasonably incurred costs for being required to change frequencies as a result of the repack process. The rest of the proceeds would be deposited in the Public Safety Trust Fund to fund a national first responder network, state and local public safety grants, public safety research, and national deficit reduction.

Congress also gave the Commission authority to promote the use of unlicensed spectrum. The Act allows the Commission to implement guard bands that are technically reasonable to prevent harmful interference between licensed services outside the guard bands. The statute also permits the use of such guard bands for unlicensed use.

I am pleased to report that the Commission has been moving carefully but expeditiously to comply with both the spirit and plain language of all the mandates in the Act. I also particularly appreciate that the Commission staff members has been proactive in seeking the active engagement of the public and all stakeholders. They began conducting webinars and workshops even before Congress passed the Spectrum Act and it plans to hold several more such events throughout this proceeding. In addition, FCC staff members have been trying to implement these statutory directives with the same bipartisan approach that resulted in Congress passing the Act. Just two months after its enactment, a unanimous, three-member Commission released an Order that set some basic ground rules for preparing for incentive auctions. For example, it identified the specific broadcast TV licensees who may participate in channel sharing and clarifies that channel sharing will be voluntary and flexible.

This past September, the Commission, this time at full complement, unanimously adopted a Notice of Proposed Rulemaking that sought comment on the full range of procedural and technical rules that the Commission would have to adopt to conduct the voluntary incentive auctions. That Notice proposes a band plan, with six megahertz guard bands, that meet specific requirements that they be no larger than technically reasonable to prevent harmful interference between licensed services. It seeks comment on the plan and asks the public to provide alternative band plans.

I believe it was important for the NPRM to propose a band plan with an appropriate balance of unlicensed and licensed spectrum. Unlicensed spectrum plays a critical role in advancing more efficient use of spectrum, and commercial wireless carriers are increasingly using unlicensed Wi-Fi services and small cell architecture to offload their smartphone traffic. In November of last year, the Consumer Federation of America found that unlicensed Wi-Fi offload resulted in wireless carriers not having to construct 130,000 cell sites. This resulted in annual cost savings of more than 25 billion dollars. The unlicensed spectrum proposals in the NPRM would also encourage development of wireless services that can make effective use of unused spectrum, or White Spaces, in broadcast TV bands. In addition, promoting continued innovation in the unlicensed service industry is important to our National economy. As Representatives Anna Eshoo and Darryl Issa pointed out in a letter they presented to ensure the Act contained statutory provisions for unlicensed spectrum use, it is estimated that unlicensed spectrum generates between 16 and 37 billion dollars each year for the U.S. economy.

The Incentive Auction Notice also appropriately seeks comment on ways the Commission could design the incentive auction to accomplish all the funding goals of the Act including funds for a national first responder network. I believe the public safety goals of the Act are very important. When Congress created the FCC in 1934, it made one of the Commission's foundational obligations "the promotion of safety of life and property through the use of wire and radio communications." The devastation and service outages caused by Derecho and Super Storm Sandy show that obligation remains as vital today as it did almost eighty years ago. We may not be able to prevent natural disasters, but we can and must improve our Nation's ability to respond to these events. Doing our best to make First Net successful would go a long way toward enhancing our responses to these crises.

Thank you for allowing me to make these opening remarks. I look forward to your questions.

Mr. WALDEN. And now we will move to Commissioner Rosenworcel.

Thank you for being here today. We look forward to your comments, as well.

STATEMENT OF JESSICA ROSENWORCEL

Ms. ROSENWORCEL. Good morning, Chairman Walden, Ranking Member Eshoo, and members of the subcommittee. It is an honor to appear before you with my colleagues to discuss our progress in implementing the incentive auction provisions of the Middle Class Tax Relief and Job Creation Act.

The Commission embarked this past September on the complex but critical task of conducting wireless incentive auctions. We must get them right because if we get them right, we will facilitate the voluntary return of spectrum from commercial licensees and promote its efficient reuse. If we get them right, we will ease congestion on our airwaves and expedite the development of new wireless services and applications. And if we get them right, we will drive digital-age innovation, spur job creation, and grow the wireless economy.

But before we get there, it is useful to consider what has come before. For nearly 2 decades, the Commission's path-breaking spectrum auctions have led the world. The agency has held more than 80 auctions, it has issued more than 36,000 licenses, and it has raised more than \$50 billion for the United States Treasury. In short, the Commission's auctions have been a model for governments and commercial wireless providers across the globe.

We are now again poised to be the world's pioneer with incentive auctions. For my part, I believe that there are four principles that should guide us: simplicity, fairness, balance, and public safety.

Simplicity is key. Incentive auctions are undeniably complicated, but at every structural juncture, a bias toward simplicity for participants is crucial. Simplicity will allow the market to work and yield the most favorable participation.

Fairness is essential. Fairness demands that we consider how to accomplish repacking by minimizing unnecessary broadcaster disruption and maximizing the ability of the public to continue to receive free over-the-air television. At the same time, we ask that broadcasters make a fair assessment of the opportunities this auction provides. By offering incentives to share channels and incentives to relocate from the UHF to VHF band, this auction can mean new resources for broadcasters to develop new programming and deploy new services.

Balance is necessary. None of the three legs of the incentive auction—the reverse action, the repacking, or the forward auction—can stand on its own. For instance, the interference rules we consider will not only impact broadcast services but also how much spectrum will be available for auction, which in turn will impact the revenues raised. We must also pay attention to the balance between licensed and unlicensed spectrum. The former provides reliability and interference protection; the latter provides low barriers to entry and promotes the efficient use of limited resources. Good spectrum policy requires both.

Finally, public safety is fundamental. Congress designated auction revenues to support the first nationwide interoperable wireless broadband public safety network. The recent storms in the Northeast have provided a stark reminder of the importance of communications in a disaster. The success of these auctions requires delivering on our promise to America's first responders.

Even with incentive auctions on course, the demand for our airwaves will continue to grow. To meet this demand, efficiency is critical. At the FCC, efficiency means getting all of our auctions done on a clear timeline. For industry, efficiency means squeezing more out of the spectrum already allocated for commercial use. Now is the time to invest in technologies—geographic, temporal, and cognitive—that multiply the capacity of our airwaves.

Finally, for the Federal Government, efficiency means finding new approaches that facilitate repurposing of spectrum better than our old three-step process of clearing, relocating, and auctioning. To this end, I believe that it is time to develop a series of incentives to serve as the catalyst for freeing more Federal spectrum for commercial use. What if we were to financially reward Federal authorities for efficient use of their spectrum? If we want to convert more airwaves to commercial use, I believe it is time to work with our government partners so they can realize value from using spectrum efficiently instead of only seeing loss from its reallocation.

It is an exciting time in communications. Incentive auctions present real challenges, but their smart execution can yield great opportunities.

Thank you for your time. I would be happy to answer any questions you might have.

Mr. WALDEN. Thank you, Commissioner. We appreciate your testimony.

[The prepared statement of Ms. Rosenworcel follows:]

**STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL
FEDERAL COMMUNICATIONS COMMISSION
BEFORE THE
SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES
“KEEPING THE NEW BROADBAND SPECTRUM LAW ON TRACK”
DECEMBER 12, 2012**

Good morning, Chairman Walden, Ranking Member Eshoo, and members of the Subcommittee. It is an honor to appear with my colleagues before you today to discuss our progress implementing the incentive auction provisions of the Middle Class Tax Relief and Job Creation Act of 2012.

The Commission embarked this past September on the complex but critical task of conducting wireless incentive auctions. As you undoubtedly know, incentive auctions are a new tool that Congress provided the FCC to address the near-term demands on our nation’s airwaves. We must get them right. Because if we get them right, we will facilitate the *voluntary* return of spectrum from commercial licensees and promote its efficient reuse. If we get them right, we will ease congestion on our airwaves and expedite development of new wireless services and applications. And if we get them right, we will drive digital age innovation, spur job creation, and grow the wireless economy.

But before we get there, it is useful to consider what has come before. For nearly two decades, the Commission’s path-breaking spectrum auctions have led the world. The agency has held more than 80 auctions; it has issued more than 36,000 licenses; and it has raised more than \$50 billion for the United States Treasury. The Commission’s simultaneous multiple round

ascending auctions have been a model for governments and commercial wireless providers across the globe.

We are now again poised to be the world's pioneer with incentive auctions. But big choices and hard work lie ahead. We must make sure our rules encourage a competitive marketplace, with opportunities for incumbents as well as new entrants, while keeping an eye on the larger context within which our proceedings take place. We will need input from the best minds in the broadcasting, wireless, technology, and public interest communities.

For my part, I believe that there are four principles that should guide us as we collect input and develop auction rules: simplicity, fairness, balance, and public safety.

Simplicity is key. Incentive auctions are undeniably complicated. But at every structural juncture, a bias toward simplicity for participants is crucial. A broadcaster should be able to quickly and transparently evaluate the opportunities auctions provide. Simplicity will allow the market to work and yield the most favorable participation.

Fairness is essential. This is especially true with regard to the treatment of broadcasters that do not participate in the auction. Fairness demands that we consider how to accomplish repacking by minimizing unnecessary disruption and maximizing the ability of the public to continue to receive free, over-the-air television. At the same time, we ask that broadcasters make a fair assessment of the opportunities that this auction provides. By offering incentives to share

channels and incentives to relocate from the UHF to the VHF band, this auction can mean new resources for broadcasters to develop new programming and deploy new services.

Balance is necessary. None of the three legs of the incentive auction—the reverse auction, the repacking, or the forward auction can stand on its own. For instance, the interference rules we consider will not only impact broadcast services, but also how much spectrum will be available for auction, which in turn will impact the revenues raised. Choices in one area affect others. This also requires attention to the balance between licensed and unlicensed use of spectrum across all frequency bands. The former provides reliability and interference protection; the latter provides low barriers to entry and promotes the efficient use of limited resources. Good spectrum policy requires both.

Finally, public safety is fundamental. The Commission must remember that Congress designated auction revenues to support the first nationwide, interoperable wireless broadband public safety network. The recent storms in the Northeast have provided a stark reminder of the importance of communications in a disaster. We must not forget that the success of these auctions requires delivering on our promise to America's first responders.

Even with incentive auctions on course, demand for our airwaves will continue to grow at a breathtaking pace. To keep up, more must be done. To meet this demand, efficiency is critical: efficiency at the FCC, efficiency from industry, and efficiency across the government.

At the Commission, efficiency means getting all our auctions done quickly and on a clear timeline. It also means exploring innovative policies that encourage the creative use of spectrum. We will be doing that just this afternoon when we consider a proposal to use the 3.5 GHz band for small cells.

For industry, efficiency means squeezing more out of the spectrum already allocated for commercial use. Now is the time to invest in technologies—geographic, temporal, and cognitive—that multiply the capacity of our airwaves. Additional spectrum is not and should not be the only solution.

Finally, for the federal government, efficiency means finding new approaches that facilitate repurposing of spectrum better than our old three-step process of clearing, relocating, and auctioning. This Committee's bipartisan Federal Spectrum Working Group has been a leader in this area. Your efforts have already started paying dividends by helping us all better understand how the government uses its spectrum.

As a next step, I believe it is time to develop a series of incentives to serve as the catalyst for freeing more federal spectrum for commercial use. What if we were to financially reward federal authorities for efficient use of their spectrum? If we want to convert more airwaves to commercial use, I believe it is time to work with our government partners so they can realize value from using spectrum efficiently—instead of only seeing loss from its reallocation.

It is an exciting time in communications. Incentive auctions present real challenges, but their smart execution can also yield great opportunities. I look forward to working with you and would be happy to answer any questions you might have.

Mr. WALDEN. We will go now to the final Commissioner, Commissioner Pai.

Thank you for being with us today. Look forward to your testimony, sir.

STATEMENT OF AJIT PAI

Mr. PAI. Thank you. Chairman Walden, Ranking Member Eshoo, members of the subcommittee, it is a privilege to appear before you today.

The Spectrum Act originated in the efforts of this subcommittee and was the result of bipartisan leadership, hard work, and compromise by you and many other dedicated Members of Congress.

Given the pressing need to make more spectrum available for mobile broadband, the FCC must act promptly to implement the act. Accordingly, this past summer, I called for the FCC to commence the incentive auction rulemaking process in the fall. Chairman Genachowski launched a timely proceeding in September, and I thank him for that.

I thank him, as well, for his recent announcement of the formation of a Technology Transitions Policy Task Force, which will address crucial issues that we will encounter as we undergo the IP transition.

As the Commission moves forward in the incentive auction rulemaking process, I believe that four principles should animate our work:

First, we must be faithful to the statute. It is our job to implement this legislation, not to rewrite it to conform to our own policy preferences.

Second, we must be fair to all stakeholders. This is especially important because the incentive auction will fail unless both broadcasters and wireless carriers choose to participate.

Third, we must keep our rules as simple as possible. The auction will be complicated enough as it is.

Fourth and finally, we need to complete this proceeding within a reasonable time frame. I believe that we should set a deadline for concluding these auctions no later than June 30th of 2014.

Fidelity to these four principles will result in a successful broadcast incentive auction.

That said, I do have some concerns with the direction of our rulemaking proceeding. Most notably, September's notice of proposed rulemaking appears to envision an auction that will yield no net revenues. That would mean no money for the First Responder Network Authority to build out a nationwide interoperable public safety broadband network. That would mean no money for State and local first responders. That would mean no money for public safety research. That would mean no money for deficit reduction. And that would mean no money for Next Generation 911 implementation, even though Spectrum Act specifically mentions each of these items.

Most of the problem, in my view, stems from the structure of the proposed auction. The only closing conditions set forth in the NPRM is that the revenues from the forward auction cover the costs of the reverse auction. This is essentially like ending a traditional auction as soon as the reserve price is met.

Another part of the problem derives from limits the FCC might place on auction participation. For example, if we start picking and choosing who may participate in the forward auction, that won't be good for anybody. By contrast, maximizing participation in the auction will maximize our net revenues. And as we set up the auction, I hope we take to heart the guidance that we receive from commenters and, importantly, from Congress.

Aside from the broadcast incentive auction, the Spectrum Act sets several additional targets for getting more spectrum to market. For example, I expect in the near future that we will commence a rulemaking proceeding on making available almost 200 megahertz of spectrum for unlicensed use in the 5 gigahertz band.

This is a legal obligation under the Spectrum Act, to be sure, but I am particularly excited about it because it is smart policy. The standard for next-generation Wi-Fi, 802.11ac, already has been developed, and it requires large, contiguous swaths of spectrum for high-capacity, high-speed data transfers. The 5 gigahertz spectrum identified in the Spectrum Act is well-suited for taking advantage of this innovative standard.

The Spectrum Act also directs the FCC to auction off the 2155 to 2180 megahertz band, which is adjacent to AWS-1. The spectrum ideally would be paired with another 25-megahertz block adjacent to AWS-1, the 1755 to 1780 bands. These bands already are internationally harmonized for commercial use, which means a deployment will be swifter and cheaper than other options.

If we auction off the spectrum within the next 2 years, it could raise billions of dollars. With productive collaboration among the FCC, the NTIA, commercial users, and Federal users, we can achieve the twin goals of efficient commercial use and effective Federal use.

In closing, the Spectrum Act gave the FCC some very challenging tasks, but if we accomplish them, our Nation's commercial and public safety communications capabilities will improve dramatically.

Chairman Walden, Ranking Member Eshoo, and members of the subcommittee, I thank you once again for holding this important hearing. I look forward to listening to your views, answering your questions, and continuing to work with you in the weeks, months, and years ahead to implement this landmark legislation.

Mr. WALDEN. Commissioner, thank you for your testimony.

[The prepared statement of Mr. Pai follows:]

**STATEMENT OF AJIT PAI
COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION
HEARING BEFORE THE SUBCOMMITTEE ON COMMUNICATIONS AND
TECHNOLOGY OF THE UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE
“KEEPING THE NEW BROADBAND SPECTRUM LAW ON TRACK”**

DECEMBER 12, 2012

Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee, it is a privilege to appear before you today. The Spectrum Act originated in the efforts of this Subcommittee and was the result of bipartisan leadership, hard work, and compromise by you and many other dedicated Members of Congress. You deserve great credit for the passage of this historic legislation.

I began my term at the Federal Communications Commission just a few months after Congress passed the Spectrum Act, and thus a large part of my time at the agency has been spent evaluating and implementing the responsibilities that Congress entrusted to us in the statute.

The Commission’s primary charge in this regard is to release additional spectrum into the commercial marketplace to address the looming spectrum crunch. As an advocate of an all-of-the-above approach to spectrum policy, I have happily embraced the challenge.

When it comes to FCC implementation of the Spectrum Act, two factors counsel in favor of prompt action. First, consumers are adopting devices like data-hungry smartphones and tablets operating on 4G LTE networks that are straining the capacity of the airwaves. More spectrum is needed to meet this demand. Second, the broadcast incentive auction is our best opportunity to push a large amount of spectrum well-suited for mobile broadband into the commercial marketplace. Accordingly, this past summer, I called for the FCC to commence the incentive auction rulemaking process in the fall. To his credit, Chairman Genachowski launched a timely proceeding in September, and I thank him for that.

As the Commission moves forward, I believe that four principles should animate our work. *First*, we must be faithful to the statute. It is our job to implement this legislation, not to rewrite it to conform to our policy preferences. *Second*, we must be fair to all stakeholders. This is especially important because the incentive auction will fail unless both broadcasters and wireless carriers choose to participate. *Third*, we must keep our rules as simple as possible. The broadcast incentive auction is inherently complicated; unnecessary complexities are likely to deter participation. And *fourth*, we need to complete this proceeding in a reasonable timeframe. I believe that we should set a deadline for conducting these auctions no later than June 30, 2014. I am optimistic that fidelity to these principles will result in a successful broadcast incentive auction.

That said, I do have some concerns with the direction of our proceeding. Most notably, September’s Notice of Proposed Rulemaking appears to envision an auction that will yield no net revenues. That would mean no money for the First Responder Network Authority (FirstNet) to build out a nationwide, interoperable public safety broadband network; no money for state and local first responders; no money for public safety research; no money for deficit reduction; and

no money for next-generation 911 implementation. The Spectrum Act mentions each of these items, which makes it difficult to square that legislation with an auction that would provide no funding for them.

Most of the problem stems from the structure of the proposed auction. The only closing condition set forth in the NPRM is that the revenues from the forward auction must cover the costs of the reverse auction.¹ I do not believe that this closing condition is sufficient since it is essentially like ending a traditional auction as soon as the reserve price is met.

Another part of the problem derives from limits the Commission might place on auction participation. We need robust participation from television broadcasters, current wireless operators, and new entrants. The more people at the party, so to speak, the better the party will be. But if the Commission preemptively tells broadcasters “You may bid this high, but no higher,”² many may not show up for the reverse auction. And if the Commission starts picking and choosing who may participate in the forward auction—such as by setting a spectrum cap or narrowing the spectrum screen despite the robust competition in the wireless market³—it will result in less participation, less revenue, less spectrum available for mobile broadband, and less funding for public safety.

It’s worth exploring a bit further the implication of the last item I mentioned. Ensuring interoperable public safety communications has been a national priority for over a decade. Indeed, the 9/11 Commission identified the lack of interoperability as a serious hole in our nation’s public safety communications and demanded that it be addressed.⁴ Given the importance of constructing an interoperable public safety network, as well as the need to reduce the deficit and fund next-generation 911, I believe the FCC must seek to maximize the net revenues obtained through the commercial broadcast incentive auction.

We have yet to hear from the public about the Commission’s proposed structure for that auction. But I hope that commenters will point us in the right direction. I also look forward to continuing to receive input from Congress, particularly Members of the Subcommittee. Given your key role in crafting this legislation, it is vital that the Commission keep open the lines of communication with you.

Aside from the broadcast incentive auction, the Spectrum Act sets several additional targets for getting more spectrum to market. An important one involves the so-called H Block, a set of frequencies that has lain fallow for years. This afternoon, we will propose rules for auctioning that spectrum. It has been four long years since the Commission last held a major

¹ See *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Docket No. 12-268, Notice of Proposed Rulemaking, 27 FCC Red 12357, 12379, paras. 67, 69 (2012).

² See *id.* at 12377, para. 53 (“[W]e also will consider implementing a reserve price, or maximum payment, that would be made to broadcasters relinquishing spectrum usage rights. This reserve price could take the form of a maximum dollar payment to a broadcaster based on characteristics of the station such as population or viewership.”); *id.* at 12564 (same).

³ See *Policies Regarding Mobile Spectrum Holdings*, WT Docket No. 12-269, Notice of Proposed Rulemaking, 27 FCC Red 11710, 11720, 11728, paras. 20–21, 39 (2012); *id.* at 11758–59 (Concurring Statement of Commissioner Ajit Pai) (outlining concerns about certain proposals), available at <http://go.usa.gov/gQWe>.

⁴ See *The 9/11 Commission Report* at 292–93 (2004) (observing that lack of interoperability impeded coordination of New York Port Authority Police Department’s response); *id.* at 398 (recommending establishment of “communications connectivity between and among civilian authorities, local first responders, and the National Guard”).

spectrum auction. Although the 10 MHz of H Block spectrum is much less than the 52 MHz we sold in Auction 73, the upcoming auction may create the momentum needed to free up more commercial spectrum.

Next, I hope and expect that in the near future we will commence a proceeding on making available almost 200 MHz of spectrum for unlicensed use in the 5 GHz band. Doing so is a legal obligation—the Spectrum Act directs us to do so—but I am especially excited about it because it’s smart policy. The standard for next-generation Wi-Fi—IEEE 802.11ac—already has been developed. That standard requires large, contiguous swaths of spectrum for high-speed, high-capacity data transfers. The 5 GHz spectrum identified in the Spectrum Act is tailor-made for this innovative standard. For one thing, there are relatively few incumbents compared to, say, the broadcast television spectrum, which mitigates coordination and relocation difficulties. For another, the propagation of 5 GHz spectrum is relatively short, which minimizes interference and makes 5 GHz perfect for common unlicensed applications such as in-home use. Finally, the technical attractiveness of this spectrum will encourage manufacturers to focus their investments on what consumers want: faster processing with less power consumption at lower prices.

The Spectrum Act also directs the Commission to auction off the 25 MHz of spectrum adjacent to AWS-1 (2155–2180 MHz). This spectrum would ideally be paired with another 25 MHz block adjacent to AWS-1: 1755–1780 MHz. These bands are already internationally harmonized for commercial use, which means deployment will be swifter and cheaper than other options. If we auction off this spectrum in the next two years, it could raise billions of dollars.

But as you know, this spectrum is currently allocated to the federal government. Reallocating it for commercial purposes will require the cooperation of the National Telecommunications and Information Administration (NTIA) and incumbent users. Unfortunately, recent developments on this front are less than encouraging. In March, the NTIA relayed what other federal agencies told them: that it would cost \$18 billion and take at least ten years to relocate federal incumbents to clear a substantially larger band of spectrum.⁵ These claims were not verified, nor did the NTIA’s report identify what it would take to clear just the 1755–1780 band. In July, the President’s Council of Advisors on Science and Technology recommended that the government divert its efforts from clearing spectrum and focus instead on sharing it.⁶ In short, it has become apparent that some have given up on clearing this spectrum in favor of auctioning off “shared rights.”

I’m not opposed to spectrum sharing. For example, geographic sharing by creating exclusion zones around certain areas can be a useful tool. And spectrum sharing may be a workable alternative when auctions can’t be used to raise funds for relocation, such as in higher bands like the 5 GHz band. But if our goal is to incentivize investment in wireless networks, nothing beats clearing.

Spectrum sharing is a complicated and largely untested endeavor that requires a lot of coordination among potentially hundreds of federal users and licensees. The largest wireless providers in America may be both willing *and able* to do so. But I doubt that smaller ones who lack the time or resources are. Indeed, the GAO recently reported to Congress that federal

⁵ U.S. Department of Commerce, *An Assessment of the Viability of Accommodating Wireless Broadband in the 1755–1850 MHz Band* (Mar. 2012).

⁶ President’s Council of Advisors on Science and Technology, *Report to the President: Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth* (July 2012).

sharing would require a lengthy and unpredictable process that would be especially costly for new entrants.⁷

And sharing could embroil the Commission in lengthy and sensitive interference disputes. After all, an interference dispute between a commercial licensee and a government user is far more likely to become mired in politics than an argument between two private parties—especially if the government agency uses that spectrum for defense or other high-priority operations. Recent experience suggests that we should be reluctant to enter this thicket.⁸

The better course, in my view, would be to prioritize the clearing of federal spectrum and to develop proposals that could enable productive collaboration between and among the FCC, the NTIA, commercial users, and federal users. We need to think creatively about all options, such as establishing financial incentives for federal users to relocate. And we should be proactive in this effort, for the opportunities—and opportunity costs—are tremendous. I can't put it any better than the House Energy and Commerce Committee's bipartisan Federal Spectrum Working Group: "Finding more efficient ways for the government to use this valuable public asset without compromising critical objectives would not only produce dividends for government agencies, but also inject additional resources into the private sector to spur our economy."⁹

So those are some of the projects we are working on at the Commission with regard to commercial spectrum. But what about the other goal of the Spectrum Act: improving public safety? Most of the work on public safety will be done at other agencies, especially the NTIA, which hosts the First Responder Network Authority (FirstNet). The Act did, however, require the Commission to facilitate the transition of the public safety broadband spectrum to the new administrator. We have worked efficiently toward this goal in three basic ways.

First, the Commission created a Technical Advisory Board for First Responder Interoperability and on June 21, 2012 transmitted the Board's minimum technical requirements to FirstNet via the NTIA.

Second, on July 31, 2012, the Commission adopted an order replacing the waivers held by certain state and local early-adopters with a process we call "Special Temporary Authority" or STA. This gives jurisdictions permission to continue to deploy and operate their wireless public safety networks if they meet the interoperability standards, have completed significant deployment, and demonstrate a specific safety need. (Unfortunately, only Harris County, Texas has been able to obtain an STA to date.)

Finally, the Commission granted FirstNet its official license with call sign WQQE234 on November 15, 2012. The Commission is still working on a proceeding to establish service rules and other requirements related to this license, and I hope we complete that proceeding in a timely fashion.

