

**OVERSIGHT OF THE
FEDERAL COMMUNICATIONS COMMISSION**

HEARING

BEFORE THE

**COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION**

UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

MAY 16, 2012

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

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OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION

WEDNESDAY, MAY 16, 2012

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 2:26 p.m. in room SR-253, Russell Senate Office Building, Hon. John D. Rockefeller IV, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. JOHN D. ROCKEFELLER IV, U.S. SENATOR FROM WEST VIRGINIA

The CHAIRMAN. Ladies and gentlemen, I'm going to infuriate my colleagues, break Senate protocol, and forget the fact that we are starting our votes at a much earlier time than I thought, unless they have more sense down on the floor, but I have an opening statement that I just want to give so much, even though the Chairman isn't here, but our two newest members are, and we're very proud of that. Ah, it's Julius.

Julius, I'm breaking all the rules. I'm going to give my statement, and nobody else is going to be allowed to, see. So, there could be a real kerfuffle up here.

Senator BEGICH. I support you, Mr. Chairman, 100 percent.

The CHAIRMAN. Obviously, it's a pleasure to welcome all of you today. Having five members is glorious. I was at the Fourth Circuit yesterday, Commissioner Rosenworcel, and for the first time they had 15 members. They had all their members there, which has nothing to do with this. Anyway, Ajit and Jessica, you're wonderful additions to the Board.

This hearing follows on the heels of a hearing we had a few weeks ago that explored the future of video and how it's migrating from one platform to another. Such migration is not limited, however, just to video. It's occurring across the communications landscape.

We all need to be giving serious thought to how our communications laws are protecting consumers' basic rights in light of these changes. But, I would be remiss if I did not start by acknowledging that you have accomplished on the Commission comprehensive reform of the high-cost Universal Service Fund, and you have done a very good job at it. The committee had a hearing on this last year, on the need for reform. I know that it was not easy. You had to make hard choices, still face difficult decisions on implementation. As expected, your reform efforts have not pleased everyone. But it was imperative that the funds start targeting universal serv-

ice support to areas of the country without service, because they truly need it.

The FCC has also the responsibility of carrying out implementation of the spectrum auction and public safety provisions that Congress passed earlier this year. I plan to be very aggressive in monitoring implementation of that law for first responders, for the obvious reasons that we all care about it.

Specifically, the law gives the agency a simple and streamlined task to adopt minimum baseline technical requirements for the new FirstNet authority. Those would be national in scope. The FCC should not complicate or encumber FirstNet's mission for public safety. We have a once in a lifetime to get this network right, and it's complicated already, and we have to do it for our nation's responders. I will make sure that this law is carried out consistent with the intent of the law.

Similarly, another program I care deeply about is E-Rate. Senator Snowe and I were responsible, actually, for passing that back in the mid-nineties, and it's made an enormous change in the nature of our country. It provides schools and libraries with, as you know, affordable access to telecommunications and the Internet, but also the demand from schools and from libraries is out-streaking the supply of money available by a 2-to-1 formula, and that worries me greatly. That's why I'm troubled about the proposal that indicates that you will consider using E-Rate funds or authority to support digital literacy initiatives.

Ranking Member Hutchison, I'm being very, very bad. OK? I just started early.

Senator HUTCHISON. Starting early.

The CHAIRMAN. Yes. But I got permission. I got sort of permission from your guy. I mean, you know, I was trying to be—

Senator HUTCHISON. Does your Chairman do that to you?

[Laughter.]

The CHAIRMAN. Let me be clear. I support broadband adoption and digital literacy efforts. It's vital that we make sure that broadband is both widely deployed and adopted in rural and urban communities on a nationwide basis. But, let me be unequivocally clear, I believe any digital literacy initiative should not compromise the E-Rate program. The Chairman and I have talked about that in my office several times.

Finally, in this hearing, we may hear calls for the agency's statutory authority, that it be updated. Any effort to revise or update the law must keep consumers front and center and is something that we will be watching extremely closely, because some might use that as a way to undermine the legal authority of the E-Rate, or want to, and we're not going to allow that to happen.

Now, that's the end of my rudeness. But, I said what I wanted to say. We have questions, but we're time constrained. We have votes starting at what, 3:50?

Senator HUTCHISON. 3:45.

The CHAIRMAN. 3:45. They may last longer.

Senator HUTCHISON. Are you going to do statements? I was told you weren't.

The CHAIRMAN. No. I wasn't meant to say this. I mean that's why I broke the law by doing this, so that's why I started early.

But, I think that you or Senator DeMint should be able to say something, and then we'll go directly to Commission members, unless Senator Kerry hits me with a sharp elbow.

**STATEMENT OF HON. KAY BAILEY HUTCHISON,
U.S. SENATOR FROM TEXAS**

Senator HUTCHISON. Well, let me say that I'm glad that we are finally having this oversight hearing. I think it is very important. First let me welcome the two new members, because they both went through our committee with very large majorities, and we're glad that you're onboard, and that you have the full contingent now.

I want to say publicly, because I've said it before, that a lot has happened since our last hearing. The net neutrality regulations that were put forward by the FCC are those which I think overstepped and am in complete disagreement with, and I think the activities that you all are making must be confined to what you're authorized to do. So, I just want to put that on the record.

Going forward, we did pass the bipartisan bill on auctioning the wireless bands, and the incentive auctions will be moving forward. So, at today's meeting, I'm certainly going to ask some questions on that, because I know others might want to speak. I think that this is a very important effort going forward, and that it be done right is very important, also. So, we can explore that in the questions.

And thank you, Mr. Chairman, for going only 2 minutes early, rather than 10.

The CHAIRMAN. I would ask now if Senator Kerry, followed by Senator DeMint, has anything to say. I mean, obviously, you have a lot to say, but do you wish to say it?

Senator KERRY. You're in rare form today, Mr. Chairman.

The CHAIRMAN. Yes, sir.

Senator KERRY. I'll have a beer with you.

**STATEMENT OF HON. JOHN F. KERRY,
U.S. SENATOR FROM MASSACHUSETTS**

Senator KERRY. I'll just say very quickly, I think a lot of good work has been done in the Commission, and I salute both bipartisan and thoughtful considerations that Commissioner Clyburn, Commissioner McDowell, and Chairman Genachowski have been putting in place here. But, we obviously have a long way to go. We all know that.

The one thing I just want to put on the table is a warning that I'm worried that some people—I don't want to see this important entity get caught in the partisan crosshairs of this Congress. Some are suggesting a weakened or inactive FCC might be much better, and, you know, I think that we have to be really careful of winding up with an unregulated communications behemoth group of them out there that would be invulnerable to competition and unresponsive to consumers if we were to move in that direction.

We need to have this discussion about where we're going post-1992 and 1996 efforts, none of which contemplated the world we're living in today. So, it's entirely appropriate to be here and be doing

this, but I think we have to be careful as we go forward, Mr. Chairman.

The CHAIRMAN. OK. Thank you, Senator Kerry.
Senator DeMint.

**STATEMENT OF HON. JIM DEMINT,
U.S. SENATOR FROM SOUTH CAROLINA**

Senator DEMINT. Thank you, Mr. Chairman. And I think you made the best point starting out, that our job is to make sure consumers are protected. We know the best way to do that in America is through lots of choices, competition, transparency, and fairness for consumers. I think that's what we're all about, and I hope that's the way we look at it.

My concern, as I've expressed to a number of you, is that there seems to be a sense sometimes in this room and in this Congress that telecom companies—the networks, the content producers—are somehow a government property or a government service. I think you know they're not. They're private companies, private investment, private management. Our job is to make sure that competition works, that there's enough choice to let the market work, and when we do that, we know that customers are protected, because they always have more choices if they're not treated right.

Sometimes I think as we look at it as more of a public utility, it's our job not only to regulate it, but to manage it, and that's the sense I get sometimes with the decisions that are coming out of the FCC, with a lot of, I think, preemptive regulation that are solving problems that aren't there yet. And that's what I want to have a chance to talk a little bit about today.

I appreciate the service of all of you, and I think I've had a little bit to do with helping to usher most of you through this process. So, I appreciate your service, and I think the way you approach your job has more to do with how we look at it, maybe, than you, because if you feel like we want you to manage the industry, that's what you're going to do. Our hope is that we can recognize that it is very different than 20 years ago, that we literally have dozens and dozens of competitors, ways to get content to consumers we never even imagined, and are growing every day.

The chances of someone being taken advantage of are getting less and less, and that has a lot to do with some good things you've done and we've done, but hopefully today we can talk about where to go from here, how to make competition and choices work better, not necessarily how to run the industry. Thank you, Mr. Chairman.

The CHAIRMAN. So ordered.

With due respect to my colleagues, I call now upon the Chairman. What I'd thought we do is have the Chairman and Commissioner McDowell speak, and then we would come in with questions. As you can see, there are a lot of people here, and a lot more coming. So, we want to use our time efficiently.

**STATEMENT OF HON. JULIUS GENACHOWSKI, CHAIRMAN,
FEDERAL COMMUNICATIONS COMMISSION**

Chairman GENACHOWSKI. Chairman Rockefeller, thank you. Ranking Member Hutchison, members of the Committee, thank you for the opportunity to be here today.

Congressional oversight is a vital function. This committee has also taken important steps in the last year, particularly the spectrum law, with its landmark provisions on incentive auctions and public safety. Faithfully implementing the new law is a key priority of the FCC today.

I'm pleased to be joined by a full complement of Commissioners, including my newest colleagues, Jessica Rosenworcel and Ajit Pai, two experienced, accomplished, and excellent additions.

They join a Commission that has been productive, collegial, and focused on issues of real importance to our country, and I'm grateful to both Commissioners Clyburn and McDowell for ongoing collaboration and engagement that has significantly improved our decisions and our processes.

At the FCC, our mission is to maximize the power of communications technology to further the public interest, to help grow our economy, create jobs, enhance U.S. competitiveness, empower consumers, and unleash American innovation.

We've made tremendous progress in the past 3 years, and, indeed, private sector innovation, investment, and job creation are up across the broadband economy. These metrics are up by double-digit percentages, both when looking at broadband applications and services, and when looking at broadband providers and network infrastructure. And the U.S. has now regained global leadership in mobile. American-designed apps and services are being adopted faster than any other. U.S. mobile innovation is the envy of the world. And we're the first country rolling out the next generation 4G mobile at scale.

Our efforts to unleash the opportunities of broadband are focused on closing broadband gaps. First, the spectrum gap. We're focused on freeing up more spectrum for both licensed and unlicensed use, driving efficiency in the use of spectrum networks and devices, removing regulatory and other barriers to flexible spectrum use and mobile broadband build-out, and moving forward on innovative approaches like small cells, and on spectrum sharing as a new and additional tool to free up government spectrum for commercial use.

I specifically want to thank this committee for its work to authorize incentive auctions. I'm proud that the idea was proposed in our national broadband plan, and the FCC now has the challenge of implementing this unprecedented mechanism. We'll be the first country in the world to do so, continuing a proud tradition of U.S. leadership on mobile policy, and I look forward to working with my colleagues and the Committee as we move forward.

We're also tackling the broadband deployment gap. As you've mentioned today, about 18 million rural Americans live in areas with no broadband infrastructure. Our comprehensive reform plan adopted unanimously in October to modernize the Universal Service Fund will spur wired and wireless broadband build-out to hundreds of thousands of rural Americans in the near term, and sets us on a path to universal broadband deployment by the end of the decade, while, for the first time, putting the fund on a fiscally responsible budget.

To our broadband acceleration initiative, the FCC has removed barriers to broadband deployment and accelerated broadband build-out. For example, we've adopted orders to ease access by

broadband providers to utility poles and established a shot clock to speed cell tower and antenna siting.

In addition to the broadband deployment gap, we're tackling the broadband adoption gap. Nearly one-third of Americans, 100 million people, haven't adopted broadband. The Connect to Compete initiative enlists government, nonprofit, and private sector leaders to tackle the barriers to broadband adoption and digital literacy, one of several public-private initiatives to promote solutions to major challenges.

The FCC's successful E-Rate program, created thanks to the leadership of Senators Rockefeller and Snowe, has already helped connect virtually every library and classroom in America last year. We adopted several important modernizations of the program, including removing unnecessary rules that limited schools' ability to strike the best deals for broadband, and we remain committed to this important program.

Public safety communications is a core mission of the FCC, and we're on schedule in implementing the FCC provisions relating to FirstNet, helping deliver on the promise of nationwide interoperable broadband communications for our first responders.

We've also taken steps to improve the location accuracy of mobile 911, and we're working on accelerating next-generation 911 so that, for example, Americans will be able to send texts or photos to 911.

The FCC also recently led a process culminating in ISP serving 90 percent of U.S. subscribers to commit to significant steps to strengthen our country's cybersecurity.

In the international arena, we're working to oppose proposals from some countries that could seriously undermine the long-standing multi-stakeholder government model that has enabled the Internet to flourish. Consumer protection and empowerment is a core FCC responsibility, and we have taken action in many areas, including Smartphone theft, bill shock, and cramming, on the latter. I appreciate the excellent committee staff report on the subject.

I want to highlight not only what the FCC has accomplished, but how we conduct our work. The FCC is committed to smart responsible government. We've taken many steps to modernize our programs and ensure that they're efficient and fiscally responsible. Our major reforms are saving hundreds of millions of dollars, and in addition to our programmatic changes, we also regularly review the agency's rules and processes, and we've moved to eliminate dozens of outdated rules and unnecessary data collections. We've done everything I've listed in this statement and more with the lowest number of full-time employees in 10 years.

When I had the honor of being confirmed by the Senate for this position in 2009, I said I would work to focus the FCC on promoting investment, unleashing innovation, fostering competition, and protecting consumers. Those remain my goals, and I look forward to working with this committee, and with my colleagues on unleashing the opportunities of communications technology for our economy and the American people. I look forward to your questions.

[The prepared statement of Chairman Genachowski follows:]

PREPARED STATEMENT OF HON. JULIUS GENACHOWSKI, CHAIRMAN,
FEDERAL COMMUNICATIONS COMMISSION

Chairman Rockefeller, Ranking Member Hutchison, Members of the Committee, thank you for this opportunity to appear before you today.

At the FCC, our mission is to maximize the power of communications technology to grow our economy; create jobs; enhance U.S. competitiveness; empower consumers; and unleash American innovation, including in areas like education, health care, and public safety.

Consistent with this mission, over the last three years, we have focused the agency on broadband communications—wired and wireless. In 2009, we developed America's first National Broadband Plan, which identified key challenges and opportunities throughout the broadband ecosystem, and proposed solutions to ensure that the U.S. leads the world in broadband access and innovation.

Together with my colleagues at the FCC, we have made tremendous progress in the past three years, taking many steps to unleash investment, innovation, and job creation. These include modernizing and reforming major programs like the Universal Service Fund, freeing spectrum for both licensed and unlicensed use, removing barriers to broadband buildout, and taking strong and balanced steps to preserve Internet freedom.

And indeed, innovation, investment, and job creation are up across the broadband economy. These metrics are up both when looking at broadband applications and services, and when looking at broadband providers and networks.

Our work at the FCC is helping create jobs across the country, from workers building broadband infrastructure, to agents at new broadband-enabled customer contact centers, to employees of small businesses using broadband to expand, to engineers and other innovators inventing the new digital future.

And the U.S. has now regained global leadership in mobile innovation. American-designed apps and services are being adopted faster than any others. U.S. mobile innovation is the envy of the world.

We are also ahead of the world in deploying 4G mobile broadband at scale—with 64 percent of the world's 4G LTE subscribers here in the U.S. These next-generation networks are projected to add \$151 billion in GDP growth over the next four years, creating an estimated 770,000 new American jobs.

In 2011, overall investment in network infrastructure equipment was up 24 percent from 2010, with broadband providers investing tens of billions of dollars in wired and wireless networks.

Internet start-ups attracted \$7 billion in venture capital in 2011, almost double the 2009 level and the most investment since 2001.

Our efforts to improve the health of our broadband economy have focused on closing broadband gaps.

First, the *spectrum gap*. Multiple studies show that demand for mobile services is on pace to exceed the capacity of our mobile networks.

Last week, at the wireless industry's annual conference, I presented the Commission's Mobile Action Plan, which builds on the mobile portions of the National Broadband Plan, to achieve our goal of unleashing mobile innovation and investment. This plan will help ensure that America maintains the position it has now regained as the global leader in mobile. It includes incentive auctions, while also recognizing that we must have an "all of the above" strategy that includes freeing up more spectrum for both licensed and unlicensed use; driving efficiency in spectrum use, including by increasing the efficiency of devices and networks; removing barriers to mobile broadband buildout; and pioneering innovative approaches like small cells and spectrum sharing between government and commercial users.

On the latter, I was pleased to announce that we are moving ahead in partnership with NTIA to test spectrum sharing between commercial and government uses in the 1755–1780 MHz band, a band of particular interest to commercial carriers.

Thanks to Congress, and the hard work of this Committee last year, we will unleash significant amounts of prime spectrum through *incentive auctions*—an unprecedented market-based solution to reallocate spectrum that was proposed in the National Broadband Plan. We've announced an implementation plan for incentive auctions that puts us on schedule to launch a rulemaking by the fall of this year.

We've also made progress toward unleashing more than 25 MHz of WCS spectrum, and converting 40 MHz of prime spectrum in the *S-Band* from satellite to terrestrial use.

Last year we became the first country to free up *TV white spaces* for unlicensed use. This is the most significant release of spectrum for unlicensed use in 25 years, and it holds the promise of new value-creating breakthroughs on the order of magnitude of Wi-Fi.

We are also tackling the *broadband deployment gap*.

Today, millions of rural Americans live in areas with no broadband infrastructure. Our plan, adopted unanimously in October, to modernize the *Universal Service Fund* will spur wired and wireless broadband buildout to hundreds of thousands of rural Americans in the near term, and sets us on the path to universal broadband by the end of the decade—while, for the first time, putting the Fund on a budget. Together with my colleagues, we crafted a set of reforms that honor fiscal responsibility, respect business realities, and help bring broadband to unserved Americans around the country, in every state.

Through our *Broadband Acceleration Initiative*, the FCC has removed barriers to broadband deployment and accelerated broadband buildout. For example, we've adopted orders to ease access by broadband providers to *utility poles* and established a *shot clock* to speed cell tower and antenna siting.

In addition to the broadband deployment gap, we are making strides on the *broadband adoption gap*.

Nearly one-third of Americans—100 million people—haven't adopted broadband. The *Connect to Compete Initiative* enlists government, nonprofit, and private sector leaders to tackle the barriers to adoption—one of several public-private initiatives driven by the Commission to promote solutions to major challenges.

The FCC's successful *E-Rate* program, created thanks to the leadership of Senators Rockefeller and Snowe, has already helped connect virtually every library and classroom in America. In 2010 we adopted several important modernizations of the program, including recognizing the potentially important role of mobile broadband, removing barriers to schools opening their computer labs as hot spots for their communities, and giving schools more choices to strike the best deals for broadband in their markets..

Public safety is a core mission of the FCC, and the agency is working to harness the power of communications to make our communities safer.

We are working with multiple stakeholders to advance next-generation 9-1-1. And we accelerated the launch of *Wireless Emergency Alerts* that allows local, state and Federal authorities to send targeted alerts to mobile devices of people who are in the vicinity of an emergency.

As part of our long-standing role in ensuring the security and reliability of communications networks, the FCC recently led a process culminating in ISPs serving 90 percent of all U.S. residential broadband subscribers committing to take significant steps to strengthen the country's cybersecurity. This includes implementing an Anti-Bot Code of Conduct to reduce the threat of botnets, adopting DNS Best Practices to prevent domain name fraud, and working to implement an industry framework to prevent Internet route hijacking.

Working with government, private-sector, and nonprofit partners, we also developed a *Small Business Cyber Planner* to help small businesses guard against cyber attacks, which are estimated to cost targeted small businesses an average of \$200,000 in damages.

In today's hyper-connected, flat world, the success of American companies, as well as global prosperity and freedom, depends on a dynamic and open global Internet. And so we are working to preserve the Internet as a free-market globally, and oppose international proposals that could stifle Internet innovation. Working with our colleagues in government and stakeholders outside government, we are seeking to head off barriers to the global expansion of cloud computing, and encouraging free flows of data worldwide.

And we are working to oppose proposals from some countries that could seriously undermine the long-standing multi-stakeholder governance model that has enabled the Internet to flourish as an open platform for communication, innovation, and economic growth. If adopted, these proposals would be destructive to the future of the Internet, including the mobile Internet, and across the U.S. Government we have consistently and strongly opposed such proposals.

The FCC also provides value by protecting and empowering consumers.

Smartphone theft is on the rise, and poses a real threat to consumers. In DC, New York, and other major cities roughly 40 percent of all robberies now involve cell phones. This past month, together with Senator Schumer, the wireless industry, and law enforcement from around the country, we announced the launch of a new database that will allow consumers and carriers to disable stolen smartphones and tablets dramatically reducing their value on the black market.

This committee has helped lead the fight to crack down on *bill shock*, a problem that has cost millions of consumers tens, hundreds, and sometimes thousands of dollars in unexpected charges. Working with wireless providers, we found a common-sense solution to bill shock—alerts to consumers when are about to incur overage charge. A few weeks ago we introduced a new online tool to help consumers track

implementation of the commitments made by wireless carriers to provide usage alerts.

Last month, the Commission approved an order to put an end to abusive, third-party charges on phone bills, what's commonly known as *cramming*. Previously, the Commission's Enforcement Bureau issued \$12 million in fines against four companies that had engaged in widespread cramming, part of a record-breaking year for our Enforcement Bureau, which logged \$67.2 million in monetary penalties and settlements on behalf of consumers in 2011.

I want to highlight not only what the FCC has accomplished, but how we conduct our work. The FCC is committed to smart, responsible government, and we have taken significant steps to modernize our programs and ensure that they are efficient and fiscally responsible—saving billions of dollars.

Our work to modernize USF and Intercarrier Compensation will not only spur broadband buildout, it also eliminates billions of dollars in hidden subsidies from consumers' phone bills.

Our work to reform the Lifeline program is expected to save up to \$2 billion over the next three years. Even before this order was adopted, we made changes that eliminated 270,000 duplicate subscriptions, saving \$35 million.

We reformed our Video Relay Service Program, which provides vital communications for people who are deaf or hard-of-hearing, saving \$250 million per year without reducing availability of service.

In addition to our programmatic changes, we have also reviewed the agency's rules and processes—asking tough questions to make sure the agency is operating efficiently and effectively.

In connection with this review, we've already eliminated more than 200 outdated rules and five unnecessary data collections. We have identified two dozen more data collections for elimination.

We estimate that internal reforms like consolidated IT maintenance and new financial system have already saved the agency almost \$8 million.

And we've done everything I've listed and more with the lowest number of full-time employees in 10 years.

In conclusion, the wired and wireless broadband sectors are critically important to our economy and global competitiveness. I look forward to working with the Committee on implementing the new incentive auctions law, and unleashing the opportunities of communications technology for our economy and the American people.

Thank you.

The CHAIRMAN. Thank you, Mr. Chairman.
Commissioner McDowell.

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

Commissioner McDOWELL. Thank you, Mr. Chairman, and Ranking Member Hutchison. This is my first opportunity to welcome our new colleagues. I want to thank the Senate for confirming them. And when the Senate did confirm them, I put out a statement saying how highly qualified they were and how they were able to hit the ground running. Little did I know that they would be hitting the ground running before the U.S. Senate 48 hours after being sworn in, but they can handle it, I'm sure. So, we have plenty of work to do together in the coming months and years.

I believe that America's future is bright when it comes to putting the power of new communications technologies into the hands of consumers. Specifically, I firmly believe that we are in the early days of the Golden Age of mobile broadband. Due to America's light touch regulatory approach to the wireless sector, we have always led the world in that arena. We can encourage this impressive trajectory and further strengthen America's global leadership in wireless if we, first, implement the new spectrum law with simplicity, humility, and regulatory restraint; second, work harder to ensure that Federal, State, and local governments relinquish more spec-

trum for auction; and third, commence a comprehensive effort to adopt policies that make it easier to deploy technologies that enhance spectral efficiency.

When it comes to implementing the new spectrum law, we should learn from past efforts to over-engineer auctions that resulted in unintended consequences and counterproductive consequences as well. New auction rules should be appropriately minimal, by adopting deregulatory flexible use policies that will make any rules future proof for innovations we can't even imagine today. Rules should also offer fair opportunities for small, medium, and large players to bid for and secure licenses without excluding any player from the auctions, as Congress intended with the law.

The FCC's inbox is full with many other matters as well. We must conclude our proceeding on universal service contribution reform as soon as possible. This silent and automatic tax increase is eating into consumers' wallets. It has been as high as 18 percent, and it must be abated as soon as possible.

Furthermore, we are overdue for modernizing our media ownership rules. Based upon the record before us and recent court decisions, at a minimum the 1975 vintage newspaper broadcast cross-ownership ban seems as out of date in today's highly competitive and dynamic digital marketplace as the wide lapels, long sideburns, and disco music of its birth year.

And last, not only must we stay unified and energized in our efforts to prevent the International Telecommunication Union from swallowing the highly successful non-governmental, private sector, multi-stakeholder model for Internet governance, but we must quickly find allies throughout the world, especially in the developing world for this effort.

So, thank you for having us here today, and I look forward to your questions.

[The prepared statement of Commissioner McDowell follows:]

PREPARED STATEMENT OF HON. ROBERT M. MCDOWELL, COMMISSIONER,
FEDERAL COMMUNICATIONS COMMISSION

Thank you, Chairman Rockefeller, Ranking Member Hutchison, and Members of the Committee for inviting me to join you today. I have served as an FCC commissioner for nearly six years, and every day has been a privilege. Nearly four and a half years have passed since the full Commission has had the opportunity to appear before your Committee, and I am pleased to be back before you. As always, I look forward to answering any questions you may have.

Today's hearing marks the first time the five of us have appeared together as the new fully-intact FCC. Accordingly, it is a great pleasure to officially welcome our new colleagues, Commissioners Rosenworcel and Pai.

We have plenty of work to do together in the coming months and years. I believe that America's future is bright when it comes to putting the power of new communications technologies into the hands of consumers. For instance, we are in the early days of the Golden Age of mobile broadband. America has *always* led the world when it comes to wireless innovation and if we choose the correct policies we will further strengthen America's global leadership.

For example, the United States has approximately 21 percent of the world's 3G/4G subscribers and approximately 69 percent of the world's entire LTE subscribers even though the population in the United States is less than five percent of the global population.¹ American wireless providers are also investing more in their infrastructure than their international counterparts. In 2011, over \$25 billion was in-

¹See *INFORMA TELECOMS AND MEDIA* (WCIS Database) (Dec. 2011).

vested in United States' wireless infrastructure² versus \$18.6 billion invested in 15 European countries combined.³

Furthermore, the American mobile market enjoys more competition than most international markets. According to the most recent FCC statistics, nine out of ten American consumers have a choice of at least *five* wireless service providers.⁴ In Europe, that number is around three.⁵ As a result, American consumers enjoy lower prices and higher mobile usage rates as compared to consumers in the European Union (EU)—4 cents per minute versus 17 cents generally in the EU.⁶ Wireless subscriber usage on average in the United States is often three to seven times as much compared to some countries.⁷ At the same time, American consumers pay at least one-third less than consumers in many other parts of the world.⁸ America's light touch regulatory policy for mobile technologies has enabled our wireless sector to flourish and lead the world. Policy makers should keep this important history in mind when contemplating the wireless industry's regulatory future.

Combining the power of the Internet with the freedom that comes from wireless mobility has created new economic and political opportunities that were unimaginable just six years ago when I was first appointed to the FCC. Competition, private sector leadership and regulatory liberalization have wrought a wonderful explosion of entrepreneurial brilliance, economic growth and political change that is improving the human condition across the globe.

Against this backdrop, I will discuss three broad initiatives that, if pursued effectively, will encourage, rather than discourage this impressive trajectory in mobile broadband deployment and use: (1) implementing the new spectrum law enacted with an eye toward simplicity, humility, and regulatory restraint; (2) identifying and engaging in an aggressive and coordinated effort to free up spectrum held by the Federal Government; and (3) fostering greater spectral efficiency.

Next, I will: review the FCC's efforts to expand broadband availability to unserved Americans through our recent reform of Universal Service Fund (USF) distributions; show how the new digital economy has rendered many media ownership regulations obsolete; discuss how reforming the Commission's procedures would ensure greater efficiencies; and elaborate on my concerns over new global efforts to have the International Telecommunication Union (ITU) regulate the Internet.

The FCC Should Implement the New Spectrum Law with Simplicity, Humility and Restraint

As noted earlier, Americans are increasingly integrating the use of sophisticated mobile devices into their daily lives. While the popularity and power of mobility has ushered in vast consumer benefits, this new reliance on wireless services has increasingly strained our spectrum capacity. As you know, Congress passed legislation in February that originated in your Committee, which, among other things, included a voluntary incentive auction for our Nation's television broadcasters.⁹ This initiative will put new spectrum into the hands of our Nation's consumers. Congratulations on that bipartisan and historic achievement.

As a result of your work, the Commission has commenced the implementation of that law which will result in the most complicated spectrum auction, or auctions, in world history. Vital to a successful effort, we should undertake our work with an eye toward simplicity and restraint. In the past, regulatory efforts to over-engi-

²See CTIA—THE WIRELESS ASSOC., CTIA SEMI-ANNUAL WIRELESS INDUSTRY SURVEY (2012), <http://www.ctia.org/advocacy/research/index.cfm/AID/10316>; see also CTIA—THE WIRELESS ASSOC., SEMI-ANNUAL 2011 TOP-LINE SURVEY RESULTS 10 (2012) (last visited May 14, 2012), http://files.ctia.org/pdf/CTIA_Survey_Year_End_2011_Graphics.pdf (providing cumulative capital investment numbers) (last visited May 14, 2012).

³See BOA/MERRILL LYNCH EUROPEAN TELECOMS MATRIX Q112 (Mar. 30, 2012) (GLOBAL TELECOMS MATRIX Q112) (estimating €14,368 YE 2011. Conversion at \$1.2948/€). The European countries included in the Matrix: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and UK; there are 27 members of the European Union (EU).

⁴Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 10–133, *Fifteenth Report*, 26 FCC Rcd 9664, 9669 (2011).

⁵See GLOBAL TELECOMS MATRIX Q112.

⁶Roger Entner, *The Wireless Industry: The Essential Engine of U.S. Economic Growth*, RECON ANALYTICS, at 1 (May 2012), <http://reconanalytics.com/wp-content/uploads/2012/04/Wireless-The-Ubiquitous-Engine-by-Recon-Analytics-1.pdf> (last visited May 14, 2012).

⁷See GLOBAL TELECOMS MATRIX Q112 at 71.

⁸See *id.*

⁹Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112–96, §§ 6402–6404, 126 Stat. 156, 224–230 (2012).

neer spectrum auctions have caused harmful, unintended consequences. I hope that we will learn from our own history so we can avoid missteps by implementing the law with regulatory humility. In doing so, new auction rules will be appropriately minimal and “future proof” and allow for uses that we cannot imagine today as technology and consumer choices evolve. For instance, new rules should include band plans that offer opportunities for small, medium and large companies to bid for and secure licenses without having to exclude *any* player from the auctions.

The Federal Government Should Relinquish More Spectrum for Auction

In addition to making television broadcast spectrum available for new and innovative service offerings, we must work together to identify opportunities to move Federal Government users into new spectrum bands. As our colleagues at the National Telecommunications and Information Administration (NTIA) have recently reported, various Federal Government operations are employing spectrum located within the 1755–1850 MHz range that could be made available for commercial uses.¹⁰

NTIA made a valuable contribution to this effort, especially in setting forth the issues at hand. Although I commend the team at NTIA for their thorough and thoughtful work, I look forward to further analysis on the cost and timing estimates in particular.¹¹ Greater clarity in the cost assumptions underlying the report would go a long way to create greater certainty in the marketplace as we attempt to satisfy longer-term commercial spectrum needs.

The Government Should Adopt Policies That Will Allow For Accelerated Improvements In Spectral Efficiency

While we identify and analyze the complex issues that will arise as we implement the new spectrum legislation, I will continue to call for an increased focus on technologies and strategies to improve spectral efficiency. Greater emphasis and education in this area will improve the ability of mobile service providers, engineers, application and content developers as well as consumers to take better advantage of the immediate fixes already available in the marketplace. Spectral efficiency solutions include more robust deployment of enhanced antenna systems; improved development, testing and roll-out of creative technologies where appropriate, such as cognitive radios; and enhanced consideration of, and more targeted consumer education on, the use of femtocells. Each of these technological options augments capacity and coverage, which is especially important for data and multimedia transmissions. The Commission’s recent workshop on receiver standards is a step in the right direction.

I am pleased that we are beginning to discuss spectrum sharing in a meaningful way. Although the term “sharing” has yet to be defined in the context of current deliberations, I have consistently encouraged FCC efforts to promote a form of sharing—for instance, I have strongly supported our work to promote unlicensed use of the “TV white spaces” within the 700 MHz Band,¹² the 400 MHz Band,¹³ and the 5 GHz Band.¹⁴ Although highly technical in nature, these sharing protocols, once brought to fruition, will appear seamless to consumers while they enjoy higher speeds and expanded coverage when making mobile connections. Moreover, the services offered in these bands have the potential to add many billions of dollars to the U.S. economy and to become essential components of the mobile broadband marketplace. For instance, unlicensed use of white spaces could serve as an “off ramp” for

¹⁰U.S. DEPT. OF COMMERCE, AN ASSESSMENT OF THE VIABILITY OF ACCOMMODATING WIRELESS BROADBAND IN THE 1755–1850 MHz BAND (Mar. 2012) (“NTIA Report”).

¹¹The NTIA Report states that moving some commercial users could cost \$18 billion and take 10 years. *Id.* at iii.

¹²*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) (using unused and under-used spectrum held by licensed and unlicensed commercial incumbents for the purpose of developing new low power wireless services).

¹³Amendment of Parts 2 and 95 of the Commission’s Rules to Provide Additional Spectrum for the Medical Device Radiocommunication Service in the 413–417 MHz Band, ET Docket No. 09–36, *Report and Order*, 26 FCC Rcd 16605 (2011) (sharing spectrum with Federal Government users for the purpose of developing and employing implantable medical devices that have a wide range of operations, including restoring movement to paralyzed limbs).

¹⁴*See, e.g.*, Revision of Parts 2 and 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U–NII) devices in the 5 GHz Band, *Memorandum Opinion and Order*, ET Docket No. 03–122, 21 FCC Rcd 7672 (2006) (sharing spectrum with Federal Government users for the purpose of developing and employing Unlicensed National Information Infrastructure (U–NII), which provides short-range, high-speed wireless connections).

wireless traffic experiencing congestion on licensed routes just as Wi-Fi is increasingly being used to circumnavigate clogged channels.

Equally important, as policy makers, we should emphasize techniques and strategies to improve spectral efficiency. In practical terms, even if we could easily identify 500 megahertz of quality spectrum to reallocate today, we should expect the better part of a decade to transpire before consumers could enjoy the benefits. As history illustrates, it takes time to write proposed auction rules and band plans, analyze public comment, adopt rules, hold auctions, collect the proceeds, clear the bands, and watch carriers build out and turn on their networks. In the meantime, as powerful new applications consume more wireless bandwidth making it easier for innovators to create and deploy new technologies, enhancing more efficient use of the airwaves has to be a top priority for all of us.

We Must Continue Our Work on Universal Service Reform

Before last fall, the challenge of solving the seemingly intractable USF and inter-carrier compensation puzzle had cast a shadow over the FCC for more than a decade. During my time as a commissioner, I have tried to learn about the practical realities of the program by holding productive policy discussions with multiple stakeholders not only in America's least populated and remote regions but also in urban and suburban areas where customers pay rates above costs to subsidize rural consumers. After years of fact gathering and analysis, with a unanimous vote, the Commission finally modernized the high cost portion of the USF. As a result, we bent the spending curve on a Federal entitlement by imposing a strict budget on the former high cost fund for the first time in the fund's history.

Historically, the high cost fund only supported traditional telecommunications services and did not directly support the deployment of broadband. Also, the program has grown tremendously over the years without promoting efficiency. For example, the high cost fund subsidized multiple providers in the same area while other parts of our Nation still remained unserved. Furthermore, the old structure allowed providers to receive subsidies to serve areas that were already served by unsubsidized competitors. In part, due to these and other inefficiencies, the high cost fund grew from \$1.69 billion in 1998 to over \$4 billion by the end of last year.¹⁵

The FCC's reform efforts last fall addressed these issues, among many others, and transformed the high cost fund into one that will support next-generation communications technologies, while also keeping a lid on spending.¹⁶ Chairman Genachowski and Commissioners Copps (since retired) and Clyburn should be commended for this historic accomplishment.

In addition to reforming the high cost program, the Commission also reformed the USF low income program (Lifeline/Linkup) in January by restraining its spending

¹⁵ Similarly, the aggregate amount spent on all USF programs grew from \$3.66 billion in 1998 to over \$8 billion through 2011. Sources: Federal Communications Commission and Universal Service Administrative Company.

¹⁶ The Commission not only has broad authority to repurpose support to advanced services but a *duty* to do so as well as handed to us by the plain language of section 254. In section 254(b), Congress specified that "[t]he Joint Board and the Commission *shall* base policies for the preservation and advancement of universal service on [certain] principles." 47 U.S.C. § 254(b) (emphasis added). Two of those principles are particularly instructive: First, under section 254(b)(2), Congress sets forth the principle that "[a]ccess to advanced telecommunications and information services should be provided in all regions of the Nation." 47 U.S.C. § 254(b)(2). Second, with section 254(b)(3), Congress established the principle that "[c]onsumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and *information services* . . ." 47 U.S.C. § 254(b)(3) (emphasis added).

Also, section 254(b)(7) instructs the Commission and Joint Board to adopt "other principles" that we "determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with" the Communications Act. In that regard, in 2010 the Federal-State Board on Universal Service recommended to the Commission that we use our authority under section 254(b)(7) to adopt a principle to "specifically find that universal service support should be directed where possible to networks that provide advanced services."

Some contend that the definition of universal service under section 254(c)(1) muddies the water because it does not include "information service." Instead, that provision states that "[u]niversal service is an evolving level of *telecommunications services* . . . taking into account advances in telecommunications and information technologies and services." But, it is also relevant that the term "telecommunications service" is qualified by the adjective "evolving." Even if section 254 were viewed as ambiguous, pursuant to the well established principle of *Chevron* deference, the courts would likely uphold the FCC's interpretation as a reasonable and permissible one. See *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

As part of this USF order approved last fall, the Commission agreed with the Joint Board recommendation and adopted "support for advanced services" as an additional principle. Moreover, even if any of the statutory language in section 254 appears to be ambiguous, the Commission's reasonable interpretation would receive deference from the courts under *Chevron*.

and adopting some necessary measures to eliminate waste, fraud and abuse in that program.¹⁷

These two reform efforts were just *first steps*, however, because the Commission only addressed the distribution, or spending, side of the USF equation. Equally important is the need to fix the contribution methodology, or the “taxing” side of the ledger. In other words, how are we going to pay for all of this?

To put this issue in perspective, the USF contribution factor, a type of tax paid by telephone consumers, has risen each year from approximately 5.5 percent in 1998 to almost 18 percent in the first quarter of this year.¹⁸ This trend is unacceptable because it is unsustainable. Furthermore, the cryptic language on consumers’ phone bills, combined with the skyrocketing “tax” rate, has produced a new form of “bill shock.” We must tame this wild automatic tax increase as soon as possible.

In a perfect world, the Commission would have conducted *comprehensive* reform by addressing both the spending and taxing sides at the same time. Instead, our effort was broken into pieces. Nevertheless, I was pleased that the Chairman recently launched a further notice of proposed rulemaking on contribution reform which was approved by the Commission at our last open meeting.

I look forward to working with my colleagues and all stakeholders to craft a pragmatic and fair solution to lower the tax rate while broadening the base in a manner that is within the authority granted to us by Congress. It is my hope that we will do so no later than this fall.

Finally, given the breadth and magnitude of the various USF reforms we have accomplished so far, many of the effects—both positive and negative—may not be apparent in the near term. That said, USF reform is an iterative process and we will constantly monitor its implementation, listen to concerns, and quickly make adjustments, if necessary.

Our Media Ownership Proceeding Gives U.S. an Opportunity to Modernize Outdated Rules

In the upcoming months, the Commission is likely to vote on the quadrennial media ownership review. In December, I concurred to the majority of the December 2011 notice of proposed rulemaking, because the Commission appears to be prepared to accept a regulatory *status quo*. I remain hopeful that the Commission will modernize its rules to reflect the economic realities of the marketplace. Maintaining decades-old industrial policy in this age of competition, mobility and new media is not in the public interest. Moreover, we have a statutory obligation to eliminate unnecessary mandates and bring all of our media ownership rules into line with today’s competitive environment.¹⁹

The factual record from the FCC’s 2006–2007 review, coupled with the weight of the evidence that has poured in thus far during our current review, would likely support a conclusion that the 1975 vintage newspaper-broadcast cross-ownership ban should be largely eliminated. Although the Commission has offered up a relaxation of the ban on newspaper-television ownership for the largest markets and considers eliminating restrictions on newspaper-radio combinations, these proposals are anemic and do not reflect marketplace realities. Particularly, in the past decade, broadcast stations and daily newspapers have grappled with falling audience and circulation numbers, diminishing advertising revenues, and resulting staff reductions, as online sources gain in popularity. Although some sectors of the news indus-

¹⁷Funding for the Lifeline/Linkup program has steadily increased over the years. In 1998, the total support for the program was \$464 million, and in 2010, the total support was over \$1.3 billion. See UNIVERSAL SERVICE MONITORING REPORT, CC Docket No. 98–202, Table 2.2 (2011), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-311775A1.pdf.

¹⁸See Proposed First Quarter 2012 Universal Service Contribution Factor, CC Docket No. 96–45, *Public Notice*, 26 FCC Rcd 16814 (OMD 2011).

¹⁹Telecommunications 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). Section 202(h) states:

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 § 202(h).

try have experienced a slight resurgence,²⁰ newspapers continue to face decline with both advertising and circulation revenues continuing on a downward path.²¹

Since 2007, a number of the Nation's most prominent daily newspapers have gone into bankruptcy and many papers have moved to online-only formats. Furthermore, over the past five years, an average of 15 daily papers, or about 1 percent of the industry, have shuttered their doors *each year*.²² This is probably a response, in part, to the challenging economic climate, but also may be a consequence of the emergence of competition from new media platforms such as the Web and the FCC's failure to modernize our rules adequately.

Regardless of any rule changes, however, traditional media owners are choosing to invest in new, *unregulated* digital outlets rather than acquire more heavily-regulated traditional media assets. Although newspaper circulation numbers continue to decline, the number of unique visitors to newspaper websites has been increasing.²³ In fact, the White House's Council of Economic Advisors has found that newspapers are one of America's fastest-shrinking industries²⁴ 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.²⁵ Currently, 172 newspapers have launched online subscription plans or placed content behind a paywall.²⁶ This represents a 15 percent increase since January alone and more papers are expected to follow suit in the coming months.²⁷ In the last year, we have also witnessed a trend of traditional news media partnering with online distributors. For instance, 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.²⁸

In today's robust and dynamic online and mobile marketplace, government should not limit the options of broadcasters and the newspaper community to attract investment, increase efficiencies, and share the costs of news production. Even in today's competitive online environment, the medium of newspaper has an important role to play. Although business models are evolving, government policies should not distort market trends.