⁷ See Government Accountability Office, *Spectrum Management: Incentives, Opportunities, and Testing Needed to Enhance Spectrum Sharing*, GAO-13-7, at 14 (Nov. 2012).

⁸ See, e.g., Letter from Lawrence Strickling, Assistant Secretary of Commerce for Communications and Information, to Julius Genachowski, Chairman, Federal Communications Commission at 1, 8 (Feb. 14, 2012) (describing potential impact of LightSquared's proposed terrestrial operations on Global Positioning System services and stating that no mitigation strategy could alleviate concerns about potential interference), available at <http://go.usa.gov/gQZj>.

⁹ Letter from House Energy and Commerce Committee Federal Spectrum Working Group to Lawrence Strickling, Assistant Secretary of Commerce for Communications at 1 (July 10, 2012), available at <http://go.usa.gov/gQ5d>.

The Act also required the FCC to establish a Do-Not-Call registry for telephone numbers used by Public Safety Answering Points (PSAPs) and to prohibit the use of automatic dialing equipment to contact registered numbers. Congress recognized that when Americans call 911, it is vital that they reach emergency personnel quickly. Public safety lines can't be tied up with non-emergency calls, and those who staff Public Safety Answering Points (PSAPs) can't be diverted by such calls. I am pleased that the Commission adopted rules on October 17, 2012 to allow for the creation of the PSAP Do-Not-Call registry. Our rules provide effective protection for public safety while at the same time minimizing the compliance burdens on those who operate automatic dialing equipment.

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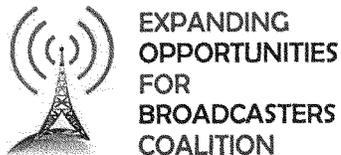
The Spectrum Act gave the Federal Communications Commission some very challenging tasks. But if we accomplish them, our nation's commercial and public safety communications capabilities will improve dramatically. Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee, I thank you again for holding this important hearing. I look forward to listening to your views, answering your questions, and continuing to work with you and your staff to implement this landmark legislation.

Mr. WALDEN. Thanks to all of you for coming today to testify before our subcommittee.

I would like to put in the record three different letters: one from the Expanding Opportunities for Broadcasters Coalition announcing a coalition of more than 25 broadcasters at this early date who are interested in selling this spectrum in major markets, a letter from the Telecommunications Industry Association supporting efforts to maximize licensed spectrum for mobile broadband, and a letter from the High Tech Spectrum Coalition supporting swift implementation of the spectrum law.

Without objection, they will be in the record.

[The letters follow:]



December 12, 2012

The Honorable Greg Walden
Chairman
Subcommittee on Communications and Technology
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Walden:

Attached please find a press release announcing a coalition of television broadcasters who, under the right circumstances, are willing to contribute some or all of their assets to the Federal Communications Commission's ("FCC") incentive auction. Although the group, the Expanding Opportunities for Broadcasters Coalition ("Coalition"), was formed only recently, our membership includes more than 25 stations in the largest markets where the FCC's need for willing sellers is likely to be the greatest. And, we receive additional membership inquiries on a weekly basis.

We would be grateful if you would enter this letter and the attached press release into the record of your December 12 hearing as an indication that the incentive auction can be a success if the relevant provisions of the Middle Class Tax Relief Act are implemented well. Thank you very much.

Sincerely,



Preston Padden
Executive Director

CC: The Honorable Anna Eshoo



EXPANDING
OPPORTUNITIES
FOR
BROADCASTERS
COALITION

Release Date: November 13, 2012

Contact: Preston Padden, 202-649-0215 or
ppadden@broadcastcoalition.org

New Coalition Formed To Advocate For Successful Auction Of Broadcast Spectrum

The group, Expanding Opportunities for Broadcasters Coalition, will represent broadcast stations considering participation in this historic auction, under the right conditions

November 13, 2012, Washington, D.C. – A group of broadcasters has formed the Expanding Opportunities for Broadcasters Coalition (“Coalition”) to advocate for the successful auction of broadcast spectrum. The Coalition will represent broadcasters considering contributing some or all of their assets to the Federal Communications Commission’s (“FCC”) incentive auction. The announcement was made today by the Coalition’s leader, former Fox, ABC, and Disney executive, Preston Padden.

In making the announcement Padden said, “This coalition’s sole focus is to advocate for the success of the voluntary incentive auction of broadcast spectrum. The FCC has only one shot to get it right. The Coalition is dedicated to ensuring we have the rules and procedures in place to maximize the auction’s chance to succeed.”

The founding members of the Coalition include television broadcast stations that, under the right conditions, would like to participate in the auction. These stations have come together to ensure that the FCC’s process provides the proper incentive and structure for a successful auction.

The Coalition welcomes the participation of other broadcasters and stakeholders that share this common interest in a successful auction. The Coalition will work with all stakeholders to ensure a successful auction as envisioned by Congress, the Administration, and the FCC. The Coalition will

partner with trade associations, public interest groups, and others to maximize participation by broadcasters and wireless carriers alike.

"I have spent the bulk of my career as a broadcaster. It is important to me that the Coalition fully support those broadcasters that wish to remain in that great and noble business. We hope that by providing an effective vehicle for those broadcasters that choose another path, the FCC's auction can strengthen the nation's broadcast and wireless future," Padden said.

Consistent with the confidentiality requirements of the Spectrum Act and the confidentiality discussion in the FCC's Incentive Auction Notice of Proposed Rulemaking, the Coalition will not be disclosing the identity of its Members. "These are ongoing broadcast businesses with employees, advertisers, and viewers. The need for confidentiality is obvious," said Padden.

Press inquiries, please contact: Preston Padden, 202-649-0215 or ppadden@broadcastcoalition.org. Broadcasters interested in joining the Coalition should also contact Preston Padden.

For over three decades, Preston Padden has been one of the most prominent media policy experts in Washington, D.C. He recently retired from Walt Disney Company, where he served as Executive Vice President of Government Relations. He has also served as an executive at Metromedia, ABC, Fox, and the Association of Independent Television Stations, as well as on the boards of both the NAB and MPAA. He is currently Senior Fellow at the University of Colorado's Silicon Flatirons Center.

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December 11, 2012

The Honorable Fred Upton
 Committee on Energy and Commerce
 2183 Rayburn House Office Building
 Washington, DC 20515

The Honorable Henry Waxman
 Committee on Energy and Commerce
 2204 Rayburn House Office Building
 Washington, DC 20515

The Honorable Greg Walden
 Subcommittee on Communications
 and Technology
 2182 Rayburn House Office Building
 Washington, DC 20515

The Honorable Anna Eshoo
 Subcommittee on Communications
 and Technology
 205 Cannon House Office Building
 Washington, DC 20515

Dear Chairmen and Ranking Members:

The Telecommunications Industry Association (TIA), the leading trade association for global manufacturers, vendors, and suppliers of information and communications technology, wishes to thank you for your key roles in the passage of voluntary incentive auction legislation. The 2012 spectrum law will help to alleviate the spectrum crunch, raise revenues for debt reduction, and fund the construction of a nationwide interoperable public safety broadband network.

TIA and its member companies have been working with the FCC as it proceeds to implement the voluntary incentive auctions. TIA has also been working closely with NTIA on collaborative efforts to make additional spectrum available for broadband use. As the Energy & Commerce Committee prepares to receive testimony from the FCC commissioners, we urge you to focus on the following issues:

Voluntary Incentive Auctions

Maximizing Licensed Spectrum. The FCC should develop a spectrum “re-packing” plan that maximizes the amount of spectrum available at auction for licensed mobile services. In doing so, the FCC must abide by Congress’ mandate that guard bands be minimized so that they are no larger than is technically reasonable to prevent harmful interference between licensed services.

Simplifying Auction Rules. The reverse auction rules should be as simple as possible to attract the greatest possible number of broadcast participants. The FCC should offer existing licensees an attractive financial incentive for facilitating the clearing of spectrum, since the spectrum law gives the agency only one chance to “get this right.”

Allowing Broad Participation. The success of the incentive auction ultimately hinges on the participation of all possible bidders in the forward auction. The FCC should not limit the eligibility of participants, and the rules should also provide for the earliest possible repacking / reclaiming of the broadcast spectrum.

Federal Spectrum

Clearing Bands. TIA supports the clearing of re-purposed federal spectrum bands to the maximum extent feasible. Cleared, exclusively licensed spectrum bands allow for the most efficient and dependable use of spectrum suitable for mobile broadband deployment, and maximize network investment, marketability, availability and consumer use.

In spectrum bands that cannot be cleared for exclusive licensed use, the most promising forms of sharing by mobile broadband networks, including those based on LTE technology, are licensed sharing with geographic, frequency or time-based coordination, including exclusion zones. Spectrum sharing, whether based on sensing technology or the FCC's Part 15 unlicensed rules, presents technical challenges when required of certain technologies, including LTE.

Transparency. TIA also urges Congress to continue pressing federal stakeholders for additional transparency regarding existing uses of federal spectrum. A comprehensive inventory of federal spectrum use would facilitate the development of market-oriented process that would ensure that limited spectrum resources are allocated more efficiently – whether to federal or commercial purposes.

Simplifying Regulations

Congress should continue to support the FCC's efforts to streamline and simplify regulations, resulting in increased market certainty, investment, and heightened quality and choice in ICT products and services. As one example, the FCC is currently seeking comment on a TIA Petition for Rulemaking that would facilitate more widespread use of electronic device labeling – a common-sense proposal that would increase the accessibility of important product information for consumers while simultaneously reducing manufacturing costs.

Public Safety

As the Committee looks ahead to 2013, TIA encourages Congress to continue its oversight to ensure the rapid development of a nationwide public safety broadband network, and to build on the important progress in the 2012 spectrum law by working with stakeholders on additional legislation to further modernize the nation's 9-1-1 system.

For more information, please contact Danielle Coffey at (202)-346-3243 or by email at dcoffey@tiaonline.org. TIA once again thanks you for your work on these important issues, and we look forward to continued progress in 2013 and beyond.

Sincerely,



Grant E. Seiffert
President



December 11, 2012

The Honorable Fred Upton, Chairman
Committee on Energy and Commerce
United States House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Henry A. Waxman, Ranking Member
Committee on Energy and Commerce
United States House of Representatives
2322A Rayburn House Office Building
Washington, DC 20515

The Honorable Greg Walden, Chairman
Subcommittee on Communications and Technology
United States House of Representatives
2182 Rayburn House Office Building
Washington, DC 20515

The Honorable Anna G. Eshoo, Ranking Member
Subcommittee on Communications and Technology
United States House of Representatives
241 Cannon House Office Building
Washington, DC 20515

Dear Chairmen and Ranking Members,

As you and your colleagues address the challenges associated with the federal budget and the "fiscal cliff", the members of the High Tech Spectrum Coalition (HTSC) believe that authorizing new spectrum auctions is timely and relevant to this debate. The authority granted by the *Middle Class Tax Relief and Job Creation Act*, H.R. 3630 will spur technological innovation, create new jobs, help satisfy the exploding consumer demand for mobile data, and raise significant revenues to fund the construction of a nationwide network for first responders. Authorizing the Federal Communications Commission (FCC) to auction spectrum for licensed mobile broadband use will be one of the greatest achievements of the 112th Congress as it will reaffirm the U.S. as the global leader in the wireless industry.

We were pleased that the Congressional Budget Office (CBO) determined the voluntary incentive auction provisions contained in H.R. 3630 will produce at least \$24 billion in revenues. We also appreciate the Commission's timely effort to release a Notice of Proposed Rulemaking and their willingness to hear all interests. Now is the time to ensure the incentive auctions are as robust and successful as possible at liberating spectrum. We should also turn our collective attention on ways to reap the economic benefits of underutilized federal spectrum assets.

As the Administration and countless others have acknowledged, there is a pressing need to find 500 MHz of high value spectrum for mobile broadband. HTSC has repeatedly stressed the empirical need for additional licensed spectrum to be made available because the increasing demand for mobile data services is astounding. The numbers below reinforce why the search for more spectrum is a time-sensitive priority:

- In 2011, four percent of users were generating more than one gigabyte of mobile data. By 2016, seventy-four percent will generate that much data.
- Mobile video traffic will nearly double every year between 2011 and 2016, and by 2016, sixty-eight percent of mobile traffic in the US will be video.
- In 2011, eight percent of US subscribers used multiple mobile devices. By 2016, that number advances to twenty-five percent of subscribers.
- Forecasts project that the volume of data traffic on mobile service provider networks will increase sixteen times from 2011 to 2016.

As technology companies, we joined this debate because policymakers need to know that we cannot simply engineer our way out of this problem. While our industry is continuing to develop and deploy increasingly efficient spectrum technologies, the fact remains there is a looming spectrum crunch that no amount of technology efficiencies will satisfy. As you know, in 2010 the FCC concluded that the industry will need 275 MHz of cleared spectrum for licensed use. Voluntary incentive auctions alone will not fulfill this need. Our attention must also focus on transitioning federal spectrum for commercial use.

The host of benefits that should be realized from the voluntary incentive auction proceedings can be replicated when accessing appropriate federal government spectrum. The voluntary incentive auction must prove to be a success. We all have a vested interest in making sure that significant swaths of spectrum are cleared, the rules governing interference and utilization encourage the highest and best use, and that they achieve the financial goals Congress expects. The challenges posed by identifying and liberating federal spectrum are multi-faceted and more complex than those in the incentive auctions. We must be innovative in our collective thinking about how to incent federal users to become more efficient, to share with one another, to vacate, or to lease their spectrum.

The mobile industry is unique because of its ability to create enormous efficiencies while stimulating growth in our economy. A recent Deloitte study builds on the growing body of economic analysis linking information and communications to national growth. It found a doubling of mobile data use leads to an increase of .5 percentage points in GDP per capita growth. Two other reports indicate that transitioning more spectrum for licensed wireless broadband will have a substantial impact on job creation and the American economy. The reports concluded that unleashing 300 MHz of spectrum for mobile broadband by 2016 will spur \$75 billion in new capital spending, create between 300,000 to 770,000 new jobs, and add \$230 billion in GDP.

We believe these are compelling reasons for this Committee to devote attention to these efforts. We want to work with you to recognize the full potential of this valuable resource. Continuing the effort to clear 500 MHz of spectrum remains a critical, timely, and economically essential challenge.

Sincerely,



Mr. WALDEN. Commissioners, obviously we have a lot to cover today, and so I have, at least first up, a yes-or-no question. I want to start with Commissioner Pai.

Do you believe the Commission should be ensuring that the auction produces the \$7 billion for the public safety network?

Mr. PAI. Mr. Chairman, I do believe that the Commission should focus on maximizing revenue to fund the public safety network.

Mr. WALDEN. Commissioner Rosenworcel?

Ms. ROSENWORCEL. Yes, absolutely. We need to deliver on our promise to our Nation's first responders.

Mr. WALDEN. Commissioner Clyburn?

Ms. CLYBURN. Absolutely, it should.

Mr. WALDEN. Commissioner McDowell?

Mr. MCDOWELL. Yes.

Mr. WALDEN. Chairman Genachowski?

Mr. GENACHOWSKI. Yes.

Mr. WALDEN. Thank you.

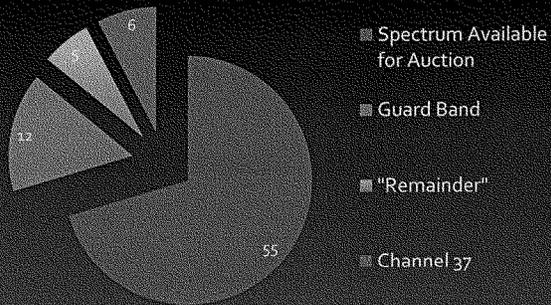
Now I would like to put a slide up here and draw everyone's attention to it and ask unanimous consent to include it in the record.

[The information follows:]

Incentive Auction Under the Terms of the NPRM

If valued at the same price per MHz-POP as the unencumbered 700 MHz B Block, the lost revenue from this 23 MHz is \$19.2 billion.

Even at a conservative \$1 per MHz-POP, the FCC's plan would forgo over \$7 billion, enough to fully fund FirstNet.



*This assumes that the FCC clears 72 MHz of spectrum in the reverse auction under section 6403 of the Middle Class Tax Relief and Job Creation Act of 2012 and that the FCC adopts the band plan it recommends in its NPRM.

Relevant Spectrum Act Provisions

Section 6403(c)(1): "The Commission shall conduct a forward auction in which ... the Commission assigns licenses for the use of the spectrum that the Commission reallocates under subsection (b)(1)(B)(ii)" (emphasis added).

Section 6403(a)(1): "The Commission shall conduct a reverse auction to determine the amount of compensation that each broadcast television licensee would accept in return for voluntarily relinquishing some or all of its broadcast television spectrum usage rights in order to make spectrum available for assignment through a system of competitive bidding" (emphasis added).

Section 6403(b)(1): "For purposes of making available spectrum to carry out the forward auction under subsection (c)(1). The Commission ... shall evaluate the broadcast television spectrum (including spectrum made available through the reverse auction under subsection (a)(1)), ... make such reassignments of television channels as the commission considers appropriate, and ... reallocate such portions of such spectrum as the Commission determines are available for reallocation" (emphasis added).

Section 6407(a): "Nothing in subparagraph (G) of section 309(j)(8) of the Communications Act, as added by section 6402, or in section 6403 shall be construed to prevent the Commission from using relinquished or other spectrum to implement band plans with guard bands."

Section 6407(c): "The Commission may permit the use of such guard bands for unlicensed use."

FCC Must Auction Cleared Spectrum

Middle Class Tax Relief and Job Creation Act of
2012

- §6403(a)(1): "The Commission shall conduct a reverse auction... in order to make spectrum available for assignment through a system of competitive bidding..." (47 USC 1452(a)(1))

FCC Must Auction Cleared Spectrum Middle Class Tax Relief and Job Creation Act of 2012

- §6403(b)(1): "For the purposes of making available spectrum to carry out the forward auction... the FCC shall evaluate the broadcast television spectrum (including spectrum made available through the reverse auction under subsection (a)(1)); and [shall reassign and reallocate the broadcast spectrum]." (47 USC 1452(b)(1))

FCC Must Auction Cleared Spectrum

Middle Class Tax Relief and Job Creation Act of 2012

- §6403(c)(1): "Auction required.—The Commission shall conduct a forward auction in which... the Commission assigns licenses for the use of the spectrum it reallocates under [the reorganization provisions in subsection (b)]." (47 USC 1452(c)(1))

Guard Bands Permitted Under the Act But No Auction Exemption

- Section §6407(a): “In General.—Nothing in subparagraph (G) of section 309(j)(8) of the Communications Act of 1934 [the subparagraph that authorizes incentive auctions] shall be construed to prevent the Commission from using relinquished or other spectrum to implement band plans with guard bands.”

Unlicensed Use Permitted in Guard Bands But No Auction Exemption

- *The act does permit unlicensed use in the guard bands, including potentially as a service secondary to the primary licensed service required by §6403.*
- Section §6407(c): "Unlicensed Use in the Guard Bands.—The Commission may permit the use of such guard bands for unlicensed use."

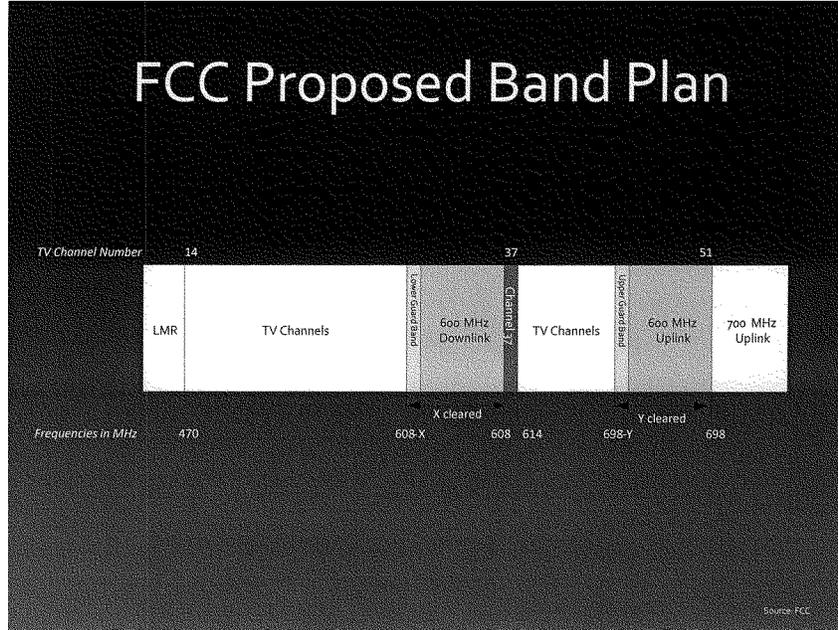
Guard Bands Must Be Minimized

- Section §6407(b): "Size of Guard Bands.—
Such guard bands shall be no larger than is technically reasonable to prevent harmful interference between licensed services outside the guard bands."

FCC NPRM on Guard Bands

- ¶156: "We propose a six megahertz guard band to protect television operations and 600 MHz uplink operations. Additionally, below we propose to add 'remainder' spectrum to the guard bands to further mitigate any potential interference concerns."

FCC Proposed Band Plan



Mr. WALDEN. As the chart they are about to put up will show you, the FCC may be forgoing as much as \$19 billion, potentially, with its guard band and unlicensed proposal. I believe you all have copies of this before you.

Commissioner Pai, before the FCC nets a single penny for public safety, it has to pay broadcasters that relinquish spectrum and reimburse stations it relocates. We can't know in advance how much that will cost, nor do we know how much spectrum broadcasters will relinquish or how much that spectrum will sell for.

In light of these unknowns, are you comfortable forgoing even a single dollar of potential revenue?

Mr. PAI. I am not, Mr. Chairman. And that is precisely one of the reasons why, in my separate statement on September 28th when we adopted the notice of proposed rulemaking, I expressed my concern that the closing condition did not appear to envision a circumstance in which the auction would yield net revenues.

That is why I proposed asking questions; for example, should we go beyond the contemplated structure of the auction, which at this point, as I understand it, seems to say that the forward auction will close once there is sufficient revenues to pay bidders in the reverse auction, to pay for reimbursable costs under the Spectrum Act, and to pay for the administrative costs of administering the auction.

So I share that concern. And I believe that the closing condition that we ultimately do adopt should be structured in such a way to maximize net revenue, precisely for this reason that you identify.

Mr. WALDEN. For those who may not be able to see the slide up there, what it shows is the spectrum that is available for auction in blue. That doesn't mean it is all going to be auctioned or that there are going to be that many stations that come forward and give up their licenses. But that, in theory, is what could be available. And then in red is channel 37. And then yellow is the remainder, and green is guard band.

Now, obviously, you are going to need some guard bands. And, obviously, some of that won't be auctionable and all of that. But I want to put in perspective that even at a conservative dollar per megahertz pop, the FCC's plan could forgo over \$7 billion gross. And that would be enough, if it were net, to fully fund FirstNet.

These are big numbers we are talking about. These are programs that the Congress has already said need to be funded through this auction. And we have also allocated—some of the other net revenues from the proposed auction have already been spent to extend the middle-class tax cut and to extend unemployment benefits. Paying for all of that was part of the big compromise that got this into law.

My concern is that if we take spectrum off the table from auction right off the top, there won't be the revenues, potentially, to pay for the things we have already committed to, and it ends up going out there in the unlicensed world.

Commissioner McDowell?

Mr. MCDOWELL. Real quick, Mr. Chairman. Actually, looking at this chart, just for right now, the assumptions actually could be very generous. So you have here about 55 megahertz, the assumption that the broadcasters will actually be able to yield. I am a lit-

tle skeptical that they will actually be able to yield that much for that auction. And I hope I am wrong. I will be the happiest person on Earth if I am wrong about this. But I am skeptical that it will be that much.

So this is the variable portion, the how much can be auctioned. The fixed portion is already here. As you said, there is a minimum amount of 12 megahertz for guard bands, and then you have the 6 for the channel 37, and then the remainder. So this is the fixed portion.

And so I wanted just to point that out, that that is a guaranteed amount that wouldn't be auctioned. What will be auctioned is not guaranteed. We don't know; there are a lot of assumptions there.

Then, lastly, at a dollar per megahertz pop, in the 700 megahertz auction of 2008 the A and the B blocks, which were the least encumbered, went for about \$2.70 per megahertz pop, in some cases.

Mr. WALDEN. So this could be worth two to three times what we are showing.

Mr. MCDOWELL. Exactly.

Mr. WALDEN. So it could be a figure of \$14 billion or—

Mr. MCDOWELL. Fourteen, 16, something like that.

Mr. WALDEN. Now we are talking a lot of money.

Mr. MCDOWELL. Even in Washington.

Mr. WALDEN. Even in Washington. And I think that is the issue here. And I know we are having a debate about how much should be available for unlicensed. I know there is other unlicensed at the 5-gig level and others that are being put forward. And I know we have some disagreement within our subcommittee about what the statute says or doesn't say. And we will get to that a little later, I think.

I will recognize the gentlewoman from California, Ms. Eshoo, for 5 minutes.

Ms. ESHOO. Thank you, Mr. Chairman. I hope that we will have another round because there really are a lot of questions that need to be asked.

First of all, I am troubled by some of the claims that the Public Safety and Spectrum Act is all about revenue-raising. The last time I checked, this is the Energy and Commerce Committee, not the Budget Committee. Having said that, I think that we did a good job to bring about a balance, to bring about dollars that would fund the public safety network, that we would produce dollars for deficit reduction.

But, again, this is the Energy and Commerce Committee. In Section 309 of the Communications Act, it explicitly prohibits the FCC from basing its auction rules predominantly on the revenue that would be generated. And during the bipartisan negotiations on this bill, a compromise was reached to allow unlicensed services to operate in the guard bands that would be created as a part of the band plan which would not be auctioned. The CBO looked at the proposal that became law and concluded that the guard band concept does not decrease the revenue.

So I don't know where all of this is coming from. I think it is kind of interesting. But it seems to me that, again, the hearing today is "Keeping the New Broadband Spectrum Law on Track."

Now, I want to start with the chairman.

Mr. Chairman, the Commission, I know, is currently—this is a little off to something else, but I am still very curious about it because I think it is so important. The Commission is currently undergoing a review of its media ownership rules. And while I recognize that no agreement has been reached within the agency, I would like to know what is being done to respond to the Third Circuit's instructions to address ownership and the viewpoint of diversity.

If you could just be brief, because I have a whole bunch of questions and I have got—

Mr. GENACHOWSKI. Just briefly, diversity remains a core obligation of the Commission, something that we care about deeply and have been focused on.

We have overhauled our data collection on broadcast ownership so that we finally are getting accurate information about minority ownership. We have a major study under way right now looking at the issues that are required in this area in order to support legal action. And we have requested funding in 2013 for additional studies to do the work that we need to do over time.

As you know, the quadrennial reviews that we have to undergo—the one we are looking at now is a 2010 review that started in 2009—they continue on an ongoing basis. It is time to get the one before us done. But, of course, we will then move on to the next one and continue to look at diversity as a central objective of the Commission.

Ms. ESHOO. Well, I think on this whole subject matter of media and consolidation that there should be an underlying principle that in a democracy that there be as many voices to the many as possible. I mean, this goes to the heart of democracy. This is not just something to fiddle around with, and so I just wanted to put that out there.

Now, to the Chairman again, some have argued that the FCC's proposal on unlicensed represents an unlawful give away. How do you respond to that?

Mr. GENACHOWSKI. Well, one, I think as you said, the statute clearly gives the Commission the authority to do unlicensed in guard bands, and I would add one point to the one you made before, which is that any economic value analysis of spectrum methods I would think would have to look at the hundreds of billions of economic value and related tax revenue that have come from innovations on unlicensed platforms. So when the FCC authorized unlicensed use for the first time, no one predicted Wi-Fi.

Ms. ESHOO. No.

Mr. GENACHOWSKI. It was a new platform for innovation that together with licensed spectrum has now made us the global leader. When I talk to my counterparts overseas, they are very focused on the opportunities of mobile, they are looking at next generation unlicensed, and I think if we don't lean into this we run the risk of falling behind other countries, seeing innovations happen overseas and not here. Of course, we will operate within the confines of the statute, which I know that both sides of the aisle very carefully constructed.

Ms. ESHOO. Thank you. To Commissioner Clyburn, on the issue of bidder eligibility, do you believe that consumers would be

harmful if the incentive auctions freed up the spectrum that was only acquired by the two largest wireless companies?

Ms. CLYBURN. I believe that the FCC should keep in mind as we craft these rules what one of the core missions of this agency is, which is competition, and I believe that we should, again, craft these rules to ensure that the framework and the environment would promote such, promote competition. It is good for innovation, it is good for the investment, and so it has got to be, we have got to look at it in a broad framework but never forgetting our mandate to provide, to stimulate competition.

Ms. ESHOO. Thank you. And to Commissioner Rosenworcel, it is wonderful to see you and hear your testimony. We have heard the suggestion today that auction rules that promote competition could result in lower auction revenues, but isn't it also true that allowing one or two firms to effectively shut out other competing bids could result in less revenue?

Ms. ROSENWORCEL. I think that that is possibly true, but I think fundamentally we need to hold these auctions in a way where there are opportunities for everyone. That will include incumbents and new entrants, and ultimately we need to make sure that the revenues we raise are sufficient to support the first responder network authority.

Ms. ESHOO. So two bookends, money and real competition. Terrific.

I yield back.

Mr. WALDEN. The gentlelady's time has expired. The chairman will recognize the vice chairman of the subcommittee, Mr. Terry of Nebraska, for 5 minutes.

Mr. TERRY. Thank you. We will go with the Chairman on this one. I think we all believe the auction should happen as soon as possible but of course getting the rules correct, but broadcasters have expressed concern about the folks who will lose a signal if broadcast contours change from repacking.

What is the Commission doing to address this concern, number one? Is there a further NPR, notice of proposed rulemaking, that will delay the process too much and is there an alternative approach to addressing this issue?

Mr. GENACHOWSKI. Well, in the statute Congress addressed this issue and laid out guidelines that the Commission has to follow in repacking. Those issues were teed up in the notice of proposed rulemaking. We expect comments on that and be in a position to make a decision. Meanwhile, we are engaging in direct dialogue through workshops and webinars and other ways to engage directly with broadcasters, both broadcasters who like the one Chairman Walden mentioned who are looking at participating and also the ones who aren't and are therefore focused on repacking.

Mr. TERRY. Appreciate that. Now, following up on the gentlelady from California's theme, I am going to move to Commissioners McDowell and Clyburn on this one.

Many commenters have argued that there should be no spectrum cap. Do you think the current spectrum screen with the safe harbor of one-third of the total spectrum in the local market is sufficient to protect consumers and create more competition? McDowell first.

Mr. MCDOWELL. I do, and I expressed my concern when we launched our spectrum aggregation NPRM about reverting back to the days of the hard spectrum cap. It might be under a different name or have a different way of approaching it, but spectrum is a lot like real estate, and so you have to look at each transaction on its own unique case-by-case characteristics, and what was considered, what were considered apples and oranges in terms of different frequencies a few years ago today is no longer the case. LTE is being built out above two gigahertz as well as below one gigahertz, for instance, and so the same services are being built in frequencies that just a few years ago were thought to be very different in their propagation characteristics, as it is called in the business. So I think we need to be very careful about where that proceeding could go.

Ms. CLYBURN. And one of the things that I keep in mind, and I go back to the competitive landscape which is optimal for us, and we need to keep that in front of our mind as we craft policies. Also in terms of the spectral aggregation currently, we have not looked at that proceeding. There has been no reform or no adjustments since 2003. So I think the time is right for us to look at the policies, current policies. There have been a lot of changes in the environment and also, again, keep in front of mind what our goal is to have a competitive landscape and the benefits of that, and so all of the—I have an open mind as it relates to this, and I think that is healthy.

Mr. TERRY. So you think that the screen may not be conducive as much as you would like for competition, and so we need to look at that again?

Ms. CLYBURN. A lot has changed since 2003 since that last review.

Mr. TERRY. And then our new Commissioners, Rosenworcel, what would you think, and then Mr. Pai.

Ms. ROSENWORCEL. Arguably our existing spectrum screen has a certain lack of clarity to it, so I think it is a good thing that the agency has opened up a proceeding to talk about that. At the same time, technology evolves, and we are finding that spectrum in the two gigahertz range, for instance, is now viable for mobile broadband use, so I do have some concern that if we put rigid requirements in place, they may not respect the way that technology evolves.

Mr. PAI. Congressman, I agree with my colleagues. In particular I agree with Congressman Clyburn that the time is right to revisit this framework in light of some of the deficiencies identified when we kicked off this notice of proposed rulemaking, notably, number one, our current approach understates competition in the market because it takes out of the spectrum equation certain spectrum that, as my colleagues McDowell and Rosenworcel pointed out, are in fact used for 4G service, like the broadband radio service, the educational broadband service. Number two, our current approach also creates needless uncertainty because parties, since this is a case-by-case basis, if they don't know ex ante how the Commission is going to approach their particular spectrum holdings. So for those two reasons I think the time is right to revisit the screen,

mindful of the fact that we need to preserve what is right, and in my current view the current screen does a good job of that.

Mr. WALDEN. The gentleman's time has expired. The Chair recognizes the gentleman from California, Mr. Waxman, for 5 minutes.

Mr. WAXMAN. Thank you, Mr. Chairman. We had our differences on this committee and with the Senate, and we finally reached a compromise, and we settled by agreeing to allow the FCC to utilize guard bands that might allow both unlicensed and licensed uses to flourish. We understood this to be a good compromise that showed unlicensed and licensed uses did not have to be mutually exclusive. Unfortunately, some are now suggesting that the FCC's proposal to create the guard bands contemplated in the legislation is an unlawful giveaway.

Chairman Genachowski, do you think we have to decide between the licensed or unlicensed model? Is there an opportunity to create a band plan that includes both?

Mr. GENACHOWSKI. No, I don't think we have to make that decision. And, yes, there is the opportunity to create a balanced band plan that uses both licensed and unlicensed and maximizes the economic value created for the country.

Mr. WAXMAN. Some have expressed concern about guard bands that are too big or not technically reasonable. How will the FCC determine the appropriate size for any guard bands?

Mr. GENACHOWSKI. Well, on a record, based on the engineering and input that we get, we made a proposal that is based on our expert staff, our engineers and the work that they did, which we believe in the first instance is technically reasonable, and we will consider all the comments that come in.

Mr. WAXMAN. Why do you think that start-ups, innovators, technology companies, many of which populate Miss Eshoo's district and my district, care so much about unlicensed spectrum? I have heard from the cable industry that it is critical spectrum located in the television bands be made available for unlicensed use.

Mr. GENACHOWSKI. Because it is an extraordinary platform for innovation. It has been proven to be that. When it was first done 20, 30 years ago it was a theory. Now we know, and we have a choice now, do we expand on this good idea or do we let other countries do it before us? The innovation will go to whichever country builds the most robust licensed and unlicensed spectrum infrastructure.

Mr. WAXMAN. And how do you explain the cable industry support that what you are trying to do with regard to making sure there is an unlicensed spectrum available in the broadcast band?

Mr. GENACHOWSKI. Well, they, too, have been innovating in the area, taking, looking at unlicensed and using it to provide alternative broadband access to consumers. Innovation can come from tiny start-ups in Silicon Valley or larger companies. We want to maximize all innovation.

Mr. WAXMAN. You gave a speech several months ago at Wharton in which you suggested there is a war on Wi-Fi. What did you mean by that?

Mr. GENACHOWSKI. Well, I think I asked why anyone would want to launch a war on Wi-Fi, and it is really the reasons that we are

talking about. This has been such a productive, beneficial policy innovation for the country. My view is that we should lean into it consistent with the statute and anticipate that American innovators will take advantage of new platforms for innovation and invent things that we can't even imagine now.

Mr. WAXMAN. Thank you for that clarification. This is an important provision. It was very important to people on this committee, and the compromise I thought was a good one to allow this kind of innovation to be able to go forward.

Commissioner Rosenworcel, how will the adoption of Next Generation 911 benefit American citizens and first responders, and do you believe this is an important component of the FCC's public safety mission?

Ms. ROSENWORCEL. Yes. I think the first—

Mr. WAXMAN. Your mic.

Ms. ROSENWORCEL. Yes. I think the first duty of the public servant is the public safety, but that is not just my opinion, it is the law, it is right there in the first sentence of the Communications Act. Next Generation 911 is going to improve all of our safety. In the future we will have a world where every call into our 911 centers may be accompanied by videos, photographs, and your medical records. It can make us all safer.

But the challenge is getting from here to there, and that is going to take three things. First, it is going to take technical standards. The FCC is at work on that with our public safety colleagues. Second, it is going to take a lot of coordination. The agency will need to work with the more than 6,000 public safety answering points around this country as well as carriers to produce that kind of outcome. And, finally, it is going to take funding, and to that end I would note that in the Middle Class Tax Relief and Job Creation Act as a result of the work of this committee, there is up to \$115 million in grant funds available for Next Generation 911. That is a terrific resource, and it is my hope that the public safety answering points from around this country will benefit from that.

Mr. WAXMAN. Thank you. And Commissioner Clyburn, if I could squeeze in a question to you, you have been an advocate for wireless consumers and the importance of competition. As more Americans, especially economically vulnerable populations, rely exclusively on wireless service, do you believe consumers will benefit if the FCC exercises authority to promote wireless competition in the upcoming incentive auctions?

Ms. CLYBURN. Absolutely. Competition, when the markets are healthy and robust, there are more opportunities, you know more options, and that is good, especially for lower income consumers. There is not a one-size-fits-all, I don't take a one-size-fits-all from a regulatory standpoint, and I believe that I should help promote that in the market, in the competitive market standing in that framework.

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

Mr. WALDEN. The gentleman's time has expired. The Chair will recognize the gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman, and welcome to the Commissioners. First let me mention how pleased I am that we are working collaboratively with the industry on the text 911 issue.

You know, that is what kids use today. They move way quicker than we do, and if the reports that I am reading are true, then I like what is going on, and that is what we would hope, that we would be working with regulators and the industry to resolve an identifiable need, so kudos, congratulations, and I would say keep it up.

Obviously the goal of this was to do two things. One was to have spectrum available and also try to help fund this, and that is kind of where this debate is going, and being part of kind of what Anna said, you know, it is keeping the new broadband spectrum law on track and kind of like an oversight hearing, and a lot of us are asking questions that pertain to that.

I was also—Chairman, I was appreciating this because when we talk about the guard bands it just raises the historical aspect of LightSquared, and for me I had great hopes that LightSquared would provide Wi-Fi to rural small town America, but—and I like GPS, we all use it, but I think they cybersquatted on spectrum that wasn't there. There was no band, there was nothing there to protect the spillover, and we lost this great opportunity for rural America to really have high speed Internet access, and so I think that is part of this debate of how much is too much, where is the band, so we don't have encroachment but we also get full compensation. Is that kind of the debate that we are having you think? Chairman?

Mr. GENACHOWSKI. Well, I think the discussion about how to get this exciting new opportunity right is the one that we are having. The incentive auction law was a landmark piece of legislation. It involved a lot of people, and the obligation is now on us consistent with the statute to get the balance right and to do something that drives U.S. leadership in mobile, that raises very substantial revenues for the Treasury, and that drives private investment and innovation, including through things like unlicensed which the statute anticipated in guard band.

Mr. SHIMKUS. Well, and part of the legislation was to make sure we had the funds available also to deploy, and because part of that debate was, you know, some people are saying, well, if there is not enough money, we will just go back to Congress and they will give us more, and we are just not in that world today. We are expecting it to come through this process.

Mr. GENACHOWSKI. There is one piece here that I look forward to working with the committee on, which was the channel 37 piece on this chart. I think we share your interest in freeing that up for auction, and as we looked at it in our notice process, we saw a much higher amount of actual use than we would like, and the congressional authorization for the amount to clear that spectrum at 300 million we believe at this stage won't be enough, and this is an area where I do think we can work together on a bipartisan basis, perhaps clear channel 37, and I hope that is an area that we can follow up together because it is a way to get more licensed spectrum up for auction and also move forward on unlicensed. Look forward to working with you on that.

Mr. SHIMKUS. Well, that would be an interesting process because of the full deployment in that channel and what it does. It is almost like moving military spectrum.

Mr. GENACHOWSKI. That is why we haven't proposed auctioning it. Other things on this chart really aren't reversible decisions if that is true.

Mr. SHIMKUS. Right. So let me end with a question to Commissioner Rosenworcel and Commissioner Pai. There has always been a large debate, we have never really moved on it, on just restructuring, reorganizing it, you are relatively new. Having observed the process in the short amount of time you have been there, what are your thoughts about how we can really move the Commission from the copper wire era to today and what would restructuring look like?

I have a minute left, so if you could kind of split that time, that would be helpful.

Ms. ROSENWORCEL. Well, I think in part you are referring to the task force that the chairman just put in place, which I think is a very good idea.

Mr. SHIMKUS. Your ideas.

Ms. ROSENWORCEL. All right. So I will say that years ago we used to all exist with a wire line, copper line into our houses. The networks we use today are far more diverse. One-third of our households only have wireless phones. We have probably about 30- to 40,000 VoIP lines out there.

Mr. SHIMKUS. So how do we reform the Commission? I mean, I am trying—we know that. I mean, so how do we reform the Commission?

Ms. ROSENWORCEL. Well, I think part of reforming the Commission is understanding the communications networks that are actually out there today and making sure that the Commission's structure reflects those networks, and so we do have concerns about how we look at this as a matter of silos today, where we treat cable differently than we treat traditional wire line architecture, different than we might treat wireless or broadband, and harmonizing across those platforms to reflect the way we use networks today would be a good idea.

Mr. SHIMKUS. Chairman, 30 seconds for Mr. Pai without objection.

Mr. PAI. Just to add to my colleague's answer, I think there are two basic questions as we undergo the IP transition that we need to be mindful of. Number one, what role, if any, should the economic regulation of the copper era have in a world of IP? In my view it should have relatively little to the extent that those types of regulations no longer make sense in a competitive all-IP world where we have convergence across different platforms. Then there is the question of are there any particular social goals that we should try to achieve in the all-IP world that we think are important? For example, when somebody calls 911, should it matter whether they are calling on a land line telephone, on a wireless phone or on a VoIP application? So those two basic questions, the economic and the social goals of regulation in the IP world, are going to be central challenges for the Commission, and that is part of the reason why I am glad that the Chairman announced the task force which I first called for in July because I think this really is the biggest challenge that we face at the FCC, how do we approach the all-IP world.

Mr. WALDEN. The gentleman's time has expired. We now recognize the chairman emeritus of the committee, the honorable gentleman from Michigan, Mr. Dingell, for 5 minutes.

Mr. DINGELL. Thank you, Mr. Chairman. My commendations for this hearing. We need to do what we are doing, and I commend you for that. These questions will be yes or no. First to Chairman Genachowski.

Mr. Chairman, section 6403(b) of the Spectrum Act requires the Commission to coordinate with Canada and Mexico when authorizing the reassignment and reallocation of broadcast frequencies. Is that correct?

Mr. GENACHOWSKI. Yes.

Mr. DINGELL. Mr. Chairman, I would note that similar such coordination took place for the DTV transition and that it took a very long time. Is that correct?

Mr. GENACHOWSKI. Yes.

Mr. DINGELL. Mr. Chairman, will the Commission commit to negotiating new arrangements with the State Department, Canada, and Mexico as mentioned in paragraph 34 of the Commission's notice of proposed rulemaking before repacking broadcast frequencies? Yes or no?

Mr. GENACHOWSKI. I am not sure of that provision, but we are committed to working with Canada and Mexico.

Mr. DINGELL. Is that a yes or no?

Mr. GENACHOWSKI. I would have to look at that provision to give an accurate answer.

Mr. DINGELL. The law requires you to do it.

Mr. GENACHOWSKI. We will comply with the law.

Mr. DINGELL. I hope so. Mr. Chairman, section 6403(b)(2) of the Spectrum Act requires the Commission to, quote, make all reasonable efforts to preserve as of the date of the enactment of this act the coverage area and population served of each broadcast licensee as determined using the methodology described in OET Bulletin 69 of the Office of Engineering and Technology. Does the Commission intend to define explicitly what such reasonable efforts will constitute? Yes or no.

Mr. GENACHOWSKI. Yes, as part of our decision.

Mr. DINGELL. Mr. Chairman, does the Commission expect to have defined such reasonable efforts? Yes or no.

Mr. GENACHOWSKI. Yes, as part of our decision.

Mr. DINGELL. Mr. Chairman, paragraph 49 of the NPRM states, quote, the allotment optimization model may have limited or no applicability to this proceeding. The Commission states in paragraph 50 that, quote, it expects interested parties will have an opportunity for meaningful comment on all specific repacking methodologies it is considering before it makes a decision, close quote.

Does the Commission publicly commit to sharing with the public the repacking methodology it adopts as well as the variables and other inputs it may use to predict repacking results? Yes or no.

Mr. GENACHOWSKI. Yes.

Mr. DINGELL. That is a big question. I had a hard time getting it out. I am sure you added your share of difficulty to it, Mr. Chairman.

Mr. Chairman, I note the Commission has had a proceeding pending on its spectrum screen since September of this year. Does the Commission intend to complete this proceeding before releasing rules for the voluntary incentive auction authorized by the Spectrum Act? Yes or no.

Mr. GENACHOWSKI. Yes, that is our plan.

Mr. DINGELL. Mr. Chairman, on a related note, does the Commission intend to use its authority under section 309(j) of the Communications Act to ensure broad participation in the voluntary incentive auction authorized by the Spectrum Act? Yes or no.

Mr. GENACHOWSKI. Yes.

Mr. DINGELL. Mr. Chairman, the Commission released a technical paper by the staff in 2010 which concludes that an additional 275 megahertz of licensed spectrum will need to be cleared in order to meet rising consumer demand for mobile broadband. Does the Commission believe that it can achieve that goal? Yes or no.

Mr. GENACHOWSKI. Yes.

Mr. DINGELL. Mr. Chairman, other than incentive auctions, how does the committee intend to meet that goal?

Mr. GENACHOWSKI. Well, by freeing up spectrum through removing regulatory barriers, like we did just yesterday and also a few weeks ago with WCS, by recovering more spectrum from the government through spectrum sharing approaches, through clearing and reallocating government spectrum, and through unlicensed spectrum.

Mr. DINGELL. Mr. Chairman, thank you.

We in the border States are very much concerned about what could or will happen to us in this process, losing service, seeing stations go dark, seeing additional confusion and conflict with our neighbors to the north and south. I hope you will keep that in mind as you go forward.

Mr. Chairman, I ask your kindness in just one thing, and that is to commend Commissioner Clyburn for her work on prison calling petitions before the Commission. I appreciate the progress the Commission has made on these petitions and encourage the Commission to resolve these matters as expeditiously as possible.

Mr. Chairman, members of the Commission, thank you for your courtesy to the committee today.

Mr. TERRY [presiding]. Thank you, Mr. Dingell. Mr. Barton, you are recognized.

Mr. BARTON. Thank you, Mr. Chairman. I am tempted to yield back to Mr. Dingell just to let him continue asking his yes or no questions. Sooner or later he will get to one that they can't answer.

But Chairman Dingell did ask a question that I am going to put a little bit different slant on. He referred to that part of the H.R. 3630, the new law, that the Commission in making these reassignment or reallocations shall make every effort, every reasonable effort to preserve the existing population and coverage area for each broadcast licensee.

Over on the next page, on page 72, subparagraph 5, with regard to low power television usage, it says nothing in the subsection shall be construed to alter the spectrum usage rights of low power television stations, yet in the FCC PowerPoint presentation in response to the question can low power television participate in a re-

verse auction, the answer to that is no. I understand that part of it. It says low power television services have only secondary interference protection and must make way for full power and class A TV stations assigned to new channels. I understand that. But then they go on to say that they have to promote—they may be required to go to a different technology, MVPD systems, and/or the Internet.

I can't speak for the entire committee obviously or even the subcommittee, but I can speak for myself, who has been a member of the subcommittee and who supported the enactment. I didn't envision that we would have the end result that a low power television station would simply end up off the air, and so I would like to ask the Chairman and the other Commissioners if, in fact, you are willing to commit that low power television stations that have acted in good faith, they understand that they may have to move or be repacked, but I personally believe it is not fair at all that the end result is that a low power television station that has been a good licensee ends up totally off the air.

Mr. GENACHOWSKI. Well, these are questions that we asked in our notice. Congress did not change the status of the low power stations, and so they remain secondary services. Many, as you point out, provide valuable programming in their communities. Our job is a hard one, which is how do we free—maximize the spectrum that we free up, generate revenue for the Treasury and for FirstNet and also address the issues you are raising, which are the number of LPTV stations around the country that are providing valuable programming. It is a difficult question which we have not answered yet. We look forward to working with you and getting very robust input from stakeholders as part of our process.

Mr. BARTON. But can we agree, and again the low power television stations understand that they are secondary, they understand under current law that they provide service only if it doesn't interfere and that as the full power stations and the class A stations operate they have to work around them. They understand that they don't have the right to participate in this auction. The one thing that they are not willing to agree to is that they can be just kicked out of business, kicked off the air, and that is that.

Can we agree as a committee and as the Commission that we are going to take steps to make sure that if a low power station has operated in good faith and complied with its existing license that we will make an effort to keep them on the air? Not necessarily on the same channel and the same, but at least in the same market.

Mr. GENACHOWSKI. We will work with the LPTV community. We have an obligation, as has come up a number of times, to act within the statute. Certainly keeping LPTV stations on the air where we can is something that makes sense, but I think at this point we haven't made a proposal on this. We have an obligation to listen to the record, act consistent with the statute, and we will continue to work with you and the other members of the committee and the LPTV community to ultimately reach the goals of the statute, some of which, as you point out, are in tension with each other.

Mr. BARTON. Can I ask the newest Commissioner, Mr. Pai, do you believe that the current reverse auction, forward auction simultaneous system that has been outlined is really workable?

Mr. PAI. It is certainly a novel construction which is necessary since the entire incentive auction process presents questions; a first impression, as Congresswoman Eshoo pointed out in her opening statement. I think the simultaneous auction has the advantage, as the NPRM points out, of certainty in real time as to what spectrum will be available, but there are obviously some complications. Participants in the reverse auction aren't necessarily well versed in auction processes, and they might not know, you know, exactly what the nature of the auction is going to hold for them. On the forward side, the bidders might not know what spectrum they are bidding on which inhibits, obviously, their ability to form a coherent strategy.

So there are going to be some challenges there, and I am hopeful that in the NPRM process that commenters will give us a wide range of perspectives that will allow us to understand whether the simultaneous approach is the best one.

Mr. BARTON. Well, I would encourage the Commission and the staff and the members of this committee to keep an open mind on this because we have conflicting goals. We want to maximize revenue for deficit reduction, we want to maximize reallocation of spectrum for new uses, and we want to preserve the rights of the existing licensees that don't wish to participate in the auction. When you put that all together, it is very difficult to come up with a system that actually makes sense, and I would hope you all keep an open mind on how to do that.

With that, Mr. Chairman, I would yield back.

Mr. TERRY. Thank you, Mr. Barton. The Chair recognizes the gentleman from Massachusetts, Mr. Markey, for his 5 minutes.

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

Mr. Chairman, could you help us to frame this tension that exists under existing law? That is, that what we are trying to do is to make new spectrum available for the wireless revolution while at the same time ensuring that broadcasters are protected, that they only have to act voluntarily, but that there is proper protection against interference. So what is the process that you have established that telescopes the time frame to ensure that that issue is resolved and done so in a way that meets all the technical requirements but forces the parties who sometimes have a stake in just, you know, waiting until eternity to finally just get to the point where they accept the reality of the technology?

Mr. GENACHOWSKI. Two points briefly. One, on the time frame, this is why we moved so quickly to start the NPRM. We have announced that we intend to hold an auction in 2014, and we will drive this step by step to a conclusion.

The second point, on the framing, what many people don't realize is that in many major markets, most major markets in the U.S. today there are many more over-the-air TV licensees than people realize. In New York, where I am from, the number is 28. And there were, there was a large allocation of these licenses before cable and satellite, and what we are doing now, and this is I think the innovation of incentive auctions, is to say, how can we use market mechanisms to reallocate some of that spectrum to mobile broadband in a win-win way? And that is what we are doing. That is why there will be broadcasters who remain in markets like New

York and others that are healthy, indeed stronger, but there is also tremendous opportunity to free up spectrum to generate revenue and to promote innovation.