Ironically, based on the evidence in the record thus far, the newspaper-broadcast cross-ownership rule is likely undermining its own ostensible goal of promoting a diversity of voices in the media marketplace. The rule may indeed be exacerbating the diminution of journalism. Further, the record thus far demonstrates that in-

²⁰In 2011, network and local news viewership increased for the first time years; however, local TV station advertising revenues still experienced a decline. See PEW RESEARCH CENTER'S PROJECT FOR EXCELLENCE IN JOURNALISM, THE STATE OF THE NEWS MEDIA 2012, KEY FINDINGS, <http://stateofthemedial.org/2012/overview-4/key-findings/> (last visited Mar 14, 2012) ("THE STATE OF THE NEWS MEDIA 2012") (stating that news viewership increased for local stations and networks for the first time in five and ten years, respectively); THE STATE OF THE NEWS MEDIA 2012, LOCAL TV, <http://stateofthemedial.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).

²¹THE STATE OF THE NEWS MEDIA 2012, OVERVIEW, <http://stateofthemedial.org/2012/overview-4/>; THE STATE OF THE NEWS MEDIA 2012, KEY FINDINGS, <http://stateofthemedial.org/2012/overview-4/key-findings/>.

²²THE STATE OF THE NEWS MEDIA 2012, MAJOR TRENDS, <http://stateofthemedial.org/2012/overview-4/major-trends/>.

²³*Newspaper Web Audience*, NEWSPAPER ASSOC. OF AM. (Apr. 25, 2012), <http://www.naa.org/Trends-and-Numbers/Newspaper-Websites/Newspaper-Web-Audience.aspx>.

²⁴ECONOMIC 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.

²⁵Derek Thompson, *Newspapers are America's Fastest-Shrinking Industry*, THE ATLANTIC (Mar. 11, 2012), <http://www.theatlantic.com/business/archive/2012/03/newspapers-are-americas-fastest-shrinking-industry/254307/>; 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; Andrew Edgecliffe-Johnson, *Bleak Outlook for U.S. Papers*, FINANCIAL TIMES (Mar. 16, 2012), <http://www.ft.com/intl/cms/s/0/3eef0bc4-6f73-11e1-9c57-00144feab49a.html#axzz1uryNf9hc>.

²⁶Papers 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).

²⁷*Compare id.*, with THE STATE OF THE NEWS MEDIA 2012, NEWSPAPERS, <http://stateofthemedial.org/2012/newspapers-building-digital-revenues-proves-painfully-slow/> (stating that roughly 150 newspapers have instituted a "metered model").

²⁸THE STATE OF THE NEWS MEDIA 2012, OVERVIEW, <http://stateofthemedial.org/2012/overview-4/>.

market combinations do not negatively affect viewpoint diversity²⁹ and actually increase the quantity and quality of local news and information provided by commonly-owned outlets to benefit the American consumer.³⁰ For these reasons, and many others, with the weight of the evidence before us it appears that the newspaper-broadcast cross-ownership rule could be counter-productive, not in the public interest and should be largely eliminated.

Opportunities Abound for Further FCC Reform

Congress has recently shown interest in identifying opportunities for the streamlining and improving Commission procedures and to ensure that unnecessary, outdated or harmful rules are repealed.³¹ I agree. Although some FCC reforms require Congressional action, others may be achieved internally. For instance, the Chairman has enacted some of my suggestions, including ensuring that notices of proposed rulemaking contain actual proposed rules. I applaud his efforts in this area. In 2009, I outlined additional suggestions regarding reform of the FCC to Acting-Chairman Michael Copps and subsequently to Chairman Genachowski. For your convenience, I have attached copies of these letters. (See Exhibit A).

We Should Remain Unified in Our Opposition to UN/ITU Regulation of the Internet

Finally, all of us should be concerned with a well-organized international effort to secure intergovernmental control of Internet governance. Since being privatized in the early 1990s, the Internet has historically flourished within a deregulatory regime not only within our country but internationally as well. In fact, the long-standing international consensus has been to keep governments from regulating core functions of the Internet's ecosystem.

Unfortunately, some nations, such as China, Russia, India, Iran and Saudi Arabia, have been pushing to reverse this consensus by giving the International Telecommunication Union (ITU) regulatory jurisdiction over Internet governance. The ITU is a treaty-based organization under the auspices of the United Nations.³² As Russian Prime Minister Vladimir Putin said last June, the goal of this effort is to

²⁹ 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.")

³⁰ 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.

³¹ Fifty years ago, there were only 463 pages in the FCC's portion of the Code of Federal Regulations ("CFR"). During this period, Americans only had a choice of three TV networks and one phone company. Today, over-the-air TV, cable TV, satellite TV and radio, and the millions of content suppliers on the Internet, offer consumers with an abundance of choices. In other words, the American communications economy was far less competitive in 1961 than it is today, yet it operated under fewer rules.

In contrast, by late 1995, the FCC's portion of the CFR had grown to 2,933 pages—up from 463 pages 34 years earlier. As of the most recent printing of the CFR last October, it contained a mind-numbing 3,746 pages of rules. Even after Congress codified deregulatory mandates with the landmark Telecommunications Act of 1996, the FCC still managed to add hundreds more pages of rules. In fact, the FCC has added 86 pages of rules since 2008.

To put it another way, the FCC's rules, measured in pages, have grown by almost 710 percent over the course of 50 years, all while the communications marketplace has enjoyed more competition. During this same period of regulatory growth, America's GDP grew by a substantially smaller number: 360 percent. In short, this is one metric illustrating government growth outpacing economic growth.

To be fair, some of those rules were written due to various congressional mandates. And sometimes the FCC does remove regulations on its own accord, or forbear from applying various mandates in response to forbearance petitions. But all in all, the FCC's regulatory reach has grown despite congressional attempts to reverse that trend.

³² History, ITU, <http://www.itu.int/en/about/Pages/history.aspx> (last visited May 14, 2012).

establish “international control over the Internet using the monitoring and supervisory capabilities of the [ITU].”³³

In 1988, delegates from 114 countries gathered in Australia to agree to a treaty that set the stage for dramatic liberalization of international telecommunications.³⁴ As a result, the Internet was insulated from government control and quickly became the greatest deregulatory success story of all time.

Today, however, several countries within the 193 member states of the ITU³⁵ want to renegotiate the 1988 treaty to expand its reach into previously unregulated areas. A few specifics are as follows:

- Subject cyber security and data privacy to international control;
- Allow foreign phone companies to charge fees for “international” Internet traffic, perhaps even on a “per-click” basis for certain Web destinations, with the goal of generating revenue for state-owned phone companies and government treasuries;
- Impose unprecedented economic regulations such as mandates for rates, terms and conditions for currently unregulated traffic-swapping agreements known as “peering;”
- Establish for the first time ITU dominion over important functions of multi-stakeholder Internet governance entities such as the Internet Corporation for Assigned Names and Numbers, the nonprofit entity that coordinates the .com and .org Web addresses of the world;
- Subsume under intergovernmental control many functions of the Internet Engineering Task Force, the Internet Society and other multi-stakeholder groups that establish the engineering and technical standards that allow the Internet to work; and
- Regulate international mobile roaming rates and practices.

These efforts could ultimately partition the Internet between countries that on the one hand opt out of today’s highly successful, non-governmental, multi-stakeholder model to live under an intergovernmental regulatory regime, and on the other hand, those member states that decide to keep the current system. Such a legal structure would be devastating to global free trade, rising living standards and the spread of political freedom. It would also create an engineering morass.

These latest attempts to regulate Internet governance have rallied opposition on a bipartisan basis. Chairman Genachowski has also been working to raise awareness on this important issue as have key members of the Obama Administration.

For your convenience, I have attached a copy of a recent *Wall Street Journal* op-ed that I wrote which provides more detail on the issue. (See Exhibit B).

Conclusion

In sum, it has been an honor to serve as a commissioner at the FCC. During my service, my focus has been to support policies that promote consumer choice offered through abundance and competition rather than regulation and its unintended consequences, whenever possible. In the absence of market failure, unnecessary regulation 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 will continue to examine the FCC’s public policy challenges through this lens, and I look forward to continue working with all of you to ensure that America maintains its foothold as the leader in the communications marketplace.

Thank you again for the opportunity to appear before you today. I look forward to your questions.

³³Vladimir Putin, Prime Minister of the Russian Federation, Working Day, GOV’T OF THE RUSSIAN FED’N, <http://premier.gov.ru/eng/events/news/15601/> (June 15, 2011) (last visited May 14, 2012).

³⁴See International Telecommunication Union, Final Acts of the World Administrative Telegraphy and Telephone Conference, Melbourne, 1988: International Telecommunication Regulations (Geneva 1989), available at http://www.itu.int/osg/csd/utpf/utpf2009/documents/ITU_ITRs_88.pdf (last visited May 14, 2012).

³⁵Overview, ITU, <http://www.itu.int/en/about/Pages/overview.aspx> (last visited May 14, 2012).

EXHIBIT A

Robert M. McDowell, *The UN Threat to Internet Freedom*, WALL ST. J., Feb. 21, 2012, at A19, available at <http://online.wsj.com/article/SB1000142405297020479240457229074023195322.html>.

THE WALL STREET JOURNAL.

TUESDAY, FEBRUARY 21, 2012

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The U.N. Threat to Internet Freedom

By ROBERT M. McDOWELL

On Feb. 27, a diplomatic process will begin in Geneva that could result in a new treaty giving the United Nations unprecedented powers over the Internet. Dozens of countries, including Russia and China, are pushing hard to reach this goal by year's end. As Russian Prime Minister Vladimir Putin said last June, his goal and that of his allies is to establish "international control over the Internet" through the International Telecommunication Union (ITU), a treaty-based organization under U.N. auspices.

If successful, these new regulatory proposals would upend the Internet's flourishing regime, which has been in place since 1988. That year, delegates from 114 countries gathered in Australia to agree to a treaty that set the stage for dramatic liberalization of international telecommunications. This insulated the Internet from economic and technical regulation and quickly became the greatest deregulatory success story of all time.

Since the Net's inception, engineers, academics, user groups and others have convened in bottom-up nongovernmental organizations to keep it operating and thriving through what is known as a "multi-stakeholder" governance model. This consensus-driven private-sector approach has been the key to the Net's phenomenal success.

In 1995, shortly after it was privatized, only 16 million people used the Internet world-wide. By 2011, more than two billion were online—and that number is growing by as much as half a million every day. This explosive growth is the direct result of governments generally keeping their hands off the Internet sphere.

Net access, especially through mobile devices, is improving the human condition more quickly—and more fundamentally—than any other technology in history. Nowhere is this more true than in the developing world, where

unfettered Internet technologies are expanding economies and raising living standards.

Farmers who live far from markets are now able to find buyers for their crops through their Internet-connected mobile devices without assuming the risks and expenses of traveling with their goods. Worried parents are able to go online to locate medicine for their sick children. And proponents of political freedom are better able to share information and organize support to break down the walls of tyranny.

The Internet has also been a net job creator. A recent McKinsey study found that for every job disrupted by Internet connectivity, 2.6 new jobs are created. It is no coincidence that these wonderful developments blossomed as the Internet migrated further away from government control.

Today, however, Russia, China and their allies within the 193 member states of the ITU want to renegotiate the 1988 treaty to expand its reach into previously unregulated areas. Reading even a partial list of proposals that could be codified into international law next December at a conference in Dubai is chilling:

- Subject cyber security and data privacy to international control;

- Allow foreign phone companies to charge fees for "international" Internet traffic, perhaps even on a "per-click" basis for certain Web destinations, with the goal of generating revenue for state-owned phone companies and government treasuries;

- Impose unprecedented economic regulations such as mandates for rates, terms and conditions for currently unregulated traffic-swapping agreements known as "peering."

- Establish for the first time ITU dominion over important functions of multi-stakeholder Internet governance entities such as the Internet Corporation for Assigned Names and Numbers, the nonprofit entity that coordinates the .com and .org Web addresses of the world;

- Subsume under intergovernmental control many functions of the Internet Engineering Task Force, the Internet Society and other multi-stakeholder groups that establish the engineering and technical standards that allow the Internet to work;

- Regulate international mobile roaming rates and practices.

Many countries in the developing world, including India and Brazil, are particularly intrigued by these ideas. Even though Internet-based technologies are improving billions of lives everywhere, some governments feel excluded and want more control.

And let's face it, strong-arm regimes are threatened by popular outcries for political freedom that are empowered by unfettered Internet connectivity. They have formed impressive coalitions, and their efforts have progressed significantly.

Merely saying "no" to any changes to the current structure of Internet governance is likely to be a losing proposition. A more successful strategy would be for proponents of Internet freedom and prosperity within every nation to encourage a dialogue among all interested parties, including governments and the ITU, to broaden the multi-stakeholder umbrella with the goal of reaching consensus to address reasonable concerns. As part of this conversation, we should underscore the tremendous benefits that the Internet has yielded for the developing world through the multi-stakeholder model.

Upending this model with a new regulatory treaty is likely to partition the Internet as some countries would inevitably choose to opt out. A balkanized Internet would be devastating to global free trade and national sovereignty. It would impair Internet growth most severely in the developing world but also globally as technologists are forced to seek bureaucratic permission to innovate and invest. This would also undermine the proliferation of new cross-border technologies, such as cloud computing.

A top-down, centralized, international regulatory overlay is antithetical to the architecture of the Net, which is a global network of networks without borders. No government, let alone an intergovernmental body, can make engineering and economic decisions in lightning-fast Internet time. Productivity, rising living standards and the spread of freedom everywhere, but especially in the developing world, would grind to a halt as engineering and business decisions become politically paralyzed within a global regulatory body.

Any attempts to expand intergovernmental powers over the Internet—no matter how incremental or seemingly innocuous—should be turned back. Modernization and reform can be constructive, but not if the end result is a new global bureaucracy that departs from the multi-stakeholder model. Enlightened nations should draw a line in the sand against new regulations while welcoming reform that could include a nonregulatory role for the ITU.

Pro-regulation forces are, thus far, much more energized and organized than those who favor the multi-stakeholder approach. Regulation proponents only need to secure a simple majority of the 193 member states to codify their radical and counterproductive agenda. Unlike the U.N. Security Council, no country can wield a veto in ITU proceedings. With this in mind, some estimate that approximately 90 countries could be supporting intergovernmental Net regulation—a mere seven short of a majority.

While precious time ticks away, the U.S. has not named a leader for the treaty negotiation. We must awake from our slumber and engage before it is too late. Not only do these developments have the potential to affect the daily lives of all Americans, they also threaten freedom and prosperity across the globe.

Mr. McDowell is a commissioner of the Federal Communications Commission.

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EXHIBIT B

Letter from FCC Commissioner Robert M. McDowell to FCC Acting Chairman Michael Copps (January 27, 2009).

Letter from FCC Commissioner Robert M. McDowell to FCC Chairman Julius Genachowski (July 20, 2009).

FEDERAL COMMUNICATIONS COMMISSION
Washington, DC, January 27, 2009

Hon. MICHAEL J. COPPS,
Acting Chairman,
Federal Communications Commission,
Washington, DC.

Dear Mike:

Once again, congratulations on being named Acting Chairman. Additionally, thank you for your dedication and commitment to public service and the Commission. It goes without saying that I am looking forward to continuing to work with you.

I am greatly encouraged and energized to know that you, Commissioner Adelstein and I will be working together toward the goals of boosting employee morale, promoting greater transparency, as well as creating a more informed, collaborative and considerate decision-making process, all aimed toward advancing the timely and orderly resolution of Commission business. Thank you for addressing these and many other issues within minutes of becoming Acting Chairman. I certainly appreciate the new atmosphere you are creating at the Commission, and I know that the FCC's talented and dedicated career employees appreciate your efforts as well. Accordingly, with the utmost respect for you, the Commission staff and the new Obama Administration, I offer below several preliminary suggestions on achieving the important public interest objectives of reforming this agency. My letter is intended to continue a thoughtful dialogue on moving forward together to improve the public's ability to participate in our work, as well as our overall decision-making abilities. Our collaborative efforts to rebuild the agency should not be limited to the thoughts outlined in this brief letter. As you and I have discussed many of these ideas already, let this merely serve as a starting point for a more public discussion that should examine a larger constellation of ideas.

I would first recommend that we commence a thorough operational, financial and ethics audit of the Commission and its related entities, such as the Universal Service Administrative Company and the Federal Advisory Committees. As with all FCC reform endeavors, I hope that all of the commissioners will be involved in this process, including its development and initiation. We should seek comment from the public and the Commission staff, and we should provide Commission employees with an opportunity to submit comments anonymously.

I would also suggest that we work to update and republish the Commission's strategic plan. Completing this task would create a solid framework for future actions and demonstrate our commitment to transparency and orderliness, each of which is critical to effective decision making.

The findings of our review, combined with our work to develop a new strategic plan, would provide us with the information and ideas necessary for considering a potential restructuring of the agency. I am not suggesting that we make change for the sake of change. After all, we agree that the agency needs to be flexible and must be responsive to its myriad stakeholders, most importantly American consumers. There are, however, steps we likely would want to implement to increase our efficiency. For example, as you have already stated, delegating some authority back to upper and mid-level management, filling many of the numerous open positions with highly-qualified applicants and making more efficient use of non-attorney professionals come to mind.

As we have also discussed previously, we need to improve our external communications regarding FCC processes and actions. As an immediate first step, I suggest that we swiftly establish and publish Open Meeting dates for the entire 2009 calendar year. The public, not to mention the staff, would also greatly benefit if we would provide at least six months' notice on meeting dates for 2010 and beyond.

Also, we agree that we need to overhaul our internal information flow, collaboration and processes. I am eager to continue to work with you and Commissioner Adelstein to identify and implement measures to increase coordination among the commissioner offices, between commissioner offices and the staff, as well as among

the staff. It is important that we cooperate with each other to foster open and thoughtful consideration of potential actions well before jumping into the drafting process.

As part of these communications improvements, I share your desire to update the Commission's IT and web systems. They are in dire need of an overhaul. Clear, concise and well-organized information systems will ensure that all public information is available, easily located and understandable.

Finally, I propose that the commissioners work together to build an ongoing and meaningful rapport with other facets of government, especially in the consumer protection, homeland security, and technology areas. I am confident that close collaboration with our government colleagues with similar or overlapping responsibilities would greatly benefit the constituencies we serve.

In closing, Mike, I again extend my warmest congratulations on your designation as Acting Chairman. I look forward to working together with you and Commissioner Adelstein to improve our agency during the coming days and weeks.

Sincerely,

ROBERT M. McDOWELL,
Commissioner.

cc: The Honorable Jonathan S. Adelstein

FEDERAL COMMUNICATIONS COMMISSION
Washington, DC, July 20, 2009

Hon. JULIUS GENACHOWSKI,
Chairman,
Federal Communications Commission,
Washington, DC.

Dear Julius:

Once again, congratulations on your nomination and confirmation as Chairman. I am greatly encouraged and energized to know that you, Commissioner Copps and I will be working together on a plethora of communications policy challenges facing the economy and American consumers. Although you have only been here for three weeks, I applaud the steps you have already taken to reform the agency. Your recent statements regarding boosting employee morale, promoting greater transparency, and creating a more informed, collaborative and considerate decision-making process are heartening. Anything we could do to advance the timely and orderly resolution of Commission business would be constructive. I am confident that you will agree that the preliminary steps Mike took during his interim chairmanship have provided a sound footing upon which to build.

Accordingly, in the collaborative and transparent spirit of my January 29, 2009, letter to Mike, I offer below a number of suggestions on achieving the important public interest objectives of reforming this agency. As you and I have already discussed, these thoughts are intended as a starting point for a more public discussion that should examine a larger constellation of ideas for moving forward together to improve the public's ability to participate in our work, as well as our overall decision-making abilities. Many of these ideas have been discussed by many people for a long period of time, and if we don't care who gets the credit we can accomplish a great deal.

Operational, financial and ethics audit.

I would first recommend that we commence a thorough operational, financial and ethics audit of the Commission and its related entities, such as the Universal Service Administrative Company, the National Exchange Carrier Association and the Federal advisory committees. Just as you recently articulated in your June 30 request for information on the Commission's safety preparedness, I would envision this audit as an examination akin to a due diligence review of a company as part of a proposed merger or acquisition, or after a change in top management. I would not envision the process taking a lot of time; yet, upon completion, we would be better positioned to identify and assess the current condition of the FCC and its related entities, as well as how they operate.

This undertaking would be a meaningful first step on the road to improving the agency. As with all FCC reform endeavors, I hope that all of the commissioners would be involved in this process, including its development and initiation. We should seek comment from the public and the Commission staff, and we should provide Commission employees with additional opportunities to submit comments anonymously. I also propose that we hold a series of "town hall" meetings at the FCC's Washington headquarters, at a few field offices, as well as in a few locations around

the country to allow our fellow citizens to attend and voice their opinions directly to us.

As part of a financial review, it is crucially important that we examine the Commission's contracting process, as well as the processes relating to the collection and distribution of administrative and regulatory fees currently conducted exclusively by the Office of Managing Director. For instance, we should consider whether the full Commission should receive notice prior to the finalization of significant contracts or other large transactions.

In the same vein, it is time to examine the Commission's assessment of fees. Regulatory fees are the primary means by which the Commission funds its operations. You may be aware that the FCC actually makes money for the tax payers. As Mike has also noted, our methodology for collecting these fees may be imperfect. At first blush, it appears that we may have over-collected by more than \$10 million for each of the last two years. Some have raised questions regarding how the fee burden is allocated. Our recent further notice of proposed rulemaking could lead to a methodology that lowers regulatory fees and levies them in a more nondiscriminatory and competitively neutral manner.

We should also work with Congress to examine Section 8 of the Act and the Commission's duty to collect administrative fees. I am hopeful that we will examine why we continue to levy a tax of sorts of allegedly \$25 million or so per year on industry, after the Commission has fully funded its operations through regulatory fees. As you may know, that money goes straight to the Treasury and is not used to fund the agency. Every year, we increase those fees to stay current with the Consumer Price Index. At the same time, our regulatees pass along those costs to consumers and they are the ones who ultimately pay higher prices for telecommunications services.

Further, given the significant concerns raised about the numbers and the way the audits have been conducted, I recommend that we examine the financial management of the universal service fund. You may know that the Commission's Inspector General reported last year that the estimated erroneous payment rate for the High Cost program between July 2006 and June 2007 was 23.3 percent, with total estimated erroneous payments of \$971.2 million. While I am pleased that the OIG identified this error, it is time that we get to the bottom of this matter and remedy it.

In the same spirit, an ethics audit should ensure that all of our protocols, rules and conduct are up to the highest standards of government best practices. Faith in the ethics of government officials has, in some cases, eroded over the years and we should make sure that we are doing all that we can to maintain the public's trust.

Update and republish the FCC strategic plan.

Also in connection with this review, I hope that we can work together to update and republish the Commission's strategic plan. Like me, you may find that, as we toil on day-to-day tasks, it can be easy to lose sight of our strategic direction. Completing this task would create a solid framework for future actions and demonstrate our commitment to transparency and orderliness, each of which is critical to effective decision making.

Potential restructuring of the agency.

The findings of our review, combined with our work to develop a new strategic plan, would provide us with the information and ideas necessary for considering a potential restructuring of the agency. As you know, the Commission has been reorganized over the years—for instance, the creation of the Enforcement Bureau under Chairman Kennard and the Public Safety and Homeland Security Bureau under Chairman Martin. Close coordination among the staff in pursuit of functional commonality historically has improved the Commission's effectiveness. Nonetheless, the time is coming again to reconsider this option.

I am not suggesting that we make change for the sake of change. After all, we would agree that the agency needs to be flexible and must be responsive to its myriad stakeholders, most importantly American consumers. There are, however, additional improvements we can make to increase our efficiency. As Mike emphasized, the Commission's most precious resource, really our *only* resource, are its people. Many of our most valued team members are nearing retirement age. We need to do more to recruit and retain highly-qualified professionals to fill their large shoes. I hope our next budget will give us adequate resources to address this growing challenge.

Next, I would encourage consideration of filling many of the numerous open positions with highly-qualified applicants and making more efficient use of non-attorney professionals. For example, there is no reason why we cannot use engineers to help investigate complaints and petitions that involve technical and engineering questions. This would be especially useful as we continue to consider matters pertaining

to network management. Similarly, our economists could be better used to help assess the economic effects of our proposed actions.

Improve external communication.

As you and I have also discussed, we need to improve our external communications regarding FCC processes and actions. I greatly appreciate Mike's promptness in posting the Open Meeting dates covering his tenure. I am hopeful that we will swiftly establish and publish Open Meeting dates for the entire 2009 calendar year. The public, not to mention the staff, would also greatly benefit if we would provide at least six months' notice on meeting dates for 2010 and beyond.

As part of these communications improvements, I look forward providing input as to updating the Commission's IT and web systems. I applaud your commitment to this endeavor and Mike's success in securing additional funding toward this end. Clear, concise and well-organized information systems will ensure that all public information is available, easily located and understandable. I also recommend that we update the General Counsel's part of the website to include litigation calendars, as well as access to pleadings filed by all the parties. Additionally, I suspect that our customers would prefer that licenses of all stripes be housed in one database, rather than separate databases spread across the stovepipes of our several bureaus. We should seek comment on this, and other similar administrative reform matters.

In addition, I propose that we create, publish on the website and update regularly an easy-to-read matrix setting forth a listing of all pending proceedings and the status of each. This matrix would include those matters being addressed on delegated authority. The taxpayers should know what they are paying for.

Similarly, I suggest that we establish and release a schedule for the production of all statistical reports and analyses regularly conducted by the Commission, and publish annual updates of that schedule. This would include, for example: the *Wireless Competition Report*, which has traditionally been released each September; the *Video Competition Report*, which until recently, was released at the end of each year; and the *High-Speed Services Report*, which, at one point, was released biannually. Similarly, quite some time before your arrival, I went on record calling for giving the American public the opportunity to view and comment on at least a draft or outline of the National Broadband Plan. I look forward to working with you to increase public awareness regarding the status and substance of our work on this plan. The goal here would be not only to ensure that the public is fully aware of what we are working on and when, but also to give these valuable analyses to their owners—the American people—with regularity.

In the same vein, Congress, the American public and consumers, among other stakeholders—not to mention your fellow commissioners—would greatly appreciate it if notices of proposed rulemakings actually contained *proposed rules*.

Improve internal communication.

Also, we need to overhaul our internal information flow, collaboration and processes. I am eager to work with you, Mike, and our future colleagues, to identify and implement additional measures to increase coordination among the commissioner offices, between commissioner offices and the staff, as well as among the staff. It is important that we cooperate with each other to foster open and thoughtful consideration of potential actions well before jumping into the drafting process. The bottom line is simple: No commissioner should learn of official actions through the trade press.

An effective FCC would be one where, for instance, Commissioner offices would receive options memoranda and briefing materials long before votes need to be cast. For example, for all rulemakings, within 30 days of a comment period closing, perhaps all commissioners could receive identical comment summaries. Also, within a fixed timeframe after receiving comment summaries, say 60 to 90 days, all commissioners could receive options memos complete with policy, legal, technical and economic analyses. In preparation for legislative hearings, it would be helpful if all commissioners received briefing materials, including witness lists, at least five business days prior to the hearing date. For FCC *en banc* hearings or meetings, we should aim to distribute briefing materials to all commissioners at least one week prior to the event date. The details here are less important than the upshot: all commissioners should have unfettered access to the agency's experts, and receive the benefit of their work. Again, I am grateful to Mike for his preliminary efforts in this regard.

Also along these lines, I hope that your team will reestablish the practice of regular meetings among the senior legal advisors for the purpose of discussing "big picture" policy matters, administrative issues, as well as to plan events and meetings that involve all of the offices. Given the numerous tasks we have before us, I trust

you will agree that regular meetings among this group will improve our efficiencies, and go a long way toward lessening, if not eliminating, unpleasant surprises.

Just as important would be to hold regular meetings among the substantive advisors and relevant staff, including the Office of General Counsel. Having ample opportunity to review and discuss pending proceedings and the various options at the early stages of, and throughout the drafting process would allow us to capitalize on our in-house expertise early and often. Taking such precautions might also bolster the Commission's track record on appeal. Indeed, this type of close collaboration might lead to more logical, clear and concise policy outcomes that better serve the public interest.

Another idea is to update and rewrite our guide to the Commission's internal procedures, currently entitled *Commissioner's Guide to the Agenda Process*. For instance, just as Mike has done with respect to the distribution of our daily press clips, I propose that we undertake a thorough review of the physical circulation process, including identifying and making changes to reduce the amount of paper unnecessarily distributed throughout the agency. Current procedures require that each office receive about eight copies of every document on circulation when one or two would suffice. I also wonder why our procedures mandate delivery of 30 paper copies of released Commission documents to our press office. The overwhelming majority of reporters who cover our agency pull the materials they need from our website. Perhaps this is another area where we could save money and help the environment all at the same time.

Coordinate with other facets of government.

Finally, on a more "macro" level, I propose that the commissioners work together to build an ongoing and meaningful rapport with other facets of government, especially in the consumer protection, homeland security, and technology areas. I am confident that close collaboration with our government colleagues with similar or overlapping responsibilities would greatly benefit the constituencies we serve.

In closing, I again extend my warmest congratulations on your new position as Chairman. You are to be commended for the steps you have taken thus far toward rebuilding this agency. I look forward to working together with you, Mike and our new colleagues upon their confirmation to do even more.

Sincerely,

ROBERT M. McDOWELL,
Commissioner.

cc: The Honorable Michael J. Copps

The CHAIRMAN. Thank you very much, Commissioner.

I'll start with the questions, to be followed by Senator Hutchison, then Senator Kerry, and then Senator DeMint, and Senator Begich, hopefully, will come back.

I appreciate the FCC's commitment to expanding the reach of broadband across the country, and I've said that. I also share your passion for making sure that broadband is both widely deployed and adopted in rural and urban communities on a nationwide basis. In fact, several months ago I requested the GAO, that they study the efforts supporting sustainable broadband adoption through the BTOP program. It's my hope that this study will allow us to identify the essential elements of a successful program to better focus resources on only those endeavors that have proved to be effective.

So, while I appreciate the FCC's recent efforts on promoting digital literacy, such efforts should not under any circumstances proceed at the expense of the future of the E-Rate program. Already, annual demand for E-Rate funds, as I indicated in my opening statement, is outmatching money available by a 2-to-1 factor.

Now, during your confirmation hearings for the three of you, I asked each of you if you could commit to me that you will support and protect the E-Rate program. I'd just love to remind you that I asked for a yes or no answer, and I got all yeses. So we're going for a repeat performance, because the world changes. And so,

please give me a yes or no answer. Do you promise not to take funds from E-Rate, funnel funds through E-Rate, or use E-Rate legal authority for your digital literacy initiatives? Mr. Chairman?

Chairman GENACHOWSKI. Yes, I think. The answer is yes. We're committed to strengthening, supporting, growing the E-Rate program. Digital literacy is important. We won't do anything in digital literacy that would in any way undermine the E-Rate program.

The CHAIRMAN. So, that would allow you to answer yes.

Chairman GENACHOWSKI. I believe so. Yes.

The CHAIRMAN. Yes. So, you say yes. Please.

Chairman GENACHOWSKI. Yes.

The CHAIRMAN. Thank you, sir.

Commissioner McDowell?

Commissioner McDOWELL. Yes.

The CHAIRMAN. Commissioner Clyburn?

Commissioner CLYBURN. Yes, in principle.

The CHAIRMAN. Yes, in principle?

Commissioner CLYBURN. Yes.

The CHAIRMAN. That's good.

[Laughter.]

The CHAIRMAN. Commissioner Rosenworcel?

Commissioner ROSENWORCEL. Yes.

The CHAIRMAN. And Commissioner Pai?

Commissioner PAI. Yes.

The CHAIRMAN. Excellent. And not much time either on that.

This is for the Chairman, and it has to do with the mobility fund. In the context of FCC's universal service reform, you and I have spoken about the important role that wireless services play, particularly in rural areas. We've discussed the FCC's mobility fund, which you have indicated will help support the deployment of wireless services in areas that are underserved today.

Prior to our FCC actions to reform the Universal Service Fund, our offices, together, discussed the importance of making sure that the FCC's efforts help bring wireless service to rural areas that do not have it now. But, it's my understanding that the largest holders of spectrum in my state of West Virginia may not participate in this fund.

My question, therefore, is: can the mobility fund help poorly served states like West Virginia, even if local carriers choose not to take part, number one. And number two, if not, what other steps can be taken to bring wireless services to these rural areas?

Chairman GENACHOWSKI. Well, we hope and expect that there will be broad participation in the upcoming reverse auction for the mobility fund. It's worth noting that in our USF reform order, for the first time, we identified mobility as an independent universal service goal. So, we're committed both to universal service to everyone in their homes, but also recognizing that people want and need mobile service when they're on the road to and from work, et cetera. That is the purpose of the mobility fund.

We'll take the first step with these reverse auctions. As I said, we hope and expect broad participation. We're very committed on the goal of getting mobile broadband to the parts of the country that don't have it, where the economics don't support it, but where it's important to ensure that consumers have mobile access.

The CHAIRMAN. I thank you, sir. And I now call upon the Ranking Member, the distinguished Senator from Texas.

Senator HUTCHISON. Thank you, Mr. Chairman. First, I want to ask a parochial question, and it's about the State of Texas wireless broadband network for emergency responders. As you know, you've granted the State of Texas a waiver to deploy the emergency responder network in the 700-megahertz wireless band. It is further along in its efforts to comply with the parameters of the grant than any of the other jurisdictions in the country, I'm told, and they are prepared to start using the network as early as this month, just in time for the start of hurricane season.

And my question is, because Texas has moved to try to meet this very important season that afflicts us regularly, is it possible that they will get that waiver to be able to go forward so that they can actually use it this year?

Chairman GENACHOWSKI. I hope so. As you know, prior to Congress' enactment of FirstNet and the public safety proceedings, there were a small number of waivers granted. We understand that the NTIA, which has lead responsibility for FirstNet, is preparing comments to us on it. We look forward to getting input from the NTIA, from the Committee. We want to achieve the goal of the statute of having one interoperable public safety network for first responders. We also have to take into account the kinds of issues that you mention.

Senator HUTCHISON. And could I just ask if it would be a priority, in your opinion, to try to work with all of those issues, and assuming that they have met all of the requirements, that you would be able to move expeditiously?

Chairman GENACHOWSKI. Yes. Unfortunately, there's a small number, and a very small number at the stage that you described for Texas.

Senator HUTCHISON. All right. Thank you.

Let me ask you about spectrum, as you are getting ready to go forward with the auctions. I think it has been proven that the licenses that have the fewest strings attached or the ones that are burdened with the least number of restrictions will auction for the most revenue, which is, of course, what we all want. My question is: is that a priority of yours? I want to ask the Chairman and the senior Republican Commissioner about trying to keep the future spectrum auctions as free from burdensome restrictions as possible, in order to gain the most revenue.

Mr. Chairman?

Chairman GENACHOWSKI. I agree that simplicity is better than complexity, in terms of running auctions, getting spectrum out there. The goal of the spectrum auctions is to maximize the overall economic opportunity from spectrum. It's what the Communications Act directs us to take into account. We're going to start proceedings in the near future, and we'll be hearing from a lot of stakeholders, and we look forward to working with the Committee on the process of ensuring that we have spectrum auctions that maintain U.S. leadership in mobile.

Senator HUTCHISON. Maybe I missed it. Do you think that freedom from restriction is a high priority for that goal?

Chairman GENACHOWSKI. Yes, I think so. I think spectrums are complex, and the Commission has a lot of history in designing auctions. It also receives some direction from Congress in the statute that will faithfully implement, maximizing the opportunities of spectrum and determining in consultation with all stakeholders, the best, simplest model to drive the most economic growth and opportunity. That will be the focus that I hope we'll all have in addressing the complex issues in auction design.

Senator HUTCHISON. OK. Either Mr. McDowell or the others, is there anyone who wants to weigh in on this as well?

Commissioner McDOWELL. I think you're absolutely right, Senator. It's very important that we keep the encumbrances to just a bare minimal amount. Just having learned from experience, if we go back very briefly to 2007, when I voted on the July 2007 order for the 700-megahertz auction, there were encumbrances on the D block and the C block. I voted for the D block encumbrances, but I did not vote for the C block encumbrances.

But, in both cases, it did not turn out as expected. For instance, the intended winner for the C block didn't make a winning bid, and nobody bid on the D block, or had a bid that met the minimum bid. And there are all sorts of other collateral problems with it.

So, with the best of intentions, we can sometimes make these Rube Goldberg designs, but by the time the auction takes place, and certainly by the time these networks are built out, the market has passed by, but taking the government back in time. That's why it's important to adopt what we call flexible use policies. And I thank the Chairman for having talked a lot about that recently.

Senator HUTCHISON. Thank you. I know there are so many who wanted to ask questions. I'm going to stop there, but if we don't get a second round, I do have some questions for the record. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Hutchison.

Senator Kerry.

Senator KERRY. Thank you, Mr. Chairman. You've recounted some of the progress made and some of the advances in technologies, and obviously, the technology itself we see competition in the apps, and in a lot of the things that people have a choice on. But, there really are only two dominant wireless service providers, and 96 percent of Americans have a choice of two wired broadband, either your cable or your telephone.

So, my question to you is: how would you say the law has, in fact, either encouraged or discouraged competition, in the best sense of the word, in terms of numbers of providers, and so forth?

Chairman GENACHOWSKI. Well, first, I hear from a broad array of speakers today that competition is a core feature of our free-market system, and the best mechanism to generate innovation, job creation, consumer benefits. Competition has always been an issue in the communications space. Since 1996, we have more competition than we did before, and that's good. We hear from many stakeholders in the space, smaller companies that are trying to compete, that they have real concerns about obstacles to competition. The more that we can in a smart, sensible, pragmatic way promote healthy robust competition, the better off our economy will be, the better off consumers will be, and the less of the need there will be

to adopt other kinds of regulations that the Commission will need to consider if competition is insufficient.

Senator KERRY. Anybody can chime in on this. Is it the Commission's fundamental view that two and two is adequate, that that's what we're willing to settle? Or should the law be geared toward trying to somehow figure out whether there should be a greater number of competitors within those spaces?

Chairman GENACHOWSKI. I'll answer you briefly, and let someone else speak. A duopoly is not the ideal outcome at all.

Commissioner MCDOWELL. Senator, excellent issue to raise. According to the FCC, 90 percent of American consumers have a choice of five wireless providers. And also, I want to commend the Chairman for his work, and this goes back to Chairman Michael Powell, in 2002, 10 years ago, work on unlicensed use of the TV white spaces. I think there are a lot of opportunities to create new delivery platforms, which can inject more competition in that last mile, and wireless is a terrific hope in that regard. So, I'm actually very optimistic about more competition in the broadband space, and that certainly is a cornerstone of what I try to do at the Commission.

Senator KERRY. I see, Commissioner. Let me just throw an additional question out as we do that.

For Google, Facebook, Microsoft, Amazon, a bunch of folks, they have been able to innovate very significantly, obviously, but net neutrality has been critical, they would argue, and a lot of us would argue, to their ability to be able to do so.

I think it was what, three? Yes. Three of the four witnesses at our recent hearing, when we had the video hearing, a week or so ago, 2 weeks ago, made the same argument. But, how would you say investors, startups on the Internet, how have they responded to this capacity with respect to the neutrality? How essential has it been, in your judgment, with respect to IPOs and creation of new entities?

Commissioner GENACHOWSKI. I think it has been essential. As I think you agree, the issue isn't the Google, and Facebook, and Amazon of today, but the versions of those companies 3, 5, 7, 9 years ago, when no one ever heard of them, and they were wonderful new entrepreneurial opportunities that existed because of an open Internet. The framework that we adopted last year, which was supported both by early stage investors, technology companies, the cable industry, most ISP providers provided certainty and predictability across the board to investors in early stage technology companies as well as investors in infrastructure, and, in fact, we've seen since then an increase in investment and innovation across the broadband economy.

Our apps economy continues to boom, and we've seen double-digit increases and investment in broadband infrastructure, and much more stability in this space than before we adopted our framework.

Senator KERRY. And as we think about bringing this law up to date, were we to get to that at some point, should we codify the rule? Should we put it in?

Commissioner GENACHOWSKI. I would encourage it.

Senator KERRY. Is there any dissent on that?

Commissioner MCDOWELL. Yes.

Senator KERRY. Yes. Mr. McDowell.

Commissioner MCDOWELL. I wrote a very long dissent in our 2010 order. And I think actually codifying it will complicate efforts internationally, as we are now combating the ITU from trying to regulate Internet governance. This issue, as I travel the globe, has actually come up many, many times, others say, well, it's the law of the United States to do this, why can't we do this internationally. So, I would be very wary about Congress trying to codify this. Right now, it's before the courts, and the courts will determine whether or not the FCC actually had the authority to do what it did. And, of course, I think the FCC did not have the authority to do what it did.

Commissioner CLYBURN. Part of the reason I believe, Senator, that we're seeing a lot of innovation in this space and more encouragement toward that is because these high-level rules of the road, which incidentally fit on one page, provides certainty. It provides transparency. It provides a means for those who want to innovate in this space that they know that their service provider will not be able to favor their businesses at the detriment of innovation.

So, with all of these players, oh, again, wanting and encouraging us to move forward with, again, these high-level rules of the road, I encourage us to recognize what has been happening over the past several years, in terms of the engagement, and what will continue to happen with the certainty and protections in place.

Senator KERRY. I'll just say in closing, Mr. Chairman, that with respect to Europe, what the United States does is going to have a profound impact on what they do. We want them to be open. So, I think there's a powerful argument for why, in fact, we might consider the codification.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Kerry.

I encourage all members, so that everybody can be called upon in a relatively short period of time, to keep their questions and answers to 5 minutes.

Senator DeMint.

Senator DEMINT. Thank you, Mr. Chairman. I have to smile when I hear us, including you, talk about encouraging innovation and investment in the industry. This is one industry we don't need to encourage. It's just happening so much faster than we can even understand.

The greatest obstacle, if you talk to people who are in the industry, whether they are content providers or networks, is just arbitrary and unpredictable rulemaking. They don't know what's going to happen.

I'd be curious, Mr. Chairman, and I do appreciate you coming by my office, and I enjoy meeting with you, and as I said before, I appreciate your service, but how many complaints about violations of the Open Internet Order has the FCC received in the last 6 months, since the regulations were published?

Chairman GENACHOWSKI. I'm not sure if we received any formal complaints.

Senator DEMINT. OK. How many did you receive before that?

Chairman GENACHOWSKI. In terms of formal complaints, I believe the Commission received at least one. I'm not sure how many formal complaints.

Senator DEMINT. One that was handled on a particular basis. This is what I mean by preemptive rulemaking. A private network, built with private capital, and we're deciding how they're going to manage it.

If there was only one network, we'd have to sit down and talk about it, but as Commissioner McDowell has talked about, whether it's wireless or landline, dozens and dozens of choices exist. It's remarkable to me that we're talking about—given our limited ability to manage anything—that we think we can manage the Internet and pick winners and losers.

The market has worked well, and I think despite what has been said here today, I hear from the players and the stakeholders in the market that this threat of the Government coming in and deciding how much they're going to charge, based on bandwidth, not only affects the networks, but eventually the content providers will be told how to favor one versus another.

So, this is a big concern for me, and Commissioner McDowell, we hear monopoly talked about a lot, duopoly talked about a lot in the wireless business, but how many American consumers purchase wireless services from a provider other than AT&T and Verizon.

Commissioner MCDOWELL. I believe, Senator, from the FCC's own statistics, it's, you know, well over 100 million. Perhaps, over half the marketplace is picking a provider other than those top two.

Senator DEMINT. I think we've got a pretty remarkable and dynamic competitive marketplace, and I think there is a good and growing case for a lighter and lighter hand of regulation, not to go in where there have been no complaints and no problems, and I think violate the private property rights of the people who build out a network and begin to tell them how they charge for their product. And as you know, users use different bandwidth. There are very big differences, and for us to try to regulate it makes very little sense right now.

A lot of our decision making, as we talked about, Mr. Chairman, when you came by the office, is based on the assumption there's not enough competition. One of the responsibilities of the FCC is to develop and present competition studies. You and I talked about the need to get those out on time, so that we could have good information as decisionmakers here. Do we have a competitive market or don't we?

I think all the evidence is that we do, and the FCC is long overdue in giving us the information we need to make good decisions and for you to make good decisions. Because most of the regulations, and what I consider arbitrary and unpredictable rulemaking, is coming from the assumption that there's not enough competition, not enough choices, and it's the job of government to come in and protect the consumers. I think it's a false assumption. We need to get those reports from you.

So, again, thank you all for your service. And Mr. Chairman, I'll yield back.

The CHAIRMAN. Thank you, Senator DeMint.
Senator Begich.

**STATEMENT OF HON. MARK BEGICH,
U.S. SENATOR FROM ALASKA**

Senator BEGICH. Thank you very much, Mr. Chairman. Thank you all very much for being here, and as you always know, I always like to invite you, especially the new members, as now members, to come up to Alaska to give you a sense of rural, and where even though 90 percent of the country has wireless and competition, we're not in that equation totally yet. But, thank you for the work you've done.

Mr. Chairman, you know I'd be parochial for a moment, but that's who I represent, is Alaska. So, let me give you an example.

We're dealing with an issue now with Adak. Let me give you a comparison. Adak is like if you were in East Texas and Anchorage is in Los Angeles, to give you a distance. And some of you know this already. 1,200 mile distance. And one of the rules, or at least the efforts of the national broadband plan was the no flash cuts. Well, here's what Adak's dealing with. It's a small community of 130 folks. They went from a December 2011 resource of USF funds, to January 2012, 84 percent reduction, just like that. This company will be out of business by the end of this year.

In the process, as you remember, many of you heard my complaints and concerns about the waiver process. Now, this group represents 130 customers. This is waiver one that they have to fill out and this is waiver two. It's very expensive and very hard to do. And somehow, you know, I recognize the one size can't fit all, and you have been very good, the Commission, in working and trying to figure out especially Alaska and Hawaii, because of the uniqueness, and I appreciate that. But, this is the worry that we just, I'm giving you my flashpoint.

We need some ability, because at the end of the year, they will not be able to pay their RUS loans, and they will be out of business. They're the only landline and wireless provider in the whole area, that's it, in the sense of what's going to happen.

So, is there a way, and I use this as an example, for small carriers, under 50,000 lines, and this is, as you imagine, very under 50,000, or any number, to help give some relief in the application process, and the fee structure, and the cost? This is several hundred thousand dollars. As you know, many of you are lawyers and past lawyers, and these are not cheap when you call a lawyer and say, "I need a few pieces of paper drawn up."

Is there some way to give some relief in this process of filling out these waivers, but also very timely response, because their clock is ticking, and they're going to be out of business very quickly.

So, Mr. Chairman, I give it to you, but, again, I want to start with the caveat, you guys have done an excellent job in working with us in Alaska, because it's so different. When we say "rural," it is rural. Extreme rural. And all of you have been there and seen it. You know what I'm talking about.

So, help us walk through this and ensure that a place like Adak can survive, where most their work is now in wireless. This is what they want to provide, as they meet the goal of the broadband. You don't have to go on this specific one, but this is my example, because it's a crisis for them.

Chairman GENACHOWSKI. The general challenge we face is we inherited a program with very little accountability, where the recipients, in general, had control of the funding spigot, and fiscal responsibility is a challenge, and converting the program from one with insufficient accountability to one where the money that consumers are paying in, every dollar is going out in a way that makes sense is a challenge. We're in the first round of implementation, and we understand that for some of the companies, it's a particular challenge. But, we take the waiver process seriously. We'll continue to look for ways to streamline and improve it, so that we can move from the program that we had, which everyone agreed didn't work, to one that efficiently achieves our collective goals of ensuring universal broadband.

Senator BEGICH. Is there a way, especially for very small carriers, because the waiver process cost is the same. You're going to have to fill it out. Is there a way to help give some relief so it's actually a streamlined process? I know you may think it's streamlined, but I'm not a lawyer, so I can't tell you what streamlined looks like from a lawyer's perspective, but it just seems excessive for a simple obvious issue that's about to happen.

Chairman GENACHOWSKI. We will continue to look for the most streamlined way to run the process. There are many, many very small companies that are receiving consumer dollars, taxpayer dollars. We have to get the balance right between ensuring accountability, protecting the money that's going into the fund, but also not creating impossible situations for companies coming in.

Some of what the companies are doing now in helping us make sure we have an accountable program, they won't have to do more than once, but again, we're committed to a streamlined process.

Senator BEGICH. What I'll do, Mr. Chairman, I have several other questions, broader, and some more parochial. I'll submit them for the record, but I appreciate keeping to your requirement of 5 minutes total.

The CHAIRMAN. Thank you, Senator Begich.
Senator Boozman.

**STATEMENT OF HON. JOHN BOOZMAN,
U.S. SENATOR FROM ARKANSAS**

Senator BOOZMAN. Thank you, Mr. Chairman, and we appreciate all of you being here, and a special welcome to our two new members.

Chairman Genachowski, as you know, Senator Pryor and I recently sent you a letter regarding the universal service reform, and the need for regulatory certainty, as the process moves forward. Businesses, both large and small, need to be able to properly plan for the future, and there are many concerns, especially from the rural providers, that they lack the necessary data and information to move forward. So, in a second, I'd welcome your comments regarding that.

We also invited you to send a staffer to Arkansas, and I think many in rural America feel like they're being left out of the process. Arkansas is much like West Virginia. So, again, I would also ask you to do that.

But, can you comment a little bit about that as we move forward?

Chairman GENACHOWSKI. Sure. First of all, it would be my second trip to Arkansas, and I learned a lot on my first trip, and I recognize the challenges in rural Arkansas when it comes to broadband.

Those challenges are all over the country, and we have 18 million Americans who live in areas that have no broadband infrastructure, including many in Arkansas. The program we inherited was sending more money than it should to certain areas, funding four or five providers in a single area, or funding one company when there was an unsubsidized competitor.

The reforms that we put in place are designed to cut those back, and then finally move forward with funding broadband for unserved Americans in places like Arkansas. The transition is challenging. But, our focus is on achieving these goals for rural America. That's the purpose of universal service, doing it in a way that's consistent with fiscal responsibility and accountability, and you're completely right, predictability and certainty.

So, we are in, in some ways, the hardest part of implementation. We'll continue to work together as a group to get the balance right, so that we get broadband to people who don't have it, who deserve it, that we don't waste money, but that we also are cognizant of business realities for the companies that have been receiving funds for the program and deal with those companies in a fair, reasonable, phased-in way.

Senator BOOZMAN. Very good. Thank you. And any of you can jump in on this one. One of the things that all of us are hearing a lot about are the misuse of the Lifeline program. And the marketing is very, very aggressive now. Many Americans are concerned about the misuse, possible fraud and abuse of the Lifeline program. It's like seeing the wheelchair ad on television, where you contact us, and you'll get this free. What that does also is it really, it's one of those things that destroys trust in our institutions.

So, can you comment on reforms? I know that you're actively working to do that. What do we need to do to fix the program?

Chairman GENACHOWSKI. We share those concerns, and a few months ago, the Commission also unanimously adopted some strong reforms to address waste, fraud, and abuse in the program, tackling, for example, duplicative recipients, when there's only supposed to be one per home, tackling the situation when people who aren't entitled to get the benefit, get the benefit. There is a problem with sleazy, unscrupulous people who try to take advantage of the program and take advantage of people.

We're increasing our enforcement efforts, and I can't speak about specific investigations that we have ongoing, but companies out there that are taking advantage of this program, we will come after.

Senator BOOZMAN. That's good to know.

We talked about spectrum a little bit. What short-term solutions are out there for spectrum needs that can be utilized while we do the longer term solutions, such as incentive auctions and things like that are implemented? What's on the short term?

Chairman GENACHOWSKI. Several things. And some of my colleagues may want to comment. I agree with Commissioner McDowell that unlicensed is a real opportunity. We're seeing Wi-Fi taking more and more of the load, that's unlicensed spectrum that the Commission issued, not knowing where it would lead, a couple of decades ago.

We're seeing advances in technology, in infrastructure, smaller cells being rolled out, more efficient networks. There is near-term spectrum that we can auction off, if we all work together. We're working closely with NTIA on, for example, the 1755 spectrum. We need to accelerate those efforts, move quickly. There are several pieces of spectrum that were identified in the legislation, with deadlines for auctioning them. We will auction them, and we're working hard to make sure that when we auction them, we'll auction them in a way that's most valuable to the public, for example, finding ways to pair a spectrum that otherwise would be put out unpaired.

Senator BOOZMAN. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Boozman.

Senator Blunt.

**STATEMENT OF HON. ROY BLUNT,
U.S. SENATOR FROM MISSOURI**

Senator BLUNT. On the reform of the Universal Service Fund, Chairman, what are you doing there to deal with the issue of subsidy, of an unsubsidized competitor, or, you know, in that environment we've talked about before? How are you defining unserved, and underserved, and trying to be fair, as you look at the unserved community, and then look at the partially served community? Some thought on that would be helpful.

Chairman GENACHOWSKI. Well, getting broadband to unserved Americans is goal number one, along with fiscal responsibility, and tackling those areas where the fund is supporting one company, where there's an unsubsidized competitor, we all agree that needs to be phased out.

There are issues at the margins that become challenging. What if there's partial overlap. Those are issues that will work through as we implement it, but our goals are very clear. Broadband to unserved Americans, fiscal responsibility, and then cognizance of business realities, so that we don't treat unfairly companies that shouldn't be receiving money ultimately, but have near-term alliances that we have to take into account.

Senator BLUNT. And does the additional use of this fund have any impact on those small telephone companies that are 60 or so percent, we have one or two that might be as high as 90 percent, are dependent on the help from the USF, as you then say, spend more of this on broadband? Does that mean you have less available to spend on traditional phone service, or how does that impact that?

Chairman GENACHOWSKI. No, because the networks are the same. And many of the companies in this particular category, and really, most of the issues come from a subset of rural providers, and that's the ones that are under what's called a rate of return regime. These companies have received for many years a guaran-

teed 11.25 percent return. Most companies don't operate that way. And, in fact, most unserved rural Americans live in areas served by companies that are called price cap carriers.

We do want to make sure that as we put in place these reforms that we're sensitive to the unique needs of some of the smallest companies that are under rate of return, but we also have an obligation to the consumers putting money into the fund. Getting that balance right is what we're focused on doing on together. It's not easy. But that's our goal and our focus.

Senator BLUNT. On spectrum sale, are you having any luck with companies? Do you need some companies to relinquish areas of the spectrum they have, and are you having any luck getting them to do that?

Chairman GENACHOWSKI. I agree with my colleague. We need the Federal Government, in some cases, to relinquish spectrum that they have, or to move more quickly to share spectrum. That's the single most promising area to free up a substantial amount of spectrum from all the broadband, along with the incentive auction provisions that the Committee in Congress adopted recently.

Senator BLUNT. Commissioner McDowell, do you have some ideas as to how that sharing might work or how the government community could give up total control of parts of spectrum in a way that would be mutually beneficial, or at least beneficial to the use of spectrum?

Commissioner McDOWELL. Yes, sir. First of all, the Federal Government alone probably occupies about 60 percent of the useable spectrum. That's just the Federal Government. Not State and local governments. So, that tells you a lot right there.

Spectrum sharing is sort of an ill-defined term. It can mean a lot of different things. One question I would have is, if a private sector user of the spectrum is going to not have priority, would the government want to break into its channel, so to speak? For instance, if a private sector user is using their device and all of a sudden their call is dropped, because the government needs to use it, what is the value of that to the marketplace? Probably minimal. It's more along the lines of the rights of an unlicensed user, where you don't have priority. If you think of your walkie-talkie or baby monitor, you know, walkie-talkie from childhood, et cetera, usually got cutoff by the stronger person or your neighbor. So, that's not an ideal situation, if that's what we mean by spectrum sharing.

The unlicensed use of TV white spaces is a form of sharing. Using the scraps there in between channels. So, there are a lot of different ways we could approach the sharing concept, but I don't think it's a cure-all. I think the executive branch, in particular, needs to look a lot harder at what kind of spectrum they can relinquish for auction, and they need to do it yesterday.

Senator BLUNT. Thank you, Chairman.

The CHAIRMAN. Thank you, Senator Blunt.

And now Senator Lautenberg.

**STATEMENT OF HON. FRANK R. LAUTENBERG,
U.S. SENATOR FROM NEW JERSEY**

Senator LAUTENBERG. Thanks, Mr. Chairman. Chairman Genachowski, if we look at today's *New York Times*, it talks about

the hacking case, that the head of the Rupert Murdoch British newspaper empire was formally charged on Tuesday, along with her husband, for burdening the course of justice in the phone hacking situation that's going on. I'm looking to that, because it bolsters the case that I want to make with you. There is evidence that news corporations have been involved in a broad range of misconduct, reaching the highest levels of the New York-based company, and involving actions in the UK and the U.S.

Now, if we look at the list here, and we see these are senior people from the company, from the News Corp. And they applied for renewal of their license in 2007. 2007. Five years ago. And despite this long list, the FCC has not announced any plans for proactive investigation into whether or not News Corp is fit to hold a broadcast license in the U.S. And I address this to each one of you. What does it take for the FCC to begin an investigation?

Chairman GENACHOWSKI. Well, obviously, we have important responsibilities under the law. We're aware of the serious issues that we see in the UK. These matters may come before the FCC as adjudicatory matters. I think it would be inappropriate for us to prejudge them, and also inappropriate to speak about any investigations we may have ongoing.

Senator LAUTENBERG. We're not talking about an outcome. We're talking about an action that has to be taken.

Chairman GENACHOWSKI. We don't comment, as other agencies of government don't comment, on the status of investigations. Obviously, we have important responsibilities that we will take seriously. It's important that we not prejudge it.

Senator LAUTENBERG. That would be very good to take seriously. The head of the company found unfit to lead a major international company by British Parliamentary Committee. Doesn't that suggest that maybe we ought to be looking at them to see what effect that has? They do have an obligation for good character to have a license renewal here, and it's been a long time. It's my understanding that the FCC is looking into allegations News Corps deliberately misled the FCC regarding its application to renew the license of WWOR, in New Jersey.

Mr. McDowell, do you have a point of view here about when we ought to get started on looking at this?

Commissioner McDOWELL. I think the Chairman has stated it, actually, quite eloquently.

Senator LAUTENBERG. I heard him.

Commissioner McDOWELL. OK. Very good. I agree with what the Chairman said.

Senator LAUTENBERG. Ms. Clyburn?

Commissioner CLYBURN. Senator, we do have a process in place. Any petitioner or potential petitioner has a right to file before us, and when and if they do, we take all of those matters seriously, and we will review in a timely manner.

Senator LAUTENBERG. Ms. Rosenworcel?

Commissioner ROSENWORCEL. The Communications Act speaks in terms of character, financial, and technical qualifications for broadcast licensees, so the Commission should monitor the situation.

Commissioner PAI. And Senator, at the risk of going last, and having nothing original to say, I will associate myself with my colleagues on that question, and commit to you that in the context of the license renewal proceeding, I'll study the record very carefully, and support appropriate action.

Senator LAUTENBERG. Well, I think that some action here is absolutely required, and we ought to get going on this. New Jersey, where one of the stations exists, would be the fourth largest media market in the country, and here these people have a license, and they're fiddling around with this. Charges are flying in all over. And I think while there's not enough evidence for us to make a decision, certainly, we ought to be looking at this, and saying, well, isn't it time for you to step up and declare yourself, or take that license and say the patience of the country has long run out, and we're going to award the license to a deserving party.

Many Americans aren't able to get broadband service, changing the subject a little, because they live in areas where companies won't make it available or simply can't afford it. Yet, 19 states currently restrict local governments' ability to offer broadband. How could we expand broadband access when states are passing laws to prevent municipal broadband?

Chairman GENACHOWSKI. We've seen some terrific examples of municipal innovation around broadband. My own view is that those should be encouraged. I look forward to working with the Committee on addressing obstacles and barriers to that.

The CHAIRMAN. Thank you, Senator Lautenberg. I hate to do this, but we really have a number of people who are——

Senator LAUTENBERG. Thanks, Mr. Chairman.

The CHAIRMAN. It's over five. It's over five.

Senator Rubio.

**STATEMENT OF HON. MARCO RUBIO,
U.S. SENATOR FROM FLORIDA**

Senator RUBIO. Thank you, Mr. Chairman. I'll be brief, because I have a few questions I want to get in.

The first is, Commissioner McDowell, you wrote a piece in February in the *Wall Street Journal* titled, "The U.N. Threat to Internet Freedom." I think you were talking then about the International Telecommunication Union, the ITU process. I know all of you are interested in that process. Could you just give us a brief update, any of you, as to where we stand on that issue, and what role the Commission will play in that regard?

Commissioner MCDOWELL. The Commission plays, actually, a supporting role as sort of a technical advisor to the State Department. The State Department takes the lead role in that. I understand, through both private and public information, that the State Department will be announcing a head of the U.S. delegation, a head negotiator probably next month sometime. This comes at a crucial time, as some very crucial meetings are going to take place internationally later in June, leading toward a treaty negotiation in Dubai this December. So, it's really of utmost importance that the United States cultivate allies throughout the world, and especially the developing world, which could be devastated by international regulation of Internet governance.

Senator RUBIO. Does the Commission anticipate in its supporting role putting out recommendations to the State Department as to what our position should be, what we should be advocating for or against, in terms of having an agenda for the summit?

Commissioner McDOWELL. Thus far, I've been very encouraged by, actually, the Obama Administration's statements on this particular issue. There was a blog posting just a couple of weeks ago by the White House, and State Department, and Commerce Department jointly. So, that's a very good sign. And as far as I know, the FCC is onboard with that.

Senator RUBIO. Thank you. The other question we've talked a lot today about is access in different places. Different Senators have raised it. I want to raise it, and I think I'll start with you, Chairman, but anybody could comment on it. We've spoken about this briefly, when we first met. It has to do with Puerto Rico, and some startling statistics about Puerto Rico. The 2010 706 Section Report found that 4 million Puerto Ricans had no broadband access, which is one-sixth of all Americans that are identified as unserved. The 2011 study found that 70 percent of Puerto Rico is still unserved by the broadband services. My understanding is the national broadband plan does not factor in Puerto Rico, as if it's not part of the United States. In fact, it explicitly excludes Puerto Rico in terms of determining the broadband availability gap, based on insufficient data.

Where do we stand on this issue? I think it's of critical importance. You might be able to update us on that.

Chairman GENACHOWSKI. It is an important issue, and Puerto Rico is very much a part of our plans, and we have our goal of reaching unserved Americans with broadband. Puerto Rico is very much a part of that. Of course, the funds for that have to come from somewhere, which is why the more support we can get from the Committee on a bipartisan basis to ring savings out of the program, so we can get broadband to unserved Americans, the stronger it will be, and the faster we will be able to move.

There's some good news in Puerto Rico. Mobile connectivity has increased very rapidly, also supported by some government programs. But, you're right. There is an issue with people in Puerto Rico unserved by broadband, and I look forward to working with you on addressing that.

Commissioner CLYBURN. And to affirm that, I look at this, in terms of process, especially from a mobile perspective, as a down payment. We made a commitment to work within a certain budgetary framework, and, of course, that means the types of engagement or restrictions that we speak of today.

My office, we take a lot of meetings from those who care and represent those persons in that territory, and I care a lot about connectivity. I've got friends on the islands who deserve the same type of engagement as we have, and so, hopefully, again, the savings that we'll have time to speak more about will be able to, again, connect those in that area.

Senator RUBIO. The mobile capacity expansion, is it at par with the rest of the national level? In essence, is the evidence that that's where the demand is going, is toward the mobile route, because the broadband route, you talked about the rapid growth in mobile

connectivity. Is that based on demand? That's what's available, so it's growing faster than the national average, for example, on growth?

Chairman GENACHOWSKI. I think that's part of it. And there's no question that the rate of increase in Puerto Rico has been fast. I don't remember the level of mobile penetrations, as compared to other States, but we can get that information to you.

Senator RUBIO. Thank you. And the last point, just to go back to it, because I think it's really important. A lot of people are not aware of the implications the ITV could have in the 21st century, especially with some of the countries that are really engaging in this regard, China and Russia, who especially in China are not exactly bastions of Internet freedom. Any place that bans certain terms from search should not be a leader in the international Internet regulatory framework. So, I hope we will continue to stay engaged and involved in that regard. I know you all will, and I hope the Committee will keep a close eye on that issue as well.

Chairman GENACHOWSKI. They're very serious issues, and the proposals that are out there to create a new layer of international governance for the Internet are just a bad idea. They're bad for the global economy. They're glad for freedom and democracy around the world. And across the administration, we're committed to opposing those strongly.

Commissioner MCDOWELL. And thank you for your resolution, too, Senator.

Senator RUBIO. Thank you.

The CHAIRMAN. Thank you, Senator Rubio.

I'm going to call now no Senator Toomey. Senator Klobuchar was in line before that. So, it will be Senator Toomey, Senator Klobuchar, Senator Pryor, and Senator Cantwell, should she return. If not, Senator Warner.

**STATEMENT OF HON. PATRICK J. TOOMEY,
U.S. SENATOR FROM PENNSYLVANIA**

Senator TOOMEY. Thank you, Mr. Chairman, and I'd like to thank all the Commissioners as well for being here today.

I guess the first question might as well go to the Chairman for this. The authority that the Commission claims for the passage of the open Internet order doesn't rest on Title II of the Communications Act at all, right?

Chairman GENACHOWSKI. Correct.

Senator TOOMEY. OK. If the court strikes down the validity of this order, do you support reclassifying broadband as a telecommunication service under that act, under Title II?

Chairman GENACHOWSKI. The framework that we've adopted is working. It's widely supported. It's led to predictability and certainty in the industry. I hope the court doesn't strike it down. If it does, I hope Congress will fill the gap immediately and make it clear that we have the authority.

This is a case where, through a lot of hard work, we were able to take a big radioactive dispute, increase certainty and predictability, and create a climate for increased innovation and investment, and it's important that that continue.

Senator TOOMEY. I know that's your view. You know that's not shared universally here, to say the least. And neither of us knows what the court's going to do, but there's certainly a distinct possibility that they could strike this down.

So, my question for you is: Would you support reclassifying broadband to have it considered under Title II?

Chairman GENACHOWSKI. I'm on the record of saying the Title II approach is not the best idea. I believe we have Title I authority and authority in Section 706, and I'm optimistic that the court will uphold that, and that we can move forward in the direction we're on.

Senator TOOMEY. Commissioner McDowell, do you have an opinion on this matter?

Commissioner McDOWELL. I think the Title II docket ought to be closed in that case. I think the implications of having it open internationally are devastating.

Senator TOOMEY. Does anybody else want to comment on this question?

Commissioner CLYBURN. I mentioned earlier that the current framework is working, that there are high-level rules of the road that fit on one page, that it lends a certainty and transparency that I think is beneficial to the American way of life and way of communicating, and I am hopeful, also, that the courts will recognize that.

Senator TOOMEY. I understand, but I had a different question, though. It's about the applicability of Title II.

Commissioner CLYBURN. Again, I am hopeful, and if the court hands down a decision that's contrary to that, I'll come back and we'll have another—

Senator TOOMEY. Answer me then.

Commissioner CLYBURN. Thank you.

Senator TOOMEY. I see. Anybody else have anything they want to add?

Commissioner PAI. Senator, as I said during our previous hearing, I would not support reclassification under Title II, assuming the court rules as you suggested.

Senator TOOMEY. OK.

Commissioner ROSEWORCEL. I acknowledge that for the last decade the Commission has been in the business of reclassifying these services as information services, and that there has been substantial reliance on that regime, and in addition, the Supreme Court has upheld that regime. At the same time, I support the approach that the Chairman has recommended.

Senator TOOMEY. OK.

Commissioner McDOWELL. Can I add one quick thing, Senator? I'm sorry to interrupt.

The FCC has never, and I want to underline the word "never," considered broadband Internet access services to be a telecommunication service under Title II. That is a myth, and I'm happy to supply this committee with supplementary information in that regard.

Senator TOOMEY. Great. I'd welcome that.

Let me just ask a little bit about the incentive auctions. And I apologize if I missed the answer to this question earlier, but do you have a date by which you do expect to have finished the design process?

Chairman GENACHOWSKI. We don't. We have a goal for starting the process, which is by the fall, launching the rulemakings. We intend to move as expeditiously as possible. We want to get the timing right, so that we maximize participation by broadcasters, and have a successful auction.

Senator TOOMEY. OK. Can you share with us any sort of guiding principles on what kinds of conditions you might consider attaching to the auction process?

Chairman GENACHOWSKI. I can't, because my mind is open. I expect we'll have a robust process, hearing from a lot of stakeholders, consulting with the Committee. Our goal is on maximizing the opportunity of mobile broadband to our economy, to all Americans, learning from experience, and maintaining U.S. leadership in mobile.

Senator TOOMEY. Commissioner McDowell, do you have anything you'd like to add?

Commissioner McDOWELL. I think build-out provisions are important, so care should be in winning bidders, so licensees should be investing in building out and using that spectrum. Beyond that, I think we need to be very careful about any other conditions.

Senator TOOMEY. Anybody else like to add anything? OK. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Toomey. Re-jiggering here, I will call upon Senator Klobuchar, then Senator Thune, who was here earlier, and then Senator Pryor, then Senator Cantwell, then Senator Warner, Senator Udall, and Senator Ayotte.

Senator KLOBUCHAR. All right.

The CHAIRMAN. Thank you.

**STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. All right. Thank you. Thank you very much, Commissioners. Welcome to our two new Commissioners. I wanted to applaud you for your recent action on wire line cramming. That's something that we've had a lot of issues with in our state, and I wondered if you could just elaborate a little, Mr. Chairman, maybe, Commissioner McDowell, on how you're going to investigate this and what your plans are, and why you think it's a problem.

Chairman GENACHOWSKI. Well, our work was informed by the excellent work that the staff of this committee did in tackling cramming hearing that the Committee held and the complaints that we also received at the FCC about cramming and wire line. And we found the same as the Committee staff report did, that with respect to wire line, there was real evidence of consumer abuse and we needed to act, and we did unanimously at the Commission, putting in place a set of reforms that we expect will decrease cramming.

We also continue to take enforcement seriously. We announced over the last year a series of enforcement actions, with fines. That will continue. And we'll continue to look at the space. We've heard some reports of issues in the wireless space. At the point where we

announced our order, I said that if those problems increase we will act, and so let's avoid them up front.

Senator KLOBUCHAR. Thank you. Commissioner McDowell?

Commissioner McDOWELL. I don't think I can improve upon that answer.

Senator KLOBUCHAR. OK.

Commissioner McDOWELL. I agree with the Chairman.

Senator KLOBUCHAR. That's nice and short.

Chairman GENACHOWSKI. Thank you.

Senator KLOBUCHAR. That's good timing for our Dig Once. Why do it twice, if you can just answer it once. Right?

[Laughter.]

Senator KLOBUCHAR. This is something I've been working on with Senator Warner. We've introduced a bill known as "Dig Once," which requires States to install broadband conduits as part of any federally funded transportation project. And this was part of the national broadband plan. Could you just address how you're going to work with the Secretary of Transportation in carrying out this program?

Chairman GENACHOWSKI. Well, we're encouraging the Transportation Department and others to move on this as quickly as possible, because it is a no-brainer. And since the idea was first conceived, it's clear that it's not only a wire line broadband opportunity, but a wireless one as well. Many people don't realize that a wireless call, most of its distance travels through wire line networks, and so lowering the cost of infrastructure build-out of fiber in the roads will help not only wire line, but wireless. And we're hopeful that we'll see some action concretely in the near future.

Senator KLOBUCHAR. All right. Very good. Mr. Chairman, last weekend, the Senate Appropriations hearing, you indicated that the FCC had been working closely with RUS to ensure USF reforms do not undermine the RUS's asset portfolio. Can you share the details of how those discussions are going, and are you going to work to make sure that there's not any harm to the portfolio?

Chairman GENACHOWSKI. We recognize that there are issues for some USF recipients when it comes to RUS, and resolving it is going to require flexibility on the FCC's part, flexibility on the RUS part, potentially flexibility on Congress's part. We don't want to let the tail wag the dog and have RUS loans mean that consumers are paying for unjustifiable services for a long time. On the other hand, we recognize near-term business realities. We're going to work with RUS, with this committee to address these issues.

Senator KLOBUCHAR. Very good. Then I had a question about the first phase of the Connect America Fund. It was in the USF reform order. It's supposed to provide \$300 million in support for 2012 broadband investments to unserved Census blocks on the map, but I'm hearing now that some portions of it may go unused. What's going to happen to this money?

Chairman GENACHOWSKI. My understanding is that the response has so far been very strong, but I will get back to you with an exact percentage on how much will be utilized. [See page 77.]

Chairman GENACHOWSKI. Obviously, we want to encourage the maximum possible use. I just met with one company recently that told me they were going to use every penny, both in the first phase

and the second phase, and we have mechanisms to address unclaimed money, but I think we're hearing a positive response on companies taking the money and spending it with the accountability mechanisms that we've attached to it.

Senator KLOBUCHAR. OK. Very good. Last, and you can answer this in writing, because I know my colleagues want to get to this. We have some very remote areas of our State on the Canadian border, to the point where actually one of the parts of our State you cannot get to except going through Canada, called the Northwest Angle, unless the ice freezes over. And so, this is Lake of the Woods County. They applied for channel reallocation after the DTV transition, but had to wait years to get final approval from the Canadian government, and the FCC, this January, and this is about—and we can talk about it in writing—coordination with Canada, going forward with regard to the incentive auction legislation that was passed in February, and some other issues that we think we could do a better job of working with our Canadian friends.

Chairman GENACHOWSKI. We'll respond in writing. [See page 127 at **.]

Senator KLOBUCHAR. OK. Thank you very much.

The CHAIRMAN. Thank you, Senator.

And now Senator Thune. And I would remind that we have six people to go. Votes are meant to start at 3:50. There's a possibility it may slip, but people who have waited to ask questions should be respected. So, if people could exercise discipline.

Senator Thune.

**STATEMENT OF HON. JOHN THUNE,
U.S. SENATOR FROM SOUTH DAKOTA**

Senator THUNE. Thank you, Mr. Chairman. Mr. Genachowski, on April 3 this year, Senator Begich and I, along with 17 other Senators sent you a letter requesting, among other things, that the FCC not implement additional reductions in USF support until the implications of the reforms and reductions adopted in the USF reform order can be properly evaluated and understood. As of yet, there has not been an official reply to the letter.

My question is: Will there be a reply forthcoming in the near future?

Chairman GENACHOWSKI. There will be a reply forthcoming in the near future.

Senator THUNE. Great. And maybe this will be addressed in a letter, but could you answer the question about whether or not you would delay additional reductions in USF and ICC support pursuant to the further notice until the implications of the reforms and reductions adopted in last fall's USF order can be properly evaluated and understood?

Chairman GENACHOWSKI. I think it's important that we continue to move forward with implementing the reforms while listening very carefully to the issues that come up and make appropriate modifications. So, one of the reasons I haven't responded to your letter yet was that we've made some modifications in the last 2 or 3 weeks that I wanted to put in place, so that we could tell you about them in the letter, because we want to respond to the concerns. Stopping the reforms, I think, would be counterproductive,

inconsistent with fiscal responsibility, and unfair to unserved Americans who would benefit from us moving forward, including in South Dakota.

Senator THUNE. OK. This question has to do with the concern in the wireless and telecom industry about the need for additional spectrum. As you know, there's great consumer demand for wireless services, and we've got some recent economic reports that conclude that unleashing about 300 megahertz of spectrum from mobile broadband by 2016 would spur \$75 billion in new capital spending, create somewhere between 300,000 to 770,000 new jobs, and add \$230 billion to GDP.

When you look at the entire wireless ecosystem and all the economic benefits that derive from this type of investment, I think there's no wonder that this has been one of the few good news stories that we've had in the U.S. economy. And I guess my question has to do with the issue of how we get new spectrum out there.

I mean I believe that we've got to do more to identify new spectrum and get it into the hands of those who are going to invest and continue to build robust wireless networks. I know that you're looking at some ways to get more spectrum to market, but I'm concerned that the process may take too long, and you all will just say that in some cases we need more time, and I don't think that's going to be sufficient, based upon the demand.

So, the question is, consistent with what the President's called for in the form of an additional 500 megahertz of spectrum, can you provide a little more detail on how we get spectrum to market quickly, and avoid the pitfalls of kicking the can down the road?

Chairman GENACHOWSKI. I agree with all your points. So, thank you for the incentive auction authority, which will make a big difference, and will move forward in implementing that quickly. Recovering spectrum from government is important, and working on a bipartisan basis with the Committee will help. And then there are areas where we've identified where by removing regulatory barriers to spectrum use, we can free up spectrum that already is commercial for terrestrial mobile broadband, and I look forward to working with you and the Committee on a bipartisan basis on that as well.

Senator THUNE. OK. We would welcome that opportunity. I think it's really important. And I would just follow up.

The CHAIRMAN. I just beg of you. The votes are meant to be starting right now. They haven't. We have four people waiting to ask a question.

Senator THUNE. OK.

The CHAIRMAN. Will you yield?

Senator THUNE. I guess I'll yield, Mr. Chairman, if that's your desire. Go ahead. I will submit some questions for the record.

The CHAIRMAN. OK. I appreciate it. I know. One, actually, but you do have that.

Senator Pryor.

**STATEMENT OF HON. MARK PRYOR,
U.S. SENATOR FROM ARKANSAS**

Senator PRYOR. Thank you, Mr. Chairman. Chairman Genachowski, I want to jump right in on the Child Safe Viewing

Act, and this is the bipartisan bill that basically directed the FCC to move beyond the V-chip, as you know, and look at other advance blocking technology.

Can you give us a very quick update on the status of what the FCC's doing?

Chairman GENACHOWSKI. Yes. First of all, it's a tremendous accomplishment for Congress to have passed this bill by ensuring that the industry takes disabilities issue into account early. It will solve a lot of problems, and really take advantage of the opportunities of technologies to serve people with disabilities.

The statute gives us a list of target dates to hit. We've hit all of them so far, working very well with the disabilities community and industry. I think it's been a success, and we're committed to seeing it continue to being a success.

Senator PRYOR. Thank you. And also on the Child Safe Viewing Act, the one about the V-chip.

Chairman GENACHOWSKI. Ah. I'm sorry.

Senator PRYOR. That's okay.

Chairman GENACHOWSKI. My apologies. The Child Safe Viewing Act.

Senator PRYOR. You're getting those confused, because those are both Rosenworcel initiatives here in the Committee, but go ahead.

Chairman GENACHOWSKI. I'll apply that answer to a different question. The Child Safe Viewing Act, the opportunities of technology to empower parents in meaningful ways is something that you and I have talked about for a long time. Chairman Rockefeller and I have talked about it, too. It's a real opportunity. We're seeing more and more new technologies hit the market to do that, and continuing to work together to incentivize, promote those technologies, and the awareness of parents about those technologies is important.

Senator PRYOR. And is the FCC taking steps to try to bring those technologies to bear, to allow parents, especially parents, to utilize those technologies?

Chairman GENACHOWSKI. Yes. We've been doing outreach. We've done events at schools and with parents. We've worked with the Education Department. To the extent that we can resolve these issues through better technology in the hands of more parents, that would be preferable, and I think will actually work better than other courses of action.

Senator PRYOR. All right. Commissioner McDowell, did you have anything to add to that, to the Child Safe Viewing Act?

Commissioner MCDOWELL. No. I think he did a great job. He's on a roll.

Senator PRYOR. OK.

[Laughter.]

Chairman GENACHOWSKI. Thank you.

Senator PRYOR. And you mentioned the CVAA, the 21st Century Communication Video Accessibility Act, and it sounds like the Commission is maybe what, half way through, or even more, in trying to implement that and make that work.

Chairman GENACHOWSKI. I think that's about right. We're hitting our targets and will continue to do that.

Senator PRYOR. Great. And there's also a provision about a clearinghouse that, again, one of the Commissioners here helped on. And basically, has the Commission taken steps to get the clearinghouse established yet?

Chairman GENACHOWSKI. I don't remember. Commissioner Rosenworcel, have we?

Commissioner ROSENWORCEL. I believe it's under way, but certainly, we will make sure that that continues.

Senator PRYOR. OK. Thank you, Mr. Chairman. I'll yield back my time, but I do have other questions for the record.

The CHAIRMAN. I understand.

Senator PRYOR. Thank you.

The CHAIRMAN. Thank you, Senator Pryor.

Senator Cantwell.

**STATEMENT OF HON. MARIA CANTWELL,
U.S. SENATOR FROM WASHINGTON**

Senator CANTWELL. Thank you, Mr. Chairman. Chairman Genachowski, we spoke last week about several issues, the enforcement action on the declaratory order on call completion, to make sure that it's being taken seriously, about phantom traffic, and how we can get the inclusion of carrier identification code, so that you can close a loophole and find a solution there. We talked about low-power FM and the rulemaking, and the implementation from the Local Community Radio Act. And so, I'm optimistic that we will be seeing low-powered FM stations in the very near future, or by the end of the year, I should say.

But, we spent a lot of time talking about the media ownership rule and specifically the media cross ownership. I've expressed my disappointment at where the Commission is on the proposed rule, and particularly when it's released in December, which seems to be the habit, and then Congress is gone, and oops, where's Congress' ability to raise their objections on this.

So, I'm curious, because the Martin Rule that came out, and this is very, very similar, we had 28 Senators, including Senators Obama and Biden, co-sponsor a resolution of disapproval that subsequently passed the Senate. So, what has changed that you think is going to convince me and my colleagues that the Martin Rule, and now the Genachowski Rule, that was from 4 years ago, are now simply okay?

And to follow up, too, on that, when you are looking at that public interest standard, why did you look at cross media ownership rules in the top 20 markets versus the top 10 or the top 30? Just because I'm trying to get it all in for the Chairman here.

Chairman GENACHOWSKI. I'll keep my answer brief. Senator, you've been strong and consistent on these issues, and the views that you're expressing have been expressed by others in the record. The proceeding is still open, and reviewing the record, and then we recognize the conviction that you have on these issues, and all of these arguments will be taken into account as we move from the notice to an order.

Senator CANTWELL. Well, I would encourage you to come to Seattle as a previous commission did, but I'd also encourage you to really pay attention, that many members of Congress passed and

the Senate passed a disapproval of the very thing that you're thinking about issuing again.

So, thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Cantwell.
Senator Warner. Then Senator Ayotte.

**STATEMENT OF HON. MARK WARNER,
U.S. SENATOR FROM VIRGINIA**

Senator WARNER. Thank you, Mr. Chairman. I'll try to be very brief, so we'll get in before the vote.

Spectrum, one of the things I would point out, as I think Commissioner McDowell said, 65 percent owned by the Federal Government. We have a bipartisan bill, Senator Wicker and I, to try to do a spectrum inventory. We're not going to know how we can reallocate or nudge our Federal partners unless we have that full inventory. Unfortunately, we've had some parts of the administration hold back on that. I think it is an essential tool.

I see Senator Wicker just coming in. At this point, talking about the spectrum inventory bill. I think it's an important step to move forward.

I've been concerned with NTIA's approach on some of the government's spectrum about spectrum sharing, as opposed to full relocation. My understanding, though, you're working on something that's pretty innovative in terms of experimental licenses with both NTIA and the private sector that might allow a more efficient use of spectrum sharing with government spectrum. Do you want to comment on that?

Chairman GENACHOWSKI. That's right. So, two things. One, spectrum sharing is an important opportunity. It shouldn't be thought of as eliminating the need for reallocation of government spectrum that's just not inefficiently used by government. In some cases, it may be more effective to have sharing, to, for example, auction a license, but protect particular areas around the country where there is a use, where it's very expensive to move. So, T-Mobile, with the support of the wireless industry, has filed an application for an experimental license, to conduct some tests around a military base. We're very supportive of that, and we're working closely with NTIA to get that granted quickly, to identify the base to test this out, so that we can move forward and free up spectrum quickly.

Senator WARNER. Well, I would commend you to move forward on that. And again recognizing that we have other Senators here, I just would add, I really support the efforts you've done on USF reform. I was curious with your answer that said none of the fixed-rate return players are going to see any decrease. I'm not sure how that all happens on a going-forward basis, since we're re-jiggering the formula, but I do think that getting these dollars out towards broadband, toward the 18 million unserved Americans, and I really appreciated the fact that you-all are working together.

And I hope, you know, we won't have—there will be many efforts to try to delay that. I think that while we may hear from certain of our—we don't hear in an organized fashion from the 18 million Americans who don't have broadband service that need it. So, I say Godspeed.

Thank you, Mr. Chairman.
The CHAIRMAN. Thank you, Senator Warner.
Senator Ayotte.

**STATEMENT OF HON. KELLY AYOTTE,
U.S. SENATOR FROM NEW HAMPSHIRE**

Senator AYOTTE. Thank you, Chairman.

Chairman Genachowski, we've talked a lot about the spectrum being held by the Government right now. I just want to ask you about a particular band, 1755 to 1780, which you commented on in your opening statement. My question is: as we go forward to repurpose that spectrum, how is the Pentagon being included in this to protect our national security interests, and how can we ensure that it's an open and transparent process, so that all stakeholders can weigh in, so that we handle that spectrum properly?

Chairman GENACHOWSKI. Well, the NTIA and the Commerce Department represents all the Federal agencies in the process. We coordinate with NTIA and we also speak with the military agencies. Of course, I agree that it's important to make sure that anything that happens in this area protects the needs of the military, but as others have pointed out, there's wide agreement that there's inefficient spectrum use on the part of the Federal Government, and it's in all of our interests to address those and move forward to free up spectrum.

Senator AYOTTE. And has the Pentagon expressed any concerns about how you're moving forward with that band?

Chairman GENACHOWSKI. My understanding is that there's real interest in this idea of a sharing mechanism for that band that would free up significant spectrum for commercial users in auctions soon, also preserving the military's ability to use that spectrum in the limited areas where it needs it.

Senator AYOTTE. And I quickly want to jump in on the Universal Service Fund, the USF fund. Certainly, we all have our different viewpoints on it, and New Hampshire, according to the last data that was out in 2009, is a donor state, \$25 million. So, I commend you on the reform, and I do think it's important that you're slowing the growth of the money that's being held in the fund. So, I think that the more that we can get the money out, it's important. But, even donor states, like New Hampshire, have rural areas, that don't have broadband access.

How do I continue to assure my constituents with the reforms that are being made that as a donor state, that New Hampshire is going to be addressed in a better way for the return on investment for my constituents?

Chairman GENACHOWSKI. Well, we look forward to working with you on concrete New Hampshire issues, but our uniform goal, our joint goal is to make sure that unserved Americans everywhere, including New Hampshire, get the benefits of the money that goes into this fund. And so, if you're an unserved American, our commitment is in the years ahead, this money will be used efficiently to provide service to you and not be wasted where it's not needed.

Senator AYOTTE. Great. And real quick. You only have data from 2009 by each state. We've been trying to get data from you for 2010 and 2011 for each state by state breakdown. I hope you'll get that

out soon, so that everyone can see what that means in terms of each of their states and what they're contributing or not contributing.

Thank you.

Chairman GENACHOWSKI. Thank you.