Mr. MARKEY. When we moved over the 200 megahertz out of this committee in 1993, we had a two-star general sit here and say you just can't do it, it is just absolutely technologically impossible to do. So, again, do you have a process that is totally fair to the broadcasters and to the wireless industry that is in place? Have you had them in your office simultaneously with their engineers to talk about the issues so that you can hear and your experts can hear the differences which they have?

Mr. GENACHOWSKI. That is exactly what we are doing. Through the notice and comment process, also through the workshops, also through direct engagement with our engineers, that is what I have said to both industries, which is get your engineers working because we will resolve these largely as engineering issues consistent with the economic and innovation goals of the statute.

Mr. MARKEY. Do you ever have a meeting yourself with the engineers in the room, with the other, you know, from all industries just sitting there with your engineers hearing the disagreements?

Mr. GENACHOWSKI. I very much enjoy meeting with engineers and business executives, and I won't express an opinion on what is fun to meet with.

Mr. MARKEY. OK. No, I appreciate that. Let me just say last year The Economist magazine predicted, this is hyperbolically I think, The Economist predicted that the expected economic benefits of unlicensed spectrum alongside finding a crack in the code for curing cancer would be amongst the most significant developments expected in 2012. Do you agree with that?

Mr. GENACHOWSKI. Yes, I do. I don't know about the 2012 piece, so I would have to think about that, but as I said before, the Wi-Fi was not an expected innovation from unlicensed policy when it was first done, and I think there is every reason now to expect that we will get unexpected innovations in the future from a new platform for innovation.

Mr. MARKEY. And we had a hearing in this committee just a couple of weeks ago where one of the FCC's top engineers testified that advances in technology are not likely to obviate the need for guard bands anytime soon.

Do you believe that the FCC should put licensed spectrum at risk for interference by reducing the size of the guard bands?

Mr. GENACHOWSKI. Until we can change the law of physics and eliminate the possibility of interference, we are going to have to have guard bands.

Mr. MARKEY. And so, again, is there a process that gives people deadlines in terms of resolving these technical issues? Because we are congressional experts, which is an oxymoron compared to real experts, and when you put engineers in a room, we have to just remain silent and listen. So that is, to us, it seems to me, the real question, how timely are the deadlines given here to resolve these issues because I think it is almost like a homework assignment, you know. You have got a deadline, you have got to get that answer, and then we will find a tie breaker to make a judgment as to who is right and who is wrong, and I don't know what exactly

the timelines are here, but it just seems to me that the economic benefits are so overwhelming, while the risks actually to the broadcasting industry could be great, but to resolve it in a way that benefits the American people and these industries.

Mr. GENACHOWSKI. So that is a fair question. If I could answer it briefly. Comments in response to our notice are due, I believe, in January, with replies due shortly after that. At my level, the Commissioner level, and the staff level, we have been encouraging all the industries to give us their best engineering and to do the hard work to put us in a position. From there, as we have in past proceedings, we will move forward in exactly the direction that you are suggesting, which is getting engineers together from the different industries and sitting there until we get answers and we will have a timetable, and we will drive it to conclusion. It won't be the first time we have done that.

Mr. MARKEY. Yes, because just as an engineering final exam, it is win-win for broadcasters and for wireless. That is just one of the exams scheduled, to make sure that we just resolve it in a timely fashion.

Thank you, Mr. Chairman.

Mr. TERRY. Thank you, Mr. Markey. At this time the Chair will recognize the gentlelady from Tennessee, Ms. Blackburn.

Mrs. BLACKBURN. Thank you, Mr. Chairman. Commissioner McDowell referenced the Title II proceedings in light of the WCIT conference in Dubai. So Chairman Genachowski, why is that title, Title II still open?

Mr. GENACHOWSKI. Well, it is common to have notices of inquiry stay open where there is public interest and commenting, as there have been here. We don't see any uncertainty being created by that proceeding. The sector is actually quite strong, investment and innovation are going up. To the extent there is any uncertainty, it is coming from the Verizon litigation. As I have done before, I would call on Verizon to withdraw its litigation. That would increase certainty and allow us all to move forward.

Mrs. BLACKBURN. Well, have you had any discussions with the other Commissioners? Chairman, Commissioner McDowell, do you want to weigh in on that?

Mr. MCDOWELL. Real quick, I would respectfully disagree with what the Chairman just said. Actually when I speak with Wall Street analysts, that is one of the first questions I get is what is the future of that Title II docket. At the time that it was first floated in the summer of 2010 there was an incredible amount of anxiety expressed from the investment community over that docket. It frequently comes up in conversations that I have with our international counterparts and diplomats internationally. So I think it does create uncertainty, and the litigation against the order regarding the regulation of Internet network management actually I don't think is creating the uncertainty. The uncertainty was started by the FCC in this space. There was no evidence of any market failure for the FCC to address at all to begin with.

Mrs. BLACKBURN. I had an entrepreneur tell me this week that they are distressed that so many Federal agencies are trying to solve problems that don't exist, and I think there is a problem with that.

Mr. Chairman, have you had discussions about a reclassification of broadband services via Title II if the FCC loses the DC Circuit and loses the case?

Mr. GENACHOWSKI. No. We are focused on a framework that is in place, that is working, that is driving private investment and innovation across the ecosystem. I think if we can preserve what we have right now it will continue to be a win for the country.

Mrs. BLACKBURN. Well, do you feel like you have the authority to reclassify broadband services under Title II and subject them to Title II regulations?

Mr. GENACHOWSKI. Our general counsel at the FCC has said consistently that we do have that authority.

Mrs. BLACKBURN. OK. When do you plan to close that title?

Mr. GENACHOWSKI. We don't have plans to close it. It has been a forum for public input and participation. And as I said, we are seeing a sector that is very strong and growing and leading the world.

Mrs. BLACKBURN. So you plan to just leave it open as long as you want to?

Mr. GENACHOWSKI. It is a forum for the public to comment, and they have done so, and I expect they will continue to do so.

Mrs. BLACKBURN. Yes, sir, I think you are going to hear a lot of public comments. I think people are going to be weighing in readily with you on these issues, and I think the uncertainty that is generated around some of the activity does not serve our innovative community well, and I hope that we can provide some certainty.

The task force and, Commissioner Pai, I appreciated that you mentioned that, and I know that you are looking forward to working on that task force. So, Mr. Chairman, is the task force going to be focused on modernizing an obsolete regulatory framework so that we can finally rationalize this new marketplace of converged services and hasten the IP transition to next generation networks or do you intend to use it to put legacy regulations on new technology? So where are you planning to head with that?

Mr. GENACHOWSKI. Our goal really since I arrived in 2009 was to focus on unleashing the opportunities of broadband and addressing all of the policy issues associated with that. We did that through the Universal Service Fund reform and creation of the Connect America Fund, the Disabilities Act implementation, et cetera. We will continue as we have been doing to drive the rollout of digital networks, digital IP networks. It is very exciting for the country, and we need to see continued private investment in that. We also need to make sure that in the world, in this transition consumers are protected.

Mrs. BLACKBURN. Let me interrupt there just a second. Do you think it is necessary for you to drive it or do you think that the free market drives it?

Mr. GENACHOWSKI. I think the free market is driving tremendous investment. I think we create a climate for investment, and we have to make sure that any rules we have in place that shouldn't be there get taken away, and things we need to protect—

Mrs. BLACKBURN. Can I submit a list?

Mr. GENACHOWSKI [continuing]. Consumers, public safety, and competition, are in place.

Mrs. BLACKBURN. Commissioner Pai, 5 seconds.

Mr. PAI. I will try to be very brief. I would just support the Chairman in his formation of the task force, look forward to working with him, the Commission staff on making sure that we have a regulatory framework that incentivizes, not penalizes, investment in next generation networks.

Mrs. BLACKBURN. Well done. I will yield back. Mr. Chairman, I have one question that I am going to submit for the record.

Mr. TERRY. Thank you. The Chair now recognizes the gentleman from Pittsburgh, Mr. Doyle.

Mr. DOYLE. Thank you, Mr. Chairman, and I want to welcome the Commissioners back to our committee room and tell you that it was good to see all of you last week in your committee room.

Mr. Chairman, just very briefly, because this is a little off topic, but I have to ask, can you give us any update on special access?

Mr. GENACHOWSKI. Sure, it won't be the first time that you asked that question and we have had a chance to talk about it. As you know, we have been working as a commission on what we have announced would be the next step, a data collection order. I don't know if this has been announced, but I can tell you now that order has been voted, and as soon as it is finalized it will be issued, and we will be moving forward in the special access area in the ways that we have announced.

Mr. DOYLE. Excellent. And what is the timing? So that all Commissioners have voted?

Mr. GENACHOWSKI. Yes, it has all been voted and the staff is finalizing the process to release it.

Mr. DOYLE. Very good. OK, thank you very much.

Mr. Chairman, I want to ask you about the Commission's work on designing the forward auction process with regards to the eligibility of competitive wireless carriers to bid for a license. I think it is very important that we ensure a competitive wireless marketplace, and that requires all carriers to have a sufficient amount of spectrum to be able to offer comparative quality of service. That means being able to deploy 4G LTE service in a reasonable time frame and being able to avoid frequent dropped calls. So for every carrier, the ability to secure spectrum licenses means the ability to stay competitive with other providers. So I think it is important, Mr. Chairman, for the FCC to be able to give all potential participants a fair shot at the bidding process. I would like to see more carriers have LTE capability and more robust coverage. That means the FCC has to design auctions in a way that will maximize the competitive benefits of this resource.

Mr. Chairman, I do want to enter into the record before I go further a letter from the Competitive Carriers Association addressing the issue of bidder eligibility because I think it does a good job in laying out the concerns these carriers have with being able to participate in the auction. So I would like that entered in the record.

Mr. TERRY. Hearing no objection, so ordered.

[The letter follows:]



December 11, 2012

The Honorable Fred Upton
 Chairman, Committee on Energy and Commerce
 The Honorable Henry Waxman
 Ranking Member, Committee on Energy and Commerce
 The Honorable Greg Walden
 Chairman, Subcommittee on Communications and Technology
 The Honorable Anna Eshoo
 Ranking Member, Subcommittee on Communications and Technology
 U.S. House of Representatives
 Committee on Energy and Commerce
 2125 Rayburn House Office Building
 Washington, DC 20515

Dear Chairman Upton, Ranking Member Waxman, Chairman Walden, and Ranking Member Eshoo:

We write in strong support of Congress's reaffirmation, in the Spectrum Act, of the FCC's authority to adopt and enforce rules to promote competition and increase auction revenue.^{1/} The Spectrum Act reaffirms the FCC's authority to design competitive auctions to maximize return for U.S. taxpayers and ensure consumers enjoy the benefits of a competitive marketplace, which depends on competitive carriers' access to critical spectrum resources. Preserving the FCC's authority to manage spectrum is essential to ensuring competition in the wireless broadband marketplace. Competition, in turn, creates jobs, enhances auction revenues and spurs new and innovative services for consumers while allowing a continued light-touch regulatory regime in our dynamic industry.

Ensuring a competitive wireless marketplace requires that all market participants have sufficient spectrum to compete effectively. With only a limited amount of new spectrum coming available

^{1/} Middle Class Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6404 ("Spectrum Act").

over the next few years, it is imperative that the Commission have the tools to design auctions that address today's and tomorrow's wireless marketplace. The Spectrum Act preserves the Commission's ability to adopt generally applicable spectrum aggregation rules that promote competition. Rules that apply to every bidder apply generally. While generally applicable rules will always affect different companies differently, rules are no less "generally applicable" as a result.

The Commission has long used generally applicable spectrum aggregation rules to promote competition, stimulate investment, and encourage innovation for the benefit of consumers. In the 1990s, for instance, the Commission adopted rules on personal communications service (PCS) spectrum holdings to foster broad participation in the marketplace. The Commission also implemented an overall limitation on the amount of commercial mobile radio spectrum any one entity could acquire at auction to help ensure diversity in the provision of mobile wireless services. These policies were fundamental to the emergence of a wireless marketplace in which new entrants challenged the established incumbent telephone companies on price, service, and innovation. Reversing course and allowing the dominant incumbents to monopolize this scarce and essential resource will inevitably exclude, eliminate, or weaken the competitiveness of the mobile market in ways that will raise consumer prices, destroy jobs, and stifle innovation in the wireless industry.

The incumbent providers' suggestion that spectrum aggregation rules could negatively affect auction revenues is inaccurate. In fact, there is clear and decisive evidence that encouraging multiple parties to pursue spectrum has resulted in higher revenues for the government. Therefore, it is critical to craft rules that encourage participation in auctions. In turn, enhanced participation ensures that competitive providers are able to obtain the quantity and quality of spectrum necessary to meet growing consumer demand while maximizing revenues for a finite taxpayer-owned resource. This authority has been critical to the success of previous auctions, and reaffirmation in the Spectrum Act of Commission authority "to adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition" provides the FCC with the necessary tools and flexibility to structure successful, competitive auctions going forward.

Sincerely,

Atlantic Tele-Network
Bluegrass Cellular
C Spire Wireless
Competitive Carriers Association
Cricket Communications, Inc.
MTPCS, LLC d/b/a Cellular One
Nex-Tech Wireless
nTelos Wireless
SouthernLINC Wireless
Sprint
T-Mobile USA
U.S. Cellular

Mr. DOYLE. Thank you.

There should be no confusion on this point. The legislation passed by Congress gives the FCC flexibility to design auctions in a way that allows everyone to participate, including smaller carriers. I want to urge all of the Commissioners to take advantage of the tools at your disposal to protect competition.

So, Mr. Chairman, let me ask you, is this an issue to which you will give close consideration?

Mr. GENACHOWSKI. Yes. And I agree with the way you characterized it.

Mr. DOYLE. Thank you. Mr. Chairman, I want to ask you a little bit about media ownership, too. You might remember I brought up this issue at a previous hearing, and I continue to be very concerned about moving forward with relaxing cross ownership rules again before we complete an FCC analysis on the impact such a rule would have on changes in female and minority ownership. Mr. Chairman, the FCC's incentive auction NPRM envisions that television stations could engage in channel sharing in order to free up spectrum for reallocation. Have you considered the impact of this proposal on media ownership and diversity in light of the ownership order that you are currently circulating?

Mr. GENACHOWSKI. We do think that the incentive auction process will provide new opportunities for minority owners to continue providing service in a difficult marketplace, by receiving money for sharing channels or by potentially receiving money for moving from UHF to VHF, so we see the incentive auctions as a net plus for minority ownership, and we are working and will continue to work with the community to work through those issues.

Mr. DOYLE. Yes, I think some are just concerned that we understand what these impacts are before we move forward because the concern is sometimes after a ruling is made and you continue to study these issues, it is very hard to get the genie back into the bottle, so to speak. So I would just urge you and the Commissioners to take a closer look at the impact of these auctions in light of your media ownership review, and I thank you for the work that you are doing.

Mr. Chairman, with that I will yield back my time.

Mr. TERRY. Thank you, Mr. Doyle. At this time recognize the gentleman from Louisiana, Mr. Scalise.

Mr. SCALISE. Thank you, Mr. Vice Chairman, and appreciate the hearing and especially the five Commissioners for being here with us. I want to start by looking at the Congressional Budget Office estimate on the spectrum auction. If you look at the NPRM, the estimates are that it would raise about \$25 billion from the broadcast incentive auctions, and I just want to get your take on what you think can be achieved. If you look at the CBO report, does that match with where you think you will be? I will start with the Chairman, get your take on that.

Mr. GENACHOWSKI. Well, both CBO and OMB have looked at the proposal, they scored it, and certainly it is not in our expertise to revise that scoring. We are certainly focused on running an auction that generates very substantial revenue for FirstNet and beyond. One of the key factors in that will be broadcaster participation, and that is why we are all working together with the industry and with

others, why we are happy to see the group formed that we heard about at the beginning of the hearing from Chairman Walden of broadcasters who are saying you know what, this makes sense, and we want to work proactively with the Commission to design rules that encourages our participation because that is the best way to free up the most amount of spectrum.

Mr. SCALISE. Commissioner McDowell?

Mr. MCDOWELL. I am a little bit more cautious. I hesitate to use the word "pessimistic." And I hope that I am proven wrong as to how much that will actually raise. As was pointed out earlier in this pie chart, it has the 55 megahertz actually being auctioned. You have to keep in mind that in the markets where we need spectrum the most, these are the largest cities, that is where we are the most spectrum constrained for mobile broadband. That is also where broadcasting is the most profitable because there are more eyeballs condensed, you know, compacted into a small area, like, let's say, New York City where there are 28 TV stations. So in order to yield 60 megahertz, let's say, at 6 megahertz per TV station, that is 10 TV stations or licensees that would have to go dark or channel share in a New York City, for instance. That is more than a third. That is a lot. I hope that is the case. I hope it actually happens, but I am not convinced yet that it will.

So I think we need to be more cautious and sort of fiscally conservative with some of the assumptions that went into the CBO or the OMB estimates.

Mr. SCALISE. If I could just emphasize because, you know, there are some components of the bill for public safety, other expenditures, but another part of that legislation was to provide some revenue to pay down the national debt. \$15 billion is right now estimated to be raised that would go towards paying down the debt. So as you are conducting the auction, clearly we want to free up more spectrum, and that is going to create jobs, it is going to allow us to do a lot more things that we can't do today, but it also allows us an opportunity to have some real money to start paying down the debt. So I would like to emphasize that as well.

I want to talk about the Dubai hearings, and I know you touched on it, both Chairman Genachowski, Commissioner McDowell, I want to thank you all for both representing the United States in those talks, and we are going to be following it, and I was glad that we passed the legislation out of the House, now the Senate and House have both spoken very loudly in a bipartisan and unanimous way that we oppose any attempt by the United Nations to take over parts of the Internet, and we want to see it continue to be an open and free model with a multi stakeholder approach. I think, Commissioner McDowell, you touched on this some in your opening. Do you see some hypocrisy where Title II is open here in the United States and yet we are in Dubai telling them not to use this outdated approach to trying to grab more pieces of the Internet internationally, but here in the United States there still seems to be this open ended question with Title II open that that maybe sends a mixed signal. I wonder if either of you would like to touch on that.

Mr. MCDOWELL. Excellent question, and I will try to be diplomatic with the response because we are at a crucial time in these

diplomatic negotiations. The answer is both yes and no. Yes in that we say internationally we want to keep government out of the space, that the multi stakeholder model is the way to resolve conflicts, and it has worked very well for consumers ultimately. No in that one of the messages being put forth is that each nation has the sovereign right to determine what its Internet policy should be, and there should not be an international regulatory overlay. So there is a distinction between an international regulatory overlay and a domestic policy overlay. I happen to think it is more intellectually honest and consistent to say that government should stay out of the space altogether as much as possible, and we should therefore close things like the Title II docket.

Mr. SCALISE. Chairman Genachowski.

Mr. GENACHOWSKI. In both cases the goals and the actions are designed to preserve Internet freedom and openness, to preserve the Internet as we know it, and to ensure that no gatekeepers, public or private, interfere with Internet freedom so that we have the innovation and free speech that we have seen from the Internet for the last 20 years continue for the next 20 years and beyond.

Mr. SCALISE. Thank you for your time and answers, and I yield back the balance.

Mr. WALDEN. The gentleman's time has expired.

The Chair now recognizes the gentlelady from California, Ms. Matsui.

Ms. MATSUI. Thank you, Mr. Chairman. I want to thank you very much for holding this hearing today.

And I want to thank the Commission for being here today. And, well, as you know, you are going to be arguably undertaking probably the most complex spectrum auction in history, and I think you all know it needs to be transparent. And I believe Congress must work closely with the Commission to ensure the auction's success.

Mr. Chairman, the Middle Class Tax Relief and Job Creation Act directed the FCC to auction up to 120 megahertz of additional spectrum to be reallocated from mobile broadband services for the broadcast incentive auction. If we don't see strong participation from the broadcasters during the incentive auction process that reaches Congress' goals, does FCC have a fallback plan?

Mr. GENACHOWSKI. Well, our focus is on implementing the statute. It is a very good idea to provide a mechanism to reallocate spectrum from existing commercial to broadband. I say that not only because Congress passed it, but because we originated it in our national broadband plan in 2010.

I think "caution" is a good byword here. But we are seeing more and more reason to be optimistic, including the formation of the group of Chairman Walden mentioned before. And my hope and expectation is that we will see a successful process. Certainly, we are on optimizing all of our work to make the process simple, understandable, and allow broadcasters to be in a position with a—can make an economically rational decision.

Ms. MATSUI. OK. In case, just in case it does not work out quite the way you feel it should work out, do you have a next step at all? I mean, where do you look for the next tranche of spectrum? I am sure you are looking at this not just in a linear way. That

is not the way everyone operates here. You are thinking about other opportunities here.

So where do you see the next tranche of spectrum coming from after the upcoming incentive auction? Are you looking at the 1755 to 1850 band?

Mr. GENACHOWSKI. Yes. It is a great question. And we don't see these as mutually exclusive at all. And so 1755, the 3.5-gigahertz item that we will vote on later today, which is 100 megahertz that we are very excited about, 40 megahertz of spectrum that the Commission voted on last night to free up in the satellite band, 30 megahertz of WCS, we see other opportunities for government spectrum. So this is a very high priority; as a commission, we all agree on it. And whatever happens with incentive auctions, we will continue to move forward relentlessly on all of the other opportunities and policies.

On the incentive auction piece, I expect it will work. Congress will continue to be interested. I think what Congress has done in the law is to say, this is a band where we expect to see a significant amount of spectrum freed up for mobile broadband.

Ms. MATSUI. Right.

Mr. GENACHOWSKI. This is how we would like to see it work. And I expect that the broadcast industry will get that message.

Ms. MATSUI. OK. Commission Rosenworcel, you know, spectrum is going to be a big part of the budget debates in the coming years. So we will need to generate new revenues for the Treasury. As stakeholders continue their efforts for a long-term spectrum solution, do you see any opportunities for a meaningful amount of revenues that can be generated, at least probably in the short term, from sharing opportunities? What are your ideas on ways to generate revenues from sharing and ways to incentivize agencies to relocate?

Ms. ROSENWORCEL. With respect to spectrum, I think demand is only going to continue to grow. So we are going to need to have an all-of-the-above approach. That will include things like sharing. And as you are probably aware, with the 1755 band, we are trying to identify if that is viable for sharing with the 2155 megahertz band that we need to auction within the next 3 years.

With respect to existing Federal users, I believe that agencies are mission-focused. They use their spectrum in service of their missions, but they lack today incentives to use that spectrum efficiently. I think it is time that we infuse those missions with rewards for using their spectrum efficiently. And if we do that, we are highly likely to be able to call more spectrum back from Federal users over time and repurpose it for commercial use.

Ms. MATSUI. So in working with some of the agencies and talking with them, I think they understand that. But this idea of relocating en masse is something they can't do. Not in a short term, anyway.

So as we move forward, I think we need to be very creative about how we incentivize the agencies to move forward in a way that is timely by trying to figure out more incentivizing ways to do this and also incentivize the sharing as maybe an interim step as moving forward. And I think what I am saying is what we need to do is have a long-term process with certain benchmarks along the way so there is a sense that we are moving forward.

So anyway, I thank you very much for everything you are doing, and I yield back my time.

Mr. WALDEN. The gentlelady yields back the balance of her time.

The Chair recognizes is incoming vice-chair of the Subcommittee on Communications and Technology, the gentleman from Ohio, Mr. Latta.

Mr. LATTA. Thank you very much, Mr. Chairman, and thank you very much for conducting the hearing today, and again to all the Commissioners for appearing before us today.

I have an explanation from Cisco, "Why Spectrum of 5 Gigahertz is Better for Unlicensed Use Than Even the White Spaces."

I would request unanimous consent to submit it for the record.

Mr. WALDEN. Without objection.

[The information follows:]

12/12/12

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An Unlicensed Roadblock?



[Mary Brown](#) | October 20, 2011 at 2:39 pm PST
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The road to US spectrum reform often feels like anything but a Superhighway. New obstacles emerged just today, when it became apparent that House Members on the Energy and Commerce Committee have yet to reach agreement on much needed spectrum legislation.

The latest roadblock? What to do about unlicensed spectrum.

As the leading provider of unlicensed devices in the world, Cisco has a unique business perspective on this matter and has thought a lot about this should be reconciled, and our perspective is well settled.

We strongly believe that unlicensed technology such as WiFi will be a critical part of addressing the rising demand for data traffic from smartphones, tablets, laptops, and a myriad of other mobile devices. Mobile carriers need more spectrum to address this demand, and more spectrum is needed for unlicensed devices, too.

For uncensored, policymakers should focus their attention on 5 GHz and the benefits of expanding the existing vibrant WiFi ecosystem.

If we take a wrong turn now, then we will miss an enormous opportunity to free up more spectrum for mobile broadband and generate billions of revenue for the federal government.

Here's why:

First – Congressional action on spectrum would yield enormous benefits in the short term – driving economic growth, creating jobs, and spurring innovation. With any legislation, there will be different views. That's part of the process. But differences should not bring the process to a standstill.

Spectrum legislation is needed to give the FCC tools to make more wireless broadband spectrum available. Based on Cisco's Visual Networking Index data demonstrating the projected growth in mobile data, it is critical to get this issue addressed. In addition, it is critical to move forward on transitioning more spectrum from federal use to commercial use. We are at the very beginning of the mobile broadband explosion, and failure of policymakers to act now will mean a lack of connectivity, dropped connections, and slow data rates in the future. No one wants that outcome.

Second – the value of WiFi and other uncensored technologies that run on uncensored spectrum is to take spectrum that would otherwise not be used, and to put it to productive work. In other words, in situations where uncensored can co-exist with an existing use, and not interfere with that use, that ability to "share" is the economic dividend that should command the policymaker's attention.

The expansion of uncensored technologies such as Wi-Fi from the original 2.4 GHz band into 5 GHz occurs in a shared environment and has proven to be remarkably successful– uncensored shares with federal systems at 5 GHz, using spectrum that would otherwise lie fallow. Maximizing industry's ability to put that spectrum to work, without creating harmful interference to existing users, should be everyone's goal in a world where WiFi is in every mobile device, and new WiFi applications are growing at a brisk clip.

Third – a critical question in spectrum reform is whether the reform will result in spectrum being put to work in the economy. Uncensored spectrum at 5 GHz consists of an ecosystem of large, well-established chipset manufacturers, hundreds of radio manufacturers and others who already are producing technology for sale in most countries of the world. If additional uncensored spectrum is made available at 5 GHz, there is an immediate impact to US industry to produce innovative new products, and drive new applications, to benefit business and consumers. For that reason, Cisco strongly favors policies that support an examination of whether additional shared spectrum at 5 GHz can be made available to uncensored.

Proposals before Congress to create a new, sub 3-GHz spectrum band for uncensored, such as a new band in the TV UHF band dedicated to uncensored, put the emphasis in the wrong place. New radio ecosystems, even in favorable circumstances, can take a decade or more to develop, leaving spectrum unused at a time when the licensed mobile industry has an acute demand for it. Whether a new uncensored ecosystem could successfully develop in the UHF band is anybody's guess.

Of equal importance, clearing spectrum below 3 GHz for uncensored excludes one use (licensed mobile) in favor of another (uncensored). Contrast that to uncensored use at 5 GHz, where existing federal users remain, uncensored devices operate on spectrum that would otherwise remain idle, and everyone benefits from more

intensive use of the radio spectrum. To Cisco, shared spectrum use, building off the existing ecosystem at 5 GHz, presents the most compelling vision for unlicensed.

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Good article, Mary.



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

Commissioner Pai, the statute identifies an additional 195 megahertz of spectrum above 5 gigahertz for unlicensed use. In light of that, does it make sense to jeopardize the auction and the public safety network by pulling out for unlicensed use the broadcast incentive spectrum ideally suited for licensed wireless broadband?

Mr. PAI. Thank you for the question, Congressman.

As I stated in my testimony, I am very bullish about unlicensed use in the 5 gigahertz band for the reasons that I expect are identified in the letter you just submitted for the record. I have spoken with Cisco and other players in the industry who have worked on and helped develop Super Wi-Fi technologies that would be compatible with the 5 gigahertz band, 802.11ac standard, which I mentioned earlier.

But the basic reason I am bullish about 5 gigahertz in particular is this: If you think about what the ideal use for unlicensed is, it is fast speeds for data transmission within a relatively small area, such as a home or an office. Five gigahertz is perfect for that because you can, as the Spectrum Act envisions, dedicate gigantic channels that would be 160, even larger megahertz, for the sole purpose of transmitting data.

And, additionally, not an engineer—much to my parents' chagrin—but what I have been informed is that the propagation characteristics of 5 gigahertz waves are such they don't travel through walls, they don't travel very far. So you don't have the risk of interference that you might have lower in the band.

So if you have, you know, gigabit wireless throughput, thanks for 5 gigahertz, that is a tremendous opportunity that I think we should take advantage of.

So I am pleased that the Spectrum Act requires the Commission to commence the rulemaking process on 5 gigahertz by February, because I think that this is an area, consistent with the Chairman's call for greater innovation and investment in unlicensed, where we could really see some bang for relatively little bucks.

Mr. LATTA. Thank you.

Commissioner McDowell, the administration has talked a lot about the need to bring additional spectrum to the market for commercial use. In your view, has their behavior matched the rhetoric and how important is the secondary market in dealing with the spectrum crunch?

Mr. McDOWELL. I think there are two issues, actually. One would be spectrum sharing in the Federal spectrum space, and the other would be secondary markets.

So to answer a your secondary markets question first, I think we could do better to ensure a freer and faster flow of spectrum in those markets to make sure that spectrum flows to its highest and best use in as unencumbered a way as possible.

Secondly, I would love to see the executive branch, Federal users spectrum, actually do a better job of offering up spectrum for auction rather than sharing. Sharing can be very beneficial, as we have just discussed; unlicensed use, that is a form of sharing. But there is no substitute for exclusive-use licenses.

I think Congress can have a role here in maybe trying to provide Federal users of spectrum an incentive to get off their spectrum.

It is an opaque process right now. The law says that if it costs more to move them off their spectrum than it would raise at auction that you can't move them. So let's do what we can to get them off that spectrum and try some carrots.

Mr. LATTA. Thank you.

Chairman Genachowski, in the NPRM it talks about a geographic area. It says, "items available for bid." And when I was reading through this and kind of going back, what Mr. Dingell was also talking about because, you know, where we are located from northwest Ohio, and of course growing up as a kid, we got Canadian television stations in our area, and vice versa for Canadians.

What is the definition and how would you define that geographic area because you say the multiple blocks of spectrum available in a geographic area? What is a geographic area?

Mr. GENACHOWSKI. I think that is a question that we teed up for comment and input in our public proceeding.

If I could say one thing on the border issues, these are very important issues that come up every time there is any transition in spectrum, whether it is commercial or public safety, and we have very good processes in place both with Canada and Mexico to negotiate through these issues. And in decades of work, our countries have solved every one of them. And so I fully expect that that will happen here and that we will address the border issues in a way that doesn't interfere with the incentive auction.

Mr. LATTA. Thank you very much, Mr. Chairman, and I yield back.

Mr. WALDEN. The gentleman yields back the balance of his time.

The chairman recognizes the gentleman from New Jersey, I believe is next, Mr. Pallone.

Mr. PALLONE. Thank you, Chairman Walden.

Let me quickly say that I encourage the FCC to keep on track with implementation of this spectrum law, but not to overlook important details that will ensure a successful auction for all stakeholders.

However, today, I am interested in discussing the recent superstorm Sandy. Its devastation has greatly impacted my district and many other districts in New Jersey and New York. An examination of the communications performance and reliability in the wake of Sandy is of great importance. And that is why my Democratic colleagues sent a letter to you, Chairman Walden, requesting a hearing following the storm. It seems that communication services failed to perform as needed during and after the storm, power outages and floods disrupted many types of communications, including wireless, TV, telephone, and Internet services. According to the FCC, the storm knocked out a quarter of the cell towers in an area spreading across 10 States, leaving millions of cell phone users unable to make calls.

I had three questions I wanted to ask Chairman Genachowski. And first, what are you doing to ensure the reliability of the communication networks during and after natural disasters? And, more specifically, what efforts are underway at the FCC to identify and highlight best practices and, where necessary, to address potential vulnerabilities in our communications infrastructure?

All that in a minute or two.

Mr. GENACHOWSKI. Let me try to cover a little bit of ground. Obviously, the devastation in New Jersey and that region was tremendous. And I want to note that our 24/7 operations center at the FCC played in this disaster as it had in others a very important role in the recovery efforts. In New Jersey in particular, we were engaged with the New Jersey Broadcaster Association in efforts to get fuel to cell towers as quickly as possible, working with State and local authorities in New Jersey, as well as FEMA.

We did receive your letter. And, in fact, as you might know, we have announced field hearings that we will be starting in January. That continues an effort that has been underway at the Commission to ensure, working with State and local authorities, the resilience and reliability of our communications networks.

These disasters show that communications devices, mobile communications devices, are interwoven in our lives. They are how we communicate with our families, with emergency services providers, our businesses. And we need to constantly look at these issues, make sure we have in place systems, including best practices, that give us a reliable communications network. And we have to take seriously the interconnection between our communications grid and our power grid which have their own issues—

Mr. PALLONE. Right.

Mr. GENACHOWSKI [continuing]. And address what we need to do to make sure the communications networks stay up.

Mr. PALLONE. Let me move on because I want to ask two more things.

But if those field hearings haven't been scheduled, if there is some way to coordinate it with our schedule in the House, because it would be nice to be able to be there, if that is possible.

Mr. GENACHOWSKI. We will work with you on that.

Mr. PALLONE. Large numbers of people, as you know, because they didn't have power, turned to the radio and other broadcasting. You mentioned the broadcasters. Audiences were up 247 percent Monmouth County, 195 percent in Middlesex. These are part of my district.

How are you working with the broadcasters to ensure that they continue to play an important and robust role in information sharing during natural disasters like Sandy?

Mr. GENACHOWSKI. I agree with your point. And we saw both TV and radio continue to play a important role in disasters at the same time as we see mobile and new Internet, social media play important roles. I agree with Craig Fugate, our FEMA head, that these multiple platforms together can help improve our public safety profile all around.

The broadcasters, one of the things that we do during crises like these is make sure that when they have tower or other issues affected by the storm, we immediately do what we need so that they can stay on the air. And during this disaster, we granted a number of what are called STAs, essentially Special Temporary Authorizations, to make sure broadcasters can stay on the air. This is a hard thing for broadcasters to do, and others.

And I just want to take a moment to note that the broadcasting industry, the mobile industry, the cable industry, in the worst

parts of the storm, each of those sectors had people on the ground, at risk to their own personal safety—

Mr. PALLONE. That is true.

Mr. GENACHOWSKI [continuing]. To get networks up and get them back up.

Mr. PALLONE. Let me just ask you lastly about Wi-Fi. When many citizens in the States lost access to wireless and Internet, I understand that Wi-Fi hotspots were offered for free in public areas during and after the storm and became an alternative for Internet access.

Does this highlight the approach you discussed today about the need for a balanced spectrum policy that includes unlicensed uses like Wi-Fi?

Mr. GENACHOWSKI. Yes.

Mr. PALLONE. You have 2 seconds for that.

Mr. GENACHOWSKI. Yes.

Mr. PALLONE. All right. Thanks so much.

Thank you, Mr. Chairman.

Mr. WALDEN. Were you able to get the questions in you needed?

Mr. PALLONE. Yes. "Yes" was fine for the last one. Thank you.

Mr. WALDEN. All right, thank you. We will look forward, Chairman, to the results of your hearings out there as well. I think the committee, obviously, on both sides, very concerned about response in a disaster situation. And as we have talked after the nationwide EAS test, which you initiated for the first time didn't quite come out as we would all hope. These things matter a lot. So thank you.

We will go now to the gentleman from California, Mr. Bilbray, for questions.

Mr. BILBRAY. Thank you, Mr. Chairman. And Mr. Chairman, I would like to follow up on the questions from the gentleman from Michigan, Mr. Dingell.

You know, Mr. Chairman, the conversation with Mr. Dingell has got me kind of concerned. I don't know what part of the country you hail from.

Mr. GENACHOWSKI. I was born in Boston, grew up in New York.

Mr. BILBRAY. All right. Can you imagine what the response would be from the people in Boston or New York or Washington, DC, if they tried to make a phone call and someone in a foreign language, or in English, notifies them that France—you know, the Paris cell phone company has confiscated your call and that if you want to make this call you need to call this number and get a license—basically get an account with them.

That is the kind of response that people along our international borders get, and have in the past.

Can you imagine my constituents or my brother says to me, "When I am a part of the United States, why is a foreign corporation confiscating my calls?"

So I am very concerned when, first of all, when Mr. Dingell brought this issue up, it didn't seem to be on your radar, quote, unquote.

And I am also concerned when you state that we have a history of great cooperation with our neighbors to the north and the south.

I want to make sure today that you are all aware this is an issue that you need to address. And the people along the fronteras, both

north and south, are just a much a part of the United States and have as much right to access to telecommunications as somebody in New York, Boston or DC. And should not have to accept the fact that, well, you are on the border so you just accept the fact foreign companies can confiscate your calls.

So that said, and I think I made it clear, what conversations are you having today with the United States of Mexico and Canada?

Mr. GENACHOWSKI. Well, I would like to follow up with you on the issues you are mentioning and learn more.

With respect to the incentive auction transition and border issues that will come up with broadcasters who may have to move to stations where they are concerned, and I understand these concerns with the potential for interference, we have begun the process at the staff level with both Mexico and Canada to work those issues out. These are similar to issues that have been worked out in public safety bands and in other bands. But I look forward to working with you and make sure we fully understand your concerns.

Mr. BILBRAY. I mean, it is an essential issue. My hometown, at least half of the city cannot make cell phone calls at certain times because of foreign interference. And then we finally worked that out with some deals.

But how close are we to resolve these issues, though?

Mr. GENACHOWSKI. I would say we are at the beginning of the process with respect to incentive auctions in Canada and Mexico.

Mr. BILBRAY. What incentive is there for Canada and Mexico to cooperate with us on this issue?

Mr. GENACHOWSKI. Ultimately, they seek to put in place spectrum-related services in their countries that have counterbalancing effects on people who live on the U.S. side. And so it is in both countries' interests in order to maximize their own services to reach accommodations at the borders. It is true for both commercial and public safety. It is sometimes a bumpy process, and I certainly wouldn't want to overstate how easy it is to get through—these issues resolved. But I do know over the last 4 years while I have been chairman, we have resolved some very complex issues and then our expectation is we will be able to do that here and we will work very hard to do so.

Mr. BILBRAY. OK. Let me say for the record, because everybody's talking about what—you know, the situation with Sandy.

First of all, somebody who had family that lived through Katrina, and I was in there after Katrina and in California that lived through the fires in San Diego, the reverse 911 and the cell phone capabilities worked extraordinarily well in San Diego. That technology was a lifesaver and worked well.

The fact is that those of us that were hit by Hurricane Katrina found that it was much more probable that when your electricity gave out that your cell phone worked enough to be able to call and say you were out of power. And I know it for a fact that transformers were replaced. And it was because of that public/private partnership that we had during those disasters, both in San Diego and down in the Gulf that that ability to have that public/private was absolutely essential.

So I just got to tell you, with everything, the problems we pointed out, the fact is that it was much more probable after Katrina that you had phone services than if you had power services.

And so those who want to talk about the old hard line technology as being dependable, it definitely was not more dependable than the new technology we had. So with all problems they talk about Sandy, I will just tell you as somebody who lived through two disasters, the system worked well.

My concern still is on you. The people along the borders of the United States put up with a lot because of where they live. They darn well shouldn't have to put up with foreign corporations or foreign governments confiscating their communication system. And you, all of you, have as much responsibility to make sure that does not happen again and make sure they have equal access to their technology or their government and their system as somebody who lives in Kansas.

And with that, I yield back, Mr. Chairman.

Mr. WALDEN. Gentleman yields back.

And I appreciate the Chairman's willingness to continue to work with our colleague from California in the future.

Now I recognize the gentlelady from the Virgin Islands, Dr. Christensen, for 5 minutes.

Mrs. CHRISTENSEN. Thank you, Mr. Chairman. And thank you to the Commissioners for being here this morning.

I guess a lot of my questions have been at least in part answered. We talked about the importance of the radio and television broadcasters during Sandy. And as a person who comes from an area that is prone to hurricanes, those are important to us. And we also—Congressman Pallone talked about the importance of Wi-Fi, and we know that the cable companies were able to use Wi-Fi and provide services so that families could communicate during Sandy and communicate with emergency services.

So some of you have already indicated your commitment to this, but I just wanted to assure from each of you that you are committed to promulgating rules that will promote the use of unlicensed technology in the guard bands.

I think you answered it, Commissioner Pai, in your last question, that each of you are committed to promulgate rules that will promote the use of unlicensed technologies in the guard band?

Mr. GENACHOWSKI. Is that—that was our proposal. And we are now seeking comment. And we have laid out the Commission proposal, which is to do that.

Mrs. CHRISTENSEN. OK.

And, again, on the issue of diversity, which at least two questions were asked regarding this already. But a continuing concern to the Tri-Caucus is the need for more women and minorities in ownership positions in media companies.

Are you concerned at all, Chairman Genachowski and maybe Commissioner Clyburn, that the television stations most likely to offer to return their spectrum in a voluntary incentive auction might also be stations that offer unique and more often the more ethnically diverse programming?

Mr. GENACHOWSKI. I am concerned in general about diversity. It is a fundamental obligation of the Commission. I do think that the

incentive auction provides new economic opportunities for minority broadcasters, for language broadcasters, et cetera, because in a difficult market it creates opportunities to receive additional capital for spectrum sharing or for moving from UHF to VHF. And we certainly heard from members of the minority community that they are interested in learning more about those possibilities, because this could be win-win for minority broadcasters.

Mrs. CHRISTENSEN. Commissioner Clyburn.

Ms. CLYBURN. As you know, the existing ecosystem as it relates to diversity, particularly with people of color and women, it is almost nonexistent. I mean, we are talking about single-digit ownership engagement. So that always has been, even before I got sworn in, has always been an interest of mine and a concern of mine.

As it relates to this current pathway, as it relates to incentive auctions, one of the things that I say all the time, and I am very monotone and repetitive about it, is this is a voluntary engagement. And because of that, even though the numbers could be few, they do have an opportunity to participate in this framework. I am hopeful that it will take advantage of and consider any and all opportunities, including sharing, so existing programming cannot or will not be lost.

Mrs. CHRISTENSEN. And perhaps the Tri-Caucus could be helpful in providing information and opportunities or encouraging some of our stations to participate.

Ms. CLYBURN. Absolutely. And as it relates to employment, too, this office has been engaged with a lot of principals and a lot of people in the ecosystem. And I look forward to working with you on those issues.

Mrs. CHRISTENSEN. Thanks, and Commissioner Rosenworcel, just a follow-up to Ms. Matsui's question, were there specific incentives that you had in mind for—I serve on the task force. So we were discussing these with some of the government agencies, how they can reallocate, give up some of their spectrum. Did you have some specific ideas about incentives?

Ms. ROSENWORCEL. Yes. For starters, though, I want to say that the task force that the subcommittee has set up on Federal spectrum is a terrific idea. I appreciate that it is bipartisan.

The wireless revolution is here to stay. The demands on our airwaves are only going to continue to grow. As far as incentives for Federal users, I think we need to create them so that they can be efficient and they are inspired to return spectrum so that we can auction it off for commercial uses. That could include financial rewards associated with the revenues from its subsequent auction for commercial use, it could also include structural rewards in the budget and appropriations process. And, finally, I think that these ideas are consistent with the idea of synthetic currency, which was proposed by the President's Council of Advisers of Science and Technology in their recent report on Federal spectrum use.

Mrs. CHRISTENSEN. Thank you.

And I guess my last question to the Chairman, Commissioner Pai suggested June 30th, 2013, as a deadline for the auction. Is that a reasonable or an achievable date?

Mr. GENACHOWSKI. I think, I stand to be corrected I think it was 2014.

Mrs. CHRISTENSEN. 2014. Sorry. Yes.

Mr. GENACHOWSKI. So 2014 is I think when we are targeting. I think we will know more about what would maximize the benefits of the auction as the comments come in. But we are certainly on a path to conduct the auction in 2014.

Mrs. CHRISTENSEN. Thank you, Mr. Chairman.

Mr. WALDEN. The gentlelady yields back the balance of her time. The Chair recognizes the gentleman from Kentucky, Mr. Guthrie, for 5 minutes.

Mr. GUTHRIE. Thank you very much. I really appreciate the Commissioners for being here today. I appreciate your taking your time to be here.

A couple of questions, three questions. One for the Chairman first.

In the statute, the language “all reasonable efforts,” the language is in there designed to preserve the contour of a current television signal.

Could you tell me what that phrase means to you, and will that phrase be interpreted to mean no more than a certain amount of interference will be tolerated and, if so, how much will that be?

Mr. GENACHOWSKI. Well, I think that is the kind of question where we have an obligation to run the process we are running, hear from stakeholders and get input on the precise definition. The statute is clear “reasonable efforts on population and coverage,” and our obligation is to comply with the statute.

Mr. GUTHRIE. So you don’t have any personal interpretation of that?

Mr. GENACHOWSKI. No. No. We laid out, I believe, some thoughts in the notice of proposed rulemaking, but we will work very closely with stakeholders on giving content to the Congressional directive.

Mr. GUTHRIE. All right, thanks.

Commissioner Pai, I was on the working group for government spectrum, and Congresswoman Matsui and I led that effort, and we took a deep dive into it. And one thing that we were looking around is the issue of shared spectrum. So in the PCAST report, the 2012 PCAST report suggested that we should move away from licensing and towards a greater reliance on spectrum sharing.

And my question for you is, are you aware of any commercial available product that is available today for use if we move towards a system of sharing? And to the extent that infrastructure and devices are not currently built around the concept of sharing, what might the challenging tradeoffs be?

Mr. PAI. It is a great question and I think I am not personally aware at this point. But one of the things I do have concerns about with the sharing is it is a largely untested, untried endeavor that requires coordination among potentially hundreds of Federal users. One of the fears, as I pointed out in my testimony, is that while larger players and on the commercial side may be up for the challenge of doing that kind of coordination, some of the smaller players might not.

I think—I am not opposed to innovative sharing strategies, as I said, again, in the testimony, that geographic sharing, for example by creating exclusion zones, can allow us to reuse the spectrum in places where Federal users aren’t using it. But I think, by and

large, our focus really should be on clearing. I think an unencumbered right to spectrum creates a maximum incentive for a user on the commercial side to develop it and to deploy it in an efficient manner to the benefit of consumers. And so one of the things that I think we really need to prioritize is not just sharing writ large or even sharing as an interim measure, but clearing as the gold standard for our approach to Federal spectrum in particular.

Mr. GUTHRIE. Thank you.

Then for Commissioner McDowell, also from the work of the working government spectrum working group, the GAO recently reported that total percentages of the most highly valued spectrum exclusively or predominantly used by Federal government is as high as 57 percent. And given Federal agencies' budgets, many of these systems are not up to date and thus operate inefficiently.

And would you discuss whether or not some of these Federal uses could be served by commercial mobile private providers and how could Federal spectrum holdings be operated more efficiently? So could commercial also take some use of this Federal—of government use and then how would it be more efficient?

Mr. MCDOWELL. Excellent question. And this is something I have been talking about for years, actually, is the potential for off-the-shelf private sector solutions, including with a nationwide public safety network. I think that is going to have to be a must. Seven billion isn't going to cover it, as the statute calls for. You are going to have to have off-the-shelf, private sector technologies to help there.

But we don't know how efficiently the Federal Government is using spectrum. I think we can safely assume, however, that it is not using it terribly efficiently. And that is why I think Congress really needs to step in here to try to make that whole world less opaque and more transparent respecting classified spectrum and all the rest, but to make it more transparent and also to give Federal spectrum users an incentive to relinquish their spectrum for exclusive use licenses through auction as Mr.—as Commissioner Pai just eloquently pointed out. That does provide the best incentive for build-out and use of these frequencies.

Mr. GUTHRIE. While I have got a few—a half of minute, I guess, basically, the question for Commissioner Pai, anybody else want to respond to what was basically to commercial available products that sharing will work or the likelihood of it happening, it working.

Mr. GENACHOWSKI. I would just point out that it is in the interest of both the commercial sector and the military to develop incentives to get more commercial technology into military use. The reason is, there is a growing gap between the price and functionality of military communications equipment and commercial. There always has been. It is getting larger because of the tremendous innovation on the commercial side.

I have had a chance over the last few months to speak directly with senior officials in our military services. And I believe that there is real work going on to think about how to take advantage of commercial innovation on the military side more quickly, providing better communications to our troops at lower cost.

Mr. GUTHRIE. Thank you very much.

I yield back, Mr. Chairman.

Mr. WALDEN. The gentleman yields back the balance of his time. The Chair recognizes the gentleman from Illinois, Mr. Rush.

Mr. RUSH. Thank you, Mr. Chairman. And to the Commissioners, happy holiday. And I welcome you here to this hearing.

You five Commissioners are some of the—are five of the most important people in our Nation. You five Commissioners oversee networks, industry, mediums that inform our democracy and that are essential to protecting our freedom. You oversee industry, the sectors that make up more than a fifth of our GDP and employ tens of millions of our Nation's workforce.

However, I have been on this committee for about 17 years. And for those—each of those 17 years, I have seen a litany or many, many Commissioners come before us to discuss minority ownership. And we seem to get more and more platitudes, less promises, but absolutely no performance. And I am getting pretty fed up with this continuum of excuses that seem to come forth from the Commission itself. I think it is high time now for you to get serious about this issue of media ownership.

As a matter of fact, there has been—and I am going to ask you the question. And you each can answer this with a yes or no answer. Is it acceptable to each of you that there are only 28 full-power TV broadcasters owned by minorities in this country? Yes or no.

Mr. GENACHOWSKI. No, that is not acceptable.

Mr. MCDOWELL. No.

Ms. CLYBURN. No.

Ms. ROSENWORCEL. No.

Mr. PAI. No.

Mr. RUSH. Does the Commission know, for example, how many minority employees are in the broadcasting or new media industries? Do you know the answer to that question?

Mr. GENACHOWSKI. I don't know the number off the top of my head.

Mr. MCDOWELL. No.

Ms. CLYBURN. I don't have that information.

Ms. ROSENWORCEL. No, I don't have that information right now.

Mr. RUSH. I am also glad that you all postponed your rulemaking on media or media ownership because you did not know the impact of the proposed rules on minority ownership and audiences. And so that leads me to another question that I have.

What besides a new tax certificate policy could increase diverse ownership of special licenses?

Let me just give you some figures.

In the 17 years that FCC had the minority tax certificate policy, that policy produced 364 tax certificates and over 200 million transactions, totaling more than \$1 billion in value. That represented about two-thirds of all minority-owned stations. When the policy, the tax certificate policy, began minorities owned about 40 of the 8,500 broadcast stations. Over its lifetime, the policy, the tax certificate policy, helped raise that number to 333 stations; 290 radio stations, 43 TV stations. It also yielded 31 cable systems. Currently, there are no minority-owned cable systems that are operating today.

And my question to you is, what do you believe, other than a new tax certificate policy, could increase diverse ownership of broadcast licenses, given the history of the tax certificate program, which was ended by the Republican Congress in 1995?

Mr. GENACHOWSKI. A few points, if I could. I agree with you on tax certificates and encourage the ongoing consideration of that. I will mention several areas of potential. One is the Low Power FM order that we adopted last month, which will create new opportunities for minority and other broadcasters to get into the business at lower levels of capital. And so for new entrants from the minority community, I think that is an important opportunity.

A second is the work that we have been doing under the leadership of Tom Reed in our Office of Communication Business Opportunities to try to bring together capital and minority women, other small business entrepreneurs. Very good work, and I thank Tom Reed for that work.

And the third that I would point to is the Open Internet Order, which keeps the Internet and content media on the Internet available for anyone around the country to develop the business and reach an audience. And we are seeing minority entrepreneurs take advantage of that platform, create online content businesses, and then use that as a way to move to traditional media platforms.