The CHAIRMAN. Thank you, Senator Ayotte. The vote is in process. Senator Wicker, you're free to ask a question, but you will also be chairing the hearing.

**STATEMENT OF HON. ROGER F. WICKER,
U.S. SENATOR FROM MISSISSIPPI**

Senator WICKER. Thank you. And shall I adjourn it then?

The CHAIRMAN. Yes.

Senator WICKER. Thank you.

Senator HUTCHISON. Let me ask if you will be willing to answer questions, also, that we didn't get the chance to ask for the second round.

Chairman GENACHOWSKI. Of course.

Senator HUTCHISON. We have a couple.

Senator WICKER. I appreciate you accommodating me. We will report the bill to the full Senate in your absence, Mr. Chairman.

Chairman Genachowski, thank you for sticking around. We all have full schedules this afternoon, and I'm sorry I haven't been here for most of the time. You know I've advocated device interoperability, along with a number of competitive wireless carriers operating in the United States. So, let me commend you for moving to a notice of proposed rulemaking, addressing the prospect of interoperability in the lower 700-megahertz band. Of course, this is only a step. So, if you could, tell us what is the status of this notice, and when do you expect the FCC to take final action on the issue?

Chairman GENACHOWSKI. We're taking this seriously, and we appreciate your urging in this regard. Interoperability is a real issue for the smaller carriers that have that A block spectrum. There are interference issues that have come up, and we're now working with stakeholders to analyze the interference issues to determine if there's a way to address them, ultimately to make sure that all the carriers who have spectrum in that band have the ability to use it and to get devices for their consumers.

Senator WICKER [presiding]. OK. Now, how is that process going? Because what I'm trying to get is the timeline.

Chairman GENACHOWSKI. If I could respond in writing to that. I don't remember whether the comment proceeding is still open or not. But, our intention is to move quickly on this, because it's a real issue in the marketplace for the carriers that have the spectrum. [See page 104.]

Senator WICKER. Well, good. Then if you could take that for the record and give me a specific answer on when you expect to take final action, that would be terrific.

And let me just ask this to Commissioner McDowell, about the Universal Service Fund and relief mechanisms.

The last time the Committee addressed this issue, I said the FCC needed to focus on broadband availability, while reigning in cost and remaining adequately responsive to the unique needs of rural

America, which most of my State comprises. Not all of my colleagues agreed with every aspect of the order, particularly the funding dedicated to wireless service, and I share that concern. However, I believe the Commission took an important and necessary first step.

I urge the FCC to move forward on the second part of USF reform, and focus on contribution to ensure that we complete modernization of USF. However, I do understand that some companies will have growing pains during this transition. It's my understanding that part of the USF order includes several relief mechanisms for those who believe that reform will have an adverse impact on their businesses.

So, are you in a position today to elaborate on those relief mechanisms, Mr. McDowell?

Commissioner MCDOWELL. I believe you're speaking about the waiver process at the FCC. And we had an interesting dialogue earlier regarding that.

We are taking this very seriously. We want to make sure that the waiver applications are as detailed as possible, so we truly understand what the hardships may or may not be for the applicants. But, we also want to keep it as streamlined as possible. This is a work in process, and we hope to be able to refine our process going forward and learn a lot as we go.

Senator WICKER. How is that process proceeding?

Commissioner MCDOWELL. I think it's proceeding fine thus far, and we will make determinations as quickly as possible on those waiver applications.

Senator WICKER. Well, thank you very much. And I appreciate you folks sticking around. I look to counsel to see if there is some magic words I need to say. Do I need to adjourn the hearing? This is the most power I've had in quite a while.

[Laughter.]

Senator WICKER. If there is no objection from the other members of the Committee, we'll keep the record open for 2 weeks.

Hearing no objection, the hearing is adjourned.

[Whereupon, at 4:07 p.m., the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF MIGNON L. CLYBURN, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Good afternoon Chairman Rockefeller, Ranking Member Hutchison, and members of the Committee.

When I last appeared before you, I was still within year one of my current tenure at the FCC. Since then, the Commission has, without question, experienced two very dynamic and productive years. We've issued an impressive number of rulemakings and have engaged in an incredible amount of industry and intergovernmental collaborations, resulting in a more thorough and inclusive decision-making process.

It has been said, at times, that agency over-regulation can lead to undue intrusion, which could interfere with the vibrancy of the global free market. We have been told, more than once, that American ingenuity and innovation will be stifled by unnecessary and poorly targeted government rulemakings. Let me firmly state for the record that I agree with both of those assertions. In my opinion, however, one of the best ways that this regulatory body can prevent this from occurring while not abandoning our public interest obligations, is by promoting robust competition throughout all communications industry sectors. The greater the number of viable competitors, the more incentives those competitors may offer consumers through better services, more product offerings, and yes, more marketplace discipline. In other words, the more robust and competitive a marketplace, the less need there is for regulation.

But the plain truth is that this marketplace nirvana does not always exist. There are times when the communications ecosystem fails to properly address current, key consumer interests. And when that occurs, the Federal Communications Commission is here to play a vital role. We encourage industry to respond, in collaborative ways, to address consumer harms when appropriate, and we codify regulations through rulemakings when that pathway is warranted. I am not resistant to industry-led, voluntary solutions in some cases, because that type of engagement has the potential to give the marketplace greater flexibility to respond to evolving consumer needs in our technologically fast-paced environment. But I am also not ashamed of stating for the record that I am an advocate for smart, targeted regulatory action when necessary to promote meaningful competition in order to ensure that basic consumer protections are in place.

We have joined hands with industry and public interest advocates in tackling significant reforms of the Universal Service Fund. We are lowering the barriers to broadband adoption by partnering with industry and grass roots organizations, and we have worked with the wireless association and others to tackle consumer bill shock issues. And most recently, thanks to you and both wireless and broadcast stakeholders, we are now better equipped to address America's appetite for more mobile broadband solutions.

The Commission is moving forward to promote and encourage competition and we recognize that one of the best ways to achieve this is to repurpose more spectrum for mobile broadband services. In 2010, we adopted rule changes to allow mobile broadband service in the 2.3 GHz band. This year, we proposed changes that can similarly repurpose 40 MHz of Mobile Satellite Service spectrum for terrestrial mobile use. Our staff is also working diligently to implement the historic voluntary incentive spectrum authority that you gave us in February.

For me, however, the greatest example of our collaboration can be found in the implementation of the landmark 21st Century Communications and Video Accessibility Act, or CVAA. In conjunction with industry stakeholders, bipartisan drafters in the House and Senate put together a comprehensive bill that works toward ensuring that there is digital and technological parity for those with different abilities.

This is the most important piece of disability legislation since the passage of the Americans with Disability Act. It affords us stronger authority to adopt rules that will offer greater access to video programming and the most advanced voice and

data services on the market, irrespective of the communications platform being used, to deliver vital services to those previously denied.

Congress provided the roadmap, then handed it off to the FCC to further coordinate and strategize with private industry on how best to implement the parameters in a way that minimally burdens stakeholders. CVAA is an example of collaboration between Congress, the FCC, and industry at its best, and 36 million blind, deaf, and hard of hearing Americans are the direct beneficiaries.

Over the past two years, the Commission has had a number of important public safety achievements. In September of last year, the Commission initiated a rule-making, to modernize the current voice-based 911 system to a Next Generation 9-1-1, or "NG-9-1-1" system so that the public will be able to send texts, photos, videos, and other data to emergency call centers. The FCC improved the reliability and continuity of communications by adopting outage reporting requirements for VoIP networks, and the agency is collaborating with broadband Internet Service Providers to learn more about the technical issues associated with the outages that the customers of those providers may experience. The current top priority related to public safety policy is implementing the specific mandates that Congress imposed with regard to establishing the Technical Advisory Board for First Responder Interoperability, and transitioning public safety spectrum to the First Responder Network Authority.

I am grateful for the opportunity to speak today, and I look forward to answering any questions you may have on how the FCC can continue to promote greater access to communications technologies and services for all Americans. Thank you.

PREPARED STATEMENT OF JESSICA ROSENWORCEL, COMMISSIONER,
FEDERAL COMMUNICATIONS COMMISSION

Good afternoon, Chairman Rockefeller, Ranking Member Hutchison, and the distinguished Members of the Committee.

It is a great privilege to appear before you today. I was ceremonially sworn into office on Monday. My tenure at the agency has been limited. So it is in that spirit that I offer my remarks today. They will be brief.

There may be no sector of the economy more dynamic than communications. These are the technologies that support our commerce, connect our communities, and enhance our security. They are an essential part of how we educate, create, entertain, inform, and govern ourselves.

Yet technology changes at a blistering pace. So it is essential that the Commission approach its tasks with humility. It must have a healthy respect for the power of innovation to invert what we think we know.

Still, I believe that there are enduring values in the Communications Act that must always inform the Commission's work. Public safety is paramount. Universal service means that everyone in this country, no matter who they are or where they live, should have access to first-rate communications services. Competition inspires private sector investment and drives the development of more innovative services at lower cost. And consumer protection is always in the public interest.

In the weeks and months ahead, the Commission will have no shortage of challenging issues to address. The Middle Class Tax Relief and Job Creation Act tasked the agency with a series of spectrum auctions designed to ease the growing demand for this scarce resource. These include incentive auctions, which are undeniably complex. In years past, Commission auctions have raised \$50 billion for the United States Treasury. Its path-breaking auctions have led the world. I am confident that with the right mix of engineering and economics, with these new auctions the Commission can once again serve as a pioneer. Furthermore, if it follows the law, it can do so in a way that is fair to all stakeholders and will provide our first responders with the resources and nationwide interoperability that will help keep us safe.

For more than five years, I had the tremendous privilege of serving on the staff of this Committee. It is an honor to return to this room and sit at this table in my new role. From my time working for this body, I deeply understand that it is the duty of this agency to listen to the Congress and be responsible to the American people.

Thank you again for the opportunity to appear before you today. I would be happy to answer any questions you may have.

PREPARED STATEMENT OF AJIT PAI, COMMISSIONER,
FEDERAL COMMUNICATIONS COMMISSION

Chairman Rockefeller, Ranking Member Hutchison, and members of the Committee, it is a privilege to appear before you today. Several months ago, you extended to me and to my colleague, Commissioner Rosenworcel, the opportunity to appear before you in connection with our nominations to the Federal Communications Commission. I am honored that this Committee, and ultimately the full Senate, approved our nominations. And I am grateful to you for your support during the confirmation process and for giving us the chance to serve the public in our new capacity. As I stated during our previous hearing, I look forward to building a collaborative relationship with Congress, including the members and staff of this Committee.

That relationship begins, appropriately, with this oversight hearing. Congressional oversight of the Executive Branch and independent agencies is a critical feature of government. As the Supreme Court opined decades ago, Congress' "power of inquiry . . . is an essential and appropriate auxiliary to the legislative function."¹ It is important for agencies to be accountable not only by virtue of statutes that reflect accumulated Congressional will, but also through contemporary examination. I seek no exemption from this exercise. Accordingly, I welcome your exacting scrutiny regarding my office's performance and priorities during the fifty-two hours since I was sworn in as a Commissioner.

On a more serious note, the agency in the near term will be addressing several high-profile matters. I am eager to begin working with my new colleagues at the Commission, with Congress, with interested parties, and with the American people in doing so with care and dispatch.

First and foremost among these matters is the implementation of the spectrum auction authority granted by Congress earlier this year. With the proliferation of smartphones and functionally similar devices, the increasing use of high-bandwidth mobile applications is straining network capacity. Indeed, according to one recent estimate, data traffic on mobile service providers' networks is projected to increase 16 times from 2011 to 2016. The FCC therefore must do what it can to free up additional spectrum for broadband, and Congress' recent action has given the Commission important authority to accomplish this objective. The Commission needs to implement the incentive auction legislation swiftly in order to address the Nation's growing demand for wireless broadband. At the same time, however, it must do so in a balanced manner that takes into account the concerns of all stakeholders. It is my intention to work with my colleagues thoughtfully to sort through the technical, policy, and legal thickets ahead. We need to get this right. But implementation of this authority is not the only answer. Currently, the Federal Government has control over too much spectrum, limiting the amount of spectrum available to handle the growing demands of American consumers. The government therefore needs to accelerate its efforts to identify and to free up as much additional spectrum as is feasible for commercial use.

Reform of the universal service system is another area in which the Commission will be focusing much attention. This past fall, as you know, the Commission adopted many changes to the distribution side of the universal service ledger. On April 27, 2012, the Commission issued a Further Notice of Proposed Rulemaking that seeks comment on a broad range of questions relating to the contribution side. I agree with the Commission's recent characterization of the status quo in this area: "The current contribution system has given rise to uncertainty, inefficiency, and market distortions. Outdated rules and loopholes mean that services that compete directly against each other may face different treatment. Universal service charges billed to consumers and businesses vary by company despite virtually identical service offerings, creating confusion and distorting markets. And compliance costs have increased as companies struggle to apply old rules to new products."² In this context, reform is a necessity, not a luxury. Chairman Genachowski, Commissioner McDowell, and Commissioner Clyburn deserve much credit for taking on this challenge, and I stand ready to assist them in future efforts. I look forward to reviewing the record compiled in response to the Further Notice and taking appropriate action in a timely manner.

Media ownership is another area in which the FCC soon will be poised to take action. At the end of last year, the Commission released a Notice of Proposed Rulemaking kicking off the quadrennial review process mandated by Congress. The

¹ *McGrain v. Daugherty*, 273 U.S. 135, 174 (1927).

² News Release, "FCC Reforms Seek Efficient, Fair USF Contribution System," available at <http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0427/DOC-313804A1.pdf>.

NPRM sought comment on several of the Commission's media ownership rules as well as certain aspects of an FCC order on diversity of ownership that were vacated and remanded by the United States Court of Appeals for the Third Circuit. My understanding is that the comment and reply comment deadlines have passed. I will carefully review the record and will support the Chairman and my fellow Commissioners in seeking to resolve the difficult questions presented in this proceeding. Our efforts must reflect the changing nature of our Nation's media landscape while at the same time preserving the Commission's commitment to the core values of competition, diversity, and localism.

The areas I have outlined—spectrum policy, universal service, and media ownership—occupy distinct niches in communications regulation. But the common thread uniting them is that prompt and well-considered FCC action can improve the communications marketplace for the benefit of all consumers. Freeing up more spectrum for wireless broadband will give companies the incentive to invest in next-generation services and allow consumers to take advantage of advanced mobile applications. Wise reform of the contribution mechanism will ensure that the Universal Service Fund is sustainable and will enable more Americans to enjoy access to voice and broadband services. A more vibrant media sector will help more Americans gain access to a wider array of broadcast television, radio, print, and other sources of news.

Indeed, whenever the FCC exercises its jurisdiction, it should seek to create a regulatory environment in which competition and innovation will thrive, because consumers ultimately will reap the rewards. My approach will be to promote policies that will give private firms strong incentives to raise and invest capital; to develop new products and services; and to compete in established and new markets. We should do what we can to remove uncertainty that can deter businesses and investors from taking risks; to revisit outdated regulations; and to set clear, modernized rules for the road. Moreover, the FCC should act with dispatch to reflect the pace of change in today's marketplace. Faced with an industry as vibrant and dynamic as today's communications sector, the Commission must guard against clinging to twentieth century methods of addressing the technological landscape of the twenty-first century.

I believe that this approach will result in more American consumers enjoying better products at lower prices. And it will help the communications industry—which by some measures constitutes one-sixth of our economy—contribute more meaningfully to economic growth and job creation.

Chairman Rockefeller, Ranking Member Hutchison, and members of the Committee, thank you once again for giving me an opportunity to serve, and for affording me and my new colleagues at the Commission the chance to testify today. I look forward to your questions.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN D. ROCKEFELLER IV
TO HON. JULIUS GENACHOWSKI

E-Rate

Question 1. Under the Lowest Corresponding Price rule adopted in 1998 for the E-Rate program, providers of eligible E-Rate services are barred from charging the recipients of E-Rate funds more than they charge other similarly situated customers. This rule is intended to make sure that E-Rate funds go as far as possible to serve schools and libraries. But recent press reports have alleged that some providers may have been charging schools and libraries many times more than they charge others in the same region for the same services. Can you provide a history of the Commission's efforts since 1998 to enforce the Lowest Corresponding Price Rule?

Answer. Adopted in 1998, the Lowest Corresponding Price (LCP) rule (47 C.F.R. § 54.511(b)) prohibits “providers of eligible services” from charging schools and libraries “a price above the lowest corresponding price for supported services.” The rule reinforces the E-Rate competitive bidding rule, provides schools and libraries with bargaining power, and gives the FCC an additional tool for oversight.

The FCC has taken several actions to ensure LCP compliance, including an \$8.3 million FCC–DOJ settlement agreement in 2009 with AT&T regarding over-billing, and a 2011 FCC–DOJ investigation involving two Wisconsin E-Rate service providers. Also in 2011, the FCC's Inspector General subpoenaed data and information regarding LCP from various E-Rate service providers.

USAC's current audit procedures test for cost-effectiveness by requesting a vendor's price list to determine if the customer was charged the LCP and comparing the prices charged to E-Rate beneficiaries and other similarly-situated customers.

In the spring of 2012, USAC included LCP training in its vendor trainings and will include it in its applicant trainings beginning in October.

Question 2. Does the fact that some states have existing state master contracts for communications with providers for prices that may not comply with the Lowest Corresponding Price rule complicate the Commission's enforcement of the rule?

Answer. The requirements of the LCP rule are well-established and clear. Participants in the E-Rate program are required to ensure compliance with all applicable Commission rules, including LCP.

Question 3. Recently the Universal Service Administrative Company (USAC) that administers the Universal Service Fund, including the E-Rate program, amended its training materials to include information about the Lowest Corresponding Price rule. Is the Commission aware of how USAC trained companies that participate in the program about the rule before this presentation was updated? What guidance did the Commission give to telephone companies before this year? Are you aware of why USAC decided to make these changes to the presentation?

Answer. Internal discussions during the 2011 LCP whistle-blower investigation led to the Commission directing USAC to include training on the LCP rule in the 2012 vendor and applicant trainings. The Commission prepared materials regarding LCP compliance and provided them to USAC for incorporation in its annual trainings for service providers and applicants. Commission staff reviewed all USAC training materials and attended the vendor trainings that took place in May 2012.

Question 4. I have received reports that some providers have been awarded lengthy multi-year E-Rate service contracts? What is the rationale behind awarding multi-year contracts? Are they necessary to attract bidders to serve rural areas? What are the mean and median lengths on multi-year contracts? How many of these contracts are longer than three years? How long is the longest contract?

Answer. The E-Rate program does not award multi-year contracts. Applicants for E-Rate funds may enter into multi-year contracts with service providers but must seek approval for E-Rate funding each year. An E-Rate applicant cannot enter into pre-paid multi-year contracts unless the applicant itself pays in advance and gets reimbursed from USAC on a pro-rata basis. Therefore, there is never a guarantee that E-Rate will fund each year of a multi-year contract.

The Commission found in the E-Rate First Report and Order that multi-year contracts could potentially reduce the costs incurred by the USF in serving the E-Rate program. The Commission found "educators often will be able to negotiate better rates for . . . multi-year contracts, reducing the costs that both they and the universal service support mechanisms incur."

The Commission and USAC do not track data on the duration of multi-year contracts entered into by E-Rate applicants.

Payphones

Question 5. Payphones are a vanishing feature of the American communications landscape. Fifteen years ago, we had more than 2 million payphones across the country, but now we have less than a quarter as many. Despite this decline, they remain a primary link to the communications network for American households without any form of household phone. They are a vital part of keeping Americans connected and can be a lifeline in times of emergency.

Before you became FCC Chairman, as part of your nominations hearing in 2009, I asked if you would review existing payphone policies at the FCC in order to ensure that the Congressional mandate to compensate each and every completed call is met. You responded that you would "review existing policies to ensure that the Congressional mandate in Section 276 of the Communications Act—to compensate each and every completed call—is met." I also asked if you would work to "ensure that disputes over payphone compensation are resolved in an expeditious manner." You replied in the affirmative.

In light of the important role that payphones play and the risk associated with the loss of communications service, please provide an update on what the Commission has done since you became Chairman to review its payphone policies and to resolve payphone compensation disputes in a timely manner.

Answer. On September 7, 2010, I circulated a final order that resolves several payphone compensation petitions, including a petition for declaratory ruling filed by Illinois Public Telecommunications Association seeking refunds from Bell Operating Companies and petitions filed by independent payphone associations from the states of Illinois, Mississippi, New York, Florida, Ohio, and Michigan seeking Commission preemption of decisions by individual state commissions. The issues in these multiple petitions raise complex issues based on unique procedural facts. The Commission has compiled an extensive record submitted by payphone service providers and

interested parties from several states. The order is awaiting the votes of my fellow Commissioners.

Mobility Fund

Question 6. Currently, West Virginia receives a substantial amount of funding under the legacy Universal Service Fund high-cost support mechanism, which is being completely phased out. Can you guarantee that our state will receive funding in the upcoming Phase I Mobility Fund auction?

Please explain whether your auction methodology for Phase I of the Mobility Fund contains any adjustments that factor in the higher costs of providing coverage to mountainous and foliated areas such as those in West Virginia. If not, please explain what incentives are contained in the auction to get companies to invest in West Virginia using Federal high-cost support.

Answer. West Virginia carriers are currently receiving \$18.5M annually in USF support and are receiving an additional \$4.6M in CAF Phase I support to serve an additional 15,000 currently unserved homes and businesses.

The Mobility Fund Phase I Auction (Auction 901) will offer up to \$300 million in onetime support to carriers that commit to provide advanced mobile voice and broadband services in areas where such services are currently unavailable. Winning bidders will have to deploy 3G service within two years or 4G service within three years of the award of support.

Using a reverse auction format, bidders will identify a per-road mile support price at which they are willing to meet our requirements to cover the qualifying road miles in a given area. The states that receive funding will be determined by the bids that are received. Bidders are responsible for investigating and evaluating all technical and marketplace factors that may have a bearing on their bid amounts. Support will be awarded based on the lowest bid amounts submitted.

Lifeline

Question 7. I believe strongly in making sure all Americans have access to affordable communications services—including rural and low-income Americans. That is why I support the goal of the FCC's Lifeline program. At the same time, I recognize there has been rapid growth in the program, particularly in the prepaid wireless area. To make sure that this program continues to serve Americans who need it most, we must root out waste, fraud, and abuse.

Earlier this year, the FCC adopted reforms of the Lifeline program and sought comment on additional reforms. Do you believe that those measures are sufficient to protect the Lifeline program against waste, fraud, and abuse?

Answer. As you note, earlier this year, the FCC issued an Order to eliminate waste, fraud, and abuse in the Lifeline program. The Order includes a number of reforms to constrain program growth, including establishment of national eligibility criteria and a national database, and independent audits. On July 31, 2012, the Wireline Competition Bureau (WCB) issued a Progress Report estimating that Lifeline reforms have already generated approximately \$42.75 million in savings thus far in 2012 by eliminating more than 300,000 duplicate customers. This puts us on target to meet our savings goal of \$200 million in 2012. WCB will continue to monitor the implementation of these reforms.

Cable Rates

Question 8. According to the FCC's 2012 Report on Cable Industry Prices, there is evidence that cable rates have risen at a rate in excess of inflation. The report noted that rates for expanded basic cable service increased by 3.7 percent during 2010, compared to an increase of 2.5 percent in the Consumer Price Index. Over time, this increase has been more substantial. Your report states that from 1995 to 2010, rates increased 144 percent, compared to the Consumer Price Index increase of 44 percent.

I know that, under the 1992 Cable Act, the FCC cannot regulate the rates of the basic tier where there is "effective competition." Given the continuing increase in cable rates that you found, does the "effective competition" standard need to be revisited?

Answer. The Commission applies the effective competition standards as promulgated by Congress. If Congress decides to revisit the issue, Commission staff will be available to provide technical assistance. As you note, our most recent cable price surveys do show basic and expanded basic cable rates increasing more quickly in the 25 percent of communities where there have been findings of effective competition, but when the data is evaluated on a per channel basis, the average overall price decreases by 7.3 percent for expanded basic service.

Cramming

Question 9. Last July, this Committee released a staff report that uncovered the harm caused to consumers when bogus companies cram fraudulent charges onto phone bills. We learned that cramming costs consumers as much as \$2 billion a year in fraudulent charges—and that phone companies had been making huge profits from these charges.

After the report exposed the extent of these practices to the light of day, several major landline telephone companies committed to me that they will stop it. That's good news. But we cannot let crammers run from one kind of bill to another—we must stop cramming from moving into wireless and other services. Are you working to make sure cramming does not move to other services, such as wireless?

Answer. Like you, I am concerned about cramming practices and the adverse effects that they have on consumers. Your report highlights the problems that consumers face when they receive unwanted charges on their wireline bills. Our Order issued earlier this year requires wireline carriers that currently offer blocking of third-party charges to notify consumers of the option at the point of sale, on each bill, and on their websites. The Order also requires that wireline carriers place charges from non-carrier third parties in a distinct bill section separate from carrier charges.

Similar to the findings in your Committee report on the subject, the Commission concluded that the record before us at the time did not demonstrate a need for rules to address cramming involving wireless—as well as VoIP—services, but we initiated a Further Notice about wireless and VoIP cramming, and we intend to monitor all consumer complaints closely. If the record developed through the comments demonstrates that there is a need for rules to address cramming involving wireless and VoIP service, I am committed to Commission action on the issue.

Political File

Question 10. For more than five decades, broadcasters have kept paper copies of their public files. The FCC recently required television broadcasters to move into this century and finally make their public and political files available online. I wholeheartedly support this requirement. We're moving to a digital world, and government transparency cannot be stuck in the dark ages. However, I question the wisdom of exempting from the rule broadcasters who are not in the top 50 markets. I understand that you are worried about the bottom line for broadcasters in rural areas—but I am concerned about the citizens they serve. It is often more difficult for citizens in rural areas to make the trip to their nearest broadcaster's station to review paper files. Should you not make sure that citizens in rural areas can access the same information as those in the largest markets?

Answer. I understand your concern and agree that access to this information should be provided to all Americans, regardless of where they live. To be clear, every television broadcast station is required to upload new public file documents into the online system to make them available to the public. Consumers in every area—urban and rural—will be able to access the stations' public file materials using the online system. The Commission provided a limited delay—to July 2014—for stations in smaller markets in order to provide additional time for those typically smaller stations to prepare for the transition. I believe this was the appropriate balance to strike, considering that the majority of political advertising purchases are made in larger markets. Stations that are not required to upload the political file materials until 2014 are still required to maintain materials in paper form at the station's main studio.

Verizon/SpectrumCo Transaction

Question 11. The Commission and the Department of Justice are both reviewing a transaction between Verizon and four of the largest cable companies. As part of the proposed deal, Verizon and the cable companies would market and sell services for each other. Some have raised concerns that these joint operating agreements could make it very difficult for other companies to compete—especially companies that cannot offer all of the same services. These concerns are compounded when these competitors might be the only ones that serve consumers in other rural areas. So, if these competitors are harmed directly in a particular market, does that mean there is a risk that all of their rural consumers may suffer as a result? When you review the joint agreements as part of the larger transaction, do you plan to pay attention to the impact that they may have on the provision of voice, broadband, and video services to rural consumers across the country? Will the Commission consider how the joint agreements affect whether broadband service is further deployed, upgraded, and maintained for residential customers in rural America?

Answer. The Commission's review of the Verizon-SpectrumCo transaction focused on the impact the transaction would have on consumers throughout the country, including in rural areas. I approved the transaction only after the companies made significant pro-consumer, pro-competitive modifications to their original agreements.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUE TO
HON. JULIUS GENACHOWSKI

Applications for Waiver of Universal Service (USF)/Intercarrier Compensation (ICC) Reform Rules

Questions on timing of review and decisions on waiver petitions

Question 1. I am concerned about the Commission's ability to provide timely responses to waiver requests filed because of the recent USF/ICC Order. Please provide a list of waiver requests which have been filed to date including the date the request was filed, and the start and end dates of the public comment period. To the extent the FCC has issued a decision on the waiver request, please indicate the date of the decision. With respect to requests filed by native communities subject to the 45-day shot clock, please also include the date on which the shot clock started and time periods during which the shot clock was stopped, and why.

Answer.

Waivers Granted (in part)

- *Allband*: Order (DA 12-1194, rel. July 25, 2012)
- *Windy City Cellular*: Interim Relief Order (DA 12-923, rel. June 12, 2012)

Waivers Withdrawn

- *Big Bend*: (originally filed Feb. 6, 2012; withdrawn via letter July 18, 2012)

Pending High-Cost Cap Waivers

- *Border to Border* (filed June 29, 2012; Public Notice released on July 12, 2012; comments due Aug. 13, 2012; replies due Aug. 28, 2012)
- *Dell Telephone* (filed June 6, 2012; Public Notice released July 11, 2012; comments due Aug. 10, 2012; replies due Aug. 27, 2012)
- *Adak* (filed May 22, 2012; Public Notice released May 31, 2012; comments received July 2, 2012; replies received July 16, 2012)
- *Accipiter* (filed Apr. 18, 2012; Public Notice released May 4, 2012; comments received June 5, 2012; replies received June 20, 2012)
- *Windy City Cellular* (filed Apr. 3, 2012; Interim Relief Order released. June 12, 2012)
- *Sandwich Isles* (filed Dec. 30, 2011; PN rel. Jan 10, 2012; comments received Feb. 9, 2012; Replies received Feb. 24, 2012; 1st data request letter released Mar. 13, 2012; 2nd data request letter released June 6, 2012)

The Commission has received waiver requests from three carriers serving Tribal Lands: Sandwich Isles, Adak and Windy City Cellular. Sandwich Isles has requested a waiver of Section 54.302 of the Commission's rules, which establishes a total limit on high cost universal service support of \$250 per line per month. The company received \$892.15 per line per month in 2011, or more than 3.5 times the overall \$250 per line cap set unanimously by the Commission in the USF order.

The Wireline Competition Bureau (WCB) issued a Public Notice on the carrier's petition on January 20, 2012. Comments were due on February 9, with replies due on February 24, 2012. At that point the shot clock was stopped. WCB issued a letter seeking initial information on March 13, 2012; and followed up requesting additional information on June 6, 2012, noting concerns about the carrier's projected revenues and expenses. Staff is currently reviewing that additional information provided by the carrier. The redacted version of the follow-up letter to Sandwich Isles is available at: http://fjallfoss.fcc.gov/edocs_public/attachmatch/DA-12-893A1.pdf. As noted above, interim relief has already been granted to Windy City Cellular (the wireless affiliate of Adak) for six months or until the waiver petition for Adak is resolved. The Adak petition remains under consideration and, unless the Wireline and Wireless Bureaus need additional information from the carrier to resolve the waiver petition, the 45 day shot clock expires on August 30, 2012.

Question 2. How will companies be assured that if they apply for a waiver, your staff will move faster than they have previously?

Answer. In all cases, the Commission's bureaus are reviewing each waiver petition individually and will make final decisions as expeditiously as possible. A thor-

ough review is needed to protect consumers and small businesses that pay into the fund.

Question 3. Does the Commission have enough staff to handle the amount of work needed to quickly comb through the massive amount of data to respond quickly to the waiver requests?

Answer. Implementing the Commission's comprehensive overhaul of USF is an enormous effort, and the FCC staff is working hard on it. The Commission has released a total of 20 orders to date implementing the USF-ICC Transformation Order. As I noted at our appropriations hearings this year, our staff level is at a ten-year low, but we have requested funding that would ensure that we can successfully carry out our core functions, including implementing and administering the USF program consistent with Congress' directives under Section 254.

Question on loss of voice service requirement for waivers

Question 4. The stated purpose of the FCC's reforms is to modernize the USF program to enable access to broadband. Yet, it is my understanding that these waivers can only be obtained if customers would lose voice service in an area served by a small company.

- Is my understanding correct that customers could lose access to their fixed broadband and yet the service provider would not qualify for a waiver as long as those customers still get voice service?
 - If my understanding is incorrect and a provider could in fact get a waiver to avoid loss of fixed broadband for customers, please identify the rule or provision of the Order contradicts this understanding.
 - If my understanding is correct, please explain why you think this waiver structure will help to promote universal access to broadband.
- Is my understanding correct that customers could see significant increases in the prices they pay for voice or broadband service, and yet the service provider would not qualify for a waiver as long as those customers can still get voice service?
 - If my understanding is incorrect and a provider could in fact get a waiver to avoid significant price increases to consumers on voice or broadband services, please identify the rule or provision of the Order that contradicts this understanding.
 - If my understanding is correct, please explain how this complies with the statutory requirement to ensure reasonably comparable rates for services in rural and urban areas.

Answer. I circulated an order to clarify that waivers can be granted to prevent loss of broadband service and to account for rate changes. The draft order was temporarily removed from circulation to address additional requests raised by stakeholders, but I expect to recirculate it for vote shortly.

Our obligation is to review these issues carefully to ensure consumers and small businesses paying into the fund are protected, while ensuring consumers do not lose access to service. In demonstrating whether a waiver is warranted, the burden of proof rests with the petitioner. Unsubstantiated claims that rates will increase are not sufficient to justify a request for significant public funding. Accordingly, it is incumbent upon carriers to demonstrate that current support amounts are actually necessary and rate levels appropriate. It is worth noting that many carriers charge very low rates while receiving USF support. For example, a July 31, 2012 report from USAC recently noted that carriers serving 233 study areas are currently charging their customers *less than \$10 per month* while receiving USF support.

Impact on carriers with Rural Utilities Service (RUS) Loans

Question 5. In response to a question by Senator Klobuchar on the impact of the FCC's new rules on the RUS loan portfolio, you stated that resolving the problem is going to require "flexibility on the FCC's part, the RUS's part, potentially flexibility on Congress's part." Further, in your response to Senator Klobuchar, you also stated that you did not want to "have RUS loans mean that consumers are paying for unjustifiable services for a long time." In addition, The FCC has repeatedly claimed that most carriers would experience less than a ten percent reduction in funding under the FCC's new program as compared to the USF program prior to reform. How many carriers with RUS loans will experience more than a ten percent reduction in funding absent a waiver?

Answer. RUS administers its loan program and has a better understanding of its loan portfolio. Commission staff worked closely with RUS throughout the USF re-

form process to understand their concerns and to estimate the potential impact of different reform options on RUS borrowers, and we continue to do so. Any carrier who believes they may have difficulty in repaying RUS loans as a result of reductions in support is free to file a waiver, and one factor the Commission will explicitly consider is the ability of a carrier to service outstanding debt. In addition, the information that carriers should submit when requesting a waiver explicitly includes information regarding outstanding loans, including RUS loans.

Question 6. Please explain specifically what kind of flexibility you believe is necessary on the part of the FCC, the RUS, and the Congress to ensure that RUS borrowers do not default on their loans.

Answer. By flexibility, I mean that the waiver process must include a data-driven, case-by-case analysis of individual company circumstances, while ensuring we are protecting consumers and businesses that pay into the fund. As noted above, I support modifying the waiver standard to take a loss of broadband service, not just voice service, into consideration. In addition, the National Broadband Plan recommended that one way to accelerate implementation of USF reforms would be for Congress to provide a one-time capital infusion into the Universal Service Fund.

Question 7. As you review the RUS loan portfolio in hindsight, what types of services do you consider “unjustifiable” and why?

Answer. The rate of return system has not historically had strong accountability measures or good incentives for carriers to control costs. In addition, our previous universal service funding mechanism gave rate of return carriers control over their own funding spigot and incentives to outspend their peers. As we review practices generally (not specific to RUS portfolio) a variety of potentially concerning practices have come to light. For example: the number of employees and operating costs of some companies of similar size and service area are often very different, with some carriers having many more employees and much higher costs for essentially the same service; some carriers receiving very high per-line and total USF support levels are simultaneously giving millions in “capital credits” to investors; some carriers have set up a web of family-owned affiliates and have essentially contracted with family-owned businesses at costs much higher than they used to pay non-family-owned companies for the same service.

Question 8. As noted in the recently filed Notice of Oral Ex Parte Contact by the Administrator of the Rural Utilities Service, RUS loans were issued under the rules that were current at the time of the loan. Please explain the basis on which the FCC believes it is justified in changing rules mid-stream in a manner that could disrupt the ability of borrowers to repay RUS loans and potentially trigger major budgetary problem for the Federal Government.

Answer. The USF-ICC benchmark reforms adopted in the Order only affect support going forward. In recognition of business realities and the need for carriers to have time to adjust, the Commission is phasing in changes gradually over 18 months. Commission staff has an ongoing dialog with RUS and meet with them regularly to understand their lending practices and their overall loan portfolio, and to understand the potential impact of our actions on their borrowers, including what tools they have to address troubled loans. We said we would consider RUS debt in evaluating waiver petitions and we have been doing just that as Commission staff works through the small number of waiver petitions that have been filed. To expedite review of waivers, the Commission delegated authority to the Wireline Competition Bureau and Wireless Competition Bureau. The Order requires the Bureaus to initiate the process for public comment within 45 days of receipt of a petition, and they have consistently done so. To date, fewer than ten companies have filed a waiver. Of those, one has been withdrawn, and two have already been resolved.

I would also like to address the misimpression that we have changed rules mid-stream and that parties could not have anticipated changes. All stakeholders have been on notice that comprehensive reform was coming to the universal service program for at least the last decade. In 2001 when the Commission, under then-Chairman Powell, adopted a reform order in response to a proposal by the Rural Task Force (RTF), which included RUS, the Commission agreed that the methodology was to be only temporary (5 years) while a more comprehensive reform was developed. (FCC 01-157, paras. 165-177). In 2006, the Commission voted to temporarily extend that mechanism, stating that the rules would remain in effect “until the Commission adopts new high-cost rules for rural carriers.” (FCC 06-69, para. 2). That decision was followed by additional notices seeking comment on reform in 2008 and in 2010, which ultimately led to the Order we adopted in 2011. Arguments that rules were changed without adequate notice ignores the procedural history of the reforms we have undertaken. Coupled with the transition periods provided to carriers and the waiver process to address unique circumstances, I firmly believe the reforms the

Commission unanimously adopted strikes the right balance between the needs of rural carriers for support and the need to protect consumers and small businesses that pay into the fund. It is worth noting that the overwhelming majority of rural carriers (more than 700 of the approximately 800 rural carriers that receive USF support) are not affected by the caps or see slight increases in support.

April 25, 2012 Benchmark Order

Question 9. The FCC's April 25, 2012 Order set benchmarks for reasonable capital and operating expenses based on comparisons among similarly situated rate-of-return carriers. According to the FCC, as a result of the Benchmark order 500 carriers will see increases in High Cost Loop Support (HCLS) and 100 carriers will have expenses limited to bring costs down to levels of similarly situated peers.

Plases explain the FCC's process in determining the appropriate similarly situated rate of return carriers to be used in determining reasonable capital and operating expenses for rate of return carriers in Hawaii and Alaska.

Answer. In determining reasonable reimbursements for capital and operating expenses, the limits take into account what the actual costs are of rate of return companies, and compares those companies with one another on various dimensions—companies with a similar number of loops, companies with similar soil, companies with similar climate, companies with similar levels of under-appreciated plant—and only limits those companies that are extreme outliers compared to their peers. The purpose of benchmarking carriers to their peers is to identify the outliers and to determine the causes for their higher support amounts. The Bureau's Order identifies and limits only those companies whose costs are higher than 90 out of 100 companies operating under similar conditions. Under the methodology adopted by the Bureau, over 700 carriers face no limits this year and will see increases or no change in their high cost loop support.

The Order included Alaska-specific considerations to ensure carriers compared to their peers within the state, including a specific Alaska variable. Sandwich Isles Communications is the only rate of return carrier operating in Hawaii. As noted above, that carrier has requested a waiver of section 54.302 of the Commission's rules, which establishes a total limit on high cost universal service support of \$250 per line per month. The company received \$892.15 per line per month in 2011, or more than 3.5 times the overall \$250 per line cap set unanimously by the Commission in the USF order. Staff is currently reviewing that filing.

Question 10. Of the approximately 100 carriers that will see decreases in HCLS, how many have outstanding RUS loans?

Answer. Our understanding from information provided by RUS is that approximately 35 of the affected carriers have RUS loans. However, RUS may be in a better position to answer this based on their internal analysis.

Petitions for Reconsideration and Further Proceedings

Question 11. I share the concerns raised by Senators Thune and Begich about the importance of fully understanding the implications of the reforms and reductions adopted in the USF order prior to implementation. To this end, please provide a summary of the status of the outstanding petitions for reconsideration including the primary issues presented for reconsideration and the manner in which the FCC has responded to those petitions.

Answer. In response to the USF/ICC Transformation Order, twenty-four petitions for reconsideration or clarification were filed. These petitions sought reconsideration or clarification across an array of issues involving both the Commission's universal service and intercarrier compensation reforms. Consistent with standard practice, public comment was sought on these petitions.

To date, the Commission has issued four reconsideration orders addressing aspects of eleven different petitions for reconsideration or clarification. In addition, the Wireline Competition Bureau and Wireless Telecommunications Bureau have issued four orders that clarify the rules adopted in the USF/ICC Transformation Order. The Bureaus also have issued multiple orders to implement the reforms set forth in the USF/ICC Transformation Order across a range of topics, from this year's interstate tariff filing to benchmarks for high cost loop support. Finally, the Bureaus have taken a number of other actions in response to waiver and other requests from parties in connection with the proceeding.

Incentive Auctions

Question 12. With respect to incentive auctions designed to allow television broadcasters the ability to sell all or a portion of their spectrum for mobile uses, what steps is the FCC taking to work with broadcasters to ensure stations that do not wish to participate are able to offer robust services now and into the future?

Answer. The amount of spectrum cleared through the incentive auctions will depend on the voluntary participation of broadcasters. The Commission is educating broadcasters on the options that are available to them, as well as encouraging their participation. The Commission held a TV Broadcaster Relocation Fund Workshop to focus on the design of the Commission's program to reimburse some broadcasters for the relocation costs they will likely incur as a result of the channel reassignments in connection with repacking as authorized by the Act. While it is not expected that all broadcasters will participate, voluntary incentive auctions present a compelling economic opportunity for many broadcasters. The Commission will reach out to, and work with, all affected parties in a process that is transparent and fair.

Verizon-Cable Transaction

Question 13. The FCC is currently reviewing the Verizon—Cable transaction. The transaction involves not only spectrum transfer but also commercial agreements between the parties with potentially far-reaching impact. Is the agency reviewing the impact of the entire transaction—including the impact of the commercial agreements—upon consumers, prices, competition, network investment, and jobs? If so, do you anticipate that the agency will release a final Order that addresses the issues raised by the commercial agreements at the same time that it issues its decision on the spectrum transfer?

Question 13a. Since the commercial agreements between the parties are confidential, the FCC review of this transaction to ensure that it serves the public interest takes on special import. Can we expect that the FCC will review this transaction with the same rigor and vigilance that it used in the review of the AT&T/Mobile proposed merger?

Answer. The FCC recently completed its review of the Verizon Wireless-SpectrumCo and related transactions, which was rigorous and thorough. As part of that review, the Commission reviewed and worked to ensure significant changes were made to the commercial agreements.

Low Power Television

Question 14. In your recently released Report and Order, the Commission states with regard to low power TV stations the following:

“Because we license low power television stations and TV translators on a secondary interference basis, they create no impediment to repacking as we need not protect these facilities in our repacking plan. For that reason, relinquishment of spectrum by these licensees through channel sharing arrangements will not aid the band clearing or relocation process—our immediate goal in this proceeding.”

If the Commission does not afford protection to low power TV in its repacking plan, should low power licensees be afforded spectrum rights similar to those of many other licensees such as allowing licensees more technical freedom and greater spectrum flexibility?