Mr. WALDEN. I know the gentleman's time has expired, but go ahead.

Mr. McDOWELL. With the Chair's indulgence, if I could add to that. Five years ago this month, December 27th, the Commission voted out its historic Diversity Order. There were 13 items adopted; six were turned back by the Federal appeals court in Philadelphia, the Third Circuit, seven still remain.

I have been a long time, ardent supporter of the tax certificate program, but there is more that can be done. Incubator programs, incentives in general to make it easier to convey stations from non-minority owners to minority owners. We also need policies that promote more access to capital. This is really what is at the root of all this. That is where the tax certificate program is so helpful. So whatever policies we could find, whatever we want to call them, that promotes access to capital for minorities and disadvantaged businesses.

Ms. CLYBURN. Number one, of course, is access—may I?

Mr. WALDEN. Yes.

Ms. CLYBURN. Thanks. Number one of course, as my colleague stated, is access to capital.

But number two, in terms of the FCC's jurisdiction, at this time we do not have sufficient data in order to have a judicially upheld standard of framework, to meet that framework in order to move forward in any narrowly tailored approach. So the studies, fully funded studies to that end could help.

Mr. WALDEN. If you want to be quick, then we have to get to Mr. Stearns.

Mr. PAI. Very quickly, Congressman, two ideas that don't depend on congressional action. One idea is an idea that I have endorsed with the Minority Media and Telecommunications Council, and that is increasing access to capital by allowing more foreign investment in U.S. broadcast holding companies. Currently, broadcasting

is the only niche the communication industry where the FCC maintains a 25 percent cap, which inadvertently limits the amount of capital that U.S. broadcasters, minority broadcasters in particular, can get.

Secondly, I endorsed in September the—what I call an AM radio revitalization initiative. Minority broadcasters in particular are disproportionately in the AM band. And it is between 21 years since we have revisited our rules at the FCC. So one of the things I would like to do is revitalize the band by trying to figure out whether there are any of rules which, inadvertently or not, stand in the way of greater minority ownership on the radio side.

Thank you, Mr. Chairman, for your indulgence.

Mr. WALDEN. I know my ranking member wants to make a quick comment. Then we will go to Mr. Stearns.

Ms. ESHOO. It is my understanding that, Mr. Chairman, that you haven't allocated the funds for this study.

Mr. GENACHOWSKI. For—well, there is a study ongoing.

Ms. ESHOO. To meet that standard.

Mr. GENACHOWSKI. There is a study ongoing for which we have allocated substantial funds. That is ongoing. And we have requests for funds in our 2013 budget that would allow us to move forward with the next round of studies.

Ms. ESHOO. Is it enough money to complete it?

Mr. GENACHOWSKI. I think the amount we have requested for 2013 is enough money to complete it, yes.

Ms. ESHOO. Thank you.

Mr. WALDEN. Well, having given almost twice as much time as anybody else, we will now move on to Mr. Stearns to wrap up our hearing.

Mr. STEARNS. Thank you, Mr. Chairman. Mr. Chairman, this is a very good hearing.

Chairman Genachowski, just a question. When we passed the bill in February with this middle class tax cut, I think as I recollect the figure was, we were going to try and give back or auction off, make about 26 billion. Is that the figure you remember?

Mr. GENACHOWSKI. I think the CBO score was roughly that.

Mr. STEARNS. Roughly that. Based upon what you see now and your effort so far, do you think that is feasible we will get that kind of money back?

Mr. GENACHOWSKI. Well, I actually shared Commissioner McDowell's characterization before, which was that we should be cautious. But certainly maximizing, generating a very substantial amount of revenue to at least cover First Net and beyond is an important part of our implementation of the statute.

Mr. STEARNS. In your notice of proposed rulemaking, I think there was a—there is some question I think in the industry by some segments that they are worried about the—when you go to different geographic locations there is not enough specific information so that the repacking process is clear. And I guess to minimize the extensive task of repacking for the broadcasters, I guess, have you done an analysis across the board on some geographic locations where that spectrum could be more broad and less narrow, something like that? Does that make sense?

Mr. GENACHOWSKI. Congress, in the law, it instructed the FCC or had some language on how to calculate that. Reference to OET Circular No. 69. So we are now working with the congressional language. This is part of our proceeding. And to the point Congressman Markey made before, rolling up our sleeves with the engineers in the broadcast industry and the mobile industry to maximize the opportunity.

Mr. STEARNS. So you say it is a formula that you are using?

Mr. GENACHOWSKI. We haven't decided how we will do it. Our job now is to implement the provision of the statute that sets some guidance for the methodology for repacking.

Mr. STEARNS. Should part of that be part of the notice of proposed rulemaking so that they could understand what you are doing, or is this just going to be after the notice is over?

Mr. GENACHOWSKI. The notice addresses this issue, and this will be an ongoing process involving engineers at the industries and at the FCC to maximize the ability to free up spectrum.

Mr. STEARNS. Commissioner McDowell, what percent of the spectrum usable for mobility is controlled by the Federal Government?

Mr. MCDOWELL. I have seen estimates at about 60 percent. That may vary.

Mr. STEARNS. Is it a concern that other countries seem to be able to clear spectrum for commercial use while we don't seem to be making the same progress?

Mr. MCDOWELL. First of all, I think the U.S. as always been a world leader in spectrum. But we do have to have serious concerns about our competitors abroad, yes.

Mr. STEARNS. I think—is this a question of leadership for us to be more expeditious, perhaps like folks overseas, or is this just a failure of why we are not as equipped as they are? Do you think there is any reason why we can't be? Or you just think—

Mr. MCDOWELL. So many thanks to Congress for passing the Digital TV Act of 2005, and that opened the door to the last major spectrum auction we had, which was almost 5 years ago, in 2008. That actually helped us leapfrog other nations. But in the past 4, 5 years, we haven't had any major auctions, and we need to get on to that.

Mr. STEARNS. That is what I hear when I talk to other countries, that they seem to be ahead of us. And so we just wonder whether it is our leadership here or it is whether—what can we do?

Let me move on here. Commissioner Pai, the July 2012 PCAST report suggests that the new Federal spectrum architecture is that the norm for spectrum use should be sharing, not exclusivity. Comparing the track records for sharing and exclusivity, which approach has driven more investment in our wireless networks?

Mr. PAI. I think, Congressman, without question, it has been the latter approach, clearing exclusivity—

Mr. STEARNS. Exclusive is much more.

Mr. PAI. Correct.

Mr. STEARNS. Right. And with that in mind, it is worth more all the time?

Mr. PAI. I agree. And that is why I think it should be our priority when it comes to spectrum policy in the Federal spectrum area.

Mr. STEARNS. OK. Mr. Genachowski, several of the major wireless providers have joined efforts to work with the Department of Defense on the testing of several of the systems identified in the NTIA's 2012 report. It appears it is costly, time consuming to relocate, and the DOD seems to be not cooperating and negotiating well with them.

I guess the question is, have you followed this at all? What is your status or—

Mr. GENACHOWSKI. Yes. You are asking about the 1755 band?

Mr. STEARNS. Yes.

Mr. GENACHOWSKI. Yes. This is an area, there is a tremendous opportunity to move forward with testing around different bases. My understanding is that the DOD and the wireless industry are in what I hope will be the final stages of negotiating the details of the arrangement. I think it is good for all the parties to hear that there is bipartisan desire to move this process quickly so that we can test the ideas and free up spectrum in that band and do it in time to pair it with the other spectrum that Congress has required us to auction by, I believe, 2015.

Mr. STEARNS. We were just told about a month ago things seem to have come to a grinding halt. Are you familiar with that?

Mr. GENACHOWSKI. My understanding is that it is not moving as quickly as we would all like. It has not halted and that there is negotiations back and forth. Again, I think it is helpful for everyone to know that there is strong desire in Congress to see this done.

Mr. STEARNS. Thank you, Mr. Chairman.

Mr. MCDOWELL. Mr. Chairman, I would like to thank Congressman Sterns for his service, and we are going to miss you.

Mr. STEARNS. Thank you.

Mr. RUSH. Mr. Chairman?

Mr. WALDEN. Just a second. Just saying we all concur with that statement. He has done a terrific job in this committee for many years, in this subcommittee, and his leadership is greatly appreciated, and we are going to miss you.

Mr. STEARNS. Thank you, Mr. Chairman.

Mr. WALDEN. Mr. Rush has asked to be able to ask another question or two. And I have yielded.

Mr. RUSH. Thank you, Mr. Chairman. Thank you so much for your consideration.

I want to say to Cliff, it has been a pleasure sitting with you on this committee. We have not agreed on anything yet, but it has still been a wonderful, wonderful pleasure serving with you.

Mr. STEARNS. If the gentleman would yield.

I think we had a privacy bill that we were working on together and a data security for a while when you were the chairman of the Commerce, Consumer Protection and Trade.

Mr. RUSH. There was some agreement, not too much.

Mr. WALDEN. I will try and intercede.

Congressman Sterns, would you agree that Mr. Rush should have another minute to ask another question?

Mr. STEARNS. Yes.

Mr. RUSH. Fine gentleman.

Mr. WALDEN. Mr. Rush for another minute or so.

Mr. RUSH. One issue that doesn't get much attention, and I want to thank Commissioner Clyburn for her excellent work, is the exorbitant prison phone rates. As a matter of fact, it has taken this Commission 9 years and some months to rule on the right petition. That petition would cap prison phone rates at reasonable levels. It shouldn't cost more to make a cell phone call to Singapore than it is to receive a long distance call from a loved one in prison.

Does the Commission intend to issue a notice at the next Commission meeting to move forward with the right proceeding?

Mr. GENACHOWSKI. Thank you for that question. That proposal, I believe, is on circulation and is being actively considered by the Commission and hopefully will be resolved soon.

Mr. RUSH. Yes or no?

Mr. GENACHOWSKI. It is a yes, as quickly as possible.

Mr. RUSH. Thank you. Thank you, Mr. Chairman.

Mr. WALDEN. Thank the gentleman.

Mr. RUSH. Yield back.

Mr. WALDEN. I am happy to accommodate his additional request.

I think that concludes our opportunity today. We appreciate the work of the Commission, and your testimony helps guide us in our understanding how the law it is being implemented. The record will be open for 10 days for additional questions from our members who maybe didn't get a chance to offer them or think of a few others after the hearing. So we appreciate again your work, look forward to continuing the dialogue as we go forward to create jobs and innovation in America across all the spectrum and all the bands. Thank you.

The committee now stands adjourned.

[Whereupon, at 12:50 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

Opening Statement of the Honorable Fred Upton
Subcommittee on Communications and Technology
Hearing on "Keeping the New Broadband Spectrum Law on Track"
December 12, 2012
(As Prepared for Delivery)

More than a decade has passed since the September 11th attacks, and we still have not met the 9/11 Commission recommendation to create a nationwide public safety network. So when faced with the opportunity to help fund construction of the network by freeing spectrum to meet soaring demand for mobile broadband services, we leapt at the chance. The result? The broadcast incentive auction provisions of the Middle Class Tax Relief and Job Creation Act.

I will not pretend it is an easy piece of legislation for the FCC to implement. Designing a reverse auction that encourages television stations to relinquish spectrum, reorganizing the stations that choose to remain on air, and repackaging and selling the cleared spectrum in a way that generates \$7 billion for First Responders certainly presents the agency with some challenges. To meet those complex challenges, the FCC should focus on maximizing the spectrum it clears and the revenue it generates.

The agency should not complicate matters by artificially enlarging guard bands or giving away blocks of reclaimed broadcast spectrum for unlicensed use. Doing so would violate the act, which states that guard bands shall be no larger than technically reasonable to prevent interference and requires the FCC to auction all the spectrum it makes available by repurposing spectrum that stations relinquish or reorganizing stations that remain. It would also jeopardize the funding for public safety in a fiscal climate that is unlikely to provide alternate sources for the foreseeable future.

Doing so is also unnecessary. The Middle Class Tax Relief and Job Creation Act is a balanced piece of legislation. It provides the proverbial garage entrepreneur plenty of other unlicensed opportunities to generate economic benefit. First, as the FCC's NPRM acknowledges, it preserves a "substantial amount" of unlicensed "white space" spectrum. Second, it allows, but does not require, unlicensed use in guard bands. Third, it identifies an additional 195 megahertz of other spectrum for unlicensed use. That is in addition to more than 670 MHz of spectrum below 6 GHz already available for unlicensed use, which is more than the 580 MHz currently available below 6 GHz for licensed wireless use.

The FCC must also refrain from picking winners and losers and excluding certain parties from the auction. This, too, would not just reduce revenues but also violate the statute. While the act does preserve any authority the FCC has to impose generally applicable rules on spectrum aggregation, it does not allow the FCC to prevent parties from competing for spectrum through auctions.

Let's not squander this unprecedented and long overdue opportunity by trying to do too much. Neither First Responders nor the nation can afford it.

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Office of the Director

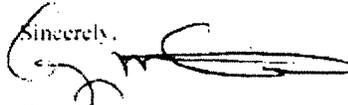
**Federal Communications Commission
Office of Legislative Affairs
Washington, D.C. 20554**

February 20, 2012

The Honorable Greg Walden
Chairman
Subcommittee on Communications and Technology
Committee on Energy and Commerce
United States House of Representatives
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Walden:

Please find attached responses from Federal Communications Commission Chairman Julius Genachowski to the post-hearing questions from the Subcommittee's December 12, 2012 hearing entitled "Keeping the New Broadband law On Track". Please let me know if I can be of further assistance.

Sincerely,

Greg Gaije
Director
Office of Legislative Affairs

Enclosure

The Honorable Lee Terry

1. As the FCC considers identifying additional spectrum for terrestrial wireless use, it is important not to lose sight of the critical services provided by incumbent users of spectrum. What is the process that the Commission intends to use to ensure that the valuable services currently provided -- both to commercial and U.S. Government customers -- will not be disrupted by the potential reallocation or reuse of spectrum?

Response: Maintaining our country's global leadership in mobile requires making more spectrum available for wireless broadband. In doing so, the Commission recognizes the importance of existing spectrum uses—by both government and commercial stakeholders—and will continue to ensure that those uses are fully considered. Our processes will continue to be transparent and open, enabling all parties to engage with the Commission, and our decisions will continue to be data-driven.

The Honorable Mike Rogers

1. The FCC's approach to petitions seeking agency action has been disappointing. For example, I understand that the FCC's Consumer and Governmental Affairs Bureau issued an order in May dismissing a Petition for Declaratory Ruling filed by Anda, Inc., a generic pharmaceutical distributor, asking the agency to clarify the statutory basis for its rule requiring opt-out notices on faxes sent with the recipient's express consent. The Petition languished at the FCC for 17 months without even being docketed, and when the FCC finally did take action, it had its staff simply dismiss the Petition without clarifying the rule's statutory basis. The FCC did so even though the uncertainty about the rule's legal basis apparently has exposed legitimate businesses to lawsuits seeking massive damages that Congress never intended to authorize. Such uncertainty also prompted the U.S. Court of Appeals for the Eighth Circuit to ask the FCC to clarify the legal basis for its opt-out rules in a pending appeal. In light of the substantial uncertainty surrounding the legal basis for this rule—and the resulting exposure to enterprise-crippling liability now faced by businesses across the country—why did the FCC fail to provide the clarification sought in the Petition?

2. The manner in which the FCC staff dismissed this Petition is also troubling. The order was issued by FCC's Consumer and Governmental Affairs Bureau, and so it is reviewable only by the Commission, not by a court. I understand that Anda has filed an Application for Review with the Commission, but I am concerned that the FCC may simply engage in further delay before undertaking that review—or may decline to act at all, in an effort to avoid judicial scrutiny. In fact, it has now been more than two years since Anda first sought a final, reviewable order from the Commission. Does the FCC intend to move more quickly on this Application for Review and finally produce an order that would be reviewable in court? Particularly given the FCC's assertions before the Eighth Circuit Court of Appeals that the FCC alone (and not the courts) may determine the scope of the opt-out notice requirements for faxes sent with express consent, doesn't the FCC have a duty to promptly issue a final agency order in response to requests for clarification?

3. Will the FCC commit to a 90-day timeframe for its review of the staff decision in question? Three months should be more than enough time, particularly given how long the underlying Petition has been pending and commitments made to Members of the House of Representatives in September 2011 to act expeditiously.

Response (questions 1 – 3): On May 2, 2012, the Commission's Consumer & Governmental Affairs Bureau issued an order dismissing the petition filed by Anda, Inc. to issue a declaratory ruling clarifying the statutory basis for a Commission rule on fax advertisements. The Administrative Procedure Act provides that an agency, in its sound discretion, may issue a declaratory order to terminate a controversy or remove uncertainty, but the Bureau found that the Petition did not identify any controversy to terminate or uncertainty to remove. The Bureau also concluded that, to the extent that the Petition challenged the Commission's authority to issue the rule itself, the challenge was time-barred, because under the Act and the Commission's procedural rules, requests for reconsideration of this rule were due in June 2006. The Bureau also observed that a previous Commission order had specifically tied the opt-out notice requirement to the purposes of section 227 of the Act.

It is not uncommon for a Bureau to dismiss a petition for declaratory ruling when, in the opinion of the Bureau, no controversy or uncertainty has been identified. Anda has filed an Application for Review of the Bureau order to the full Commission, which is currently under review. I anticipate that an order resolving the Application for Review will be circulated to the other Commissioners for their consideration in the next few months.

The Honorable Marsha Blackburn

1. Chairman Genachowski, I understand that the FCC's Consumer and Governmental Affairs Bureau issued an order in May 2012 dismissing a Petition for Declaratory Ruling asking the agency to clarify the statutory basis for its rule requiring opt-out notices on faxes sent with the recipient's express consent. The Petition, which was filed by Anda, Inc., a generic pharmaceutical distributor, languished at the FCC for 17 months without even being docketed, and when the FCC finally did take action, it had its staff simply dismiss the Petition without clarifying the rule's statutory basis. The FCC did so even though the uncertainty about the rule's legal basis apparently has exposed legitimate businesses to lawsuits seeking massive damages that Congress never intended to authorize.

- o Why did the FCC wait 17 months before taking action on this Petition?
- o Why, after Chairman Genachowski promised to act "expeditiously" on the Petition in a September 2011 letter to Members of House of Representatives, did it take an additional 8 months for the FCC to act?
- o Why did the FCC fail even to docket the Petition, issue a public notice, or seek public comment during that entire 17-month period?

- o In light of the substantial uncertainty surrounding the legal basis for this rule—and the resulting exposure to enterprise-crippling liability now faced by businesses across the country—why did the FCC fail to provide the clarification sought in the Petition?
- o Since this issue was reviewable only by the Commission and not by a court, did the FCC act in this manner in order to avoid judicial review?

Response: On May 2, 2012, the Commission's Consumer & Governmental Affairs Bureau issued an order dismissing the petition filed by Anda, Inc. to issue a declaratory ruling clarifying the statutory basis for a Commission rule on fax advertisements. The Administrative Procedure Act provides that an agency, in its sound discretion, may issue a declaratory order to terminate a controversy or remove uncertainty, but the Bureau found that the Petition did not identify any controversy to terminate or uncertainty to remove. The Bureau also concluded that, to the extent that the Petition challenged the Commission's authority to issue the rule itself, the challenge was time-barred, because under the Act and the Commission's procedural rules, requests for reconsideration of this rule were due in June 2006. The Bureau also observed that a previous Commission order had specifically tied the opt-out notice requirement to the purposes of section 227 of the Act.

It is not uncommon for a Bureau to dismiss a petition for declaratory ruling when, in the opinion of the Bureau, no controversy or uncertainty has been identified. Anda has filed an Application for Review of the Bureau order to the full Commission, which is currently under review. I anticipate that an order resolving the Application for Review will be circulated to the other Commissioners for their consideration in the next few months.

The Honorable Phil Gingrey

1. Mr. Chairman, I am curious about what the FCC's spectrum plans are for places like my State of Georgia. My entire district falls within the Atlanta media market, which is the 9th largest in the country. However, there are other parts of Georgia that wouldn't fall into the top 50 television markets. Can you tell me if the FCC is focusing its spectrum reclamation efforts on the top 20 or 30 television markets, or are you looking at all markets? If that is the focus, would it even be necessary to repack television stations in more rural areas in areas? Can you please describe what the FCC plans are for states like mine or the test the Commission be using to determine where your efforts will be focused?

Response: The Commission is focused on providing opportunities for broadcasters in all markets to participate in the incentive auction. The auction requires broadcasters to volunteer to clear a portion of the current upper UHF TV band, spectrum that is contiguous to the 700 MHz spectrum already allocated for wireless use. A successful auction will result in nationwide contiguous blocks of spectrum for commercial wireless which will enable significant economic growth and consumer benefits in all areas, urban and rural.

Both the Commission and Congress recognized that an incentive auction would have an impact on stations that choose not to participate, potentially resulting in the repacking of spectrum held by some broadcasters in the smaller or more rural markets. This is why there are specific provisions that require the Commission in the repacking process to "make all reasonable efforts to preserve...the coverage area and population served of each broadcast television licensee." Additionally, Congress specifically provided for a relocation fund that will pay for those stations that have to change channels as part of the repacking process.

I am committed to working with the broadcast industry on these issues, and encourage their participation in the process. Resources for broadcasters interested in learning more about the process are available at <http://wireless.fcc.gov/incentiveauctions/learn-program/index.html>.

2. Let me move on to a different topic and one that has an impact on my district in Georgia – The Atlanta Channel. Admittedly, the organization failed to fully complete the necessary application under the Community Broadcasters Protection Act of 1999 for Class A designation. Unfortunately, after denial in 2000, the company's appeal languished at the Commission for 12 years before it was denied once again last month. Given this inaction for so many years when the Commission cited a deadline – particularly in the additional comments by Commissioners McDowell and Pai – was the stated cause of rejection, is it entirely unreasonable for this petitioner to have the opportunity to simply submit application for Class A designation at this point? If each Commissioner could answer, I would appreciate it. One quick follow up for each of you, the missed deadline notwithstanding, what is the Commission's justification to the people and businesses of Atlanta to prevent this station from even the opportunity to apply for Class A status given the footprint that The Atlanta Channel has – even as a low power operator – in the 9th largest market in the county and as a community servant in Atlanta?

Response: Since becoming Chairman, I have worked to significantly reduce the backlog across the Commission, and as I assured you at our oversight hearing last year I would do, I moved this issue to decision. However, regardless of timing, the Commission unanimously denied the request because the substantive issues remain the same – ACI failed to meet the statutory certification deadline, and did not claim or demonstrate that its failure was due to the kind of "extraordinary circumstances" courts have found are necessary for the Commission to toll a statutory deadline. The station has filed a Petition for Reconsideration of the Commission's decision, which is currently being reviewed.

The Honorable Bob Latta

1. As I've read in the NPRM, the Commission proposes doing the reverse and forward auction simultaneously versus separately. Can you elaborate on the differences between those two options, and can you speculate which format will result in more spectrum being available in the forward auction.

Response: In order to be successful, the reverse and forward auctions must work together. The NPRM seeks comment on how to integrate those two processes.

The auctions could run sequentially, running the reverse auction first, followed by the forward auction. This approach could provide greater certainty about the number of licenses available in each geographic area in the forward auction, but would require reverse auction bidders to answer hypothetical questions about their potential bids. A concurrent approach could take less time, and would enable reverse auction bidders to answer questions based on actual demand and competition.

All parties have the opportunity to review and comment on the Commission's incentive auction proposals, and we encourage them to do so. Our decisions will be data-driven and based on a thorough record.

2. In northwest Ohio, we have television stations with signal contours that cover Ottawa and Ontario – that's Ottawa and Ontario, Ohio. But those signals also reach parts of Ontario, Canada. Can you assure me that in implementing any repacking of the broadcast bands, the Commission will coordinate with your Canadian counterparts to ensure that my constituents and others who live near our international borders will continue to have robust access to broadcast television?

Response: Yes. The Commission has already started discussions with Industry Canada with regards to our incentive auction proposals. The Spectrum Act reiterated the Commission's existing duty to coordinate with Canada and Mexico, and we will of course do so.

3. Chuck Jackson, who is an adjunct professor at George Washington University, an electrical engineer, and spectrum expert at a recent event on spectrum policy submitted a paper that predicted that "the 100 MHz of unlicensed spectrum at 5 GHz made available by legislation earlier this year will generate ten and one hundred times more consumer benefits than will unlicensed use of the TV white space." The FCC has taken considerable effort to create an unlicensed market in the white spaces even though there is no consumer white spaces devices. Mr. Jackson seems to think even in the best case scenario that unlicensed at 5GHz will be far more valuable, so why is the FCC spending so many resources trying to make white spaces work in the TV band?

Response: Over the past few years, America has regained global leadership in mobile communications, leading the world in deploying 4G to scale. We have nearly half the world's 4G LTE subscribers, and we are setting the pace on innovation in mobile software, apps, and devices. This success means that we face a particularly acute challenge to meet exploding mobile demand—the spectrum crunch—and that we must use all policy levers at our disposal to solve it. Both licensed and unlicensed spectrum have contributed to an explosion of new services and applications and increasing mobile broadband speeds, and both will be essential parts of the landscape in the future.

When I arrived at the FCC in mid-2009, my staff and I quickly became aware of the magnitude of the spectrum challenge facing the country. We also saw that the spectrum pipeline we inherited was largely dry. To address this, our work on the National Broadband Plan focused on laying out a comprehensive spectrum strategy and action plan. As part of

that spectrum strategy, the Commission introduced the idea of incentive auctions – an idea that Congress enacted into law last year. We are actively implementing that law and fully expect it to free up very significant amounts of spectrum for auction.

Incentive auctions are a big deal, but they're only one of many ways we've been working to free up additional spectrum for auction for licensed use over the last three years. The Commission is now on track to auction an additional 75 MHz of spectrum by 2015, and we've removed regulatory barriers on another 70 MHz of spectrum, enabling its use for licensed mobile broadband.