Answer. I recognize and appreciate the important the news, information, and programming that LPTV stations provide to their audiences. I have instructed Commission staff to continue to work with the LPTV community as we implement the Middle Class Tax Relief and Job Creation Act of 2012. As you know, LPTV stations always have been secondary services to full power TV stations, and Congress did not provide additional protections for LPTV stations in the Middle Class Tax Relief and Job Creation Act of 2012.

Question 14a. What is the FCC's plan for Class A stations going forward?

Answer. Class A stations have enhanced spectrum rights, and those Class A stations that continue to meet license requirements will have the opportunity to participate in the incentive auction process.

Media Ownership by Women and People of Color

Question 15. Are you satisfied with the level of media ownership by women and people of color today? If not, I would appreciate your suggestions on how media ownership by women and people of color can be improved. What role can the FCC play to encourage greater media ownership opportunities for women and people of color?

Answer. I believe that the FCC must ensure that the communications field is competitive, generates widespread opportunities, and is open to new ideas from all sources. The Commission currently is evaluating our diversity policies as part of the Quadrennial Media Ownership rule review. Additionally, in an effort to better understand how to best move forward in this area, the Office of Communications Business Opportunities is actively reviewing the state of the market as it prepares the Commission's 2012 Section 257 Report to Congress. Finally, over the past several

years, the Commission has implemented recommendations from the Advisory Committee on Diversity for Communications in the Digital Age in order to enhance and increase opportunities and participation in the broadcast industry by underrepresented groups.

Spectrum Swaps

Question 16. Some industry representatives as well as a few Members of Congress have suggested that spectrum swaps are a direct and faster way to increase competition in the wireless broadband market. Do you agree with this suggestion? What efforts are being taken or can be taken by the FCC to explore spectrum swaps as a way to increase competition in the wireless broadband market?

Answer. There are currently no proposals or proceedings pending before the Commission on spectrum swaps. Should any proposals come forward, we will give them full consideration while coordinating with all interested stakeholders.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN F. KERRY TO
HON. JULIUS GENACHOWSKI

Updating the Law

Question 1. The FCC has a wireless bureau, a wireline bureau, and a media bureau. Given that all three operate in a broadband world, should we have a broadband bureau at the agency that either incorporates these three separate bureaus or helps us understand the state of broadband competition and define and eliminate duplicative bureau functions?

Answer. During my time as Chairman, I have focused the FCC on broadband, including through major initiatives to advance wired and wireless broadband deployment and adoption. Every FCC bureau—including the wireline, wireless, and media bureaus—is working to unleash the opportunities of broadband for our country. This work often involves collaboration across bureaus, as with the development of the National Broadband Plan, last year’s landmark reform of the Universal Service Fund, and our ongoing implementation of voluntary incentive auctions.

Question 2. The 1992 Act is 20 years old this year, and the 1996 Act is entering its late teens. Should we update these laws and if so, using what set of principles?

Answer. If Congress chooses to revisit the Cable Act of 1992 or the Telecommunications Act of 1996, the Commission stands ready to offer whatever assistance it can. Over the past few years, Congress has made significant changes to the communications laws, including through enactment of The American Recovery and Reinvestment Act, The Twenty-First Communications and Video Accessibility Act, and The Middle Class Tax Relief and Jobs Creation Act. The FCC is focused on carrying out its important responsibilities under the existing communications laws to unleash the opportunities of broadband for our country, including by promoting broadband-related innovation, investment, and competition and protecting and empowering consumers.

Spectrum

Question 3. Cisco’s U.S. mobile data forecast projects that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. With that kind of demand for space in our airwaves for wireless broadband, the Commission should be making every effort to make as much existing spectrum as usable as possible quickly. What are the prospects for Federal and private users to share the spectrum that agencies currently hold without disrupting vital public services and what can we do to speed up the process?

Answer. Meaningful spectrum sharing among government and commercial users is a key element of the Commission’s “all of the above” approach to unleashing more spectrum for mobile broadband and increasing the efficiency of spectrum use, as reflected in our Mobile Action Plan. The Commission recently approved a proposal from T-Mobile, working with the National Telecommunications and Information Administration (NTIA), to test commercial-government LTE sharing in the 1755–1780 MHz band. This test could allow us to pair that band with existing (AWS-3) mobile broadband spectrum at 2155–2180 MHz to enhance its value and usefulness prior to auctioning AWS-3 within the next three years, as required by the Middle Class Tax Relief Act of 2012. The Commission is also preparing a rulemaking to enable commercial use of the 3.5-GHz band while protecting government users, which could free up 100 MHz of spectrum for wireless broadband. Congress’s continued support for commercial-government spectrum sharing will be important to the success of these efforts.

Question 4. As space on the airwaves becomes increasingly congested, how will the FCC better arbitrate interference disputes between neighboring services in the future?

Answer. The Commission believes that the efficient use of spectrum will increasingly depend on the effective control and management of interference between neighboring services. The Commission traditionally addresses interference issues by setting parameters for transmitters to ensure that they do not emit excessive energy into frequency bands used by other services. The Commission then relies on equipment manufacturers, service providers, and other stakeholders to ensure their receivers comply with those technical parameters. Challenges faced by recent efforts to eliminate regulatory restrictions on use of spectrum for mobile broadband have highlighted the importance of receiver performance in maximizing the overall efficiency of spectrum use. The Commission conducted a successful workshop this past March to discuss the importance of addressing receiver performance in ensuring efficient use of the spectrum and better defining interference protection rights. We have tasked our Technological Advisory Council to make recommendations in the near future as to how the Commission might approach this issue.

Question 5. Can you talk about the priority that the Commission places (or that you will place) on ensuring that there is an appropriate mix of spectrum coming to market both for auctions and for such unlicensed use?

Answer. Unleashing more spectrum for broadband, including both licensed and unlicensed use, is and will continue to be one of the Commission's highest priorities. It is part of the Commission's Mobile Action Plan, which focuses on five main areas: unleashing new spectrum, removing barriers to broadband infrastructure build-out, driving greater efficiency in networks and devices, promoting competition, and empowering consumers.

Privacy

Question 6. The FCC recently concluded an investigation into the Google Wi-Fi data collection incident where the agency found that Google's actions did not violate section 705 of the Communications Act due to the fact that the incident occurred on unencrypted Wi-Fi, rather than a secured network. In light of the result of this investigation, do you believe that Congress should update section 705 to account for this gap in the FCC's wiretap provisions?

Answer. Congress has directed us to protect the privacy of consumers when they use communications networks and services. The FCC has extensive experience and a long record of protecting this information. The FCC will continue to implement its statutory mandates, including section 705, and stands ready to work with Congress should it choose to address gaps or ambiguities in the statute.

Interoperability

Question 7. Interoperability of consumer devices within a spectrum band helps promote competition in wireless services. Since the early 1980s, the Commission has adopted rules or sent strong messages that it expects wireless service licensees to offer consumers equipment that can operate over the entire range of an allocated spectrum band. But interoperability does not yet exist in perhaps the most valuable spectrum bands the FCC has ever allocated—the lower 700 MHz band. In March, the FCC initiated a proceeding to promote interoperability in this band. I noticed that the NPRM would prefer that the industry propose a voluntary solution, as would I, but you also indicated an interest in moving to rules if that voluntary approach is unsuccessful.

Do you believe interoperability of devices within this band matters, what is the FCC staff doing to monitor the efforts of the industry at arriving at a voluntary solution for the lower 700 MHz band, and how much more time do you believe the industry should have before you would push to conclude this proceeding and adopt rules if it appears that an industry solution is not possible?

Answer. Rural providers are facing hurdles utilizing 700 MHz spectrum holding where 4G is being deployed. We are seeking comment on interference risks and possible solutions. The comment cycle in this proceeding closed on July 16, and staff is currently evaluating the record. At this time it would be premature to predict what action the Commission may take and when, but staff is working expeditiously to address this critical issue.

Public Broadcasting

Question 8. As a long-time supporter of public broadcasting, I believe that it plays a special and necessary role in our media landscape. I was pleased to see that on November 4, 2011 the FCC Consumer Advisory Committee adopted a recommendation that the FCC work with the Administration and Congress to support continued

Federal funding of the Corporation for Public Broadcasting and local public broadcast stations, including those providing service to rural, tribal, native, and disability communities.

Do you support this recommendation from the FCC Consumer Advisory Committee and can you share your views on the unique and necessary role that public broadcasting plays in our media landscape?

Answer. I strongly support continued Federal funding for the Corporation for Public Broadcasting and local public broadcast stations. They have long served the American public by providing high quality and innovative educational, cultural, children's and news programming to their local communities. The FCC stands ready to work with the Administration and Congress to ensure the public broadcasters continue to have the opportunity to flourish.

The U.N. and International Negotiations on Internet Governance

Question 9. As former Congressman Boucher recently explained, "The best way to understand the current system of global Internet governance is as a hub-and-spoke relationship. At the hub, a loose confederation of standards-setting bodies ensures the Internet's continued stability and functionality. Little, if any, regulation occurs at the hub. This arrangement leaves tremendous leeway for the sovereign governments—the "spokes"—to regulate the Internet within their borders."

And that system has worked relatively well, with some unfortunate outliers trying to control their population's access to information. Yet, there is pressure abroad for a new U.N. agency to assert international governmental control over the Internet. That pressure is coming from countries who wish to impose new tolls on service and countries that fear the power of open discourse on the Internet.

In a recent blog post, NTIA Administrator Strickling wrote about these proposals from China and others, "This is contrary to President Obama's vision of an Internet that is interoperable the world over, and the United States will vigorously oppose such barriers." And I know that this is a priority for Ambassador Philip Verveer and the State Department as well. Do all of you share the Administration's point of view?

Answer. Yes. I have been very concerned by indications over the past year that some countries would attempt to use the ITU World Conference on International Telecommunications (WCIT) to give the ITU authority over Internet governance, undermining the long-standing multi-stakeholder governance model. While the existing International Telecommunications Regulations (ITRs) have been accepted as a framework for negotiations without any pending proposals related to traditional Internet governance issues like Internet naming and numbering, critical Internet public policy issues will be discussed at the WCIT.

Of particular concern are proposals that would change Internet protocol interconnection and charging mechanisms, as well as limit the ability of companies to manage their traffic by requiring them to provide calling party number identification information so that countries can track where traffic originates. In addition, some countries have proposed adding cybersecurity provisions to the ITRs.

As the U.S. Government agency with primary responsibility for implementing the 1988 ITRs, the FCC plays a key role in domestic and international preparations for the WCIT. The FCC is working in the U.S. delegation on WCIT to vigorously oppose any expansion of the ITRs to issues related to Internet governance or proposals to abandon the multi-stakeholder model. The FCC is actively participating in U.S. delegations on WCIT, where we continue to reinforce the bipartisan U.S. Government position to maintain a free and open Internet that is not encumbered by detailed ITU regulations that would jeopardize innovation and the free flow of information. Moreover, we are working closely with the State Department and others to coordinate with like-minded countries to form a strong coalition that can work together to develop a high level, technology neutral treaty and to resist any efforts for ITU regulation where none is needed.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO
HON. JULIUS GENACHOWSKI

Question 1. According to the National Hurricane Center of NOAA, the lack of awareness and preparation compound the impact of all major hurricanes and other disasters. As we approach the start of Atlantic hurricane season on June 1st, can you detail exactly what the Commission is doing to ensure enhanced warnings for citizens living in the path of deadly hurricanes and other natural disasters? How are traditional media and social media outlets assisting with these efforts?

Answer. Since its inception, the Commission has been charged by Congress to promote safety of life and property. We have fulfilled that obligation by pursuing a variety of public safety emergency communications policies, including 911 and E911; emergency alerting (Emergency Alert System, Commercial Mobile Alert System); operability and interoperability of public safety communications; communications infrastructure protection and disaster response (Disaster Information Reporting System, Network Outage Reporting System, Special Temporary Authority); and network security and reliability. During a major public emergency, we work with our Federal partners and the communications sector to detect communications outages and rapidly restore critical communications systems and services.

Integrating social media such as Twitter and Facebook into traditional public safety communications media can promote the flow of information before, during and after disasters. The FCC uses new media outlets, including our website, Twitter and Facebook, to provide important information to consumers when disasters occur. The Commission has recommended the use of social media for non-emergency communications during disasters instead of making non-essential voice calls, which can create congestion on voice networks. Social media also provides another outlet for people to let family and friends know they are safe.

Question 2. The cost to the family members of inmates of staying in touch with the inmates by telephone is often prohibitive. Studies have shown that recidivism is reduced when inmates are able to remain in touch with family members during incarceration. In addition, studies have shown real benefits to the children of inmates if the children are able to remain in touch with their incarcerated parents. The Commission has before it a proceeding, Docket No. 09-144, which has the potential to provide competitive benefits, while maintaining security, through the mere enforcement of existing Commission policies. However, the docket in this proceeding has been open for some time. Is there any additional information the Commission needs to take action in this proceeding, and when can any such action be expected?

Answer. The Commission's responsibility to ensure that inmate calling services are available at reasonable rates is an important one. The multiple, competing petitions before the Commission regarding this matter raise complex factual questions and issues. Commission staff is currently reviewing the record that has been compiled on these issues, including recent filings by prison payphone operators, civil liberties groups, and others, and I expect they will soon develop a recommendation regarding how best to proceed.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO
HON. JULIUS GENACHOWSKI

Proposed Media Ownership Rule

Question 1. Chairman Genachowski, what are the key differences between your proposed media cross ownership rule and the media cross ownership rule put forward by then-Chairman Martin and voted on by the full Commission in December 2007?

Answer. Court cases obviously impact how we proceed in this area, and the Commission must make sure its rules are sustainable to the Third Circuit. The 2006 proceeding was a starting point for our current review, and I believe the recommendations in the NPRM continue to protect the core goals of localism, diversity of ownership and programming, but also take the realities of the current marketplace into consideration.

Question 1a. Do your proposed media ownership rules address all of the issues identified by the Third Circuit Court of Appeals in its decision in Prometheus versus the FCC, including those regarding ownership of media outlets by women and minorities?

Answer. Yes.

Question 1b. Do you believe that shared services agreements are being used by some as a means to get around the spirit if not the letter of the Commission's media ownership rules? If so, how will you address this problem?

Answer. The Commission sought comment on current attribution issues, included shared services agreements, in the pending Quadrennial Review. Staff is currently reviewing the record in that proceeding.

Verizon/SpectrumCo. Agreement

Question 2. Chairman Genachowski, I opposed the Comcast-NBCU merger and I was glad that both the Commission and Department of Justice effectively rejected AT&T's proposed acquisition of T-Mobile. In general, I am very concerned about the

concentration of economic power into the hands of a few. I know that the Commission and the DOJ are reviewing the proposed Verizon—SpectrumCo agreement. I realize that you can't discuss the substance of the ongoing review.

One of things I found helpful in thinking through the ramifications of the two deals I cited above were the various filings made by interested parties at the Commission and the reply comments.

Given the potential far-reaching impact of a Joint Operating Agreement (JOA) between Verizon and SpectrumCo, it is important that many of the key stakeholders and interested parties who may be impacted by the proposal be able to offer informed comments to the Commission in order to help it make a more informed decision. I know that I have a number of questions about the level of integration between Verizon and SpectrumCo under its proposed JOA, and ultimately whether the proposed JOA is anti-competitive.

My understanding is that what documents there are, are heavily redacted because they have been declared confidential. It makes it difficult for these stakeholders and interested parties to express their concerns, or have their concerns allayed because they can't get access to the details.

What is the current process for interested parties to gain access to the documents filed by Verizon and Spectrum Co. regarding its Joint Operating Agreement or related agreements?

Answer. Over the years, the Commission has developed what is now a fairly standardized process for balancing the need of both applicants and other stakeholders to protect their confidential business information with the need for commenters to have access to sufficient information to participate effectively in Commission proceedings. That process involves two general levels of protective orders—one for “confidential” information and one for “highly confidential” information (limited to specified categories approved in advance by the Commission staff)—which allow representatives of parties to a proceeding to have access to the information under specified conditions for the purpose of the proceeding only. Both levels of orders were issued in the Verizon/SpectrumCo proceeding. The two orders were issued on January 17, 2012, and are available at the following link: <http://transition.fcc.gov/transaction/verizonwireless-spectrumcocox.html>.

Question 2a. Overall, do you believe that the transparency surrounding access to the details of the proposed Verizon—SpectrumCo deal to date for interested parties to comment has been adequate? Are there things that can be done to improve it?

Answer. I am proud of the process Commission staff ran to review the complex transactions at issue in this proceeding. The process enabled commenters to access sufficient information to participate effectively. As stated above, this is a standardized process for balancing the need of both applicants and other stakeholders to protect their confidential business information against the need for commenters to have access to sufficient information to participate effectively.

Question 2b. You decided to bifurcate the Commission's review. The wireless division is evaluating the spectrum component. The wireless and enforcement divisions are evaluating the Joint Operating Agreement. Are these evaluations going to remain on separate tracks or will the Commission ultimately consider the deal as one?

Answer. The Order the Commission adopted on August [21], 2012 after completing its review of the transaction addressed both the spectrum transfers and the commercial agreements.

Use of Broadcast White Spaces for Unlicensed Broadband (Super Wi-Fi)

Question 3. Chairman Genachowski, what is the current status of the FCC's broadcast white space proceedings and pilot projects?

Answer. Last year the United States became the first country to free up white spaces in the TV band for unlicensed use. This policy innovation holds the promise of new value-creating breakthroughs on the order of magnitude of Wi-Fi. The Commission is now in the implementation stage and we have approved database managers, devices, and deployments. We are finalizing the process for registering wireless microphones for protection in the database. Also, the Commission is considering whether we can use similar methods to provide unlicensed access to other spectrum bands.

Question 3a. Given the challenges with freeing up new spectrum for licensed use, do you see unlicensed spectrum (across several bands) as playing an increasingly important role in overall spectrum policy?

Answer. Freeing up more spectrum for unlicensed use is a key component of the Commission's spectrum policy, which we continue to pursue as part of our holistic approach to improving spectrum management and efficiency.

Question 3b. Are you concerned that the “The Middle Class Tax Relief and Job Creation Act of 2012” may effectively block the creation of a super Wi-Fi broadband network operating in broadcast white spaces for mobile broadband as envisioned by the Commission?

Question 3c. How does the Commission plan to manage these factors to ensure that super Wi-Fi over the broadcast white spaces reaches its potential?

Answer. The availability of white spaces in the broadcast television spectrum nationwide continues to be a high priority for me.

While the Commission is still working on our Notice of Proposed Rulemaking to implement the Middle Class Tax Relief and Job Creation Act of 2012, staff is exploring ways to enable the use of additional spectrum for white spaces. Consistent with the Act, the plan is to seek comment on the potential use of white space devices in the new guard bands called for by the Act, as well as to preserve existing white space uses on unused television channels and in other interstitial spectrum.

Nationwide contiguous bands of spectrum are desirable to help ensure that innovation in this market can continue to blossom and consumers benefit from this important technology. One of the hallmarks of white space technology is its flexibility, however, and the Commission’s rules permitting such operations were specifically designed to allow opportunistic uses in spectrum that may vary from location to location and time to time. I continue to believe enhanced use of underutilized spectrum should be encouraged by such innovative technologies.

December’s International Telecommunications Union (ITU) Conference in Dubai

Question 4. Chairman Genachowski, as you know, this December in Dubai there is a conference hosted by the United Nation’s International Telecommunications Union (ITU) that will look at revising International Telecommunications Regulations. The last revision to these regulations occurred in 1988. Much has changed with respect to information and communications technologies since then. I know the Commission is supporting the State Department’s efforts.

- What are your expectations for the conference?
- What do you think are some of key issues on the table for consideration?
- Much discussion has been about that the ITU will use the forum to try and take greater control of the Internet. There are some new Internet fees being discussed. Should U.S. policymakers be concerned?

Answer. I have been very concerned by indications over the past year that some countries would attempt to use the ITU World Conference on International Telecommunications (WCIT) to give the ITU authority over Internet governance, undermining the long-standing multi-stakeholder governance model. While the existing International Telecommunications Regulations (ITRs) have been accepted as a framework for negotiations without any pending proposals related to traditional Internet governance issues like Internet naming and numbering, critical Internet public policy issues will be discussed at the WCIT.

Of particular concern are proposals that would change Internet protocol interconnection and charging mechanisms, as well as limit the ability of companies to manage their traffic by requiring them to provide calling party number identification information so that countries can track where traffic originates. In addition, some countries have proposed adding cybersecurity provisions to the ITRs.

As the U.S. Government agency with primary responsibility for implementing the 1988 ITRs, the FCC plays a key role in domestic and international preparations for the WCIT. The FCC is working in the U.S. delegation on WCIT to vigorously oppose any expansion of the ITRs to issues related to Internet governance or proposals to abandon the multi-stakeholder model. The FCC is actively participating in U.S. delegations on WCIT, where we continue to reinforce the bipartisan U.S. Government position to maintain a free and open Internet that is not encumbered by detailed ITU regulations that would jeopardize innovation and the free flow of information. Moreover, we are working closely with the State Department and others to coordinate with like-minded countries to form a strong coalition that can work together to develop a high level, technology neutral treaty and to resist any efforts for ITU regulation where none is needed.

“Wi Spy”

Question 5. Chairman Genachowski, I would like to ask you a few questions about what is referred to as Wi-Spy and the Commission’s Notice of Apparent Liability. As you know, when Google collected data from Wi-Fi networks for its Street View project it also collected so-called payload data, which is the content of the Internet communications.

Paragraph 51 from the un-redacted version of the Notice reads:

“For more than two years, Google’s Street View cars collected names, addresses, telephone numbers, URLs, passwords, e-mail, text messages, medical records, video and audio files, and other information from Internet users in the United States.”

“The record shows that Engineer Doe intended to collect, store, and review payload data for possible use in other Google projects. On at least one occasion, Engineer Doe reviewed payload data to identify frequently visited websites. The Bureau was unable to determine whether Engineer Doe did anything else with the data because he declined to testify.”

“The record also shows that Google’s supervision of the Wi-Fi data collection project was minimal. In October 2006, Engineer Doe shared the software code and a “design document” explaining his plans with other members of the Street View project.”

Let me stop there.

My understanding is that the FCC’s \$25,000 fine was the result of the company’s deliberate efforts to impede and delay the investigation by failing to respond to requests for information material to the investigation. Additionally, I believe the company also failed to provide certifications and verifications that the company conducted a comprehensive search of all materials within its possession.

- Did the FCC only have the legal authority to look at whether Google’s actions violated Section 705(a) of the Communications Act, nothing else?
- Do you believe Section 705(a) of the Communications Act doesn’t apply to unencrypted communications? What is the basis of that interpretation?

Answer. Congress has directed us to protect the privacy of consumers when they use communications networks and services. The FCC has extensive experience and a long record of protecting this information.

The Notice of Apparent Liability cites the relevant sections of the Communications Act where the FCC has authority to take action on Google’s violations. In addition, as stated on the Notice of Apparent Liability, there is no Commission precedent addressing the application of Section of 705(a) in connection with unencrypted Wi-Fi communications.

The FCC will continue to implement its statutory mandates, including section 705, and stands ready to work with Congress should it choose to address gaps or ambiguities in the statute.

Question 5a. The Street View team with personal knowledge of the Engineer Doe’s project did not submit sworn statements. Did the Enforcement Bureau request the Google staff with personal knowledge provide sworn statements? Given Google’s action to impede and delay the investigation would it not have made sense to obtain sworn statements from the Street View team? With respect to this and other investigations, can the Enforcement Bureau require sworn statements from all those with personal information regarding an allegation?

Answer. As stated in Paragraphs #3 and #45 of the Notice of Apparent Liability, the FCC interviewed several individuals who worked on the Street View project, and, after several unmet demands, did receive compliant declarations from Google on the accuracy and completeness of the its submissions. However, Google provided incomplete responses to the FCC Letters of Inquiry, which constituted willful and repeated violations of Commission orders.

Question 5b. It was brought to my attention that in November 26, 2008, Google filed a patent pertaining to the collection and use of payload data to derive more specific location information for mobile handsets entitled “Wireless Network-Based Location Approximation” (Application Number: 12/315,079). Were any of the five individuals listed as inventors on the patent application part of the Street View team interviewed by the Enforcement Bureau? Was the Enforcement Bureau aware of the patent application at the time of its investigation? Are the details of the patent claims relevant to subject matter of the Enforcement Bureau investigation (whether there was a violation of Section 705(a) of the Communications Act)? For example, can any of the claims in the patent application also be applied to encrypted communications?

Question 5c. Chairman Genachowski, the Notice of Apparent Liability states: “There is not clear precedent for applying Section 705(a) of the Communications Act to the Wi-Fi communications at issue here.” Why so? What kind of precedent does the Commission require?

Question 5d. Increasingly, 3G wireless and 4G broadband service providers offload their networks onto encrypted and unencrypted Wi-Fi systems as part of their architecture. Does the Commission need to re-examine Section 705(a) in light of this?

Answer. As stated above, there is no Commission precedent addressing the application of Section of 705(a) in connection with unencrypted Wi-Fi communications. The FCC stands ready to work with Congress should it choose to address gaps or ambiguities in the Section 705.

Experimental Licensing

Question 6. Chairman Genachowski, research institutes and companies involved in research and development often depend on ready access to spectrum to develop and conduct experiments on new products. The Commission has long maintained an experimental licensing program specifically for this purpose. In the past, with only few exceptions, the Commission routinely authorized experimental spectrum uses without requiring experimental license applicants to secure the consent of incumbent spectrum users in the same area as long as the experimental operations were unlikely to cause harmful interference.

More recently, the Commission appears to be requiring nearly all experimental licensees proposing to operate in numerous spectrum bands to coordinate and secure the consent of other spectrum users regardless of whether a significant risk is posed of harmful interference. These coordination and consent requirements can be very burdensome on researchers because incumbent spectrum users often have little incentive to cooperate and provide consent. As a result, critically important experimental operations are frequently delayed and sometimes cancelled due to the inability to secure consents on a timely basis, if at all.

- Can you confirm that there has been a change in Commission policy regarding the coordination and consent requirements for experimental licenses? If so, why the change?
- How does the Commission ensure that incumbent spectrum users respond in a timely manner to those entities seeking experimental licenses for temporarily sharing spectrum?

Answer. The FCC has long included coordination or consent requirements in experimental authorizations where appropriate to ensure that incumbent licensed operations are not negatively affected by experimental operations. In general, this process has worked well to enable experimentation and research without disrupting the various radio-based services relied on by businesses and the public. The Commission is currently seeking public input on and taking a close look at our experimental licensing rules and procedures to ensure that the process works as efficiently and effectively as possible to promote the experimentation and research critical to the development of new technologies while protecting existing radio operations. Comments from the public have been filed and staff is carefully reviewing them and preparing recommendations for next steps.

Low Power FM

Question 7. Chairman Genachowski, I have been a long-time advocate of making more low-power FM (LPMF) stations available to community broadcasters. I appreciate the work performed by the Audio Division and the Office of Engineering Technology over the years in advancing LPMF service for local community broadcasting.

In particular, in 2006, after I consulted with the Congressional Research Service, I suggested to the Audio Division that KYRS-LP in Spokane, which faced going off the air due to the encroachment of a full service FM station, could relocate to a second adjacent channel to a full service FM station if the interference model submitted proved out. The FCC agreed and KYRS-LP was saved. The decision was challenged at the DC Circuit Court of Appeal and the FCC's actions were upheld.

President Obama signed the Local Community Radio Act into law on January 4, 2011. It was a difficult negotiation. Representative Doyle and I, along with our public interest allies, had to make several concessions to the National Association of Broadcasters in order to undo the prohibition on locating a low-power FM stations on the third adjacent channel to a full service FM station.

Effectively the law overturned the court decision with respect to the FCC licensing low-power FM stations for operation on the second adjacent channel. The intent of the language was that the FCC should only grant waivers in a very limited set of (unspecified) circumstances. That is why the bar on the waiver process is set so high. With that said though, within those very limited set of circumstances, I believe the FCC should have the flexibility to try and make waiver work. It should look at things such as directional antennas or only take interference into account in populated areas, as is it does with translator stations.

There remains a disparity on some technical matters in how low-power FM stations are treated with respect to translator stations. One issue is use of the contour methodology to determine area of interference, another issue is power level. There is no technical reason why low-power FM stations cannot operate safely at the same 250-Watt power level as translator stations do. In fact, the initial proposed notice of proposed rulemaking on low-power FM service released in the late 1990s envisioned three classes of LPFM stations operating at 1000-Watts, 100-Watts, and at 10-Watts. As you know, the Commission did not go forward with its proposed 1000-Watt service.

I want the low-power FM window to be opened as soon as possible. I believe that if the LPFM power level is raised to 250 Watts, it will lead to a lawsuit leading to further delays in opening the new LPFM window. For that reason I can't support it. A likely argument put forward will be that the FCC performed insufficient testing on the effects of interference from the 250 Watt LPFM service to full service FM stations—even though 250 Watt translator service operates today. I don't see the same challenges with LPFM power levels between 10 and 100 Watts.

- Mr. Chairman, what is the status of the low power FM rulemakings?
- What are the remaining steps for a new low-power FM window to open?
- When do you expect this new low-power FM window to open?

Answer. I agree that LPFM stations are an essential outlet for local news and information. Commission staff is working diligently to implement the LCRA as quickly as possible. We have adopted two orders to implement various sections of the LCRA and are working through the remaining issues. We have specifically sought public input on a proposal submitted by the Amherst Alliance and the Catholic Radio Association to raise the maximum power level for LPFM stations to 250 watts and whether such an increase is consistent with the LCRA.

I anticipate that we will be able to announce the dates for the LPFM window when the Commission acts on these final LCRA implementation issues. The window will open after the Media Bureau substantially completes the expedited processing of the frozen FM translator station applications. I hope this process will start this fall.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. FRANK R. LAUTENBERG TO
HON. JULIUS GENACHOWSKI

Question 1. In response to a question on News Corporation, Chairman Genachowski responded that the FCC does not comment on the status of investigations and Commissioner McDowell concurred. Yet following the hearing, the press reported that Commissioner McDowell responded to reporters' questions by commenting on the status of an investigation—saying he was unaware of any investigation into News Corporation. How is it possible that neither of you could comment on the status of the investigation during the Congressional hearing, yet Commissioner McDowell could respond directly and candidly to a reporter immediately after the hearing?

Answer. I defer to Commissioner McDowell to address his comments.

Question 2. During the hearing I asked you what it takes for the FCC to begin an investigation into the misconduct of News Corporation and whether that misconduct calls into question News Corporation's fitness to hold 27 broadcast licenses in the United States. I was not asking you to prejudge the outcome of such an investigation, but rather whether the FCC would initiate one. What does it take for the FCC to begin an investigation into whether News Corporation is fit to hold its broadcast licenses in the United States?

Answer. The Commission considers allegations of broadcast licensee misconduct made in formal complaints and filings made in response to applications, and it may investigate possible licensee misconduct on its own motion. Inquiries into a licensee's qualifications to hold a license focus on the licensee's proclivity to deal truthfully with the Commission and to comply with our rules and policies. The Commission generally considers non-FCC misconduct only after there is an adjudicated finding of wrongdoing, although the Commission retains discretion to consider such misconduct prior to adjudication if it is so egregious as to shock the conscience. Adjudicated non-FCC misconduct is relevant to a licensee's qualifications if it involves fraud before another government agency, convictions for felonies and certain other crimes, or violations of competition and antitrust laws. The FCC has applied these policies faithfully and will continue to do so.

Question 3. The Congressionally mandated deadline for implementing positive train control (PTC) is fast approaching. Amtrak and other commuter rail agencies across the country have been prioritizing PTC to meet the deadline; however, PTC cannot successfully operate without sufficient dedicated spectrum.

- Are there channels being held in the FCC's spectrum inventory that have not yet been licensed to any person or entity and that could be made available to the rail industry for PTC use? If so, what are the FCC's plans for making these channels available for PTC use?
- The FCC issued a Public Notice in May 2011 seeking comment from freight and passenger railroads, equipment manufacturers, railroad associations, and other interested parties on spectrum issues related to the implementation of positive train control (PTC). A substantial number of rail carriers responded seeking FCC assistance to provide additional spectrum expressly for PTC use. What actions, if any, has the FCC taken to accommodate PTC implementation in response to the request for assistance?

Answer. The Commission recognizes the importance of rail safety and the importance of spectrum as a necessary component of implementing PTC systems as required by the Rail Safety Improvement Act of 2008 (RSIA). The RSIA did not direct the Commission to set aside spectrum for PTC. On May 5, 2011, to implement the PTC provisions of the RSIA, the Commission issued a public notice seeking comment on the spectrum needs of rail carriers. Commission staff has worked with numerous commuter rail carriers to educate them about ways to acquire spectrum pursuant to the Commission's secondary market policies and to otherwise facilitate such transactions. In recent months, secondary market transactions have been consummated for some of the most challenging markets, including Los Angeles and New York City. Commission staff will continue to work with commuter rail carriers to assist them in meeting their obligations under the RSIA.

Question 4. It is my understanding that the FCC is looking into allegations that News Corporation deliberately misled the FCC regarding its application to renew the license of WWOR in New Jersey. When can we expect a finding in this inquiry?

Answer. Commission staff is reviewing the record developed as part of the renewal process for WWOR-TV, including the misrepresentation issues alleged against News Corporation, and will consider the allegations of misrepresentation in the context of that review. I cannot predict when the staff review will be completed.

Question 5. The NTIA recently issued a report that raised the possibility of relocating government users to 2025–2110 MHz, which is currently used for Electronic News Gathering (ENG) operations. If this spectrum band is used for government users, what will the FCC do to ensure ENG operations are not disrupted?

Answer. NTIA's report estimated that relocating Federal users into the 2025–2110 MHz band would cost \$18 billion and take at least 10 years. As a potentially lower-cost, faster alternative to bring spectrum to market, NTIA is investigating the possibility of making spectrum in the 1755–1850 MHz band available through sharing between commercial and Federal entities, and the FCC is working with NTIA on that effort. Sharing could obviate the need to relocate Federal users into the 2025–2110 MHz band.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK PRYOR TO
HON. JULIUS GENACHOWSKI

CVAA

Question 1. The 21st Century Communications and Video Accessibility Act (CVAA) was enacted to update the media and communications accessibility requirements and expand access to current and emerging technologies.

I have heard concerns about the population of the statutorily required advisory committees and the resulting recommendations. Consumer and advocacy groups that serve on these committees face technical and legal capacity constraints that many businesses do not. Will you be cognizant of these inherent limitations and keep them in mind as you consider the recommendations put forth by the advisory committees?

Answer. Yes. I believe the VPAAC and its subcommittees have done great work together and have prepared strong recommendations for the Commission.

Question 2. It is my understanding that the Commission will soon consider the Advanced Communications Services provisions of the CVAA. How does the Commission plan to ensure that video conferencing services used by consumers who are deaf or hard of hearing are interoperable with each other?

Answer. Our rules require that Video Relay Services (VRS) and equipment be fully interoperable, ensuring that eligible users—deaf, hard of hearing, deaf-blind, or speech-disabled individuals who communicate in sign language—who obtain VRS video conferencing services and equipment are able to communicate with one another. The Commission has sought comment on how interoperability should work in the broader ACS context, including for users who are deaf or hard of hearing.

Phone Theft

Question 3. In March, I sent a letter to Chairman Genachowski expressing my concern at what seems to be an epidemic of cell phone thefts. It is my understanding that technology within the phone could enable a manufacturer or wireless provider to identify a stolen phone and prevent reactivation of service. This has significant consumer privacy implications. I applaud the Commission's recent initiative to mitigate the theft of cell phones but I remain concerned. Would you walk me through the steps that the Commission has taken with regard to cell phone theft, particularly the establishment of the database and how you have addressed the privacy concerns that have been raised?

Answer. On April 10, 2012, together with Senator Schumer, major city police chiefs, and the wireless industry, I announced new initiatives by wireless carriers to deter theft and secure customer data. The implementation of the initiatives can prevent stolen devices from being used by thieves and safeguard the consumer's private information contained in the smartphone.

- *Implementation of a database to prevent use of stolen smartphones.* Customers can call their participating wireless provider and report their wireless devices stolen; their provider will block that device from being used again. This system will be rolling out globally using common databases across carriers over the next 18 months.
- *Encourage users to lock their phones with passwords.* Smartphone makers will notify and educate users in the most highly visible ways—through messages on the smartphone itself and through “Quick Start” user guides—about how to use passwords to deter theft and protect their data.
- *Educate users on lock/locate/wipe applications.* Wireless providers will directly inform their customers about how to find and use applications that enable customers to lock/locate/and wipe smartphones remotely.
- *Public education campaign on how to protect your smartphone and consumers.* The wireless industry will launch a campaign, with media buys, to educate consumers on how to protect their smartphones and themselves from crime.
- *Progress benchmarks and ongoing dialog.* The wireless industry will publish quarterly updates and submit them to the FCC on progress on these initiatives.

We received the first of the required quarterly compliance updates on June 29, 2012 and all the parties involved in this important initiative have met their obligations to this point. In addition, it appears they will meet their targets for the rest of the year. I am pleased we were able to address this issue in a constructive way with the wireless providers and public safety community so that we can deter theft and protect consumers' private data.

Universal Service Fund Reform

Question 4. I am concerned about the impact of Universal Service Fund reform on the continuation of public and private investment in broadband deployment. Would you provide more information about the rationale for the retroactive component of the regression caps?

Answer. As with all the USF-ICC reforms, the benchmarks only affect support going forward. The actions we have taken were prudent steps to ensure that rate of return companies have the right incentives to invest efficiently. In recognition of business realities and the need for carriers to have time to adjust, the Commission is phasing in changes gradually over 18 months. Additionally, the methodology adopted now takes account of recent investment. Waivers are available for carriers with demonstrated need. The Commission has an open door policy—Commission staff takes meetings or call requests from companies to address any questions, and has made all aspects of the benchmark analysis available for public comment. Interested parties can find a significant amount of data and analysis beyond what is included in the Benchmarks Order at <http://transition.fcc.gov/wcb/iatd/neca.html>.

Question 5. What opportunities are there for carriers to correct data in the regression analysis other than submitting corrections to study area boundaries?

Answer. The Commission utilized the best available nationwide data to determine the benchmarks, but we also provided a streamlined, expedited process to correct

any inaccuracies. So far, the Wireline Competition Bureau has received two petitions to correct data, and both of the petitioners received responses within two weeks of the initial filing. A third petition remains under consideration. The FCC also launched a process to collect a full set of updated data from companies before the benchmarks take full effect. As noted above, Commission staff is ready and willing to meet with carriers regarding their specific issues. To the extent carriers wish to correct other potential non-boundary data errors they are free to do so using the same streamlined waiver process available for updated study area boundaries.

Question 6. Would you explain the Commission's formulation of setting benchmarks for High-Cost Loop Support?

Answer. The High Cost Loop support mechanism benchmarks compare carriers to other similarly-situated carriers based on a range of criteria. For instance, the benchmarks factor in variables that account for certain cost-related factors, such as population density, soil type, climate, as well as any recent investment by the company. Benchmark analysis identifies and limits reimbursement for those companies whose costs are higher than 90 out of 100 companies operating under similar conditions—based on the actual cost data, not a hypothetical perfectly operated company. In some cases, carriers spend almost three times as much per customer as carriers located in a nearly identical area.

Question 7. Some contend that regression analysis will change cost recovery revenues from year-to-year which creates uncertainty and may negatively impact investment in rural areas. How will the Commission balance the need to control costs while encouraging network investment in rural areas?

Answer. Before the Commission unanimously adopted the USF–ICC Transformation Order last year, rural carriers faced significant uncertainty regarding both USF and ICC revenues, which could fluctuate significantly year to year. The benchmarks analysis identifies and limits reimbursement for those companies whose costs are higher than 90 out of 100 companies operating under similar conditions—based on actual cost data, not a hypothetical perfectly operated company. Because the analysis is new to carriers does not mean that it is unpredictable. The original HCLS mechanism was initially unfamiliar, too, but over time companies learned how to operate within the confines of that system. In response to concerns about the timing of changes to the benchmarks, the Wireline Competition Bureau's order earlier this year determined that the initial benchmarks should remain in effect until 2014. In the interim, the Commission will consider whether benchmarks should subsequently be set for multiple years rather than reset every year.

700 MHz Spectrum

Question 8. It is my understanding that the Commission has initiated a Notice of Proposed Rulemaking regarding interoperability in the lower 700 MHz band. Does the Commission anticipate the completion of this proceeding before the end of the year?

Answer. The comment cycle in this proceeding closed on July 16, and staff is engaged in evaluating the record. At this time it would be premature to predict what action the Commission may take and when, but staff is working to address this critical issue.

Low Power Television

Question 9. For many years, Class A and Low Power Television Service (LPTV) stations have provided valued local, religious, Spanish language, and other programming. Communities have come to rely on this niche programming that may not otherwise be available. How will the Commission work to ensure the viability of Class A and LPTV during its implementation of the Middle Class Tax Relief and Job Creation Act? What is your position on mandatory channel sharing for LPTV?

Answer. I fully appreciate and recognize the news, information and programming that LPTV stations provide to their communities. I have instructed Commission staff to continue to engage with the LPTV community as we work thorough implementation of the Middle Class Tax Relief and Job Creation Act of 2012. As you know, LPTV stations always have been secondary services to full power TV stations, and Congress did not provide additional protections for LPTV stations in the Middle Class Tax Relief and Job Creation Act of 2012.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE McCASKILL TO
HON. JULIUS GENACHOWSKI

Question 1. Last year, I raised concerns with the FCC regarding the Universal Service Fund's (USF) Lifeline Program. In response to these concerns, the Commis-

sion has taken steps to crack down on waste, fraud and abuse within the program. The recent announcement that 20,500 letters will be sent in Missouri to eliminate duplication was welcome news. The implementation of a database to help detect and prevent duplicates is an important tool, but I remain concerned that further action needs to be taken to address fraud.

- Has the FCC conducted its own investigation into possible fraud occurring within the Lifeline program, and if so what were the findings of that investigation?
- Has the Commission examined the marketing agreements providers are using to advertise Lifeline products to consumers?

Answer. The Commission has taken steps to address waste associated with duplicative payments, beginning in 2010 with increased audits and a referral to the Joint Board. Beginning in June 2011, the Commission began investigating instances of duplicative Lifeline support. As part of the process to resolve duplicates, USAC has identified over 700,000 instances of duplicative support since last year, which is expected to provide over \$50 million in savings to the Fund. On August 13, 2012, USAC issued a Request for Proposal for a vendor to build the National Lifeline Accountability Database, which will improve detection and prevention of duplicative support going forward.

The Commission's overhaul of the Lifeline program requires that providers (1) disclose to Lifeline consumers the requirements for participating in the program and (2) collect annual certifications from consumers that they follow those requirements. Carriers may no longer tell consumers that proof of eligibility is not required for participation in Lifeline.

The Wireline Competition Bureau is reviewing carriers' marketing and advertising material in the course of its review of pending compliance plans.

Question 2. As required by the Commercial Advertisement Loudness Mitigation (CALM) Act, the FCC published an order last December outlining practices that networks and cable stations must implement by this December. I understand these rules have not yet been published in the *Federal Register*, and I have heard little about progress since December. Are we on track to see this legislation—strongly supported by consumers—fully implemented by the end of the year?

Answer. Yes. The CALM Act rules were published in the *Federal Register* on July 9, 2012. Media Bureau staff is reviewing issues raised in a Petition for Reconsideration filed by the National Cable & Telecommunications Association. The rules are on track to be effective on December 13, 2012.

Question 3. In December, the International Telecommunication Union (ITU) will convene the World Conference on International Telecommunications (WCIT-12) in Dubai to renegotiate the International Telecommunication Regulations. A key topic of discussion is expected to be whether and how to expand it to cover the Internet.

- To what extent is the FCC involved in policy and technical discussions in advance of the ITU meeting?
- What is the view of the Commission on proposals by other nations to move oversight of critical Internet resources, such as naming and numbering authority, to the ITU or other international body?

Answer. I have been very concerned by indications over the past year that some countries would attempt to use the ITU World Conference on International Telecommunications (WCIT) to give the ITU authority over Internet governance, undermining the long-standing multi-stakeholder governance model. While the existing International Telecommunications Regulations (ITRs) have been accepted as a framework for negotiations without any pending proposals related to traditional Internet governance issues like Internet naming and numbering, critical Internet public policy issues will be discussed at the WCIT.

Of particular concern are proposals that would change Internet protocol interconnection and charging mechanisms, as well as limit the ability of companies to manage their traffic by requiring them to provide calling party number identification information so that countries can track where traffic originates. In addition, some countries have proposed adding cybersecurity provisions to the ITRs.

As the U.S. Government agency with primary responsibility for implementing the 1988 ITRs, the FCC plays a key role in domestic and international preparations for the WCIT. The FCC is working in the U.S. delegation on WCIT to vigorously oppose any expansion of the ITRs to issues related to Internet governance or proposals to abandon the multi-stakeholder model. The FCC is actively participating in U.S. delegations on WCIT, where we continue to reinforce the bipartisan U.S. Government position to maintain a free and open Internet that is not encumbered by detailed ITU regulations that would jeopardize innovation and the free flow of information.

Moreover, we are working closely with the State Department and others to coordinate with like-minded countries to form a strong coalition that can work together to develop a high level, technology neutral treaty and to resist any efforts for ITU regulation where none is needed.

Question 4. American companies have had an historical advantage when it comes to the Internet because the innovation that has fueled the growth of the Internet started here. Companies were created in an environment where unconstrained Internet access provided them with a platform to succeed. In this way, America had a “strategic bandwidth advantage” over other countries. It was perhaps inevitable that this advantage would narrow, as broadband speeds have improved around the world. Given that context: Is it your view that this “strategic bandwidth advantage” has led and will continue to lead to job creation and greater innovation?

Answer. Robust broadband infrastructure is crucial to enabling innovation and job creation, and to maintaining America’s global competitiveness. Over the past few years, the U.S. has regained global leadership in key areas of the broadband economy, including mobile, where we lead in mobile apps and 4G deployment. Since 2009, we have gone from less than 20 percent to more than 80 percent of Americans living in areas with broadband infrastructure capable of delivering 100+ megabits per second, putting us near the top of the world in deployment of high-speed broadband networks. But, in this flat, competitive global economy, we need to keep driving toward faster broadband and universal access.

Question 5. There has been bipartisan consensus in this body to encourage deployment and adoption of broadband for the economic and social benefits it brings. How do data caps help or hinder in accomplishing that goal?

On the surface, usage-based billing makes sense for consumers but I am concerned about the chilling effect data caps could have on future growth of Internet video and other content. How do we ensure fair billing practices for consumers without creating a system that stifles innovation and growth of the Internet?

Answer. The nation faces not only a broadband deployment gap, but also an adoption gap. Nearly $\frac{1}{3}$ of Americans—about 100 million people—still haven’t adopted broadband in the home.

Getting these Americans online would deliver dramatic benefits to each of these individuals—in the form of access to job listings that are exclusively online, children who can research on the Internet to help with homework, and deals that can save consumers thousands a year.

Getting these 100 million Americans online would have tremendous benefits for our overall economy. Imagine if we could expand the online marketplace by 50 percent and how much that would do to drive sales for small businesses and make the U.S. a more attractive market for investment.

When it comes to speed and capacity, an environment of abundance, not scarcity, will open the door to new innovation—some we can envision and others that we can’t even imagine today.

New business models and new services can be a good thing for consumers by driving efficiency, providing more choices, and improving affordability by offering lower prices per bit. It can also help ensure that lower users aren’t subsidizing heavier users.

At the same time, to drive U.S. leadership in the broadband economy, new business models and new services by broadband providers should not come at the expense of competition, including from over-the-top providers, or at the expense of increases in broadband speed and monthly capacity.

I am sure you would acknowledge the FCC’s long-standing support of low power television and appreciate the success of low power TV since the FCC created the service in 1982. During this span of 30 years you are no doubt aware that low power TV has developed into an essential source of information and entertainment for many diverse communities across the country. I think two perfect examples of this dynamic would be the audiences who enjoy Spanish-language programming and those who enjoy religious programming. Likewise, LPTV has been the an entry point for small businesses into the broadcast market and today, many LPTV owners are small businessmen who work hard to continue to serve their local communities with news and resources aimed at the community.

Question 6. With this in mind, and also considering the likely end to a great deal of low power programming as a result of the repacking, how do you expect that this approaching void in unique programming will be filled with respect to the core missions of diversity and localism?

- I would ask each of the commissioners, will you support rules that allow LPTV to survive after the repack?

Answer. I fully appreciate and recognize the news, information and programming that LPTV stations provide to their communities. I have instructed Commission staff to continue to engage with the LPTV community as we work thorough implementation of the Middle Class Tax Relief and Job Creation Act of 2012. As you know, LPTV stations always have been secondary services to full power TV stations, and Congress did not provide additional protections for LPTV stations in the Middle Class Tax Relief and Job Creation Act of 2012.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
HON. JULIUS GENACHOWSKI

Question 1. As I brought up in the FCC nominations hearing in November, we have a population of television stations currently operating on the northern border of Canada, particularly in Lake of the Woods County. They applied for channel reallocation after the DTV transition but had to wait years to get final approval from the Canadian government and the FCC this January.

Looking ahead to the future, the need for international cooperation when it comes to spectrum is important to our translator operators on the northern border. Has the Commission begun coordination with our Canadian counterparts as it relates to incentive auction legislation passed in February?*** (*Senator Klobuchar asked this question in Committee and requested written follow up*)

Answer. Since the passage of the incentive auctions legislation in February, Commission staff has met with Industry Canada twice to discuss the specifics of the law. As the Canadians work to finalize their own digital television transition, we both agree that we should maintain open communications to maximize beneficial opportunities in our repacking. The Commission will continue to work closely with our Canadian counterparts to find satisfactory solutions to whatever repacking challenges may occur. Once the Commission releases its Notice of Proposed Rulemaking, the International Bureau, in conjunction with the State Department, will be in a better position to begin more detailed technical coordination discussions with Industry Canada.

Question 2. I am concerned about the impacts on the RUS loan program. Under the Federal Credit Reform Act, Federal agencies are prohibited from making large changes to their loan programs without congressional approval. Due to the apparent impacts of the USF order on RUS loan applicants, it looks like RUS may be facing a situation where they may have to make such changes. This creates even more uncertainty for rural companies. Can you please indicate your understanding of the financial implications under the Federal Credit Reform Act to the extent that RUS is required to restructure its debt portfolio as a result of the USF and intercarrier compensation reforms? Was this understanding factored into the consideration of the reform order?

Answer. We worked closely with RUS throughout this process to understand their portfolio of loans and the potential impact of reforms on those loans, and we continue to do so. The agencies share the same objectives: preserving voice and broadband service where it exists today while extending service to as many of the 19 million Americans without broadband as possible, at the lowest total cost to the American consumer. Existing RUS loans and future USF dollars both represent actual costs to taxpayers and ratepayers; we must work together to protect those scarce resources.

Question 3. I believe of one of the most impressive programs the FCC operates is the E-Rate program supporting communications technology in schools and libraries. Senator Rockefeller and Senator Snowe led the effort in creating a program that truly benefits schools and kids around the country. Minnesota has received a total of \$344 million since the E-Rate program started in 1998. This support has enabled schools and libraries across rural Minnesota to have telecommunications and broadband service giving students the ability to enhance their education. I understand that with the increase in demand from schools for broadband support, E-Rate program resources are stretched thin, including staff time to review and audit applications. Will you commit to keeping the resources for administering the E-Rate program targeted at the intended focus of connecting schools and libraries with communication technologies?

Answer. Yes, the Commission's focus is to use the resources of the E-Rate program to connect schools and libraries with communication technologies. The Commission has worked to modernize the E-Rate program to ensure that America's students have the connectivity required to get an education to compete in the 21st century economy.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TOM UDALL TO
HON. JULIUS GENACHOWSKI

USF Reform and Tribal Communities

Question 1. Chairman Genachowski, I support reforms to bring the universal service fund into the broadband era. Broadband is a wise infrastructure investment. Restoring American leadership in broadband will help create jobs and provide a platform for economic growth. One of the past failures of USF is on Tribal lands. As you know, Native American communities have the worst telephone connectivity rates in the country. Broadband availability rates are even worse, perhaps just 10 percent of households. These are precisely the areas that can benefit the most from Internet technologies that eliminate geographical distance—whether it is for e-Commerce, distance learning, or telemedicine. So I want to thank you and all the Commissioners for continued attention to the “digital divide” challenge on Tribal lands.

- Could you discuss how USF reforms will better serve Tribal communities that currently face a digital divide when it comes to broadband?
- Given the unique digital divide challenge on Tribal lands, how will USF reforms ensure that telecommunications companies in Tribal areas are able to bring broadband to unserved communities?

Answer. The Commission’s unanimous Order modernizes USF for broadband, and improves accountability and efficiency to ensure maximum impact of funds to extend service in unserved areas, including Tribal lands. For the first time, dedicated funding for mobile voice and broadband service is provided through a two-phase *Mobility Fund* (\$300 million in one-time support for Phase I; \$500 million annually for Phase II).

In addition to the general *Mobility Fund Phase I*, the Order establishes a separate and complementary *Tribal Mobility Fund Phase I*, providing \$50 million for one-time support for unserved areas with no 3G or 4G service on Tribal lands, as well as a *Tribal Mobility Fund Phase II*, providing as much as \$100 million (out of a total \$500 million of *Mobility Fund* support) in ongoing annual support. Carriers seeking to serve Tribal lands may participate in both phases of the general *Mobility Fund* and the *Tribal Mobility Fund*.

We are also seeking comment on a proposal to provide Tribal governments “priority units” to ensure that *Mobility Fund* support for Tribal areas best serves Tribal needs.

Waiver petitions from carriers serving Tribal lands will receive priority review. The Order requires the Wireline or Wireless Bureaus to complete review of waiver petitions in these instances within 45 days of the record closing. Waiver applicants serving Tribal lands and insular areas are specifically asked to share “any additional information about the operating conditions, economic conditions, or other reasons warranting relief based on the unique characteristics of those communities,” which FCC will consider when reviewing waiver requests.

In addition, the Order includes unique tribal engagement provisions requiring all carriers serving Tribal lands to meaningfully engage with Tribal governments.

With respect to the Lifeline program, earlier this year the Commission adopted comprehensive reform, which recognizes the unique circumstances faced by Tribal communities. We preserved additional funding for Lifeline subscribers, and maintained the Link-Up program on Tribal lands, which ensures that low-income consumers stay connected, even as we eliminated the program everywhere else in the country. The Lifeline Reform Order also created a broadband pilot program to increase adoption; at least one of these pilot projects will be directed at providing support on Tribal Lands.

USF Reform and Tribal Governments

Question 2. My understanding is that some Tribal governments have concerns that the FCC waiver process for Tribally-owned telecommunications providers could potentially require disclosure of unrelated Tribal government financial information. Will the Commission require that Tribal governments provide specific details about their operations in order for a telecommunications provider to receive a waiver?

Answer. The intent of waiver process is to take account of all revenues associated with USF-supported infrastructure, but not unrelated revenues. Accordingly, we will not take such revenues into account and require disclosure of unrelated information.

Connect America Fund—Mobility Fund Eligibility

Question 3. Chairman Genachowski, my understanding is that the vast majority of the Navajo Nation, which encompasses an area the size of West Virginia, will be ineligible for mobility fund support in upcoming auctions because the Commission

finds that this area already has 3G service. This would surprise me since many parts of the Navajo Nation still lack cell phone service.

- Could you look into this to see if one of the least served areas of the country could potentially be excluded from mobility fund support in these auctions?
- If there is uncertainty or controversy over whether service exists in these areas, should the Commission's default position be to keep these Tribal lands eligible for the Mobility fund auction?

Answer. For the first Mobility Fund auction, to be held in September 2012, eligible areas are based on the best available public data, which is supplemented by a detailed challenge process. There will be further opportunities for carriers or communities to raise issues with coverage maps prior to any future auctions. With respect to the Navajo Nation, a portion of the Navajo Nation is eligible for the first Mobility Fund Auction: 4,057 eligible census blocks, covering a population of 7,797, an area of 2,111 square miles, and 4,123 qualifying road miles.

USF Reform and Impact on Rural Utility Service Loans to Telephone Companies

Question 4. Chairman Genachowski, rural telephone cooperatives from my state are very concerned about the impact USF reforms will have on their ability to provide service in high cost areas. I am concerned by reports that many rural telephone companies may even have difficulty repaying loans from the Rural Utility Service. Can the FCC work more closely with RUS to ensure that changes in USF programs take place in a manner that does not have unintended impacts on outstanding RUS loans?

Answer. Throughout this process, we worked closely with our counterparts at RUS to understand their portfolio of loans and potential impact of reform, and we will continue to do so. The transition will require flexibility by both agencies to address issues and specific cases that will arise. The agencies share the same objectives: extending service to as many of the 19 million Americans without broadband as possible, ensuring that consumers do not lose existing voice and broadband service as reforms proceed, and minimizing the total costs borne by consumers and businesses that pay taxes and pay in to the Universal Service Fund.

Cell Phone Bill Shock

Question 5. Chairman Genachowski, I want to thank you for making cell phone "bill shock" a priority. I introduced legislation, the *Cell Phone Bill Shock Act*, that requires carriers to alert customers before they reached their monthly limits. This helps consumers avoid unexpected bills in the hundreds and even thousands of dollars. Yet I support the agreement that the FCC announced last October with CTIA, a wireless trade association. Cell phone carriers have agreed to warn customers before they reach monthly usage limits. That is a positive development, not just for consumers but also for innovation, especially as more wireless devices connect to the Internet. Will you assure me that you will keep an eye on this agreement and make sure that wireless companies follow through with their commitments?

Answer. Yes, and I thank you for your leadership in Congress on this issue.

The Commission has been at work on the problem of bill shock since 2009 as a part of our Consumer Empowerment Agenda. In 2010, we proposed rules to require that carriers provide alerts to customers when they approach and when they exceed their monthly plan limits, and when they are traveling abroad and are about to incur international roaming charges not covered by their monthly plans. While Commission staff was reviewing the comments on those rules, CTIA approached the FCC with a revised Code of Conduct requiring its carriers to provide the types of alerts the Commission had proposed, and to do so for free and automatically, without any action needed by the customer.

By the Code revisions, which were announced on October 17, 2011, CTIA's member carriers, which serve 97 percent of U.S. wireless customers, must provide at least two of the four types of alerts by October 17, 2012, and the remainder by April 17, 2013.

To assist consumers in knowing which carriers are providing these alerts, on April 19, 2012, the Commission launched a web portal that tracks each participating carrier's progress in meeting these commitments. We will update the portal as more carriers start providing the alerts. We are monitoring and working closely with carriers to ensure that commitments are kept.

Spectrum Auction

Question 6. I supported legislation to unleash more spectrum for commercial mobile broadband and public safety broadband uses. But I also know that broadcasting,

our first wireless technology, still plays an important role in communities throughout New Mexico. As the Commission works to implement voluntary incentive auctions, can you comment on the steps the Commission will take to ensure transparency during the auction process and the viability of local broadcasting after the auctions?

Answer. The amount of spectrum cleared through the incentive auction will depend on the voluntary participation of broadcasters. My colleagues and I are committed to, and will continue to run, a public, transparent process to implement the auction. We are also committed to fully educating broadcasters on the options that are available to them, as well as encouraging their participation in the process. On June 12, 2012, the Commission held a TV Broadcaster Relocation Fund Workshop to focus on the design of the Commission's program to reimburse some broadcasters for the relocation costs they will likely incur as a result of the channel reassignments in connection to repacking as authorized by the Act. While not all broadcasters appear likely to participate in the auction, I expect the auction to present a compelling economic opportunity for many broadcasters. The Commission will reach out to, and work with, all affected parties in a process that is transparent and fair. I expect there will be a healthy and diverse broadcasting industry once the incentive auction is complete.

Spectrum Reform and Future of Low Power Television

Question 7. Given that spectrum is a scarce and valuable resource, our airwaves should be used as efficiently as possible. However, I have heard from low power TV license holders that the Commission sent letters concerning their licenses. Low power TV stations often serve their local communities with niche programming not offered by more traditional TV outlets. As the Commission considers how to manage spectrum auctions and potential spectrum "repackaging," will low power TV stations still have the opportunity to serve their local communities?

Answer. I fully appreciate and recognize the news, information, and programming that LPTV stations provide to their audiences. I have instructed Commission staff to continue to work with the LPTV community as we work through implementation of the Middle Class Tax Relief and Job Creation Act of 2012. As you know, LPTV stations always have been secondary services to full power TV stations, and Congress did not provide additional protections for LPTV stations in the Middle Class Tax Relief and Job Creation Act of 2012.

Making More Spectrum Available for Commercial Use

Question 8. My understanding is that the Commission is looking into how to make spectrum from the 1.7 GHz band available for commercial mobile broadband use and potentially pair spectrum within that band with other currently available spectrum set to be auctioned. How can the Commission work with the Department of Commerce and others to help identify where more spectrum could be made available for commercial use without harming national security, public safety, and other critical government functions?

Spectrum Sharing

Question 9. Chairman Genachowski, you suggested in recent public remarks that "spectrum sharing" is "the most promising way forward" to making more spectrum available for mobile broadband. Could you share more about what role spectrum sharing between public and private entities can play as the Commission looks at how to meet growing commercial spectrum needs?

Answer (8 and 9). Through my Mobile Action Plan we are leaving no stone unturned to free up more spectrum, promote more efficient use of spectrum, and explore new ways to manage spectrum. The plan focuses on five main areas: unleashing new spectrum, removing barriers to broadband infrastructure build-out, driving greater efficiency in networks and devices, promoting competition, and empowering consumers.

My goal is to clear spectrum for auction, where appropriate, while also exploring new ideas on sharing spectrum. This should not be an either/or choice because we will likely have to utilize both models to unlock the full value of this scarce natural resource. Meaningful spectrum sharing among government and commercial users can make available valuable spectrum for broadband in the 1.7-GHz band. The Commission is working with the National Telecommunications and Information Administration (NTIA) to test LTE sharing in the 1755-1780 MHz band, which could allow us to pair it with existing (AWS-3) mobile broadband spectrum at 2155-2180 MHz to significantly enhance the value of AWS-3 prior to auctioning it as required by February 2015. Also, small cells can significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz

of spectrum for wireless broadband, and we plan to pursue a proposal later this year to make this spectrum available for mobile broadband.

E-Rate and Digital Literacy Efforts

Question 10. The e-Rate initiative helps some of the poorest schools in New Mexico enhance students' learning experiences with broadband and digital learning technologies that would otherwise be unaffordable. Unfortunately, e-Rate does not fully meet the needs of school districts across New Mexico and throughout the country. I am therefore concerned that e-Rate funding may be diverted to other digital literacy efforts. During the hearing, you assured Senator Rockefeller that e-Rate would be held harmless. Could you also assure me that e-Rate will not be harmed as the FCC considers innovative new ways to improve digital literacy?

Answer. Yes.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK WARNER TO
HON. JULIUS GENACHOWSKI

Question 1. Two years ago, the President announced his intention to free up 500 MHz of spectrum for wireless broadband use. This initiative is even more necessary today due to exploding data usage by consumers, which is leading to faster-than-expected capacity constraints across the country.

- Are you satisfied with the current pace of the identification and reallocation of spectrum to commercial broadband use? If not, why not?
- Do you have additional suggestions about how Congress or the Federal Government could accelerate the process?

Answer. When I arrived at the Commission in 2009, demand for spectrum was skyrocketing but the spectrum pipeline was empty, and the agency had no comprehensive spectrum strategy. Actions taken in the 1990s led to two important auctions in 2006 and 2008—the AWS band and the 700 MHz band, but just as the mobile revolution was accelerating, no efforts had been made ensure that there was sufficient spectrum in the pipeline, even though historically it has taken approximately a decade to bring spectrum to market.

Throughout my time at the Commission, increasing the availability of spectrum for broadband has been one of my highest priorities because of its critical importance to U.S. leadership in technological innovation, growing our economy, and maintaining our global competitiveness. Early on, I asked Commission staff to develop options for freeing up spectrum, faster, and in new innovative ways. I also oversaw the development of the first National Broadband Plan, which set audacious targets for freeing up spectrum: 300 MHz in 5 years, and 500 MHz in 10 years. That plan also introduced the idea of incentive auctions as a tool to help meet our Nation's spectrum needs. I am pleased that Congress granted the FCC that authority earlier this year, and I recently initiated a formal rulemaking process to set the rules for that auction.

The Commission has continued to work with all stakeholders to free up additional spectrum for wireless broadband use, and has made significant progress. My Mobile Action Plan contemplates a “no-stone-left-turned” approach that includes freeing up more spectrum, but also making more efficient use of spectrum and envisioning new ways to manage spectrum. A few examples of our successes follow:

- Moving forward on new auctions—up to 65 MHz in the next three years, in addition to the significant amount of spectrum that will be freed up by incentive auctions;
- Working to remove regulatory barriers to enable up to 40 megahertz of Mobile Satellite Services (MSS) spectrum to be used for land-based mobile broadband;
- Paving the way for innovative use of small cells in the 3.5 GHz band, which could free up 100 MHz of spectrum for wireless broadband;
- Working with the National Telecommunications and Information Administration (NTIA) and industry to test LTE sharing in the 1755–1780 MHz band, which could allow us to pair it with existing AWS-3 mobile broadband spectrum at 2155–2180 MHz to enhance its value and usefulness prior to auctioning AWS-3 as required within the next three years;
- Enabling white spaces in the television broadcast band to be used on an unlicensed basis;

- Working to unleash at least 25 megahertz of spectrum in the Wireless Communications Services (WCS) band by removing technical rules that had impeded broadband use;
- Revamping our wireless backhaul rules to lower costs and reflect advances in technology; and
- Changing technical rules to accelerate the rollout of LTE in the 800 MHz band.

If and when the need arises for Congress to potentially provide more tools and avenues for accelerating the process I look forward to working with you and your colleagues to help reach the ultimate goal.

Question 2. The USF reforms—which I supported—seek to deploy more mobile and fixed broadband services to rural and underserved America. At the same time, mobile data forecasts indicate that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. Rural Virginia wants to be part of the broadband economy, however, high quality broadband service just hasn't been available where consumers and rural economic development needs demand it. What would happen to the pace of rural broadband deployment if Universal Service Fund Reforms are blocked or slowed down at this time? Why is it important to move forward in terms of leveraging existing Federal funding to deploy more broadband to rural and underserved America?

Answer. When I became Chairman, the Universal Service Fund was backward-looking, not forward-looking. The Fund was not focused on extending broadband service and had become wasteful and inefficient, supporting multiple carriers in some areas, supporting carriers even in areas where an unsubsidized competitor also provides service, and often rewarding inefficient spending.

The Commission's unanimous landmark reforms to the program adopted late last year are designed to bring broadband to the approximately 19 million unserved consumers throughout America. The reforms put the Nation on the path to universal broadband and advanced mobile coverage, while maintaining support for existing rural broadband and voice service. By cutting waste, incentivizing efficiency, and setting an annual budget of \$4.5 billion for the program for the first time ever, the reforms control the size of the fund—and therefore the burden on consumers and businesses that pay for the program.

In order to extend broadband to unserved rural communities while ensuring fiscal responsibility, it is important to keep moving forward with implementation of the reforms. If we do not move forward, we will be left with pervasive inefficiencies of the old system, and will fail to connect all Americans to broadband and the enormously important economic, educational, health care, and other benefits that broadband brings.

Question 2a. I sent a letter to the FCC in 2011 arguing that although 4 Mbps download/1 Mbps upload may be adequate for now, this standard should not be considered an acceptable level of service in the future. How important is it to you to see that the acceptable level of broadband service advances over time?

Answer. It is critical that America's broadband infrastructure keep pace with changing demands and technology, as the Commission recently underscored in this year's Broadband Progress Report, which emphasized the vital importance of increasing the speed and capacity of broadband networks throughout the country. The Connect America Fund Order also recognized that broadband performance must improve over time. Fiscal responsibility requires that the Commission use limited resources carefully, and it is vital that we get basic broadband capabilities to all Americans as quickly as possible. That means funding at least 4 Mbps download and 1 Mbps upload speeds in the immediate term, while setting expectations that broadband speeds must improve over time.

Question 3. The Commission has a number of highly anticipated open Notices of Proposes Rulemaking. Now that the Commission has five highly capable commissioners, how soon do you expect to reach decisions on key issues? I would encourage you to reach decisions on important matters as soon as possible because the delay of long-standing rulemakings has caused some frustration.

Answer. The Commission has made extensive progress in clearing items and reforming outdated programs. We have eliminated 222 obsolete regulations and have modified many others to reduce burdens: Over the past six months we have made significant reductions in our backlog, including a more than 20 percent reduction in items pending more than six months in the Wireline Bureau, and an across the board 20 percent reduction in license applications and renewals pending more than six months. The Commission has a self-imposed 180-day shot clock for reviewing applications to assign or transfer control of licenses or authorizations to determine whether the transfer serves the public interest. Better than 95 percent of all license

transfer applications received since I became Chairman have been acted on within the 180-day period. We have also cut the average number of days required to review routine wireless transactions in 2012 by more than half.

I have also made modifications of the Commission's "must vote" rules on pending items. The must-vote rule is designed to ensure that the Commission releases items in a timely fashion once it has secured the votes of a majority of Commissioners (currently three votes). Previously there was virtually no time limit and when votes would occur, extensions were granted liberally and virtually indefinitely. I believe this improvement has served the Commission well and has led to faster approval of pending items. I will continue to work to find ways to make the Commission more efficient in reaching decisions.

Question 4. Looking back at FCC data stretching to 2005, the number of full-time equivalents in the Office of Engineering and Technology appears to have dropped from 116 to 81. Do you believe this reduction is the source of the backlog? Why has this office, which would seem to be at the heart of the Commission's work, have declined over time when other bureaus or offices have grown or at least stayed flat?

Answer. I have placed an emphasis on recruiting and maintaining engineers at the FCC in order to ensure that we have the expertise necessary to carry out our core technical mission. We continually monitor and balance the number of full time engineers that we require based on the work that is before the Commission.

It is important to note that the FCC's overall FTE numbers are currently at their lowest levels in more than 15 years, and the number of engineers as well as general staff in each bureau is similarly reflected in this overall decrease. The number of engineers as a percentage of the FCC overall workforce historically has not changed significantly.

Engineers are deployed throughout the Commission, not just in the Office of Engineering and Technology. While the number of staff in the Office of Engineering and Technology has been reduced, this is large measure is due to the relocation of staff and functions to the Public Safety and Homeland Security Bureau that was created a few years ago. OET has recently hired top-notch engineers in recent years and has been authorized to hire additional engineers to meet agency priorities such as spectrum management and incentive auctions. Nevertheless, we do not expect the FY 2013 numbers to differ significantly from the FY 2012 numbers. A chart showing the number of engineers at the FCC over the last four years is below.

In addition, I have established an Engineering Work Force to assess the overall engineering resources of the agency and make recommendations as to how we can strengthen our engineering resources and make the most effective use of the resources that we have. The Engineering Task Force is considering a number of recommendations, including how we can improve our recruitment and hiring and that we reestablish our Engineer in Training program.

FCC Engineers as of End of FY12

Bureau	FY09	FY10	FY11	FY12 (5/5/12)
EB	82	85	86	82
IB	34	35	34	31
MB	49	48	46	46
OET	49	47	50	49
PSHSB	21	21	19	21
WCB	4	4	3	3
WTB	30	30	30	30
Total	269	270	268	262

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
HON. JULIUS GENACHOWSKI

Senator Begich Opening Statement

Chairman Genachowski, I want to thank you for working with me during the FCC's recent efforts to reform the Universal Service Fund. I understand the need for efficiencies, and overall support the notion of USF reform. I also understand the FCC's efforts to work within a reasonable budget. However, the reality is that given Alaska's geography, distance from the lower 48, and the very remote locations of small rural communities, all of whom must be connected to "the grid" via "middle-mile" terrestrial, satellite or undersea fiber circuits, means that Alaska is very different. Our distances are greater, our population is smaller, and our costs are much

higher, particularly as it relates to the very high cost of middle-mile circuits for broadband.

Question 1. I know you saw a small corner of Alaska last year, thank you for coming and we hope to host you and members of your staff again this year. However, I still feel the need to remind the Commission of the extremely remote and insular areas in Alaska. Some Alaskan communities, including the entire island of Adak are on the brink of disaster because of the severe USF funding cuts established in your reform order.

According to the National Broadband Plan, there were to be *no flash-cuts* in universal service reform.

Just yesterday folks from the *Adak* Telephone Utility reported that their wireless leg of the company saw a reduction in USF support of 84 percent from December 2011 to January 2012. This sudden slash in funding has put the critical wireless service in jeopardy. Without the wireless leg the entire utility goes under, and the island goes dark.

Without a waiver, Adak will be out of business by the end of the year and it will default on RUS loans, which were granted in part on the FCC's determination of USF support available at certain levels.

Mr. Chairman, you and your staff often point to the waiver process as a safety net for rural companies disproportionately impacted by recent changes in high cost support. The waiver process is nearly as problematic as the underlying regulation given the substantial cost and investment of human resources required just to apply.

Wouldn't public policy be better served if the FCC granted smaller companies (under 50,000 lines) a waiver from the filing costs as well as establishing a hold harmless policy whereby companies seeing their high cost support, cut by more than 10 percent can seek a waiver and have the process automatically delayed for a period of time to investigate and ease the transition?

Answer. There are approximately 800 rate-of-return carriers that receive USF support, and thus far the Commission has received fewer than ten waiver requests. Of those, one has been withdrawn and two were granted some relief. Staff is diligently reviewing the submitted information and the public record for the remaining requests and will make final decisions as expeditiously as possible.

In response to carriers' requests for specific guidance on the waiver process, the *USF/ICC Transformation Order* laid out criteria to make it easier for companies to understand the information needed to evaluate a claim that changes in USF support would lead to loss of service for consumers. Most of the information requested, such as key financial data and basic information about cost of service, should be readily available to carriers. While some carriers may choose to hire outside experts to assist them, there is no requirement to do so. We recommend companies that are considering applying for a waiver to contact bureau staff before filing. Each company's situation is different and we can advise on which information is likely to be most important in evaluating their individual case. For carriers receiving millions of dollars annually in USF support, who have costs much higher than their peers, some one-time burdens to enable Commission staff to conduct a meaningful review of their finances is not unreasonable.

In the case of Adak, specifically, the company receives \$1,482.99 per line each month, or nearly 6 times the overall \$250 per line cap set unanimously by the Commission in the USF order. Staff has requested additional information from the company to address issues regarding affiliate payments and executive compensation, for example. Our obligation is to review these issues carefully to ensure consumers and small businesses paying into the fund are protected.

While staff investigates, the Bureau provided interim support for Windy City, Adak's wireless affiliate. Although this comes at a significant cost to the consumers and businesses that pay into the fund, staff concluded it was appropriate to ensure they had time to fully evaluate Adak's financial situation before making a final decision.

Question 2. I understand the Commission desire to establish capital expense and operating expense limits for rural rate of return carriers. And, whether I agree or not, I understand that your staff's recent order establishing what is called a "regression analysis" to limit expenses puts a limit on most small companies at their current level of capital and operating expenses. Thank you for revisiting the formula recently, however there are still some companies that will be severely impacted by reductions to be implemented on July 1. I understand that your staff is well aware that the model contains data errors and other possible analytic flaws.

Since your staff admits that these flaws exist, why doesn't the FCC limit the July 1 impact to the proposed limitation of all companies to their current level of ex-

penses instead of implementing the reduction on a few when the reductions may be based on data errors and flaws. I know that the order limits the initial level of the impact and transitions in the impact, but why implement this reduction on a few until you know that you have it right?

Answer. The Commission provided a streamlined, expedited process to correct any inaccuracies in the data at issue. So far, the Wireline Competition Bureau has received two petitions to correct data, and both of the petitioners received responses within two weeks of the initial filing. A third petition remains under consideration. The FCC also launched a process to collect a full set of updated data from companies before the benchmarks take full effect.

Even as the Commission continues to make necessary adjustments, in order to extend broadband to unserved rural communities while ensuring fiscal responsibility it is critical to keep moving forward with implementation of reform. As it does so, the Commission will continue to run a fair, open process in which the valid concerns of stakeholders are addressed—working closely with affected carriers to ensure that residents of the Nation’s rural and high-cost areas receive the quality voice and broadband services that all Americans need.

Question 3. The FCC has issued a Further Notice of rulemaking that proposes yet more changes to USF support for smaller carriers.

- As was suggested in a letter I co-led with Senator Thune in April, which was also signed by 17 others Senators, with all the drastic changes made in last year’s USF reform order, don’t you think it’s time to back off the Further Notice and let the industry, lenders, investors and consumers adjust to the reforms and evaluate their impact on rural communities and providers?
- I understand that USF caps will change every year. If that’s the case, how can a company plan for longer-term investments?
- How can lenders know what the caps will be in determining whether to extend credit?
- Do you think it’s reasonable to ask companies to file 5-year network build-out plans as the FCC’s new rules do when the “budget” your new caps set for network build-out will change each year?

Answer. In recognition of business realities and the need for carriers to have time to adjust, the Order allowed for reasonable transition periods, gradually phasing in changes over 18 months. I believe its important to keep moving forward with implementation of these once-in-a-generation reforms and not roll back the progress that has been made. In order to extend broadband to unserved rural communities while ensuring fiscal responsibility, it is important to keep moving forward with implementation of the reforms. If we do not move forward, we are left with inefficiencies of old system, and will not be able to close the gaps to ensure that residents of the Nation’s rural and high-cost areas receive the quality voice and broadband services that all Americans need.

The Order took steps to improve the high-cost loop support (HCLS) mechanism, one of the principal sources of USF funding for rate-of-return carriers. The High Cost Loop support mechanism caps compare carriers to other similarly-situated providers based on a range of criteria. Most of the independent variables change little each year—climate, soil type and the like change only slowly if at all. Those variables that do change, such as the percentage of under-appreciated plant and line count, are in the control of, or at least known to, each provider. Benchmark analysis identifies and caps only those companies whose costs are higher than 90 out of 100 companies operating under similar conditions—based on the actual cost data, not a hypothetical perfectly operated company, and only affect support going forward. The addition of these variables made the methodology more accurate and equitable for all carriers. The Bureau does not intend, and the mechanism is not designed to reduce support dramatically each year.

Question 4. The very high cost of providing broadband services in Alaska is directly related to the very high cost of “middle mile” terrestrial, satellite and under-sea fiber circuits. The middle mile circuits are necessary to connect small rural Alaska communities to the nationwide broadband system. In rural Alaska these middle mile circuits can cost 20 times or more than the same circuit in an urban area. So:

- How will the FCC ensure that broadband continues to be deployed in rural Alaska—at affordable rates comparable to urban rates—when the FCC Connect America Fund order fails to contain any mechanism for dealing with Alaska’s extraordinarily high middle mile costs?
- Isn’t the goal of the national broadband plan to ensure rural broadband customers receive broadband service at rates comparable to urban areas?

- How can you ensure that rural and remote areas that are genuinely high cost, such as Hawaii and Alaska, receive ongoing sufficient, stable and sustainable support necessary to build and operate mobile broadband networks, particularly if you use a nationwide reverse auction to distribute support?

Answer. The *USF/ICC Transformation Order* took several steps to ensure that rural and remote areas that are genuinely high cost, such as Hawaii and Alaska, receive the ongoing sufficient, stable, and sustainable support necessary to build and operate fixed and mobile broadband networks. For example, by including lands in Alaska and Hawaii within the Tribal definition in the Order, Alaska and the Hawaiian Homelands are eligible for the *Tribal Mobility Fund Phase I* (providing \$50 million for one-time support for unserved areas (no 3G or 4G) on Tribal lands) and the *Tribal Mobility Fund Phase II* (providing as much as \$100 million (out of a total \$500 million) in annual support for Tribal lands). Alaska and the Hawaiian Homelands are also eligible for support in the general Mobility Fund Phase I and II.

In addition to establishing the Tribal Mobility Fund, the *USF/ICC Transformation Order* provides special relief for Alaska wireless carriers with respect to the transition away from the legacy funding mechanism for wireless carriers. While all other wireless carriers are immediately subject to a five-year phase down in support under the old rules as we ramp up the Mobility Fund, we delay the beginning of the five-year transition period for two years for remote areas of Alaska (areas outside Anchorage, Juneau, and Fairbanks). Over 50 remote communities in Alaska have no access to mobile voice service today, and many remote Alaskan communities have access to only 2G. Therefore, the Order concludes that carriers serving remote parts of Alaska, including Alaska Native villages, will have a slower transition path during the national transition to the Mobility Fund.

Regarding middle mile costs, we have sought comment on several proposals to explicitly include middle mile costs in various programs within the Connect America Fund. Those proposals remain under consideration. In providing funding for all rural areas, including Alaska, we have to ensure that all Americans are able to take advantage of the benefits of broadband while also protecting consumers and small businesses that pay into the Fund. In addition, recognizing the reliance on lower bandwidth satellite backhaul in many areas of Alaska, for areas with no terrestrial backhaul options, the broadband public interest obligations have been relaxed. Rather than being required to provide broadband speeds of 4Mbps downstream and 1 Mbps upstream, fixed broadband providers compelled to use satellite backhaul need only provide service of 1 Mbps downstream and 256 kbps upstream to receive USF support. This is yet another example of the Order taking into consideration Alaska's unique circumstances.

Question 5. It appears highly likely that as a result of the November USF/ICC order many rural carriers will lose revenues—both USF support and from elimination of crucial intercarrier compensation. Is that correct?

Alaska, like 22 other States, has a complimentary State level universal service program. The Alaska state fund disburses over \$15 million to Alaskan carriers each year. Do you anticipate these State funds will have to expand to cover revenue lost from the reforms you are implementing? And if so, have you calculated how much these State funds will need to grow?

Answer. While the vast majority of carriers see an increase of support as a result of reform, some carriers will see reductions phased in over a period of years as a result of corporate operations expenses that are in excess of similarly situated carriers, lower than average rates, and other factors. As carriers adjust to our targeted reforms that are designed to promote broadband deployment in a fiscally responsible way, we expect that they will make changes in their operations to adjust to any potential support reductions before seeking additional Federal or state universal service funding—which must ultimately be paid for by consumers and small businesses.

As a general matter, the Commission supports the efforts of many states who have established state funds to assist in the deployment of broadband-capable networks as the statute contemplates. In many instances state USF funds, like the Federal USF fund, impose a burden on consumers and small businesses and are trying to balance these concerns as they set a budget for their funds. Federal and state funds working together to meet consumer needs is the essence of the federal-state partnership envisioned by Congress in the universal service provisions of the 1996 Act. It is possible that some states will modify their state universal service funds in response to the FCC's recent reforms, but we cannot predict what individual states will do.

Question 6. Would you agree the FCC's November universal service and intercarrier compensation order is the most major reform of these programs since the 1996 Act?

Why then didn't you, as the chair, use the process established by Congress and refer issues to the Federal-State Joint Board on Universal service?

Congressional intent is clear. The joint board process was created for a reason yet it was not used. Why is that? Why didn't you follow Congressional intent?

Answer. Section 254 (c)(2) of the Communications Act states that the "Joint Board may, from time to time, recommend to the Commission modifications in the definition of the services that are supported by Federal universal service support mechanisms."¹ The Commission instituted a special comment cycle for State Members of the Federal-State Joint Board on Universal Service to seek specific input regarding the proposals in the USF/ICC Notice of Proposed Rulemaking. Many of the policy innovations the Commission adopted in the USF/ICC Transformation Order arose from Joint Board recommendations, including, among others, determining that USF support be directed where possible to networks that provide advanced services, as well as voice services; establishing a budget for the high cost program of \$4.5 billion; and the creating a separate Mobility Fund. We will continue our ongoing dialogue with the State Members of the Joint Board.

Question 7. The E-Rate program has always meant a great deal to the State of Alaska, ensuring that the children and educators living and working in our state's most remote towns and villages have access to the Internet and distance learning and professional development courses that are otherwise unavailable to them locally.

Let me quote from comments filed with the FCC last week by the Superintendent of the Dillingham City School District: As a small, rural school district in Alaska that has high poverty, low socio-economic, and predominantly native Alaskan population (Yupik), "I want to thank the FCC for our current level of E-Rate funding. We are an "off the road" community, meaning the only way in and out is by air, dog sled, snow machine, or boat. We just recently acquired access to high-speed fiber Internet via GCI Corporation extending this service to rural, remote areas of Alaska. The cost for this more than doubled our annual rate and without the current E-Rate support we could not afford this service." Is there a better way to administer the digital literacy program without damaging E-Rate processing?

Answer. The E-Rate program has achieved remarkable success—97 percent of American schools and nearly all public libraries now have basic Internet access. I supported the needed improvements to upgrade and modernize the E-Rate program to ensure that America's students can keep up with the innovative high-tech tools that are now essential for a world-class education and to compete in the 21st Century economy. The FCC's 2010 E-Rate Order makes it easier for schools and libraries to get the highest speeds for the lowest prices by increasing their options for broadband providers and streamlining the application process for educators and librarians.

I can assure you that I will not support any action that will potentially damage this vital program. The Commission's goal is to provide the important benefits of the E-Rate program to eligible schools and libraries protect the integrity of the program and investigate potential waste, fraud and abuse.

Question 8. Also wish to highlight the importance of keeping intact reliable source of communications to relay emergency and lifesaving information to those areas that lack reliable cellular or Internet service.

It is imperative that rural communities continue to have reliable sources of communications in cases of emergency and lifesaving situations. Can the Commission comment on ways to improve the distribution of emergency alert information?

Answer. The Commission has improved the distribution of Emergency Alert System (EAS) alerts by requiring that EAS Participants (*e.g.*, broadcast stations) have the capability to receive EAS alerts formatted in the Common Alerting Protocol (CAP). CAP allows EAS Participants to receive EAS alerts directly from the alert originator (*e.g.*, the Federal Emergency Management Agency, National Weather Service, state and local governments). CAP alerts also have the potential to provide geographically targeted alerts that can include rich content such as streaming video and multilingual alerts.

Last year, the Commission also conducted the first nationwide test of the EAS. This test allowed the Commission and FEMA to test each link within the EAS cascade architecture. The test showed that the cascade architecture was basically sound, but that there are areas of the current system that need improvement. We will continue to work with FEMA and the EAS Participants to address the weaknesses so that the system will work as planned.

¹ 47 U.S.C. § 254(c)(2).

Question 9. The due diligence work done day in and day out by local broadcasters will be lost if constituents can't receive it. How does the FCC intend to improve this?

Answer. The Commission, Federal Emergency Management Agency (FEMA) and other Federal agencies work together to assist broadcasters and other communications services during emergencies, particularly those involving severe weather. One tool the Commission utilizes is the Disaster Information Reporting System (DIRS)—this is a voluntary web-based system where broadcasters and providers inform the FCC about their operating status following a major disaster.