The FCC has also pursued an ambitious strategy for unlicensed spectrum. The FCC was the first agency in the world to allow unlicensed use of what were at the time known as "junk bands" of spectrum. Innovators seized this opportunity and brought to market cordless phones, Bluetooth, and Wi-Fi. Today, approximately one-third of mobile data traffic is offloaded to Wi-Fi, as carriers increasingly develop new methods to manage capacity on their networks. People depend on unlicensed spectrum every single day: to connect wirelessly to their home and business Internet networks; to stream news and movies onto their tablets; to connect their hands-free Bluetooth devices; to monitor inventory using RFID tags. New smartphones switch seamlessly between licensed and unlicensed networks, helping consumers whose wireless plans have data caps avoid penalties.

TV white spaces create a powerful new platform for next-generation innovation – a world-leading platform at a time when many other countries are actively working to leapfrog the U.S. While this is still a nascent effort, it is important to remember that it took well over a decade after the mid-1980s decision to allow unlicensed use in the "junk bands" for Wi-Fi to become a major commercial success. Enabling unlicensed use of TV white spaces is a win for innovation and a big opportunity for our country that must be seized. But we also recognize, as did Congress, that there are numerous spectrum bands that offer opportunities for unlicensed use, including the 5 GHz. In fact, at the February Commission meeting, we will consider a Notice of Proposed Rulemaking to unleash up to 195 megahertz in the 5 GHz band for unlicensed use.

4. As you know, the Middle Class Tax Relief and Job Creation Act of 2012 required the FCC to report on the "rejection rate" for certain common carrier microwave bands. In that report, the Commission noted that "It is not possible to calculate a precise rejection rate for coordination requests in the 11 GHz, 18 GHz, and 23 GHz bands because frequency coordinators do not keep records on rejected coordination requests."

As one who supports transparency in the oversight of our national spectrum assets, I'm curious why this information isn't tracked more closely. And as the expert agency charged with the administration of these bands; don't you agree that there needs to be a better, more transparent means of tracking their use and demand? Shouldn't your agency – the one charged with oversight of the nation's communications infrastructure, both wired and wireless – be responsible for knowing exactly what is the status and availability of these critical assets? And if

is not your agency, who is responsible? Since accurate data is what we need to make spectrum policy decisions, I would like to know what you need in order to collect and report on this data.

Response: The Commission has detailed information on all of the licenses that it has granted in all of the microwave bands, as well as all of the applications for such licenses that have been filed. This information is publicly available in the Commission's Universal Licensing System (ULS).

The Middle Class Tax Relief and Job Creation Act of 2012 required the Commission to report on the "rejection rate" for microwave applications in the 11 GHz, 18 GHz and 23 GHz bands. As noted in the Report to Congress, the rejection rate for coordination requests was less than one percent. The Report also noted that the rejection rate for applications filed with the Commission was zero.

In order to calculate the rejection rate more precisely, the Commission would have to impose recordkeeping burdens on potential applicants or change the long-standing microwave frequency coordination process. Such a change could increase costs and burdens on applicants and delay the licensing process.

The Honorable Anna Eshoo

1. Last year, the International Telecommunications Union announced that operations of unmanned aircraft will require radiofrequency spectrum for air traffic control, vehicle command and control, and sense and avoid capabilities – all of which are essential safety functions. This year, the Federal Aviation Administration was instructed to begin integrating unmanned aircraft into the national airspace by 2015.

According to reports from GAO and CRS, one of the biggest obstacles to safely operating these aircraft at home is signal interference. What steps have been taken by the FCC taken to make sure that interference issues are comprehensively addressed before 2015?

Response: The Commission is committed to mitigating the risk of interference to aeronautical uses of radiofrequency spectrum, particularly for air traffic control, vehicle command and control, and sense and avoid capabilities of Unmanned Aircraft Systems (UAS). The World Radiocommunication Conference 2012 (WRC-12) began to address radiofrequency spectrum requirements for UAS operating in non-segregated airspace and is pursuing further studies to provide a basis for considering regulatory, technical, and operational conditions to use certain fixed-satellite service frequency bands for UAS control and non-payload communications. WRC-15 will consider the use of these frequency bands based on the results of these additional studies. The FCC has and will continue to work closely with the National Telecommunications and Information Administration, which represents federal aeronautical stakeholders such as the FAA, and the State Department to prepare for WRC-15 and intervening international forums such as ITU-R Study Groups and

International Civil Aviation Organization working groups. Also, through the advisory committee process, the FCC is working with commercial aeronautical stakeholders to develop innovative policy solutions that would facilitate international deployments and operations of the UAS. As WRC-15 considers actions based on the results of additional studies, the FCC will remain engaged in the international development of UAS spectrum requirements and will consider national spectrum allocations and service rules consistent with international aviation standards and recommended practices.

The Honorable Henry Waxman

1. At the hearing, Chairman Walden displayed several slides on incentive auctions. The first slide states that under the terms of the FCC's Notice of Proposed Rulemaking (NPRM) on the broadcast incentive auction, there will be \$19.2 billion in lost revenue from 23 MHz of spectrum that is not being auctioned "if valued at the same price per MHz-POP as the unencumbered 700 MHz B Block." The 23 MHz includes 6 MHz from Channel 37, 12 MHz from the proposed guard band, and 5 MHz from any "remainder" spectrum. The slide further states that "even at a conservative \$1 per MHz-POP, the FCC's plan would forgo over \$7 billion, enough to fully fund FirstNet." Please comment on Chairman Walden's assumptions about the 23 MHz and lost revenue. Do you believe the FCC is foregoing up to \$19.2 billion in revenue?

Response: I do not believe that the proposals in the incentive auction NPRM regarding guard bands and unlicensed spectrum would result in foregone revenues. To the contrary, the Commission's proposals would (1) provide auction bidders certainty regarding interference protection, thereby bolstering auction revenues; and (2) free up substantial amounts of spectrum for both licensed and unlicensed broadband use, generating very significant economic value and associated revenues for the Treasury on an ongoing basis.

When I arrived at the FCC in mid-2009, my staff and I quickly became aware of the magnitude of the spectrum challenge facing the country. We also saw that the spectrum pipeline we inherited was largely dry. To address this, our work on the National Broadband Plan focused on laying out a comprehensive spectrum strategy and action plan. As part of that spectrum strategy, the Commission introduced the idea of incentive auctions – an idea that Congress enacted into law last year. We are actively implementing that law and fully expect it to free up very significant amounts of spectrum for auction.

Incentive auctions are a big deal, but they're only one of many ways we've been working to free up additional spectrum for licensed use over the last three years. The Commission is now on track to auction an additional 75 MHz of spectrum by 2015, and we've removed regulatory barriers on another 70 MHz of spectrum, enabling its use for licensed mobile broadband.

As to the specifics of the Incentive Auctions NPRM, based on the statutory authority provided by the Middle Class Tax Relief and Job Creation Act of 2012, the proposals seek a

balanced approach to repurposing the 600 MHz band for broadband. Freeing up additional spectrum -- both licensed and unlicensed -- is key to maintaining the United States' global leadership in mobile. The Commission proposed clearing and auctioning as much spectrum as possible for licensed use, adding spectrum for commercial providers and substantial revenues for the Treasury. The Commission is also making a significant amount of spectrum available for unlicensed use, creating an open platform for innovation to drive economic growth, and ultimately tax revenues as well.

Regarding the slide you reference, first, the analysis appears to overstate the appropriate price comparable to use in valuing the guard band spectrum. The price precedents cited in the slide were for high-powered blocks in the 700 MHz auction. In order to provide adequate interference protection to licensed spectrum blocks, the guard bands can permit only low power operations (such as the unlicensed uses proposed in the NPRM), and could not be used for macro-cellular networks. There is no reason to believe that spectrum authorized only for low power operations would generate even a small fraction of the revenues generated by the 700 MHz spectrum licensed for high-powered blocks.

Second, with respect to quantity, the slide appears to overstate the amount of spectrum that could be auctioned. For example, the slide assumes that Channel 37 could be auctioned for high power use. Today Channel 37 is allocated for Radio Astronomy and Wireless Medical Telemetry uses, including patient monitors in hospitals. If Channel 37 incumbents can be relocated, consistent with the statutory relocation cost cap of \$300 million, the spectrum can be cleared and auctioned. But if the incumbents cannot be relocated, the continued presence of Radio Astronomy and Wireless Medical Telemetry will prevent the auction of this spectrum for high power licensed use. The NPRM sought to maximize the utility of this spectrum by proposing Channel 37 as one of the necessary guard bands between television and wireless services. Additionally, the slide overstates the amount of unauctioned "remainder" spectrum, because if five megahertz of remainder spectrum were available, it could be auctioned as an additional licensed block.

Finally, a policy of auctioning guard bands could substantially increase uncertainty about the long-term interference protections afforded by the guard bands, and therefore reduce certainty about the overall value of the high-powered spectrum to be auctioned. Such uncertainty would likely suppress auction revenues. It is notable that wireless carriers, including AT&T, Verizon Wireless, Sprint, and MetroPCS; along with the wireless trade association, CTIA; and the Consumer Electronics Association (CEA), all support unlicensed use in the guard bands to the extent technically feasible.

More generally, foreclosing opportunities for unlicensed spectrum in the 600 MHz band would deprive the United States of a powerful new platform for wireless innovation and investment with tremendous potential for generating economic growth and consumer benefits. It would also risk ceding America's global leadership in spectrum policy, enabling other countries to leapfrog us and become the world's test beds for new wireless technologies.

Unlicensed spectrum has a powerful record of driving innovation, investment, and economic growth – hundreds of billions of dollars of value creation for our economy and consumers, resulting in billions of dollars of tax revenues. Opening up opportunities for unlicensed spectrum in the 600 MHz band promises to increase these benefits, unleashing important innovations like "Super Wi-Fi," next-generation Smart Grid monitoring, "Smart City" monitoring, enhanced distance learning, and services and applications that innovators have not even thought of yet.

2. In his written testimony, Commissioner Pai stated that the NPRM on the broadcast incentive auction appears to envision an auction that will yield "no net revenues." As a result, Commissioner Pai asserts there will be no money for the construction of a nationwide, interoperable public safety broadband network or deficit reduction. Do you agree?

Response: No. A key goal of the incentive auction is to raise sufficient revenues to meet the policy objectives of the Spectrum Act, including funding FirstNet. I would note that other auctions required under the Spectrum Act, such as the H Block auction later this year, will also be a source of funding for FirstNet. As I stated when the Commission adopted the NPRM, "Our duty and intention is to faithfully implement the law, freeing up spectrum, raising very substantial revenue, and helping fund FirstNet first responders." The NPRM points out that Spectrum Act requires incentive auction to raise a minimum amount of proceeds to pay broadcasters in the reverse auction, reimburse Treasury for amounts borrowed for the TV Broadcaster Relocation Fund and cover the costs of conducting the incentive auction. It also asks what other policy issues should be addressed when establishing auction closing conditions, which would include funding FirstNet. The Commission intends to faithfully implement the Spectrum Act, freeing up spectrum and raising very substantial revenue. All parties have the opportunity to review and comment on the Commission's incentive auction proposals, including closing conditions, and we encourage them to do so.

The Honorable John Dingell

1. With respect to the open proceeding concerning the structure and rate methodology of the Video Relay Service (VRS) program, is the Commission considering changes that would, as a practical matter, degrade the quality of service that deaf and hard-of-hearing users receive? If so, please detail such changes. Also, will the Commission preserve or improve the availability and quality of VRS service and technology available to consumers?

Response: The Commission is considering proposals to improve the structure and efficiency of the VRS program, to ensure that it is available to all eligible users and offers functional equivalence – particularly given advances in commercially-available technology – and is as immune as possible from the waste, fraud, and abuse that threaten the long-term viability of the program. Our goal is to ensure that this vital program is effective, efficient, and sustainable for the future. Any actions the Commission takes to reform the VRS program will further our statutory obligations to "ensure that interstate and intrastate

telecommunications relay services are available, to the extent possible and in the most efficient manner, to hearing-impaired and speech-impaired individuals in the United States," and will "encourage . . . the use of existing technology" and will "not discourage or impair the development of improved technology."

2. Does the Commission believe that deaf and hard-of-hearing consumers should have the same ability to choose their VRS provider as hearing consumers do with voice telephone providers?

Response:

Yes.

3. I understand that no further accessibility guidance based on Access Board recommendations will be available until mid-2013. What does the Commission intend to do to help industry push forward with implementing provisions of the Communications and Video Accessibility Act of 2010 to the benefit of disabled Americans?

Response: The Commission is committed to the effective implementation of the Twenty First Century Communications and Video Accessibility Act (CVAA). The Commission has met every rulemaking deadline set by the CVAA to date, ensuring full, timely, and effective compliance with the legislation's provisions. We will continue to proactively work with industry to help push forward and achieve the objectives of this landmark legislation.

The Commission has also conducted extensive outreach and training on the CVAA at numerous industry conferences and meetings. Through these events, the Commission's Consumer and Governmental Affairs Bureau has enabled the exchange and sharing of information and ideas with stakeholders on how to best implement the new legislation. The Commission will continue these presentations in the coming months and years.

In addition, since October 2011, the Commission has maintained a clearinghouse of information on accessible communications products and services. The Commission is now taking steps to upgrade this clearinghouse to make it more user friendly, and to enable its use as a tool for companies and developers seeking accessibility solutions that can serve as models for their own products and services.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

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February 7, 2013

The Honorable Robert M. McDowell
Commissioner
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Dear Commissioner McDowell:

Thank you for appearing at the Subcommittee on Communications and Technology hearing entitled "Keeping the New Broadband Law on Track" on December 12, 2012.

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for 10 business days to permit Members to submit additional questions to witnesses, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please e-mail your responses, in Word or PDF format, to Charlotte.Savercool@mail.house.gov by the close of business on Friday, February 22, 2013.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Greg Walden
Chairman
Subcommittee on Communications and Technology

cc: The Honorable Anna Eshoo, Ranking Member,
Subcommittee on Communications and Technology

The Honorable Lee Terry

1. As the FCC considers identifying additional spectrum for terrestrial wireless use, it is important not to lose sight of the critical services provided by incumbent users of spectrum. What is the process that the Commission intends to use to ensure that the valuable services currently provided -- both to commercial and U.S. Government customers -- will not be disrupted by the potential reallocation or reuse of spectrum?

The Commission's primary objective in administering wireless policy is to prevent harmful interference to spectrum licensees. The Commission's responsibility is to analyze the necessary level of protection for an incumbent user and the technical efficiencies (or lack thereof) in the new user's operations or proposed operations. Whether interference is likely to occur to services in adjacent bands or within the same band, in the context of the secondary use of spectrum, is fact specific and can be affected by such things as power levels, tower height, type of technology deployed, topography or other propagation characteristics. Therefore, instances of harmful interference between services -- whether commercial or federal -- arise under unique sets of circumstances and should be examined on a case-by-case basis. This is an undertaking that, by its nature, is careful, deliberative and somewhat time-consuming.

The Honorable Phil Gingrey

1. Let me move on to a different topic and one that has an impact on my district in Georgia - The Atlanta Channel. Admittedly, the organization failed to fully complete the necessary application under the Community Broadcasters Protection Act of 1999 for Class A designation. Unfortunately, after denial in 2000, the company's appeal languished at the Commission for 12 years before it was denied once again last month. Given this inaction for so many years when the Commission cited a deadline- particularly in the additional comments by Commissioners McDowell and Pai -- was the stated cause of rejection, is it entirely unreasonable for this petitioner to have the opportunity to simply submit application for Class A designation at this point? If each Commissioner could answer, I would appreciate it. One quick follow up of each of you, the missed deadline notwithstanding, what is the Commission's justification to the people and businesses of Atlanta to prevent this station from even the opportunity to apply for Class A status given the footprint that The Atlanta Channel has -- even as a low power operator- in the 9th largest market in the country and as a community servant in Atlanta?

I remain disappointed by the Commission's handling of The Atlanta Channel proceeding over the past 12 years. Our decision finally resolved an application for review that was filed on December 20, 2000. It is inexplicable that a licensee had to wait almost twelve years for a response from the Commission. Although the procedure followed to bring this matter to a resolution was flawed, the substance on the decision was not.

On November 28, 1999, the Community Broadcasters Protection Act of 1999 (CBPA) was signed into law. This law allowed for a one-time opportunity for LPTV licenses to obtain Class A status if they met the specified statutory criteria and filed a "certification of eligibility," on or before the statutory deadline, establishing they met these criteria. The CBPA did not provide the Commission with the ongoing authority to designate LPTV stations as Class A stations. For this reason, the Commission did not accept applications from LPTV stations that did not meet the statutory criteria and that did not file a certification of eligibility by the statutory

deadline, absent compelling circumstances. Although The Atlanta Channel filed by the statutory deadline, it failed to certify compliance with any of the qualification requirements. Thus, its request for Class A status was dismissed as materially deficient.

As mentioned above, the CPBA only allowed the Commission to accept certifications of eligibility for Class A status during a specified window (*i.e.*, within 60 days after the date of enactment). The Commission, therefore, does not have the statutory authority to consider a new request to change The Atlanta Channel's designation from a lower-power TV to Class A TV station at this time.

2. Lastly, I would like to ask a question briefly on federal spectrum. I personally believe that we can find the needed balance of ensuring our national security and consolidating federal spectrum simultaneously. Commissioners McDowell and Pai, why is it that other countries, each of which have standing militaries, public safety users, and broadcast industries, are managing to bring multiple hundreds of megahertz to market for commercial use while we seem unable to accomplish that same goal? What, in your view, is the cost of failure to make additional spectrum available for commercial use?

I agree with you, which is why I have repeatedly called for the Executive Branch to act more aggressively to evaluate its spectrum usage and establish a goal of relinquishing bandwidth to auction for exclusive use licenses regulated lightly through flexible use policies.

As I am sure you know, America continues to lead the way in rolling out advanced mobile technologies. For example, the United States has approximately 17 percent of the world's 3G and 4G subscribers, and approximately half of the world's LTE subscribers, even though the U.S. is home to less than five percent of the global population. American wireless providers are also investing more in their infrastructure than their international counterparts. In 2012, over \$28 billion was invested in the United States' wireless infrastructure versus \$20.9 billion invested in 15 of the largest European countries combined.

Such investment is necessary as Americans are consuming sophisticated devices and complex mobile applications, which are taxing spectrum availability, at an unprecedented rate. Fifty-one million new devices were connected to U.S. mobile networks in the last year alone to bring the total of American mobile-enabled devices to 424 million. In 2012, U.S. mobile data traffic reached 207 petabytes per month, a 62 percent increase over the previous year. To put this amazing growth into context, processing 207 petabytes per month is equivalent to watching 52 million DVDs per month or sending 570 million text messages each second over our wireless networks. And mobile usage will only continue to surge well into the future. It is estimated that mobile data traffic will grow nine fold in the next five years.

Furthermore, the American mobile market enjoys more competition than most international markets. Eight out of ten American consumers have a choice of at least five wireless service providers. In Europe, that number is around three. As a result, American consumers enjoy lower prices and higher mobile usage rates compared to consumers in the European Union (EU) – 3 cents per minute in the U.S. versus 12 cents generally in the EU. Wireless subscriber usage on average in the United States is approximately 5 times more than the

European average. At the same time, American consumers pay at least one-third less for their more enhanced wireless services than consumers in many other parts of the world.

As these statistics illustrate, Americans demand more spectrum to meet their needs. We must ensure that spectrum continues to flow toward its highest and best use to promote innovation, investment and economic growth. Further, federal spectrum needs to be auctioned for exclusive use licenses. Spectrum "sharing," which is an ill-defined concept, and the auctioning of exclusive use licenses are not equivalent. "Sharing" arrangements are not designed for or suited to robust, high-powered and ubiquitous commercial availability. Without more spectrum, or by relying on spectrum "sharing" and unlicensed use, critical needs will be unmet and America's global competitiveness will be severely undermined.

The Honorable Bob Latta

1. The Administration has talked a lot about the need to bring additional spectrum to market for commercial use. In your view, has their behavior matched their rhetoric?

No. I have repeatedly called for the Executive Branch to review its spectrum usage with an eye towards relinquishing federal spectrum to auction for exclusive use licenses so that more spectrum can be put into the hands of American consumers quickly and efficiently. As I am sure you are aware, there has been no significant auction of spectrum since 2008. Although we have started the proceeding to implement Congress's mandate that we conduct incentive auctions, more needs to be done.

The latest actions by the Administration appear to indicate a reluctance to free up spectrum. For instance, as our colleagues at the National Telecommunications and Information Administration (NTIA) reported in March 2011, various federal government operations are employing spectrum located within the 1755-1850 MHz range that could be made available for commercial uses. As you know, the NTIA report concluded that while it is possible to repurpose all 95 megahertz of the band, various agencies allege it would cost about \$18 billion and take over ten years to move current government users off of that spectrum. The underlying message is disappointing primarily because, by all appearances, other Executive Branch agencies did not provide NTIA with the granular data and analyses necessary to support many of the report's assumptions and conclusions. At a minimum, the agencies did not provide the data underlying their assumptions in a transparent manner. I am hopeful that clarity in the underlying cost assumptions would create greater market certainty as we attempt to attempt to satisfy longer-term commercial spectrum needs.

Furthermore, the report issued by the President's Council of Advisors on Science and Technology concluded that the traditional practice of clearing and reallocating portions of the spectrum used by Federal agencies is not a sustainable model for spectrum policy. Instead, PCAST stated that the best way to increase capacity is to leverage new technologies that enable larger blocks of spectrum to be "shared." PCAST endorsed "sharing," in part, because "it does not require licensed businesses and government entities to fully clear certain wavelengths already in use—a process that can be time consuming and expensive."

Spectrum "sharing," which is an ill-defined concept, should not be seen as a substitute for auctioning more spectrum, especially federal spectrum. Additionally, "sharing" is not a panacea and should only be a fallback once we have fully exhausted options for auctioning exclusive licenses for cleared spectrum. "Sharing" arrangements are not designed for or suited to robust, high-powered and ubiquitous commercial availability. For instance, when referring to the private sector "sharing" spectrum with federal users, many questions abound, such as: Are federal users given priority of use over private sector users? How would "shared" use of federal spectrum be determined? Through a unique technological protocol? By time of day? Geographically? On an ad hoc basis? Should consumers expect their use of "shared" federal spectrum to be interrupted with or without notice? What would the value proposition be for various spectrum "sharing" scenarios? Before moving forward on any spectrum "sharing" initiatives, these questions, and many more, will need to be answered thoroughly.

Moreover, despite the assertions by PCAST, there is also no evidence that spectrum "sharing" with the federal government will allow for the more-timely deployment of federal spectrum for commercial use. Spectrum "sharing," by its very nature, raises interference issues that need to be analyzed before "sharing" can occur. This very issue came up in the recent February 2013 Commission meeting when we initiated a proceeding, as mandated by the Spectrum Act, to permit unlicensed use on an additional 195 megahertz of spectrum in the 5 GHz band and to harmonize the rules across this band to make the spectrum more attractive for innovation and investment. This spectrum would be available on a secondary basis to commercial users. There are federal government primary users in this band and it is likely that it will be a long time before new rules are adopted to make this spectrum available. In fact, NTIA reported that there were interference risks that need to be considered and submitted a letter that portions of this band could be used to relocate federal users if the 1755-1850 MHz band were cleared. For these reasons, we cannot be complacent and stop advocating for additional federal spectrum to be auctioned for exclusive use licenses.

And how important is the secondary market to dealing with the spectrum crunch?

An unfettered secondary market process is crucial to ensuring that spectrum flows to its highest and best use. Wireless providers look to the secondary market to acquire or lease spectrum where they are experiencing spectrum congestion or to realign their spectrum holdings to make their networks operate more efficient.

I have long expressed my strong support for thorough but speedy transaction reviews given that delay and uncertainty surrounding the Commission's current process may have the unintended consequence of chilling investment that could benefit consumers. For example, the lack of a fixed timetable increases the Commission's leverage to extract conditions from the merged entity. Effectively, parties often have to either swallow unpalatable conditions or face months of additional review. In the meantime, uncertainty is costly. Being suspended in regulatory limbo strains both the companies and their employees, and provides a government-created, and therefore artificial, competitive advantage for other industry players. Does this construct speed the flow of spectrum to its highest and best use? Or are we at a point where not

only is the hope of more federal spectrum coming to market dimming, but the federal government is impeding the flow of already-licensed spectrum to its highest and best use? If these trends continue, today's consumer frustration may quickly turn to outrage while we lose our global lead in wireless. The FCC can and should do better.

Further, the Commission must not adopt the functional equivalent of a spectrum cap. The FCC commenced a proceeding at the same it released the Incentive Auction notice. Not only could the Commission consider applying a new spectrum cap regime to the Incentive Auction, but any such attempt would likely result in a spectrum cap for secondary market transactions as well. This also could hinder spectrum going to its highest and best use in the secondary market.

The Honorable John Dingell

1. With respect to the open proceeding concerning the structure and rate methodology of the Video Relay Service (VRS) program, is the Commission considering changes that would, as a practical matter, degrade the quality of service that deaf and hard-of-hearing users receive? If so, please detail such changes.

Over a year ago, the Commission approved a rulemaking seeking comment as to whether the VRS program's structure and methodology should be reformed. My office has been reviewing the comments filed in this rulemaking and has been meeting with interested stakeholders to find ways to make the program more efficient while also ensuring that the deaf and hard of hearing are able to communicate "in a manner that is functionally equivalent" to a hearing individual's ability to communicate with voice communications services.¹ It is not my intention that any reforms ultimately adopted by the Commission would result in the degradation of the quality of service that the deaf and hard-of-hearing users receive.

Also, will the Commission preserve or improve the availability and quality of VRS service and technology available to consumers?

Yes, the Commission is considering reforms that would improve the availability and quality of VRS service and technology available to eligible consumers. For example, as part of the pending rulemaking, the Commission is currently considering whether it should make changes to the rules to ensure interoperability between various types of video equipment and applications.

2. Does the Commission believe that deaf and hard-of-hearing consumers should have the same ability to choose their VRS provider as hearing consumers do with voice telephone providers?

Speaking for myself, yes.

3. I understand that no further accessibility guidance based on Access Board recommendations will be available until mid-2013. What does the Commission intend to do to help industry push forward with implementing provisions of the Communications and Video Accessibility Act of 2010 to the benefit of disabled Americans?

¹ See 47 U.S.C. § 225, as amended by Section 103(a) of the Twenty-First Century Communications and Video Accessibility Act of 2010.