In the most recent storm—Hurricane Isaac—the Commission began outreach and coordination with agencies and broadcasters in the days leading up to the storm. The FCC coordinated with FEMA and deployed teams to conduct safety scans in advance of the storm's arrival to coastal states. DIRS was instrumental in providing the Commission with information about the status of communication services throughout the storm. In addition, the coordinated efforts and information received allowed Commission and FEMA to provide an emergency supply of fuel to keep generators running at New Orleans Spanish-language TV and radio stations so that they could stay on the air as the storm came through the region.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. KAY BAILEY HUTCHISON TO
HON. JULIUS GENACHOWSKI

Question 1. Many countries like China and Russia have proposed using the ITU, an agency of the United Nations, to impose regulations on the Internet. At the end of the year, the ITU will meet in Dubai to negotiate a new treaty. I believe it is critically important for the United States to present a single, bipartisan front at that conference to keep the Internet free of international regulation and to protect the multi-stakeholder governance model.

Mr. Chairman, in your opening statement, you stated that the FCC is “working to oppose proposals from some countries that could seriously undermine the long-standing multi-stakeholder governance model that has enabled the Internet to flourish.” Please expand on this comment and discuss more specifically what the FCC is working on and what you believe the FCC's role should be in this process.

Answer. I have been very concerned by indications over the past year that some countries would attempt to use the ITU World Conference on International Telecommunications (WCIT) to give the ITU authority over Internet governance, undermining the long-standing multi-stakeholder governance model. While the existing International Telecommunications Regulations (ITRs) have been accepted as a framework for negotiations without any pending proposals related to traditional Internet governance issues like Internet naming and numbering, critical Internet public policy issues will be discussed at the WCIT.

Of particular concern are proposals that would change Internet protocol interconnection and charging mechanisms, as well as limit the ability of companies to manage their traffic by requiring them to provide calling party number identification information so that countries can track where traffic originates. In addition, some countries have proposed adding cybersecurity provisions to the ITRs.

As the U.S. Government agency with primary responsibility for implementing the 1988 ITRs, the FCC plays a key role in domestic and international preparations for the WCIT. The FCC is working in the U.S. delegation on WCIT to vigorously oppose any expansion of the ITRs to issues related to Internet governance or proposals to abandon the multi-stakeholder model. The FCC is actively participating in U.S. delegations on WCIT, where we continue to reinforce the bipartisan U.S. Government position to maintain a free and open Internet that is not encumbered by detailed ITU regulations that would jeopardize innovation and the free flow of information. Moreover, we are working closely with the State Department and others to coordinate with like-minded countries to form a strong coalition that can work together to develop a high level, technology neutral treaty and to resist any efforts for ITU regulation where none is needed.

Question 2. Mr. Chairman, at the end of March, Senator Cornyn and I sent you a letter urging the FCC to seriously consider Big Bend Telephone Company's waiver petition pertaining to the USF (Universal Service Fund) reform order. As you may recall, Big Bend serves an incredibly rural, very large, and extremely rugged region of Texas along nearly 500 miles of the U.S.-Mexico border. I believe the USF order's waiver process was intended precisely for unique and outlier companies like Big Bend. Can you explain to the Committee what criteria the FCC is using to evaluate USF waiver petitions?

Answer. In reforming the Fund, the Commission unanimously agreed that, as a matter of fiscal responsibility and accountability, and to protect consumers and small businesses paying into the Fund, a thorough, but fair waiver process was necessary for any company seeking a waiver. Any carrier facing reduced support as a result of the Commission's universal service reforms may file a petition for waiver clearly demonstrating that good cause exists for exempting the carrier from some or all of those reforms, and that the waiver is necessary and in the public interest to ensure that consumers in the area continue to receive service.

Waivers will be granted where an eligible telecommunications carrier can demonstrate that, without additional universal service funding, its support would not be "sufficient to achieve the purposes of section 254 of the Act." In particular, a carrier seeking such a waiver must demonstrate that it needs additional support in order for its customers to continue receiving service in areas where there is no terrestrial alternative. Several weeks ago, I circulated a draft order to my colleagues to clarify that waivers can be granted to prevent loss of broadband service, not just loss of voice service.

A full discussion of the Commission's waiver process is available in the CAF Order beginning at page 177 (available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-161A1.pdf).

Question 2a. Is there an update on the status of Big Bend's petition?

Answer. Big Bend filed a letter withdrawing its petition on July 18, 2012.

Question 2b. When can we expect the FCC to issue a final decision on the first batch of waiver petitions?

Answer. The FCC is acting expeditiously to consider pending waiver petitions. For example, on June 12, 2012, the Wireless Telecommunications Bureau granted interim relief to Windy City Cellular of the Commission's rules related to the interim cap on USF support. On July 25, 2012, the Wireline Competition Bureau granted in part a waiver to Allband Communications Cooperative.

In all cases, the Commission's bureaus are reviewing each waiver petition individually and will make final decisions as expeditiously as possible. As you know, to expedite review of waivers, the Commission delegated to the Wireline Competition and Wireless Telecommunications Bureaus the authority to approve or deny all or part of requests for waivers of phase-downs in support. We required that the Bureaus initiate the process for public comment within 45 days of receipt of a petition.

Question 3. Mr. Chairman, the landmark wireless spectrum bill that Congress passed earlier this year directed the FCC to conduct an "incentive auction" of broadcast spectrum. The auction and the subsequent "repacking" of the broadcast band will be very complex. Can you please tell the Committee what the FCC has done so far to implement the incentive auction law and what the next steps are?

Answer. In March 2012, I established the Incentive Auction Task Force, comprised of leading experts from the Wireless and Media Bureaus, Office of Engineering and Technology, and Office of General Counsel, as well as the Commission's Chief Economist and Chief Technology Officer. Gary Epstein, Senior Advisor to the Chairman, leads the Task Force. We also announced the retention of leading experts in auction theory and implementation from the prize-winning auction and IT specialists of Auctionomics, Power Auctions and MicroTech.

In May 2012, the Commission held a workshop that focused on helping broadcasters approach the financial and strategic opportunities presented by channel sharing. Panelists discussed the practical business and operational challenges and potential solutions that broadcasters who are considering channel sharing are facing. On June 25, the Commission held a TV Broadcaster Relocation Fund Workshop to focus on the design of the Commission's program to reimburse some broadcasters for the relocation costs they will likely incur as a result of the channel reassignments in connection with repacking as authorized by the Act. Currently, the Task Force and Commission staffs are preparing Notices of Proposed Rule Making (NPRM) for the fall. The Commission intends to meet all statutory deadlines and move expeditiously to meet the growing demand for wireless spectrum.

Question 3a. There is a strong need throughout the wireless industry for additional spectrum, and time is an important factor in meeting consumers' increasing demand for mobile broadband. Can you estimate when the incentive auction might begin?

Answer. Commission staff are actively working so we can initiate proceedings this fall on the spectrum auction process and implementation. The process will seek public input from all interested parties through comments, workshops, and other means and we intend to meet all statutory deadlines and act expeditiously to meet the growing demand for wireless spectrum.

Question 3b. Your National Broadband Plan called for 120 megahertz of spectrum to be cleared by an incentive auction. Within the boundaries of the spectrum bill and while still protecting broadcasters, do you think the FCC can reach that goal?

Answer. As I have previously mentioned, I am concerned that some provisions in the law could hinder our ability to reach the 120 MHz goal, but we have assembled a team of economists, engineers, attorneys, and others to ensure we maximize the amount of spectrum recovered consistent with the law.

The amount of spectrum cleared through the incentive auctions will depend on the voluntary participation of broadcasters. The Commission is, and will continue, educating broadcasters on the options that are available to them, as well as encourage their participation. As noted above, the Commission held a TV Broadcaster Relocation Fund Workshop to focus on the design of the Commission's program to reimburse some broadcasters for the relocation costs they will likely incur as a result of the channel reassignments in connection to repacking as authorized by the Act. While it is not expected that all broadcasters will participate, voluntary incentive auctions present a compelling economic opportunity for many broadcasters. The Commission will reach out to, and work with, all affected parties in a process that is transparent and fair.

Question 3c. Aside from your work on incentive auctions, what else is the FCC doing to get more spectrum into the hands of the private sector as soon as possible?

Answer. Since 2009, the Commission has been working on a Mobile Action Plan, which contemplates an "all of the above" approach that includes freeing up more spectrum, but also more efficient use of spectrum and new ways to manage spectrum. Our plan focuses on five main areas: unleashing new spectrum, removing barriers to broadband infrastructure build-out, driving greater efficiency in networks and devices, promoting competition and empowering consumers.

The FCC is unleashing at least 25 megahertz of spectrum in the Wireless Communications Services (WCS) band by removing technical rules that had impeded broadband use. We have also proposed removing regulatory barriers to enable up to 40 megahertz of Mobile Satellite Services (MSS) spectrum to be used for land-based mobile broadband. The U.S. has become the first country to enable white spaces in the TV spectrum to be used on an unlicensed basis.

The Commission adopted a shot clock to speed approvals of towers and antennas, and streamlined access and reduced costs for attaching broadband lines and wireless antennas to utility poles across America. By eliminating outdated rules, we have also increased the amount of spectrum available for wireless backhaul.

The new FCC Mobility Fund, created through savings from reforms to the Universal Service Fund, will use market-based mechanisms to extend mobile broadband coverage in rural America.

Staff is moving forward on new auctions—up to 65 MHz in the next three years, plus the significant amount of spectrum that will be freed up by incentive auctions. And we need to seize the opportunities of unlicensed spectrum—through steps to ensure a successful future for Wi-Fi and by making more spectrum available through advanced sharing techniques such as databases of available spectrum and dynamic spectrum access.

Also, meaningful spectrum sharing among government and commercial users could provide a path to free up valuable spectrum for broadband in the 1.7-GHz band. The Commission with the National Telecommunications and Information Administration (NTIA) to test LTE sharing in the 1755–1780 MHz band, which could allow us to pair it with existing (AWS-3) mobile broadband spectrum at 2155–2180 MHz to enhance its value and usefulness prior to auctioning AWS-3 as required within the next three years. Also, small cells can significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz of spectrum for wireless broadband.

Question 4. The FCC recently put out for comment a proposal to increase the authorized power for Low Power FM (LPFM) radio stations from 100 watts to 250 watts. When this committee passed the Local Community Radio Act (LCRA) in 2010, it was with the understanding that LPFM stations operate at a maximum of 100 watts. Congress may have acted differently had it known the FCC might allow LPFM stations to operate at 250 watts. Why is the FCC now contemplating changing and expanding the parameters of LPFM?

Answer. The Commission sought comment on a third-party proposal to bring rural and non-core LPFM stations onto the same footing as FM translator stations. We also sought comment on whether the proposal "could offset limited potential audiences, promote LPFM station viability and expand radio service to areas where full service operations may not be economically feasible."

The Commission is mindful of concerns that have been raised in the record, and sought comment on the potential for interference and need for adjacent channel spacing under the proposal, as well as whether the proposal “can be implemented in a manner that would not undermine the detailed LCRA protection standards and interference remediation procedures, which are presumably grounded on the current LPFM maximum power level.”

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. OLYMPIA J. SNOWE TO
HON. JULIUS GENACHOWSKI

Comprehensive Spectrum Inventory

As you know I have been calling for a comprehensive inventory for over three years now. A comprehensive inventory of both Federal and non-federal spectrum would provide decision makers at the FCC, NTIA, and Congress a clearer, more detailed, and up-to-date understanding of how spectrum is currently being used and by whom—data essential to sound policy decisions and spectrum management—mainly given the FCC manages over 2 million active licenses and NTIA administers over 450,000 assignments.

While I appreciate the Commission’s effort in conducting a “baseline” spectrum inventory and creating Spectrum Dashboard and the LicenseView, it is not a sufficient substitute to conducting a comprehensive inventory. In addition, Representative Stearns, Senator Warner and former Commissioner Copps have all recently called for a comprehensive spectrum inventory. So there is a growing appeal for such effort to have a better understanding of spectrum usage.

Question 1. Do you plan to conduct a comprehensive spectrum inventory of non-federal licenses? And do you believe comprehensive inventory is essential to gaining a better understanding of how spectrum is being used and by whom?

Answer. As noted, the Commission has completed a baseline spectrum inventory, which was one of the most substantial and comprehensive evaluations of spectrum in the Commission’s history. Through out systematic process, we have developed two online tools, Spectrum Dashboard and LicenseView, that reflect our understanding of where the most significant spectrum opportunities lie.

Our steps in creating and maintaining a spectrum inventory have provided the necessary information to determine how best to unleash significant additional spectrum for wireless broadband over the next ten years. Combined with the incentive auction authority granted to the Commission in the Middle Class Tax Relief and Job Creation Act of 2012 and Job Creation Act, these mechanisms will help our country realize the full potential of wireless and further our global competitiveness, innovation and economic health.

Question 2. How important would having more detailed data on spectrum usage and infrastructure and device deployment be to pursuing sharing opportunities between spectrum users and promoting more spectral efficiency?

Answer. In order to keep pace with our Nation’s broadband demands, we need to develop new tools to supplement our older ones like clearing and reallocating spectrum. Spectrum sharing is such a tool. Just as incentive auctions are a big new idea and new tool for freeing up spectrum for commercial use, the recent recommendations by the President’s Council of Advisors on Science and Technology (PCAST) on government/commercial sharing are a big idea on freeing up spectrum for commercial use. Both ideas can help drive our economy and job creation. In partnership with NTIA, the Commission has been moving forward aggressively to identify sharing opportunities with commercial providers on Federal spectrum. In addition, the Commission has taken several steps toward removing barriers and allowing more flexible use of spectrum, especially for mobile broadband, and strives to create market incentives for the efficient use of spectrum. It is more important to ensure we invest in the right “rules of the road” to promote sharing, data will play a key role in informing how those rules are crafted.

Question 3. Has the FCC created any maps showing where spectrum auctioned has *actually* been deployed and is in use? Does the FCC have any detail how much auctioned spectrum has yet to be built out in rural areas?

Answer. The Commission takes deadlines on its build-out requirements seriously and monitors licensees’ progress in meeting their obligations. The National Broadband Map—a joint creation of NTIA and the FCC—provides granular geographic information on broadband availability and can be segmented by technology in order to show where wireless service is available.

Question 4. How much detail do you have on what percentage of the area of the United States does not have enough spectrum to meet public demand? For the most

densely populated areas, how does the FCC determine that providing more spectrum is better than promoting greater spectrum reuse or heterogeneous networks to meet the demand?

Answer. I expect that more spectrum, greater investment in network capacity and density, and new technologies will all play a role in meeting growing demand for wireless services. Since 2009, the Commission has been executing on our Mobile Action Plan, which contemplates an “all of the above” approach that includes freeing up more spectrum, but also more efficient use of spectrum and new ways to manage spectrum. A market-based, flexible-use approach to spectrum management enables the market to assess demand and determine the best approach to meet that demand.

FCC Technical Expertise

In your remarks, you stated the Commission is operating with its lowest number of employees. The FCC is also unfortunately operating at one of its lowest number of engineers—over a 60 percent reduction in engineers from the 1950s to today—yet the Commission is dealing with significantly more technically complex issues such as advanced wireless communications, commercial cable & satellite industries, public safety interoperability, more device certifications, and broadband.

Engineers at the FCC play an essential role in regulatory matters by providing technical consultation on policy matters, managing spectrum allocations, and creating new opportunities for competitive technologies. I’m concerned this lack of expertise is hampering innovation and job growth because of the excessive delays to businesses that are waiting approval to technical waivers, experimental licenses, and filed petitions at the agency.

Others share my concern, a 2009 Government Accountability Office report found that the agency “faces challenges in ensuring it has the expertise needed to adapt to a changing market place.” And 2011 Wireless Report by the National Research Council suggested the FCC would benefit from “enhancing its technology assessment and engineering capabilities” due to “entering an era in which technical issues are likely to arise on a sustained basis.”

Question 5. What specifically has the Commission done to bolster its technical resources and staffing to ensure it has the adequate number and type of engineers to handle the agency’s workload?

Answer. The FCC’s engineers are a highly-educated, well-qualified critical resource to achieving our mission. Ensuring engineering resources keep pace with changes in communications technology is a key challenge for the Commission.

Earlier this year, Congress gave the Commission authority to conduct incentive auctions. To conduct those auctions, the Commission will need additional engineering resources. We have received reprogramming authority from the House and Senate Appropriations Committees to fund two more engineers for those activities during the current Fiscal Year.

To encourage excellence in engineering, the Commission’s engineers must have adequate facilities and equipment. Accordingly, the FCC has requested \$500,000 for Fiscal Year 2013 to upgrade the OET’s Columbia Laboratory facility as part of the plan. The Senate Appropriations FY13 Financial Services bill provides funding consistent with these upgrades while the House bill does not. The Senate bill also fully funds the FCC’s workforce while the House Report language encourages the FCC to reduce its current workforce

Question 6. From FY 2011 to FY2012, the FCC funding for its workforce increased to allow for 141 new full time employees. Of the 141 authorized new employees, how many are designated engineering positions? How many engineers have been hired over the past 2 years and what has been the net increase of engineers?

Answer. The FCC is at its lowest level of FTEs in ten years and has not increased its FTEs during the previous two Fiscal Years. The chart below provides a complete workforce snapshot of the FCC’s engineers since Fiscal Year 2009.

FCC Engineers as of End of FY

Bureau	FY09	FY10	FY11	FY12 (5/5/12)
EB	82	85	86	82
IB	34	35	34	31
MB	49	48	46	46
OET	49	47	50	49
PSHSB	21	21	19	21
WCB	4	4	3	3
WTB	30	30	30	30
Total	269	270	268	262

Question 7. Do you believe the FCC has the sufficient level of technical resources, given the concerns various entities have raised?

Answer. Ensuring engineering resources keep pace with the change in technology is a key challenge faced by the Commission. Our budget requests additional funding for engineering resources and upgrades to our Columbia Laboratory for FY13 to ensure that our engineers have adequate operational resources.

Wireless Device Performance

As you know, I have been advocating for greater attention to receiver performance standards for some time. I believe one of the problems contributing to the numerous interference disputes we've witnessed over the past decade is the lack of clear receiver performance guidelines. I've proposed legislation that would take steps to help mitigate, and even prevent, future interference disputes resulting in greater certainty for the market and new entrants. I applaud the FCC for holding its two-day workshop on receiver performance a couple months ago.

Question 8. What was the result of the workshop and what additional steps will the FCC take to promote greater spectral efficiency and interference immunity of wireless devices?

Answer. The workshop concluded with broad agreement that receiver efficiency is an issue that is ripe for more focused attention. Spectral efficiency is a key component of the Commission's Mobile Action Plan. Our Technological Advisory Council has made it one of their top priorities to find a constructive path forward on these issues that will have to involve all key stakeholders, including commercial spectrum users, government spectrum users, and device manufacturers.

Regulatory Uncertainty

The dispute between LightSquared and the GPS community is very disconcerting because it involves two very important services—wireless broadband and GPS. Given the significant benefits both technologies provide to millions of Americans and businesses, presenting an “either-or” scenario undermines innovation and consumer choice.

However, earlier this year, the Commission proposed to “suspend indefinitely” LightSquared's underlying Ancillary Terrestrial Component (ATC) authorization even though the FCC took steps, over the decade, to implement greater flexibility to satellite carriers like LightSquared to use their licenses for ground-based communications services and the FCC's public notice on IB docket 11–109 highlighted “the U.S. GPS Industry Council and LightSquared's predecessor licensee submitted a joint letter to the Commission stating that those interference issues had been resolved” and “no party sought reconsideration of that build-out requirement.”

Question 9. Earlier this year you stated that “regulatory certainty and predictability promote investment.” However, I'm concerned about the Commission's handling of the LightSquared matter and the lack of certainty and predictability that existed. Do you share my concern about the effect this kind of regulatory uncertainty may have on future wireless investment?

Answer. The LightSquared proceeding presented unique challenges related to commercial operations and national security because of receiver overload problems that were reported to the Commission by the GPS Industry. Ensuring that devices operate within their spectrum is critical to provide all potential licensees of spectrum certainty and predictability. Finding additional spectrum for innovative wireless services has been the source of tremendous growth for our country, and its potential to create jobs and drive the economy for the foreseeable future is substantial. I remain focused on ensuring that the Commission maximizes the economic, public safety, and national security potential spectrum offers.

Question 10. The LightSquared/GPS dispute also raises concern about how future interference disputes will be resolved. How are new entrants supposed to invest significant capital into developing and deploying wireless services if an incumbent user raises harmful interference concerns so late in the process and/or is unwilling to work in good faith to find a solution?

Answer. The role of receivers in enabling access to spectrum for new services implicates Federal stakeholders, as well as the private sector. As you note, receiver performance issues have often arisen as a conflict between legacy stakeholders and new entrants where deployment of new technologies and services threatens to adversely impact an incumbent or place restrictions on the new entrant. Other past examples include interference issues between new cellular radio systems and public safety radio systems, satellite digital radio systems and proposed terrestrial data services, and unlicensed Wi-Fi systems and FAA weather radar systems. The resolution of such matters has historically required a public process involving regulators, stakeholders and other parties. Because such discussions sometime begin upon the

introduction of a new service or technology, full deployment of such new services could be hindered.

The Commission typically addresses interference issues by setting parameters for transmitters to ensure that they do not emit excessive energy into frequency bands used by other services. The Commission then relies upon equipment manufacturers, licensees, and other stakeholders to ensure their receivers comply with those technical parameters. They are best positioned to know of their limitations and specifications and should notify the Commission if overload interference is a potential issue as a result of receiver characteristics.

Question 11. Why didn't the FCC provide any possible alternative solutions to satisfactorily resolve the interference issues?

Answer. The Commission will consider any specific suggestions for alternative solutions and review potential solutions under the Memorandum of Understanding process with NTIA.

Question 12. Did the FCC use its technical advisory committee in any aspect of the LightSquared/GPS controversy? If yes, how and to what degree? If not, why wasn't the TAC utilized?

Answer. The TAC offers guidance and recommendations on broad technology issues such as the transition of the PSTN and to IPV6. Traditionally, the TAC has not provided recommendations on pending rulemaking proceedings.

The TAC is, however, studying the general issue of receiver performance.

Question 13. Were these commercial GPS devices adequately tested under the FCC's device certification process? And how does the FCC enforce the Part 15 rules?

Answer. Receivers that operate in the frequency range 30–960 MHz are subject to equipment authorization, which is based on self-approval of compliance with the emissions limits. GPS receivers operate in the 1559–1610 MHz band and therefore are not subject to any FCC testing or equipment authorization requirements. Part 15 devices are accept interference from licensed services and to not interfere with licensed services. As stated above, the Commission typically addresses interference issues by setting parameters for transmitters to ensure that they do not emit excessive energy into frequency bands used by other services. The Commission then relies upon equipment manufacturers, service providers, and other stakeholders to ensure their receivers comply with those technical parameters.

Question 14. How many commercial GPS devices have been certified since 2003, when the FCC adopted rules permitting MSS licensees to integrate an Ancillary Terrestrial Component (ATC) into their networks? Were these devices tested against an adjacent band ATC emission test signal?

Answer. As noted above, GPS receivers are not subject to equipment authorization and therefore none have been certified.

Timely Technical Decision Making

With the rapid advancement of technologies and innovation within the telecommunications industry, it is imperative that the Commission not only have the technical expertise to make well-informed regulatory decisions but also that it makes such decisions in a timely manner.

As Representatives Walden and Stearns highlighted in a December 2011 letter, “the Commission had 5,328 petitions, more than a million consumer complaints, and 4,185 license applications that had been sitting for more than two years as of July 2011.” Also, a well known regulatory lawyer, Mitch Lazarus, once remarked “Technical proceedings [at the FCC] in general, including those to authorize new technologies, have been dismayingly slow.”

While I understand there are numerous reasons why a proceeding can remain open for such a long time, it is still concerning because the lack of action on pressing issues before the FCC can hinder innovation and cause significant uncertainty to small start-up companies and small businesses that are critical to job creation due to waiting for a decision from the FCC.

Question 15. Can you provide an update as to the steps you have taken to remove bottlenecks in order act timelier on petitions and proceedings?

Answer. From the beginning of my tenure as Chairman, I have made reform of agency processes a top priority. For example, we have reduced Commission backlogs, including a 52 percent reduction in pending satellite licensing applications and a 24 percent reduction in the number of pending petitions for reconsideration and applications for review. The Commission is working effectively, and we are moving in the right direction. There is more we can do to improve performance, and I am committed to continuing reform.

Question 16. Can you elaborate on how the FCC has adhered to this statutory requirement? What future steps will the FCC take to better utilize Section 7?

Answer. The Commission conducts over 70 different types of proceedings, and each type of proceeding involves specific circumstances that the Commission must consider. Where appropriate, the Commission has adopted its own internal shot-clocks to facilitate expedited processing of important matters. But it is imperative that the Commission have sufficient flexibility and discretion to give adequate attention to each filing and each proceeding.

Trucker TV Petition

There is a matter before you regarding a proposal to offer television service to a population of approximately 2 million long haul truck drivers at rest stops, so called "Trucker TV." This population, sometimes on the road for 27 plus days out of each month is currently without this basic service that you and I take for granted.

My understanding is that this has been pending for 7 years and is currently the longest standing circulating item on the 8th floor pending for the last three plus years. It seems to me that this service is long overdue and the benefits are great.

Question 17. What are you doing to move this proposal forward?

Answer. Commission staff recently met with representatives of Clarity Media Systems to discuss its proposal and the pending Application for Review. Commission staff encouraged Clarity to explore alternatives given that the 2025–2110 MHz band on which its proposal relies is the preferred relocation option for the Department of Defense under the recent National Telecommunications and Information Administration (NTIA) report regarding the repurposing of Federal Government spectrum for wireless broadband use.

Commission staff has outlined potential options for Clarity Media's video service proposal, and staff remains available to provide assistance as the company evaluates these alternatives.

Spectrum Sharing for Unlicensed Use

In your remarks at the CTIA Wireless Show earlier this month, you put a stronger emphasis on spectrum sharing and small cells—two areas I have been advocating for greater focus on over the past several years—to meet future capacity needs of the wireless industry. With respect to spectrum sharing, you highlighted your partnerships with NTIA in testing LTE sharing in the 1755–1780 MHz band and the experimental license T-Mobile applied for to test a sharing concept.

Question 18. Is the FCC's focus on sharing opportunities limited only to the 1755–1780 MHz band or is the Commission actively looking at sharing opportunities in other bands also?

Answer. The Commission is looking at sharing opportunities in multiple spectrum bands. The Commission is also considering other kinds of sharing arrangements, such as small cell use in the 3.5 GHz band. Small cells can significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz of spectrum for wireless broadband. I intend to propose to my colleagues an item on small cell use in the 3.5 GHz band and will continue to explore other opportunities for technology that could enhance spectrum efficiency. Lastly, the Commission has also begun sharing arrangements in some bands, such as in UHF TV white spaces.

Question 19. It's my understanding the sharing arrangement in the 1755–1780 MHz band will be paired with the 2155–2180 MHz band and auctioned as licensed spectrum. What opportunities might unlicensed use have in the FCC's spectrum sharing strategy? It seems like actively pursuing other unlicensed opportunities could be another way to spur innovation and job creation, right?

Answer. The Commission is pursuing an "all of the above" strategy regarding sharing approaches. 1755–1780, as well as paired 2155–2180 MHz spectrum, may be best suited for licensed uses.

I agree that encouraging more innovative and efficient uses of spectrum is important to spur innovation and job creation and will continue to encourage dynamic spectrum sharing and secondary markets for spectrum, as well as development and deployment of femtocells, smart antenna technology, and devices that can access unlicensed spectrum like Wi-Fi.

The Commission is also promoting unlicensed sharing in other bands, including TV white spaces in the UHF band. In addition we will soon begin exploring unlicensed use in the 5 GHz band, as directed by the Middle Class Tax Relief and Job Creation Act of 2012.

I am encouraged by signs of innovation around unlicensed spectrum and Wi-Fi, including at companies like Microsoft, Google, Dell, Cablevision, Time Warner, and a bevy of smaller companies such as Spectrum Bridge, Shared Spectrum and

Adaptrum. All these companies are investing in developing technology and business models around unlicensed spectrum.

Question 20. Have any other wireless carriers besides T-Mobile applied for experimental licenses to test sharing concepts? Answer. T-Mobile's application with respect to 1755 MHz was filed with the support and on behalf of the wireless industry, which intends to participate through coordination with CTIA. T-Mobile, CTIA and other participants are cooperating with DOD through NTIA.

Status of White Spaces

Several other countries have followed our lead in exploring the use of white spaces and one country, the United Kingdom, announced plans to launch "enhanced Wi-Fi" service next year. I have concerns the United States could be surpassed in this very promising area because other countries are more aggressively implementing their white spaces plans.

Question 21. What is the current status of the white spaces effort at the FCC?

Answer. As noted above, last year we became the first country to free up TV white spaces for unlicensed use, which hold the promise of new value-creating breakthroughs on the order of magnitude of Wi-Fi. The Commission is now in the implementation stage—approval of database managers, devices and deployments, as well as finalizing process for registering wireless microphones for protection in the database. Also, the Commission is considering whether we can use similar methods to provide access to other parts of the spectrum (See *Notice of Inquiry—Promoting More efficient Use of Spectrum Through Dynamic Spectrum Use Technologies*, ET Docket No. 10–237, November 20, 2010; also see the forthcoming report from the Presidential Council of Advisors on Science and Technology (PCAST).)

FCC & NTIA Joint Spectrum Planning

As you know, Section 112 of the statute (47 U.S.C. 922) requires the Assistant Secretary and FCC Chairman to meet "at least, biannually" to conduct joint spectrum planning activities. It looks like the last time there was formal FCC announcement of such meeting was in June 2010.

Question 22. Over the past two years, how many times have you met with Assistant Secretary Strickling about spectrum policy/planning and can you elaborate on what issues were discussed?

Answer. I have discussed spectrum policy issues with Assistant Secretary Strickling on many occasions over the past two years. Topics included how to accelerate clearing and/or sharing spectrum currently used by the Federal Government. The Commission and NTIA have ongoing dialogues regarding spectrum issues on a nearly daily basis at the staff level.

Long-Term Spectrum Planning

In June 2004, the Bush Administration released the *Spectrum Policy for the 21st Century* to promote the development and implementation of a U.S. spectrum policy for the 21st century. One of its key recommendations was the development of a "National Strategic Spectrum Plan" to provide a long-term vision for domestic (federal and non-federal) spectrum use and strategies to meet those needs.

However, the last Progress Report on the Spectrum Policy Initiative (released October 2009) had the status of such plan as "expected completion TBD." And while the Chapter 5 of the National Broadband Plan provided some long-term planning it was primarily focused on wireless broadband services instead of the whole spectrum ecosystem of radio-based services?

Question 23. What is the current status of the National Strategic Spectrum Plan? Do you believe such long-term planning could be beneficial to exploring greater sharing opportunities between commercial and Federal spectrum and help foster greater coexistence between adjacent band licensees?

Answer. The National Strategic Spectrum Plan is administered by NTIA. The National Broadband Plan, released in 2010, outlines spectrum plans and initiatives that the Commission is now actively implementing. That National Broadband Plan recommends that the FCC update its spectrum plan in 2013.

I am committed to working closely with the Federal and commercial sectors to explore both short-and long-term sharing opportunities, as well as working through technical coexistence issues.

Universal Service Fund & E-Rate

The National Broadband Plan and subsequent research have identified the lack of digital literacy among low-income Americans as a major barrier to broadband adoption. To address this, the Commission proposed implementing and operating a digital literacy program through the E-Rate program's administrative structure. The

FCC has proposed \$50 million in annual funding over a four year period and that such funds would be provided through saving from the restructuring of the Lifeline program. While I'm a strong advocate for a greater focus on improving digital literacy to spur broadband adoption, I'm concerned about the impact this proposed program will have on the E-Rate program, if it is administered through it.

Question 24. I'm concerned the proposed Digital Literacy program will be difficult to monitor. With E-Rate, it is possible and cost-effective to send auditors to school and library sites to ensure applicants have actually purchased and installed the equipment for which they received E-Rate support and providers have actually delivered promised services. By contrast, it seems it may be difficult for auditors to determine this proposed digital literacy initiative's funds have actually been spent on courses. Can you tell me how USAC could properly audit this digital literacy initiative?

Answer. In reforming the various components of Universal Service, combating waste, fraud, and abuse is a top priority. Any new program must have measures in place to ensure appropriate accountability, such as requirements that would enable auditors to verify that funds have been used appropriately. In the Further Notice of Proposed Rulemaking, the Commission sought comment on the reporting obligations that should be tied to such funding.

Competitive Access to Spectrum

The "spectrum crunch" is not exclusive to just one or two carriers, it is industry wide. And while the top four carriers provide wireless service to 90 percent of the total subscribers in the U.S., more than 30 million other subscribers use someone else. As you know, Section 309(j)(3) of the statute (47 U.S.C. 309(j)(3)) requires Commission to promote "economic opportunity and competition" by "disseminating licenses among a wide variety of applicants" including small businesses, rural carriers, and minority and woman-owned businesses.

Question 25. How should the FCC ensure, in a fair and competitive manner, that all carriers—large and small—have adequate access to this critical but finite resource?

Answer. I can assure you that the Commission will carefully consider all of our statutory requirements and use the mechanisms available to us to carrying out future auctions in a way that ensure a competitive, vibrant wireless market.

Question 26. Several countries have recently held or plan to hold spectrum auctions to make more spectrum available for next generation wireless communications and broadband. Some of these countries have applied certain conditions to their auctions rules. For example:

1. In its 4G auction, France's ARCEP provided bidding preferences to carriers that agreed to host MVNOs on its networks and had enhanced rural build-out requirements. It also required roaming agreements—to a losing bidder—for any carrier that won more than one frequency block.
2. Germany's regulator, Bundesnetzagentur, applied rural build-out requirements for its 800 MHz auction and placed bidding restrictions on certain carriers.
3. The Netherlands reserved two spectrum blocks in the 800 MHz band and one in the 900 MHz band for new entrants.
4. Canada, in its 2008 AWS auction, set aside spectrum for a new entrant.
5. Czech Republic's CTU has reserved the 1.8 GHz block for a new entrant
6. Ofcom has proposed spectrum caps in its upcoming LTE spectrum auction.
7. Australia has proposed spectrum caps for its upcoming auction.

It should be noted that several of these auctions ended up exceeding revenue expectations. I'm not advocating for the implementation of any conditions on any future auctions but I'm curious as to why these countries deemed it necessary to apply such conditions in their auctions rules? Do you believe the FCC should closely examination the recent 4G auctions in other countries to assist in determining how best to design future domestic auctions?

Answer. I am committed to an auction process that is the result of an open, transparent, inclusive, fact-based, data-driven approach that is guided by economics and engineering. The Commission will take into consideration input from all parties and entities that have ideas on how best to structure auctions, including structures that may have been used in international auctions. We are open to all factors that can make future auctions successful once we have the opportunity to examine all the evidence.

Question 27. As you know, Section 309(j)(7) of the statute (47 U.S.C. 309(j)(7)) expressly prohibits the Commission from using the expected revenue from a spectrum

auction as a basis for determining the public interest of frequency assignments. Furthermore, Congress, in H.R. Rep. No. 111, 103d Cong., 1st Sess. 258 (1993), emphasized that “important communications policy objectives should not be sacrificed in the interest of maximizing revenues.”

While there is broad agreement auctions are the best mechanism to distribute spectrum licenses, is there too much emphasis currently being placed on maximizing auction revenues instead of the longer term economic benefit that may result? How might such skewed focus on proceeds hinder achieving the strategic goals necessary for the long term health of the spectrum ecosystem?

Answer. Auctions have resulted in over \$50 billion of revenue to the U.S. Treasury and unleashed hundreds of billions of dollars in benefits for our economy since Congress granted such authority. Through the Mobile Action Plan, the Commission is exploring an “all of the above” approach that includes freeing up more spectrum, but also more efficient uses of spectrum and new ways to manage spectrum that are not focused on auctioning exclusive licenses resulting in revenue. Spectrum, whether auctioned or utilized through sharing or on an unlicensed basis, has been proven to lead to substantial economic value well beyond one-time revenues raised through an auction.

Spectrum Efficiency Metrics

One of the primary, long-standing goals of the FCC has been to promote more efficient use of spectrum. The FCC’s 1999 Spectrum Policy Statement highlighted “with increased demand for a finite supply of spectrum, the Commission’s spectrum management activities must focus on allowing spectrum markets to become more efficient.” and Strategic Plan for FY 2003–2008 (published in 2002) indicated its general spectrum management goal is to “encourage the highest and best use of spectrum . . .”

In its 2002 report, the Spectrum Policy Task Force developed three definitions: spectrum efficiency, technical efficiency, and economical efficiency. However, the SPTF concluded “it is not possible, nor appropriate, to select a single, objective metric that could be used to compare efficiencies across different radio services.”

Question 28. In the FCC’s search to free up more spectrum for wireless broadband, how does the FCC effectively determine and compare the spectral efficiency of different types of radio-based services when targeting various frequencies for reallocation?

Answer. The Commission has not applied a single efficiency metric for different types of services. In fact, the Technical Advisory Council (TAC) considered such metrics and determined that a single metric to compare spectral efficiency among different services is not feasible. The TAC made a number of recommendations for improving overall spectral efficiency, such as increasing sharing among services, which are under consideration.

Question 29. Does the FCC use network density as a component of its spectrum efficiency metric? If not, given the FCC already imposes build-out requirements to licensees, should the FCC explore requiring network density guidelines too as a way to promote more efficient use of spectrum?

Answer. Operators continue to explore how best to manage their networks and I encourage them to be as efficient as possible, taking all potential solutions into consideration. I am very excited about the opportunity for small cells to significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz of spectrum for wireless broadband. I intend to propose to my colleagues an item on small cell use in the 3.5 GHz band and will continue to explore other opportunities for technology that could enhance spectrum efficiency.

Question 30. Does the FCC have any additional data on network density comparisons of the U.S. in relation to other countries?

Answer. We do not.

Resolving the “Spectrum Crunch” Through Technology

I’m concerned there is not enough focus on the role of technology in meeting the growing demand for wireless network capacity. An Ofcom report rightfully points out increasing wireless network capacity depends on a combination of “spectrum, technology, and topology.” Given the challenges we face with reallocation, I believe technology will play an even more prominent role.

For example, research by Ofcom found that early 4G mobile networks will be 230 percent more spectrally efficient than 3G networks and that efficiency will increase to 450 percent by 2020. Technologies like dynamic spectrum access and cognitive radio can considerably improve utilization by allowing more aggressive spectrum

sharing, and, though many years off, quantum entanglement and “twisted” waves hold amazing potential to significantly, and even possibly infinitely, increase capacity without any additional spectrum.

However, I’m concerned about the threats the U.S. is facing in regards to its leadership in innovation, primarily with ICT. Many reports highlight most of the global R&D growth will be mainly attributed to Asian economies—according to NSF, the United States’ share of global R&D expenditures dropped from 38 percent to 31 percent between 1999 and 2009, while the Asia region grew from 24 percent to 35 percent. In addition, more U.S.-based companies are locating R&D operations overseas—the number of overseas researchers employed by U.S. multinationals nearly doubled from 138,000 in 2004 to 267,000 in 2009.

Question 31. What more can the government do (besides make the R&D tax credit permanent) to foster greater R&D investment, primarily in ICT?

Answer. The National Broadband Plan made seven specific recommendations on steps the Federal Government could take to promote broadband R&D. The recommendations are available at <http://www.broadband.gov/plan/7-research-and-development/?search=research%2band%2bdevelopment>.

Question 32. Given the benefits that both the private and public sectors will reap from more advanced technologies, how can there be more collaboration between both sectors to see these technologies to fruition?

Answer. The FCC participates in Wireless Spectrum Research and Development (WISARD) group of the National Coordination Office for Networking and Information Technology Research and Development to help develop priorities, encourage private investment, and develop public/private partnerships where appropriate.

Question 33. Does the FCC have any estimates on the amount of domestic private sector funding in wireless R&D as a percentage of overall industry capital investment? Do you believe there is enough domestic R&D investment in advanced wireless communications in comparison to other countries?

Answer. The U.S. leads the world in 3G subscribers by a wide margin, and we are leading the world in deploying 4G mobile broadband at scale with 64 percent of global LTE subscribers. The wireless industry invested \$310 billion 2010. The apps economy continues to grow, and U.S. firms and developers continue to lead the way. In the last three years we’ve gone from less than 20 percent of our population living in areas with broadband infrastructure capable of delivering 100+ megabits per second to approximately 80 percent, putting us at or near the top of the world. Last year we became the first country to free up white spaces for unlicensed use, which hold the promise of new value-creating breakthroughs on the order of magnitude of Wi-Fi and we are continuing to take actions to permit utilization of this spectrum. The wireless industry has been key to making this possible but as set out in the National Broadband Plan there are R&D opportunities that need the attention of Government, which currently provides approximately 60 percent of funding for basic research.

Question 34. How important are Federal programs like NSF EARS and DARPA STO to the long-term growth and health of innovation in the spectrum ecosystem and should Congress provide greater funding for basic research in this area?

Answer. The NSF EARS and DARPA STO programs both fund studies of advanced wireless technologies to facilitate increased use of the spectrum. However, the Commission is not in a position to comment on programs that it does not oversee.

Spectrum Flexibility

The National Broadband Plan highlighted the importance of spectrum flexibility. The NBP concluded that “flexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency” and “spectrum flexibility, both for service rules and license transfers, has created enormous value.” That innovation and capital formation could be beneficial to addressing the challenges that exist in making more affordable and faster broadband available in rural areas.

As you know, Section 336 of the statute (47 U.S.C. 336) allows broadcasters to offer ancillary and supplementary services, which includes data transmission and interactive materials. Section 336 also prescribes the assessment and collection of fees related to such service offerings, and the FCC, back in 1998, adopted rules requiring broadcasters to pay a fee of 5 percent of gross revenues from such services for which they charge subscription fees or other specified compensation.

Question 35. If we need to get broadband into rural areas, why not let other licensees, like broadcasters, attempt to close the digital divide that exists? Mainly, since they may have infrastructure already in place to build off of.

Answer. Broadcasters are not precluded from offering broadband, provided they operate within the context of the current rules for broadcasting, including paying 5 percent of revenue from ancillary and supplementary services to the government.

Question 36. Last year, I wrote you inquiring why a local broadcaster in Oregon (WatchTV) was denied an experimental license. It is my understanding that the broadcaster re-filed his application but it remains pending two years later. What is the current status of this pending application?

Answer. The application remains under review in the context of the changes anticipated for the UHF band, including channel repacking.

Question 37. How many other experimental license applications related to broadband services have been denied or are still pending?

Answer. The Commission is committed to expeditiously reviewing and approving experimental license applications, while also performing our important role of ensuring that the licenses would comply with our rules.

The Commission processed approximately 1600 experimental license and special temporary authority applications last year. At any given time, the Commission typically has about 230 pending applications that are undergoing review and coordination. The Commission tracks applications for experimental licenses by the frequencies that are used, not the category of technology or service such as broadband or narrowband.

Staff has informed me that they believe that most experiments for developing commercial wireless technology in the last year have been in the 700 MHz band where approximately 90 applications for experimental licenses were filed for development of commercial wireless broadband technology. Approximately 5 such applications are pending at this time.

In addition, approximately 70 experimental licenses associated with the public safety bands within the 700 MHz block have been approved. Applications for experimental licenses are rarely denied and instead the Commission's staff works with the applicant to agree on conditions that will allow the experiment to go forward.

The Commission is committed to expeditiously reviewing experimental license applications.

Question 38. If there is concern about "unjust enrichment" if broadcasters provide broadband, why isn't there the same concern with wireless communications licenses issued prior to 1994? Wouldn't the 5 percent of gross revenue that broadcasters have to pay if they add broadband to their signals fairly compensate the government, mainly since such service would have to be "ancillary and supplementary" to their broadcast television signal?