The Commission has already issued all of the rulemakings mandated by the CVAA. Currently, two of the rulemakings are still pending before the Commission. The comment periods have closed for both of the rulemakings, and my office is currently reviewing the record and meeting with interested parties. As for what other implementation activities the Commission may undertake, I defer to Chairman Genachowski because he controls the Commission's agenda.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

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February 7, 2013

The Honorable Mignon Clyburn
Commissioner
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Dear Commissioner Clyburn:

Thank you for appearing at the Subcommittee on Communications and Technology hearing entitled "Keeping the New Broadband Law on Track" on December 12, 2012.

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for 10 business days to permit Members to submit additional questions to witnesses, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please e-mail your responses, in Word or PDF format, to Charlotte.Savercool@mail.house.gov by the close of business on Friday, February 22, 2013.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Greg Walden
Chairman
Subcommittee on Communications and Technology

cc: The Honorable Anna Eshoo, Ranking Member,
Subcommittee on Communications and Technology

Attachment

The Honorable Lee Terry

1. As the FCC considers identifying additional spectrum for terrestrial wireless use, it is important not to lose sight of the critical services provided by incumbent users of spectrum. What is the process that the Commission intends to use to ensure that the valuable services currently provided – both to commercial and U.S. government customers – will not be disrupted by the potential reallocation or reuse of spectrum?

I agree that the Commission must carefully consider the critical services provided by incumbent users of spectrum, and expect that as Chairman Genachowski stated and as the staff has demonstrated in the voluntary incentive auction proceeding, the Commission will continue to allow all stakeholders to provide comments on the best way to preserve the integrity of all incumbent services while also reallocating sufficient spectrum for terrestrial wireless services.

The Honorable Phil Gingrey

1. Let me move on to a different topic and one that has an impact on my district in Georgia – The Atlanta Channel. Admittedly, the organization failed to fully complete the necessary application under the Community Broadcasters Protection Act of 1999 for Class A designation. Unfortunately, after denial in 2000, the company's appeal languished at the Commission for 12 years before it was denied once again last month. Given this inaction for so many years when the Commission cited a deadline – particularly in the additional comments by Commissioners McDowell and Pai – was the stated cause of rejection, is it entirely unreasonable for this petitioner to have the opportunity to simply submit application for Class A designation at this point? If each Commissioner could answer, I would appreciate it. One quick follow up of each of you, the missed deadline notwithstanding, what is the Commission's justification to the status given the footprint that The Atlanta Channel has – even as a low power operator – in the 9th largest market in the country and as a community servant in Atlanta?

The Community Broadcasters Protection Act of 1999 provided that licensees seeking Class A designation had 60 days after November 29, 1999, to file a certification of eligibility based on the qualification requirements of the Act. The Atlanta Channel's statement of eligibility filed during that time period included no certifications as to whether WTHC-LD met any of the Class A qualification requirements. This statutory deadline was non-discretionary, and the FCC has held in similar circumstances that, in order to toll such deadlines, a licensee must show that it was unable to meet the deadline due to extraordinary circumstances, despite the exercise of due diligence. Although the Atlanta Channel cites clerical error, it failed to take corrective action before the statutory deadline even though the station had one month to review its statement before the 60 day deadline expired. In addition, Atlanta Channel has offered no reason for its failure to do so.

In light of these facts, the Commission reasonably determined that The Atlanta Channel had failed to show extraordinary circumstances justifying waiver of a strict statutory deadline, and that it therefore lacked discretion to excuse the Atlanta Channel's attempt to cure the material defects in the Statement of Eligibility filed during the 60-day period.

Since WTHC-LD has continued to operate as a low-power television station since the staff dismissed its original Statement of Eligibility, the Commission's decision has not deprived the people of Atlanta of service from station WTHC-LD. As the Commission stated in its order implementing the Community Broadcasters Protection Act, Congress intended to permit a one-time conversion of a single pool of low-power television stations that met specific criteria before the statute was enacted and filed a "certification of eligibility" based on the qualification requirements on or before the statutory deadline. Our action was consistent with Congressional intent in passing the Community Broadcasters Protection Act.

The Honorable John Dingell

1. With respect to the open proceeding concerning the structure and rate methodology of the Video Relay Service (VRS) program, is the Commission considering changes that would, as a practical matter, degrade the quality of service that deaf and hard-of-hearing users receive? If so, please detail such changes. Also, will the Commission preserve or improve the availability and quality of VRS service and technology available to consumers?

VRS is an essential service. Americans who are deaf and hard of hearing rely on VRS for their daily communications needs. The Commission is only considering changes to VRS that would improve the service, not limit it. For example, we are considering changes that would achieve interoperability among different types of video equipment and applications (including off-the-shelf video equipment), ensure high quality of video interpreters, preserve consumer choice of services, and facilitate innovations for services and features. As always, we will continue to meet with consumers on a regular basis to obtain their feedback on proposed VRS changes, and if any changes are implemented, we will adopt a transition plan so that no VRS consumer loses service.

2. Does the Commission believe that deaf and hard-of-hearing consumers should have the same ability to choose their VRS provider as hearing consumers do with voice telephone providers?

Yes. Deaf and hard-of-hearing consumers are entitled to have telecommunications relay services, including VRS, that are functionally equivalent to voice telephone service. The Commission has had a long-standing commitment to ensuring that deaf and hard-of-hearing consumers get this service.

3. I understand that no further accessibility guidance based on Access Board recommendations will be available until mid-2013. What does the Commission intend to do to help industry push

forward with implementing provisions of the Communications and Video Accessibility Act of 2010 to the benefit of disabled Americans?

The Commission is committed to effectively implementing the Twenty First Century Communications and Video Accessibility Act (CVAA) and has already made progress towards this end. We've achieved every rulemaking deadline Congress set out for us to guarantee full compliance with the CVAA's language. We've also partnered with the regulated industry and worked hand in hand with them.

We've been at their conferences, their meetings, and spoken at their events. Our Consumer and Government Affairs Bureau has ensured that information and ideas are communicated to and received from stakeholders as to how to best implement CVAA, and this partnership will continue for the foreseeable future. Commission staff are attending and speaking at the Telecommunications Industry Association and the American Council of the Blind's upcoming events, and staff will also host the second M-Enabling Summit with the Global Initiative for Inclusive Information and Communication Technologies (G3ict), an international event designed to make sure that people with disabilities are fully included in wireless communications accessibility. The first G3ict event, in December 2011, was a stunning success and drew delegates from over 30 countries.

CVAA also requires service providers and device manufacturers to make sure that their technology is accessible, whether through internet browsers or next generations of existing services such as TTD. The Commission is working toward ensuring full compliance and recently issued a Public Notice urging providers and manufacturers to document their CVAA compliance upgrades and outreach. These records will be publically-available through a Recordkeeping Compliance Certification and Contact Information Registry" (RCCCI Registry) starting in April. The RCCCI registry will be even more important in October of this year when the CVAA's accessibility rules are set to be fully implemented. The Commission is also working toward upgrade its existing database of accessible communications products and services. After these upgrades are in place, customers with disabilities, advocates, and industry insiders will have access to an easy to use tool showing the current status of communications accessibility as well as models for future products and services.

Questions for the Record
Jessica Rosenworcel
Federal Communications Commission
“Keeping the New Broadband Law on Track”
Subcommittee on Communications and Technology
Committee on Energy and Commerce
United States House of Representatives
December 12, 2012

The Honorable Lee Terry

1. As the FCC considers identifying additional spectrum for terrestrial wireless use, it is important not to lose sight of the critical services provided by incumbent users of spectrum. What is the process that the Commission intends to use to ensure that the valuable services currently provided—both to commercial and U.S. Government customers—will not be disrupted by the potential reallocation or reuse of spectrum?

I agree that good spectrum policy requires considering the potential benefits of reallocating spectrum and also the costs associated with such a change. Moreover, I believe that it is important for the Commission to provide opportunities for interested parties to provide input on these issues when the Commission considers changes that impact existing commercial and government users.

In certain instances, Congress mandates a specific process that the Commission must follow with respect to existing spectrum licensees and the possibilities for new commercial auctions. For example, in the Middle Class Tax Relief and Job Creation Act, Congress directed the Commission to conduct incentive auctions providing broadcast licensees with the opportunity to voluntarily relinquish some or all of their existing spectrum usage rights. The Commission is then required to repack the remaining broadcasters and auction recovered spectrum for new wireless broadband purposes. The law also mandates certain protections for broadcasters with respect to how they may be repacked and directs the Commission to “make all reasonable efforts to preserve, as of the date of the enactment of this Act, the coverage area and population served of each broadcast television licensee.”

When it comes to spectrum used by federal government entities, the Commission works closely with the National Telecommunications and Information Administration. Through processes such as the Interdepartment Radio Advisory Committee, the Commission works with the National Telecommunications and Information Administration to address concerns raised by federal government use of our airwaves—as well as opportunities for reallocation and new shared use.

The Honorable Phil Gingrey

1. Let me move on to a different topic and one that has an impact on my district in Georgia—The Atlanta Channel. Admittedly, the organization failed to fully complete the necessary application under the Community Broadcasters Protection Act of 1999 for Class A designation. Unfortunately, after denial in 2000, the company’s appeal languished at the Commission for 12 years before it was denied once again last month. Given this inaction for so many years when the Commission cited a deadline—particularly in the additional

comments by Commissioners McDowell and Pai—was the stated cause of rejection, is it entirely unreasonable for this petitioner to have the opportunity to simply submit application for Class A designation at this point? If each Commissioner could answer, I would appreciate it. One quick follow up of each of you, the missed deadline notwithstanding, what is the Commission’s justification to the people and business of Atlanta to prevent this station from even the opportunity to apply for Class A status given the footprint that The Atlanta Channel has—even as a low power operator—in the 9th largest market in the country and as a community servant in Atlanta?

I agree that taking twelve years to affirm the decision to dismiss The Atlanta Channel’s Statement of Eligibility for Class A Television Status is excessive and unacceptable.

The Community Broadcasters Protection Act was designed to permit a one-time conversion of a single pool of low power television licenses to Class A licenses provided that they met specific criteria prior to enactment of the statute and also filed a “certification of eligibility” prior to a statutory deadline. The Atlanta Channel’s filing failed to include the required certification. As a result, all five Commissioners agreed that The Atlanta Channel’s Statement of Eligibility was materially deficient. Moreover, all five Commissioners agreed that the Commission’s authority to waive or extend a congressionally-established deadline is limited, absent extraordinary circumstances. At this point, I question whether the Commission has the statutory authority to reopen The Community Broadcasters Protection Act proceeding or to convert additional low power television station licenses to Class A licenses under its own authority. Furthermore, in light of the decision by Congress last year to treat low power television stations and Class A stations differently in the Middle Class Tax Relief and Job Creation Act, the conversion of additional low power television stations to Class A stations could have significant impact on the spectrum incentive auctions mandated by Congress. Larger markets, such as Atlanta, may have less wireless spectrum available for broadband service should a number of low power television stations be granted Class A status.

I note, however, that The Atlanta Channel has filed a Petition for Reconsideration, which the Commission is in the process of reviewing. I will work to ensure that the petition is voted in a timely manner and in accordance with the law. Finally, should Congress choose to provide more guidance with respect to this agency’s oversight of low power television stations by updating The Community Broadcasters Protection Act, I pledge to faithfully follow any new law.

The Honorable Henry Waxman

1. Last month, you said that it was time for “an honest conversation about network reliability in the wireless and digital age.” I agree, and I was pleased to see that the FCC is planning a series of field hearings to examine new challenges to the resiliency of U.S. communications networks during natural disasters and other times of crisis. What do you see as the role for Congress in this conversation?

The way we stay connected is changing. An increasing portion of the population no longer relies on traditional, wireline voice service. The data demonstrating this shift is striking. According to the Centers for Disease Control, 41 percent of children live in households served only by wireless phones. One in three adults relies exclusively on wireless service at home. These

numbers are only likely to grow in the future. So it is important to understand how these services work when the unthinkable occurs.

Unlike traditional, wireline phones based on copper infrastructure, wireless and fiber networks are dependent on commercial power. When the power goes out, service may cease. In the aftermath of Hurricane Sandy, for instance, one in four wireless towers was out of service in the affected area. This hampered communications for too many customers in too many communities in the Mid-Atlantic region.

Shortly after the storm, I called for “an honest conversation about network reliability in the wireless and digital age” because I think it is imperative for us to understand what the implications of network transition are for public safety. I think this conversation needs to have two components. First, from the carrier perspective we must understand the mechanics of back-up power and the need for access to fuel for generators. Second, from the consumer perspective we need to make sure that households are prepared—with things like back-up batteries or solar chargers.

I am pleased that in response to this call, the Commission is holding a series of hearings around the country on communications and disaster preparedness. But this is only a start. That is why I support calls for Congress to conduct hearings to investigate these issues and assess the reliability of our network infrastructure. This would provide an opportunity to identify best practices and any areas where the law should be adjusted to reflect network evolution. I would be happy to provide assistance if called upon.

The Honorable John Dingell

1. With respect to the open proceeding concerning the structure and rate methodology of the Video Relay Service (VRS) program, is the Commission considering changes that would, as a practical matter, degrade the quality of service that deaf and hard-of-hearing users receive? If so, please detail such changes. Also, will the Commission preserve or improve the availability and quality of VRS service and technology available to consumers?

As you know, the Video Relay Service is an important service, used by many deaf and hard-of-hearing individuals to meet their everyday communications needs.

Prior to my arrival at the Commission, on December 15, 2011, the agency released a Notice of Proposed Rulemaking seeking comment on ways to improve the efficiency of the Video Relay Service program. Commission staff followed this up with a Public Notice on October 15, 2012, requesting further comment on issues raised by the rulemaking effort. To date, no decision addressing these issues has been presented to my office. However, when the Commission does consider these issues, I will strive to make decisions that do not materially degrade the quality of service that deaf and hard-of-hearing users receive. I understand how vital Video Relay Service is to deaf and hard-of-hearing Americans who rely on it to do their jobs, keep in contact with friends and family, and participate in modern life. As a result, I will seek to review adjustments to the Video Relay Service program with an eye toward improving the availability and quality of Video Relay Services technology for consumers. At the same time, I believe that the Commission must continue to take steps to ensure that this program operates without waste, fraud, and abuse.

2. Does the Commission believe that deaf and hard-of-hearing consumers should have the same ability to choose their VRS provider as hearing consumers do with voice telephone providers?

Yes. Competition among Video Relay Service providers can inspire technological innovation and improved customer service, benefiting deaf and hard-of-hearing consumers.

3. I understand that no further accessibility guidance based on Access Board recommendations will be available until mid-2013. What does the Commission intend to do to help industry push forward with implementing provisions of the Communications and Video Accessibility Act of 2010 to the benefit of disabled Americans?

I am committed to the effective and timely implementation of the Twenty-First Century Communications and Video Accessibility Act. It is an essential part of making sure that modern communications technologies are available for all consumers. I am pleased to report that to date the Commission has met every rulemaking deadline in this law. Among other things, the Commission has reinstated video description rules, established a National Deaf-Blind Equipment Distribution Program, and implemented new closed captioning requirements. In the course of doing so, the Commission has engaged in extensive outreach to all stakeholders impacted by this law, in order to identify the best way to implement its requirements.

The United States Access Board is the federal agency responsible for developing technical standards under Section 255 of the Communications Act and Section 508 of the Rehabilitation Act. These standards are closely related to those in the advanced communications services provisions of the Twenty-First Century Communications and Video Accessibility Act. As a result, in its Report and Order and Further Notice of Proposed Rulemaking released on October 7, 2011, the Commission chose not to put in place specific technical standards for entities covered by the advanced communications services provisions of the law until the Access Board adopts final recommendations and submits them to the Commission.

This deferral did not alter or delay any compliance deadlines. Moreover, covered entities are not without guidance on technical standards. Draft accessibility guidelines from the Access Board, which were updated last year, are being used by industry in preparation for achieving compliance.

During the next year, I will do my part to keep implementation of the Twenty-First Century Communications and Video Accessibility Act on track. I also will continue to support the Commission's outreach efforts, which have included providing guidance on record-keeping obligations, maintaining a clearinghouse of information on accessible communications products and services, and providing training on accessibility obligations at a variety of conferences and industry events.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS
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February 7, 2013

The Honorable Ajit Pai
Commissioner
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Dear Commissioner Pai:

Thank you for appearing at the Subcommittee on Communications and Technology hearing entitled "Keeping the New Broadband Law on Track" on December 12, 2012.

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for 10 business days to permit Members to submit additional questions to witnesses, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please e-mail your responses, in Word or PDF format, to Charlotte.Savercool@mail.house.gov by the close of business on Friday, February 22, 2013.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Greg Walden
Chairman
Subcommittee on Communications and Technology

cc: The Honorable Anna Eshoo, Ranking Member,
Subcommittee on Communications and Technology

Attachment

The Honorable Lee Terry

As the FCC considers identifying additional spectrum for terrestrial wireless use, it is important not to lose sight of the critical services provided by incumbent users of spectrum. What is the process that the Commission intends to use to ensure that the valuable services currently provided—both to commercial and U.S. Government customers—will not be disrupted by the potential reallocation or reuse of spectrum?

Response: Your question raises at least two separate issues. First, while we seek to make more efficient use of spectrum, we must also protect licensees from harmful interference. In order to accomplish this goal, we must ensure that our technical rules are formulated in a transparent manner that allows for input by all stakeholders—ideally, through a generalized rulemaking (as opposed to individual waiver requests). Where appropriate, we should also develop standards that are informed by testing conducted by the Commission’s expert engineers.

Second, as we go about reallocating spectrum, we must ensure that incumbent users retain sufficient spectrum to provide valuable services in an efficient manner. With respect to federal spectrum, this requires coordination both within the executive branch as well as between the National Telecommunications and Information Administration (NTIA) and the FCC.

The Honorable Phil Gingrey

1. Let me move on to a different topic and one that has an impact on my district in Georgia—The Atlanta Channel. Admittedly, the organization failed to fully complete the necessary application under the Community Broadcasters Protection Act of 1999 for Class A designation. Unfortunately, after denial in 2000, the company’s appeal languished at the Commission for 12 years before it was denied once again last month. Given this inaction for so many years when the Commission cited a deadline—particularly in the additional comments by Commissioner McDowell and Pai—was the stated cause of rejection, is it entirely unreasonable for this petitioner to have the opportunity to simply submit application for Class A designation at this point? If each Commissioner could answer, I would appreciate it. One quick follow up of each of you, the missed deadline notwithstanding, what is the Commission’s justification to the people and businesses of Atlanta to prevent this situation from even the opportunity to apply for Class A status given the footprint that The Atlanta Channel has—even as a low power operator—in the 9th largest market in the country and as a community servant in Atlanta?

Response: I believe that the Commission’s twelve-year delay in addressing The Atlanta Channel’s application for review is inexcusable. Nevertheless, after careful study, I reached the conclusion that the terms of the Community Broadcasters Protection Act of 1999 (CBPA) left me with no choice but to vote to affirm the Media Bureau’s decision. Were the Atlanta Channel to file a new application for Class A designation, the Commission would have to decide whether the CBPA permitted such a filing to be made at that time. Because I have not yet been presented the arguments on both sides of that question of statutory interpretation, I would approach that issue with an open mind.

2. Lastly, I would like to ask a question briefly on federal spectrum. I personally believe that we can find the needed balance of ensuring our national security and consolidating federal spectrum simultaneously. Commissioners McDowell and Pai, why is it that other countries, each of which have standing militaries, public safety users, and broadcast industries, are managing to bring multiple hundreds of megahertz to market for commercial use while we seem unable to accomplish that same goal? What, in your view, is the cost of failure to make additional spectrum available for commercial use?

Response: Clearing federal spectrum so that it can be reallocated for commercial purposes requires strong executive branch leadership. I was therefore very concerned by some of the recommendations contained in last year’s report by the President’s Council of Advisors on Science and Technology (PCAST), which appeared to dismiss further clearing of federal spectrum in favor of various spectrum sharing schemes. We have shown in the past that we can clear federal spectrum with strong leadership from the highest levels of the executive branch, and I see no reason why that can’t happen in the future.

I also think that the bifurcated nature of our system for spectrum management may be a reason why we have greater difficulty than some other nations in reallocating spectrum. Congress has given the FCC jurisdiction over commercial spectrum, while it has given the National Telecommunications and Information Administration (NTIA) jurisdiction over federal spectrum. As a result, the two bodies must often coordinate decisions. This process can take

time. Most other countries, by contrast, embrace a unified approach to regulating spectrum assets.

Like you, I hope that we can find the necessary balance between ensuring our national security and public safety on one hand and freeing up more spectrum for commercial use on the other. If we fail, commercial providers will not have access to enough spectrum. Networks will become clogged, wireless broadband connections will slow, and calls will be dropped. Eventually, carriers will have to limit the services they offer and likely charge more for them.

The Honorable Bob Latta

1. *Question for Chairman Genachowski:* As I've read in the NPRM, the Commission proposes doing the reverse and forward auction simultaneously versus separately. Can you elaborate on the differences between those two options, and can you speculate which format will result in more spectrum being available in the forward auction.

Question for Commissioner Pai: What are your thoughts on both options?

Response: The Spectrum Act gives the Commission the discretion to do a sequential or a simultaneous auction. This decision will not be easy. We must consider not only the theoretical advantages and disadvantages of each option, but also how theory is likely to play out in practice, especially given that some participants will be participating in a spectrum auction for the first time.

The comment cycle in the incentive auction proceeding has yet to close, and I will need to review the full record carefully before drawing any final conclusion as to which path we should follow. However, here are some of the considerations that I will keep in mind in reviewing the record. We must strive to keep our rules simple and provide as much certainty as possible to auction participants. In this regard, there are good reasons to believe that completing the reverse auction before moving to the forward auction would be simpler and provide more certainty for auction participants. On the other hand, a simultaneous auction may give reverse auction participants greater opportunity for price discovery, leading to more efficient bids.

2. You have stated publicly your will to reaffirm the goals set forth in the National Broadband plan, to reallocate 300 MHz of spectrum for mobile broadband by 2015 and 500 MHz by 2020. Can you elaborate on your three-step plan to achieve these goals?

Response: In my first months in office, I became concerned by the fact we were not on track to meet the spectrum goals set forth in the National Broadband Plan. For example, the Plan called for making 180 MHz available for mobile broadband in 2010 and 2011. But by mid-2012, we hadn't made any new spectrum available for that purpose since the release of the Plan. In July 2012, I therefore proposed a three-step plan for getting us back on track to meet the goal of reallocating 300 MHz of spectrum for mobile broadband by 2015: (1) begin the incentive auction rulemaking process in the fall of 2012; (2) revise our rules to enable LTE to be deployed in the WCS band; and (3) adopt rules to allow the AWS-4 band to be utilized for mobile broadband. I am pleased that we completed each of these steps by the end of 2012.

But now is not the time for complacency. If we are to meet the spectrum goals set forth in the National Broadband Plan, we must continue to make progress on a variety of fronts. For example, we should adopt rules this year so that we can hold the incentive auction in 2014. We should issue rules promptly so that we can auction up to 10 MHz in the H Block this year. And we must redouble our efforts to clear federal spectrum and reallocate it for commercial use. We should start with the most obvious target: the 1755–1780 MHz band. This band is already internationally harmonized for commercial use, which means deployment will be swifter and cheaper than other options. If we pair it with spectrum we have already cleared (2155–2180 MHz), an auction in the next two years could raise billions of dollars for the Treasury and put 50 MHz of spectrum into the commercial marketplace.

The Honorable Henry Waxman

Commissioner Pai, in your November 9, 2012 response to a letter from Ranking Member Eshoo, you stated that you believe questions addressing the Commission’s legal authority under the Public Safety and Spectrum Act are necessary and you raised several of them concerning unlicensed spectrum when the NPRM was adopted. In your written testimony for this hearing, however, you stated that the most important principle for the Commission moving forward is to “be faithful to the statute” and that it is your job “to implement this legislation, not to rewrite it to conform to our policy preferences.” How do you reconcile your two statements?

Response: These two statements are perfectly consistent. Because it is important for the Commission to be faithful to the statute—among other things, we want the implementation of the incentive auction to withstand judicial review—I believed that it was vital to ask questions addressing the Commission’s statutory authority in the incentive auction NPRM. By soliciting comment and compiling a complete record on these legal issues, we will best be able to ensure that the FCC complies with terms of the statute when we adopt our rules.

The Honorable John Dingell

1. With respect to the open proceeding concerning the structure and rate methodology of the Video Relay Service (VRS) program, is the Commission considering changes that would, as a practical matter, degrade the quality of service that deaf and hard-of-hearing users receive? If so, please detail such changes. Also will the Commission preserve or improve the availability of VRS service and technology available to consumers?

Response: The Communications Act requires that the Commission ensure that deaf and hard-of-hearing consumers receive telecommunications relay services such as VRS "in a manner that is functionally equivalent to the ability of a hearing individual who does not have a speech disability to communicate using voice communication services by wire or radio." Given this statutory command, I believe any reform undertaken by the Commission must not degrade the quality of a service that has proven to be valuable to deaf and hard-of-hearing Americans.

2. Does the Commission believe that deaf and hard-of-hearing consumers should have the same ability to choose their VRS provider as hearing consumers do with voice telephone providers?

Response: Deaf and hard-of-hearing consumers should enjoy the benefits of competition just as hearing consumers do.

3. I understand that no further accessibility guidance based on Access Board recommendations will be available until mid-2013. What does the Commission intend to do to help industry push forward with implementing provisions of the Communications and Video Accessibility Act of 2010 to the benefit of disabled Americans?

Response: I believe that it is vital for the Commission to continue its work implementing the Twenty-First Century Communications and Video Accessibility Act of 2010. Last November, for example, the Commission issued a Notice of Proposed Rulemaking seeking comment on ways to make televised emergency information more accessible to individuals who are blind or visually impaired. This NPRM also sought comment on how to ensure that television apparatuses are able to make available video description as well as make emergency information accessible to individuals who are blind or visually impaired. We are required by the CVAA to complete the "access to emergency information" rulemaking by April 9, 2013 and the "apparatus" rulemaking by October 9, 2013. I will do whatever I can to help the Commission meet these deadlines.