Answer. Even though the FCC adopted rules to avoid unjust enrichment, some parties have still raised concerns that such flexibility would be unfair since the broadcasters weren't assigned the spectrum via an auction. However, as you know, the FCC has only auctioned licenses since 1994 and prior to that used comparative hearings and then lotteries for frequency assignments—including licenses for wireless communications.

Q16—Spectrum Fees

Every administration since President Clinton has requested spectrum fee authority from Congress. Recommendation 5.6 of the National Broadband Plan suggested "Congress should consider granting authority to the FCC to impose spectrum fees on license holders and to NTIA to impose spectrum fees on users of government spectrum" to address inefficiencies in spectrum allocations and promote more efficient use of spectrum.

Ofcom imposed similar fees (known as Administrative Incentive Pricing) in the late 1990s and issued a report in 2009 that concluded the fees "met its primary objective in helping to incentivize spectrum users to consider more carefully the value of the spectrum they use alongside that of other inputs, and to take decisions that are more likely to lead to optimal use of the available spectrum." The report also "found no evidence to suggest that the application of AIP has given rise to material adverse consequences for spectrum efficiency."

Question 39. Should Congress grant the FCC and NTIA spectrum fee authority either on all licenses and assignments or just on non-auctioned licenses, mainly if the FCC moves to implement greater flexibility of spectrum use? Do you believe the FCC can strike the proper balance in applying spectrum fees to promote more efficient use of spectrum but not to a point that it presents an undue financial burden to the licensee?

Answer. As noted in the National Broadband Plan Recommendation 5.6, our current policy leads to a situation where there is inadequate consideration of alternative spectrum uses, creating artificial constraints on spectrum supply and a gen-

erally inefficient allocation of spectrum resources. One way to address these inefficiencies is to impose a fee on spectrum, so that the licensees take the value of spectrum into account. The NBP requested that Congress grant the FCC and NTIA the authority to impose spectrum fees, but only on spectrum that is not licensed for exclusive flexible use.

The Bush Administration requested legislative authority for the fees from 2001–2008, while the current Administration has repeated this request during the past three appropriations cycles. Any fee system authorized should avoid disrupting public safety and provide enough flexibility to deal with multiple budget cycles. The FCC will implement whatever plan Congress mandates, and ensure a fair and efficient process.

Question 40. Some parties have opposed spectrum fees calling them a tax. But what is the difference between a spectrum fee that is paid annually and a licensee paying a lump sum at an auction? If a spectrum fee is a tax, isn't an auction payment a tax as well since it too goes to Treasury? Or are both not considered taxes since they are transfers to government for the right to use a public good?

Answer. A fee applies to a government action (such as licensing) that bestows a benefit on the applicant, not shared by other members of society, while a tax is not tied to the benefits received. See *National Cable Television Ass'n v. FCC*, 415 U.S. 336, 340–341 (1974). Congress has authorized the FCC to collect and process regulatory fees to cover the costs of its operations. Congress has also directed that proceeds from spectrum auctions are deposited in the U.S. Treasury.

Question 41. If not spectrum fees, how should the FCC impose economic fairness between licensees that are/were awarded via auctions versus those that were awarded via comparative hearings and lotteries?

Answer. Over the years, Congress has provided the Commission with various tools to bring spectrum to market. The FCC will implement whatever plan Congress mandates and ensure a fair and efficient process.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JIM DEMINT TO
HON. JULIUS GENACHOWSKI

Question 1. How many complaints about violations of the “Open Internet Order” has the FCC received since the regulations were published? Please briefly explain the nature of any such complaints.

Answer. The Commission has received no formal complaints. In May, a company called L2Networks filed an informal complaint against Albany Water, Gas & Light Commission alleging violation of the open Internet rules. L2N says that Albany WG&L has wrongly accused L2N of engaging in unlawful theft of service “by simply delivering over-the-top-internet-based VoIP services . . . to an existing Albany Water, Gas & Light Commission Internet customer,” and that this charge “is in effect an unconventional attempt to block Internet-based ‘lawful content, applications, services, or non-harmful devices.’”

In addition, we have received occasional consumer complaints (on average, 1 or 2 a week) that could implicate the Open Internet rules. These include, for instance, possibly discriminatory application of a data cap; service throttling; web-site blocking; port blocking; and refusal to allow software updates. As noted in the Open Internet order, such informal consumer complaints do not typically result in written orders, but the Enforcement Bureau examines trends or patterns in complaints to help monitor market developments.

Question 2. Would the FCC’s network non-duplication, syndicated program exclusivity, and sports blackout rules be necessary if existing compulsory copyright licenses available to MVPDs when distributing certain broadcast video content were repealed?

Answer. Although there could be some interaction between the FCC rules and existing statutory copyright licenses, the FCC rules have been developed to promote policies of the Communications Act that are separate from, and independent of, the statutory license provisions of the copyright laws.

Question 3. When MVPDs negotiate carriage contracts with cable networks—such as TBS, Discovery, ESPN, and Food Network—is copyright licensing included?

Answer. The Commission does not have knowledge of the private contractual discussions between MVPDs and cable programmers, and those contracts likely vary widely. Presumably, such deals generally contain copyright components to provide the MVPD with the ability to carry the network on its system.

Question 4. Regarding carriage negotiations between MVPDs and cable networks, is it fair to say there is a well-established mechanism in the marketplace—today—to negotiate and “clear” copyright licenses associated with such carriage?

Answer. The Commission does not have knowledge of the private contractual discussions between MVPDs and cable programmers. Based on existing MVPD channel line-ups, it does appear that those entities are able to negotiate deals for the carriage of the channels on MVPD systems.

Question 5. When will the FCC release its next video competition report? Has the FCC under your leadership met its statutory obligations regarding video competition reports? Will the FCC conduct a review of its video regulations to determine whether any should be eliminated or modified to reflect today’s marketplace?

Answer. On July 20, 2012, the Commission released the 14th Video Competition Report. The Report had not been released for several years prior to my nomination to the Commission. As such, there was a need to update the record and collect the relevant data before issuing a new Report. In 2009, the Commission solicited 2007, 2008, and 2009 data, information, and comment for the period 2007, 2008, and 2009 similar to what the Commission requested for previous reports. Thereafter, the Commission initiated a comprehensive review of the way in which it uses data, including data used for its statutory competition reports. In the course of that review, the Commission determined that the data submitted in response to the 2009 notices of inquiry should be supplemented. Thus, on April 21, 2011, the Commission released a Further Notice of Inquiry, requesting additional data for 2009, seeking data for 2010, and encouraging the submission of comparable historical data for 2007 and 2008.

As part of our reform effort, we have been reviewing all of the Commission rules, with the elimination of 222 obsolete regulations. A comprehensive review of the video regulations would be appropriate after the completion of the LPTV digital transition in 2015.

Question 6. Is it true that, regarding regulatory fees, the Commission has not fundamentally changed its assessment methodology since 1994? Is it true that the Commission issued an NPRM to overhaul this system in 2008? If so, when will that proceeding be complete?

Answer. The Commission conducts a rulemaking yearly to ensure the use of a fair and balanced process for collecting the Section 9 fees pursuant to applicable appropriations legislation. The Commission issued an NPRM to conduct a more thorough rebalancing in 2008. No further action was taken at that time. There is currently an item on circulation seeking further input from all stakeholders on rebalancing regulatory fee structure. I expect this step in the proceeding to begin very soon.

Question 7. When was the current standard for television broadcasting developed? What legal, regulatory, or technical obstacles prevent broadcasters from adopting new and innovative technologies and standards?

Answer. The ATSC digital broadcast standard was developed in the early 1990s by an alliance of public and private entities. Based on this private agreement, the Commission incorporated the standard into our rules. The standard itself is flexible, which allows stations to provide multiple audio tracks and Mobile DTV signals. We are aware that the broadcast industry is considering the formulation of a new or modified digital television standard, and if such a standard is brought to the Commission we will consider it, as the Commission commonly does to encourage and accommodate innovation. It is important to note that the existing standard is incorporated into the equipment used today to broadcast and receive digital television. Consideration of any new standard therefore would have to include consideration of transitional issues.

Question 8. In FY 2011, how much did the FCC spend on salaries and operations directly related to licensing issues?

Answer. The FCC does not maintain specific salary and operational estimates for activities related to licensing actions. These activities are included in the FCC’s general budget request, which provides budget estimates by bureau and general operations.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO
HON. JULIUS GENACHOWSKI

Question 1. An important issue with respect to Universal Service Fund Reform that has not been addressed is the industry contribution mechanism that pays for USF subsidies.

Mr. Genachowski, will you conclude contribution reform during your tenure as Chairman? Could you commit to completing it sometime this year?

Answer. Universal service reform is part of a broader agency effort to modernize outdated programs, eliminating unnecessary rules and improving efficiency and effectiveness. The current contribution system imposes significant compliance costs and creates inconsistencies and market distortions. I look forward to working with my fellow Commissioners and with all stakeholders in pursuit of these goals. I agree with the sentiment expressed by Commissioner McDowell at the hearing that, while the FCC's inbox is full with many other matters, we must conclude our proceeding on universal service contribution reform as soon as possible.

Question 2. Congress recently passed spectrum auction legislation and the Commission will begin setting rules for implementation perhaps as early as this fall. I'm hearing from some low power television (LPTV) interests in my state who are concerned about how the FCC will handle low power stations when the FCC conducts their incentive auctions, and subsequently goes through a process of clearing channels 31–51. Low power TV stations provide a valuable service, such as local public meetings and religious broadcasting. LPTV has been the entry point for small businesses into the broadcast market and today, many LPTV owners are small businesses who work hard to continue to serve their local communities with news and resources aimed at the community. Would you support rules that allow LPTV to survive. What assurance can you provide that low power television stations will be protected?

Answer. I fully appreciate and recognize the news, information and programming that LPTV stations provide to its customers. I have instructed Commission staff to continue to work with the LPTV community as we work through implementation of the Middle Class Tax Relief and Job Creation Act of 2012. As you know, LPTV stations are secondary services to full power TV stations, and Congress did not provide additional protections for LPTV stations in the Middle Class Tax Relief and Job Creation Act of 2012.

Question 3. Many telecom providers are now saying that many states and possibly thousands of smaller markets are going to miss out on the \$300 million in 2012 broadband support, because the FCC denied eligibility for funding in areas served even partially by fixed wireless companies. In areas that may not be adequately served by fixed wireless, is the FCC prepared to review requests for waivers?

Answer. Phase I of the Connect America Fund provides up to \$300 million in support for price cap carriers to spur the expansion of broadband in their service territories. That funding supplements the approximately \$1 billion in support price cap companies already received under the previous universal service support mechanisms, and is focused on promoting rapid new deployments to currently unserved areas. On July 24, 2012, seven carriers filed with the Commission their plans to use almost \$115 million they were awarded under the Connect America Fund. The carriers that accepted funding agreed to deploy broadband in unserved areas covering more than 17,000 census blocks in 37 states, including 180 locations in South Dakota.

Carriers that accepted the funding must meet strict requirements for deploying broadband to areas that, among other things, are currently unserved by terrestrial fixed broadband according to the National Broadband Map. To the extent an area is already served by another provider of terrestrial fixed broadband—whether fixed wireless, cable, or the price cap carrier itself—it is not eligible for CAF Phase I support.

One carrier recently filed a petition for waiver relating to fixed wireless service territories as reflected on the National Broadband Map, and Commission staff is currently evaluating that waiver request.

Follow-on: With respect to the mechanisms in place to address unclaimed money for broadband support, please describe these mechanisms in detail. Will you retain the funding for price cap rural broadband, which is the Nation's greatest area of broadband need?

Answer. The Commission stated in the *Transformation Order* that any funds not claimed in Phase I of the Connect America Fund would be used to advance the Commission's broadband objectives pursuant to its statutory authority. We are considering how best to use unclaimed CAF Phase I support. As part of that process, we are reviewing two pending waiver requests from price cap carriers.

Question 4. Mr. Genachowski, you told the Senate Appropriations Committee on May 9, 2012, that the FCC will have to demonstrate “flexibility” in addressing the waiver applications of individual small telephone companies from the applicability of the universal service distribution regression model. What exactly does “flexibility” mean in that context?

Answer. By flexibility, I mean that the waiver process must include a data-driven, case-by-case analysis of individual company circumstances. In addition, I have circulated an Order to my fellow Commissioners that would modify the waiver standard to take a loss of broadband service, not just voice, into consideration.

I strongly encourage carriers considering applying for a waiver to contact Wireline Competition Bureau staff regarding their specific situations and to seek guidance on the waiver process as early as possible if they are considering applying.

Question 5. The recently released universal service distribution regression model required a number of data points from companies and, in some cases, there may have been errors in the inputting of the data. As a result, I understand that if the mapping information is incorrect the Commission will undertake an expedited waiver process and not charge the impacted company any related fee. However, that leaves other companies, which may be facing dramatically lower levels of support based on another data point, having to spend thousands of dollars in application fees to simply get the FCC to correct an error. Is that fair?

Answer. Any waiver application to correct data in the spending benchmarks will be expedited and processed without a fee. As you note, the Bureau has acted quickly to consider these waiver requests. For example, on June 26, 2012, the Wireline Competition Bureau granted requests for waiver to correct the study area boundaries of two carriers. This action was taken less than two weeks after the waiver requests were received.

Follow-on: Can you commit that if a company seeks a waiver based on incorrect data, the Commission will waive the requisite fee and resolve it on an expedited basis?

Answer. Yes.

Question 6. Chairman Genachowski, on May 9, 2012, during your appearance before the Senate Appropriations Committee, you told senators that from early on in the USF reform process the FCC and RUS worked closely together to forestall any adverse unintended consequences resulting from changes to universal service distributions. Can you give the Committee a few examples of changes to the USF reform order that reflected input from RUS?

Answer. Commission staff has worked closely with RUS throughout the USF reform process to understand their concerns and to estimate the potential impact of different reform options on RUS borrowers, and we continue to do so. The Commission recognized and addressed concerns about past investment and outstanding debt by providing for a waiver process for relief from the support reductions. Where a provider can show that rule changes endanger existing service—including situations where a carrier needs to pay off debt for past investments—the Commission will consider waiver requests on an individualized, fact intensive basis. In addition, the information that carriers should submit when requesting a waiver explicitly includes information regarding outstanding loans, including RUS loans.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER F. WICKER TO
HON. JULIUS GENACHOWSKI

Question 1. At the FCC Oversight Hearing, you offered to respond in writing with an update on the timing for the lower 700 MHz interoperability proceeding. Could you please provide this update, as well as a specific answer on when you intend to take final action?

Answer. The initial petition for rulemaking was filed in September 2009. The Notice of Proposed Rulemaking was adopted in March 2012, with comments due June 1, 2012, and reply comments due July 16, 2012.

Question 1a. After reviewing the comments received, will the Commission take final action this year?

Answer. The comment cycle in this proceeding closed on July 16 and staff is engaged in evaluating the record. I continue to encourage industry to work towards a solution, even as staff evaluates the record. At this time it would be premature to predict what action the Commission may take and when, but we are working expeditiously to address this critical issue.

Question 2. Is it true that your office has circulated an Order to dismiss/deny all pending 700 MHz public safety waivers?

Question 2a. If so, how will the dismissal/denial of these waiver requests speed the deployment of an interoperable public safety network?

Question 2b. Why should first responders in a state ready to deploy a network have to wait several more years until FirstNet is operational?

Answer. A draft order addressing the pending 700 MHz public safety waivers has been circulated to the Commissioners, but it is currently under discussion and has not yet been adopted.

Although the Commission has granted waivers permitting early deployment of public safety broadband networks in the public safety broadband spectrum and deployment of narrowband networks in the spectrum, a number of additional waiver petitions have remained pending as of Feb. 22, 2012, the effective date of the Middle Class Tax Relief and Job Creation Act of 2012. In the Act, Congress required the Commission to reallocate the D block for use by public safety entities and to assign a license for both the D block and the existing public safety broadband spectrum to the newly established First Responder Network Authority (FirstNet). Further, the Middle Class Tax Relief and Job Creation Act of 2012 directs the FCC to “take all actions necessary to facilitate the transition” of the existing public safety broadband spectrum to FirstNet. Upon its establishment, FirstNet is responsible for deploying and operating the nationwide public safety broadband network.

Because of the Middle Class Tax Relief and Job Creation Act of 2012’s mandate for the FCC to facilitate the transition of the public safety broadband spectrum and the D block to FirstNet to hold the single nationwide public safety wireless license and to take all actions to build, deploy and operate this network, the Commission should consider minimizing impediments to the reallocation and licensing processes involved, in a manner that serves the public interest. The Commission’s mandate includes balancing consideration of public interest factors that could support the grant of the waiver against the encumbrances that would be imposed on the spectrum slated by Congress for assignment to FirstNet.

Question 3. In your opinion, how long will it be before FirstNet is operational?

Question 3a. How long before it has been deployed to 50 percent of the Nation’s geography?

Answer. Congress gave responsibility over FirstNet implementation to NTIA in the Middle Class Tax Relief and Job Creation Act of 2012. Accordingly, the NTIA is in a better position to answer that question.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROY BLUNT TO
HON. JULIUS GENACHOWSKI

Question 1. The Federal Government is the largest spectrum user in the country today. It seems only logical that some of the commercial demand for spectrum will need to be met by using spectrum licenses which are currently held by the Federal Government. What is the Commission currently doing, and what is their long term plan, to facilitate a process to make some government spectrum available in the near term at auction? We spoke previously about an idea of government users sharing spectrum with commercial providers. Could you expand on that, and address how a sharing concept fits in with the Commission’s previous auctions which heavily emphasized licensing nationwide bands for commercial use?

Answer. Meaningful spectrum sharing among government and commercial users could substantially increase the efficiency of spectrum use, including by enabling use for commercial broadband of up to 95 megahertz of spectrum in the 1.7-GHz band. Recently, the Commission has partnered with the National Telecommunications and Information Administration to test LTE sharing in the 1755–1780 MHz LTE band, which could allow us to pair it with existing (AWS-3) mobile broadband spectrum at 2155–2180 MHz to enhance its value and usefulness prior to auctioning it as required within the next three years.

With the support and on behalf of the wireless industry, T-Mobile has applied for an experimental license in the 1755 MHz band. T-Mobile, CTIA and other participants are cooperating with DOD through NTIA. In addition, small cells can significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz of spectrum for wireless broadband.

Question 2. Knowing that the Commission has yet to set up the exact rules and framework for how this next broadcast spectrum auction will proceed, I’m curious if you could at least address a concern of mine and I’m sure other members of this panel about how the process will affect low-power broadcasters in our states, specifically in rural areas? Do you foresee a scenario where the FCC will have to do more than one round of voluntary vacating and repacking, for instance if the initial process yields only a small amount of freed up spectrum?

Answer. As you note, it is still early in the process, but I understand your concern and I can assure you that we will continue to work with the LPTV community to

address their concerns. LPTV stations are secondary services to full power TV stations, and Congress did not provide any additional protections for LPTV stations in the recently enacted Middle Class Tax Relief and Job Creation Act of 2012.

Question 3. The Commission has told the D.C. Circuit that one reason it has been unable to complete the special access proceeding is the lack of data provided by the competitive service providers in response to the Commission's first data request. How many competitive local exchange carriers responded to your first request and what efforts has the Commission made since then to complete the record and obtain sufficient data?

Answer. Fourteen competitive LECs submitted information in response to the voluntary data requests. Since that submission, the Commission has been actively reviewing the record to develop a more comprehensive data collection on special access issues.

Question 4. The Commission's first data request included request for network maps and other data that would permit the Commission to identify the areas where competitors have deployed their own networks and can therefore offer competitive special access services. In order to ensure that the Commission's processes are fact driven and analytically sound, what effort has the Commission made to obtain network maps from the carriers that did not disclose the locations of their competitive facilities?

Answer. An upcoming comprehensive data collection will gather information that is necessary to complete the special access proceeding.

Question 5. After reviewing responses to its first data request is the Commission satisfied that it has an accurate picture of these different platforms and how they compete with one another?

Answer. While the initial data requests provided valuable information, we will need additional data from all relevant providers to complete this proceeding.

Question 6. Is the Commission able to review accurately the functioning of this market with the data it has received to date?

Answer. While the initial data requests provided valuable initial information, we will need additional data from all relevant providers to complete this proceeding.

Question 7. I understand from the record that there are several providers offering competitive special access services using wireless technologies. Additionally, I also know that in many areas of the U.S. utility companies have networks where they offer competitive special access services. How many of these providers responded to the Commission's data requests?

Answer. No fixed wireless providers or utilities responded to the voluntary data requests.

Question 8. From these submissions, is the Commission able to accurately assess the functioning of these types of markets and their place in the overall special access service networks?

Answer. While the initial data requests provided valuable information, we will need additional data from all relevant providers to complete this proceeding.

Question 9. Finally, over the past two years, telecommunications networks, and specifically the special access network is experiencing a dramatic shift toward Ethernet services and away from legacy services. The Commission's initial data requests asked for data from 2010. With these large scale shifts toward Ethernet for backhaul use in the past two years, has the Commission followed on with further data requests, or does it plan to request this new data, to reflect this new build-out trend?

Answer. Yes, we intend to seek additional data through our comprehensive data request

Question 10. How will the Commission look to marry the special access technologies in use today?

Answer. We are looking at all relevant technologies and their uses.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN BOOZMAN TO
HON. JULIUS GENACHOWSKI

Question 1. Does the Commission intend to apply the new public—political file requirements to other platforms, and not just broadcasters? If Yes, then when? If No, then why not?

Answer. The Commission has not yet decided whether or when to require radio stations and MVPDs to transition their public files from paper to online. One of the largest MVPDs, Time Warner Cable, has voluntarily placed its files on political ad-

vertising online for the last two years. As we gain more experience with the TV stations, we will consider whether to apply the new online file requirements to radio stations and other MVPDs.

Question 2. What steps have you directed to reduce spending and to operate in a more cost-conscious manner? What cost-savings have these measures realized?

Answer. The Commission has taken a number of steps to save costs and eliminate unnecessary spending. For example, we expect to reap significant cost saving efficiencies from a number of IT and other initiatives while improving performance. The Agile Cloud Provisioning and Management initiative will save \$1.45 million annually and improve transparency, enabling greater access for consumer and industry. The Data Center consolidation follows OMB directives on consolidation and virtualization and will eliminate redundancies between Gettysburg and DC sites, while ultimately saving \$1.1 million annually. Other examples include:

- Rent—A savings in rent in the amount of \$1.4 million due to reducing the size of FCC headquarters and field office space.
- Contracts Services—\$4.1 million. This savings includes a reduction in contracts throughout the FCC, with significant savings identified in IT services contracts, administrative services, human resources and financial operations contracts. (see charts below)
- Equipment—Overall FCC equipment costs were reduced by \$500,000. The majority of these savings are in ITC software and hardware.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. PATRICK J. TOOMEY TO
HON. JULIUS GENACHOWSKI

Question 1. What is the justification for keeping the Title II docket open?

Answer. The Commission routinely leaves notice of inquiry proceedings open for extended periods so that the public can comment as appropriate. In the last year and a half, this docket has received 19 new filings, including as recently as last month.

Question 2. When are you planning to close the Title II docket?

Answer. See response above.

Question 3. Will you close the Title II docket if the D.C. Circuit Court of Appeals upholds the Open Internet Order?

Answer. It would be premature to comment on that issue at this time.

Question 4. According to the FCC's National Broadband Plan, 95 percent of the population lives in housing units with access to broadband. Do you believe broadband is being deployed to Americans in a reasonable and timely manner?

Answer. Congress directed the FCC to conduct an "inquiry concerning the availability of advanced telecommunications capability to all Americans," and to "determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. Last year's Broadband Progress Report showed that more than 20 million Americans lived in areas where they still could not get broadband. That is not reasonable or timely, and it is far short of "all" Americans. Commission staff are currently preparing this year's Broadband Progress Report.

Question 5. After receiving certain FCC approvals, LightSquared invested billions of dollars in a proposed 4G wireless network before the FCC then prevented them from offering service due to interference concerns with GPS devices that could not be resolved to the Commission's satisfaction. There have been accusations that LightSquared received preferential treatment by the Commission in obtaining certain waivers. LightSquared, however, claims they were treated unfairly when the Commission revoked their waiver and blocked them from building out their planned network. Please address both accusations and give a detailed explanation of the process that led to approval and then withdrawal of the ATC waiver.

Answer. The decisions of the Commission's bureaus with respect to LightSquared have been determined by the facts and arguments in the record.

I have included below a detailed summary of the procedural history of the LightSquared matter prepared by Commission staff:

2001

- Commission issues *Notice of Proposed Rule Making* to permit mobile satellite service providers to offer an ancillary component in response to requests filed by Mobile Satellite Ventures Inc. and New ICO Global Communications.

- Proposal invites comment on whether the proposed rules would protect GPS systems. *See Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band and the 1.6/2.4 GHz band, Notice of Proposed Rule Making*, IB Docket No. 01–185, 16 FCC Rcd. 15,532 (2001).

2003

- Commission adopts rules permitting MSS licensees to integrate ATC into their satellite networks to provide mobile service to areas where satellite signals are degraded or blocked (*i.e.*, urban areas and inside of buildings). *See Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, IB Docket Nos. 01–185, 02–364, *Report and Order*, 18 FCC Rcd. 1962 (2003), *as modified by Order on Reconsideration*, 18 FCC Rcd. 13,590 (2003).
- Rules require MSS licensees to offer an integrated satellite and terrestrial service—they must maintain a viable satellite service and cannot offer terrestrial service separately.
- Rules also allow up to 1,725 terrestrial base stations to be deployed in the L-band, which includes the spectrum adjacent to and below the GPS band.

2004

- Commission’s International Bureau authorizes SkyTerra (formerly MSV), to offer an integrated MSS/ATC service to users equipped with dual-mode MSS/ATC mobile devices.
- Authorization provides for expansive ATC, including the deployment of thousands of terrestrial base stations. *See Mobile Satellite Ventures Subsidiary LLC Application for Minor Modification of Space Station License for AMSC–1*, File Nos. SAT–MOD–20031118–00333, SAT–MOD–20031118–00332, SES–MOD–20031118–01879, *Order and Authorization*, 19 FCC Rcd. 22,144 (Int’l Bur. 2004).

2005

- Commission modifies the MSS ATC rules in response to petitions for reconsideration of the 2003 *Order*.
- Adopted rules were (and remain) consistent with the recommendations of the GPS industry and the Executive Branch, which included input from the Department of Defense.
- Commission removes the previously adopted limitation on the number of terrestrial base stations that may be deployed. *See IB Docket Nos. 01–185, Memorandum Opinion and Order and Second Order on Reconsideration* 20 FCC Rcd. 4616 (2005) (*ATC Reconsideration Order*).
- Extensively discusses the potential overload interference from L-band (SkyTerra) ATC base stations to Inmarsat mobile satellite terminals as well as potential overload interference from 2 GHz ATC mobile devices operating above 1995 MHz to PCS mobile receivers operating in the adjacent band below 1995 MHz.
- No one raises receiver overload interference issue.

2009 (March–April)

- Harbinger and SkyTerra together file an application for transfer of control of SkyTerra to Harbinger.
- SkyTerra subsequently files an application for modification of its authority for an ancillary terrestrial component, including requests for waivers of a number of the Commission’s rules for ATC operation.
- Commission invites public comment on both requests, triggering extensive comments.

2009 (July–August)

- GPS industry raises concerns about SkyTerra’s application for ATC modifications, stating that the existing out-of-band emissions limits would be insufficient to protect against interference to GPS from LightSquared’s planned low power base stations and indoor “femto-cells.” Out-of-band emissions are not the same as receiver overload, which is the basis of the current controversy.
- No one raises receiver overload issue.

- SkyTerra and the U.S. GPS Industry Council submit a joint letter to the Commission stating that the out-of-band emissions interference issues had been resolved. No commenter raises any other concerns about GPS interference.

2010 (March 15)

- National Broadband Plan Recommendation 5.8.4 calls for the FCC to accelerate terrestrial deployment in the MSS spectrum.

2010 (March 26)

- Commission's bureaus and offices issue two orders addressing the 2009 Harbinger and SkyTerra requests and comments:

(First Order) SkyTerra Subsidiary LLC Application for Modification Authority for Ancillary Terrestrial Component, *Order and Authorization*, 25 FCC Rcd. 3043 (Int'l Bur. 2010).

- Authorizes the transfer of control from SkyTerra to Harbinger, explaining Harbinger's plans to construct a hybrid-satellite-terrestrial network and noting terrestrial component would cover 90 percent of the United States.
- Notes Harbinger's plans to deploy a network that will cover 100 percent of the U.S. population via the satellite component and ultimately over 90 percent of the population via its terrestrial component.
- Observes that if Harbinger successfully deploys its integrated satellite/terrestrial network, it would be able to provide mobile broadband communications in areas where it is difficult or impossible to provide coverage by terrestrial base stations.
- Does not waive or alter MSS/ATC rules.

(Second Order) See SkyTerra Communications, Inc., Transferor and Harbinger Capital partners Funds, Transferee Applications for Consent to Transfer Control of SkyTerra Subsidiary, LLC, IB Docket No. 08-184, *Memorandum Opinion and Order and Declaratory Ruling*, 25 FCC Rcd. 3059 (IB, OET, WTB, rel. March 25, 2010).

- Modifies SkyTerra's authorization to provide ATC, applying conditions to address all technical concerns raised in the comment cycle and granting a request to increase the power level of the base stations.
- Commission's bureaus coordinate *Order* with relevant Executive Branch agencies. Notes DOD's concerns about potential interference to national security systems in certain circumstances and instructs the licensee to continue to work with DOD to resolve these concerns.
- No one raises receiver overload interference issue.

2010: (July-September)

- Commission follows National Broadband Plan recommendations and initiates a rule making to provide greater flexibility to deploy terrestrial service in the mobile satellite service. See *Notice of Proposed Rulemaking and Notice of Inquiry*, ET Docket No. 10-142, 25 FCC Rcd. 9481.
- GPS Industry Council files comments in September that include reference to the possibility of receiver overload interference to GPS receivers at a distance of about 100 meters from ATC base stations based on state-of-the-art filtering, and notes that for much of the mobile consumer GPS in use, including public safety (e.g., 911cellphones), the harmful interference effect would be somewhat worse than this case.
- GPS Council notes that, "[i]n earlier Commission proceedings, the Council has worked collaboratively with MSS operators of ATC to seek mutual agreements that facilitate successful MSS ATC operations and avoid interference to the GPS installed base. The Council believes that solutions are available to mitigate the otherwise unavoidable harmful effects described in these comments and looks forward to working collaboratively with interested parties to explore these issues and potential solutions."

2010 (November-December)

- November 15: LightSquared announces the successful launch of its first next-generation satellite, SkyTerra 1.
- November 18: LightSquared files a request to modify its ATC authority to accommodate its business plan of selling data network capacity at wholesale, rather than retail (as SkyTerra had done). The request seeks to allow wholesale service providers to offer terrestrial-only handsets at the same power levels and

conditions previously granted. See LightSquared Subsidiary LLC Request for Modification of its Authority for an Ancillary Terrestrial Component, SAT-MOD-20101118-00239.

- Commission places November 18th request on *Public Notice*. See Policy Branch Information, Satellite Space Applications Accepted for Filing, Report No. SAT-00738, *Public Notice* (rel. November 19, 2010); see also LightSquared Subsidiary LLC Request for Modification of its Authority for Ancillary Terrestrial Component, SAT-MOD 20101118-00239, *Order*, DA 10-2243 (IB, Sat. Div., rel. Nov. 26, 2010).
- GPS industry, GPS users and Federal agencies object to LightSquared's planned terrestrial deployment, alleging that the GPS environment will be changed by LightSquared's wholesale model because it will no longer be motivated to be cognizant of the impact on its own satellite service—based on a concern about major potential GPS interference due to “receiver overload.”
- Limited technical data is submitted related to the scope of the receiver overload problem and no mitigation is submitted.

2011 (January)

- International Bureau issues January 26th *Order* modifying LightSquared's authorization.
- *Order* provides a conditional waiver of the ATC “integrated services” rule to allow wholesalers to offer mobile terminals with only terrestrial capability, rather than “dual mode” capability (*i.e.*, the ability to communicate in a single handset or terminal via either a satellite or a terrestrial network).
- *Order* establishes a process to investigate the GPS interference issue that had been raised and stipulates that *LightSquared may not offer commercial service until the process is complete and the risk of harmful interference has been resolved*.
- *Order* imposes numerous other conditions to ensure that LightSquared will continue to provide a commercially competitive satellite service and will continue to develop and make available in the marketplace dual mode MSS/ATC-capable devices.

2011 (July)

- Technical Working Group submits report concerning results of testing on the GPS receiver overload issues.
- LightSquared states it will not utilize the upper 10 MHz of the L-Band in order to satisfy interference concerns.
- Commission issues a *Public Notice* requesting comment on the report.

2011 (August)

- Commission receives over 3,000 comments in the proceeding.

2011 (September)

- Commission releases *Public Notice* requiring additional testing. See *Public Notice*, Fed. Commc'ns Comm., Status of Testing in Connection with LightSquared's Request for ATC Commercial Operating Authority (Sept. 13, 2011).

2012 (February)

- Commission receives input from NTIA that receiver overload interference cannot be resolved at this time. Commission seeks public input on the NTIA recommendation, as well as on other related issues. Commission staff is currently reviewing the record developed in response to that Public Notice.

Question 6. In your testimony at the hearing you mentioned that you have eliminated 200 outdated rules. Are there more rules that can be identified and eliminated? Can you please explain your process in identifying rules that should be eliminated?

Answer. Consistent with President Obama's Executive Orders, the FCC has developed and published a plan for ongoing retrospective review of regulations, and I have instructed each Bureau and Office to take such actions as are necessary to identify additional rules and regulations that can be eliminated. The Commission continues its work to identify further rules for elimination.

Question 7. How much broadcast spectrum do you anticipate freeing using the incentive auctions?

Answer. The amount of spectrum cleared will depend on the extent of voluntary participation by broadcasters. The Commission is, and will continue, educating broadcasters on the options that are available to them, as well as encouraging their participation. The Commission held a TV Broadcaster Relocation Fund Workshop to focus on the design of the Commission's program to reimburse some broadcasters for the relocation costs they will likely incur as a result of the channel reassignments in connection to repacking as authorized by the Act. While it is not expected that all broadcasters will participate, voluntary incentive auctions present a compelling economic opportunity for many broadcasters. The Commission will reach out to, and work with, all affected parties in a process that is transparent and fair.

Question 8. If the incentive auctions do not produce a significant quantity of spectrum that can be reallocated, what will the Commission do to address the spectrum shortage?

Answer. Since 2009, the Commission has been working on a Mobile Action Plan, which contemplates an "all of the above" approach that includes freeing up more spectrum, but also more efficient use of spectrum and new ways to manage spectrum. Our plan focuses on five main areas: unleashing new spectrum, removing barriers to broadband infrastructure build-out, driving greater efficiency in networks and devices, promoting competition and empowering consumers.

Question 9. When will the first incentive auction occur?

Answer. This Fall we will initiate proceedings and staff will carefully evaluate all comments that are received. The process will involve the views of all interested parties through comments, workshops, and other means necessary to help guide an economic, data and fact-based driven effort in order to navigate the best path for a successful auction. The Commission intends to meet all statutory deadlines and expeditiously to meet the growing demand for wireless spectrum.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARCO RUBIO TO
HON. JULIUS GENACHOWSKI

Spectrum

Question 1. The FCC's National Broadband Plan set a goal of 500 MHz of spectrum for commercial mobile use, and the President endorsed that goal. How much spectrum has been reallocated consistent with the Broadband Plan? What steps are being taken to reach the 500 MHz goal?

Answer. Since 2009, the Commission has been working on a Mobile Action Plan, which contemplates an "all of the above" approach that includes freeing up more spectrum, but also more efficient use of spectrum and new ways to manage spectrum. Our plan focuses on five main areas: unleashing new spectrum, removing barriers to broadband infrastructure build-out, driving greater efficiency in networks and devices, promoting competition and empowering consumers.

Meaningful spectrum sharing among government and commercial users could substantially increase the efficiency of spectrum use, including by enabling use for commercial broadband of up to 95 megahertz of spectrum in the 1.7-GHz band. We are working expeditiously with DOD, through NTIA, with respect to the 1755 MHz band and addressing what will happen with the 2155-2180 MHz band. With the support and on behalf of the wireless industry, T-Mobile has applied for an experimental license in the 1755 MHz band. T-Mobile, CTIA and other participants are cooperating with DOD through NTIA. Also, small cells can significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz of spectrum for wireless broadband.

Question 2. Since service rules would have to be in place before the auction, and an auction have to be completed in mid-2014 for licensing by February 2015, can you commit to beginning a draft of the NPRM by the end of this year, particularly since the Commission has been considering the 2155 MHz band for some years now?

Answer. The Commission is on track to propose rules for incentive auctions by this fall. Staff are actively working so the Commission can start a proceeding this fall on the spectrum auction process and implementation. The process will involve the views of all stakeholders through comments, workshops, and other means necessary to help guide an economic, data and fact-based driven effort in order to navigate the best path for a successful auction. The Commission intends to meet all statutory deadlines and expeditiously to meet the growing demand for wireless spectrum before the looming spectrum crunch can have a negative impact on the wireless industry. The timing of subsequent stages of the incentive auction process will

become clearer after the NPRMs are adopted. The Commission intends to meet all statutory deadlines.

Question 3. As you know, PL 112–96 gives States the ability to “opt-out” of the FirstNet network in favor of their preferred—yet still interoperable—projects, and the Commission has previously granted waivers for public safety entities to build first responder networks. Florida has a Petition for Waiver currently pending at the Commission. In addition, Pembroke Pines, FL was one of 21 entities to be granted a waiver in 2010.

- Can early-deployments by States and communities with full funding and a commitment to interoperability with the future nationwide network create additional critical resources for that network?
- Why hasn't the Commission granted pending waivers in light of the critical need for those resources?
- What tools does the FCC possess to ensure early deployments can and do interoperate with the FirstNet network?

Answer. The Middle Class Tax Relief and Job Creation Act of 2012 established a framework in which to achieve a nationwide, interoperable public safety network. The Middle Class Tax Relief and Job Creation Act of 2012 charges the Commission with “facilitating the transmission” of the 700 MHz public safety spectrum to FirstNet. We must do so in a manner that serves the public interest, and provides the best possible foundation for FirstNet to build on. The role of FirstNet in achieving that goal is critical.

A draft order addressing the pending 700 MHz public safety waivers has been circulated to the Commissioners, but it is currently under discussion and has not yet been adopted. Because of the Middle Class Tax Relief and Job Creation Act of 2012's mandate for the FCC to facilitate the transition of the public safety broadband spectrum and the D block to FirstNet to hold the single nationwide public safety wireless license and to take all actions to build, deploy and operate this network, the Commission should consider minimizing impediments to the reallocation and licensing processes involved, in a manner that serves the public interest. The Commission's mandate includes balancing consideration of public interest factors that could support the grant of the waiver against the encumbrances that would be imposed on the spectrum slated by Congress for assignment to FirstNet. The Commission is working with NTIA and other stakeholders to address the waivers consistent with Congressional intent.

Pending Docket

Question 4. As of today, the petition for declaratory ruling in FCC docket 09–144 has been pending for 1,027 days. Could you please tell me if and when the Commission intends to take action to resolve this proceeding?

Answer. The Communications Act requires the FCC to ensure that rates for inmate calling services are just and reasonable, while prisons' legitimate security interests related to inmate calling services are adequately protected.

Multiple, competing petitions on these rate issues have been filed by stakeholders. In addition, the Commission has before it a petition regarding use of IP-based calling services by families of prisoners. These petitions raise complex issues. Commission staff is reviewing the record that has been compiled on these issues and continues to meet with interested parties to obtain a better understanding of the facts and arguments.

Question 5. In the past you have spoken in favor of providing certainty in the marketplace. Do you believe that not taking action on pending dockets and NPRMs creates certainty?

Answer. The Commission has made extensive progress in clearing items and reforming outdated programs. After no action on it for years, the USF Reform Order was reported out unanimously to provide broadband to unserved areas in a fiscally responsive manner.

We have also eliminated 222 obsolete regulations and have modified many others to reduce burdens: The Commission issued an Order to eliminate waste and abuse in the Lifeline program so that phone service can be provided to those who truly need it. The Commission also finalized the viewability Order, so that more customers can receive affordable access to basic tier digital programming.

Over the past six months we have made significant reductions in our backlog, including a more than 20 percent reduction in items pending more than six months in the Wireline Bureau, and an across the board 20 percent reduction in license applications and renewals pending more than six months. The Commission has a self-imposed 180-day shot clock for reviewing applications to assign or transfer control

of licenses or authorizations to determine whether the transfer serves the public interest. Better than 95 percent of all license transfer applications received since I became Chairman have been acted on within the 180-day period. We have also cut the average number of days required to review routine wireless transactions in 2012 by more than half.

I will continue to direct my staff to work on efforts to eliminate backlog and unneeded regulations so that we can streamline and improve the core functions of the agency.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEAN HELLER TO
HON. JULIUS GENACHOWSKI

Thank you for your testimony before the Committee. I appreciate the time you spent and your thoughtful answers to the following questions.

As you all know, our economy benefits greatly from the communications and technology sector. Competition and innovation have created new services and devices as well as high-quality jobs that have changed the lives of Americans. This sector is incredibly important to sustainable growth of our economy. That is why Congress must push the Federal Communications Commission to be the most open and transparent agency in the Federal Government. The industries you regulate are too important to our nation.

Under your chairmanship, I have seen notable steps in the right direction, and you have made process a "top priority." That being said, I am concerned that the FCC is not always as open and transparent as it should be. The problem as I see it today is that the FCC can pick and choose the rules it wants to follow when it wants to follow them. This method is convenient for the FCC, but it is not good government, and we owe more to Americans with business before the FCC.

I introduced legislation that pushes the FCC toward more transparency and openness. The intent of my legislation is not to hamstring the agency. It is to push them to be exactly what Americans expect from their government, open and transparent regulators of the laws passed by Congress.

A more predictable and consistent FCC will create jobs in Nevada, which has the unfortunate distinction of leading our Nation in unemployment for over two years. Every government agency should be committed to policies that promote job creation, investment and innovation. The technology sector has helped growth in our country for the last twenty years and will continue to if big government does not overburden it.

I introduced two measures, the Telecommunications Jobs Act (S. 1817) and the Federal Communications Commission Consolidated Reporting Act (S. 1780). These bills push the FCC to be the most open and transparent agency in the Federal Government and provide a streamlined method of reporting to Congress.

The following questions are in regards to those bills, and I would ask you to please respond to each question.

Question 1. One of the most important reforms I introduced would force the Commission to demonstrate beyond any doubt the need for regulation before intervening in the marketplace. I strongly believe that a cost-benefit analysis should be conducted on any regulation that will have a significant market impact, and I believe that before the FCC begins a rule proposal, they survey industry within three years of proposing a rule to determine whether that regulation is even necessary. A cost-benefit analysis mandating the FCC to identify actual consumer harm and conduct an economic, market-benefit analysis is consistent with President Obama's Executive Order 13563 on Improving Regulation and Regulatory Review. Would you support legislation that implements a cost benefit analysis consistent with the President's Executive Order? If not, why?

Answer. Consistent with President Obama's Executive Orders, I have directed the Bureaus and Offices to engage in a rigorous analysis of the costs and benefits associated with significant proposed rules, including involving our Chief Economist early in the rulemaking process to evaluate the economic impact of proposed rules. Such routine consideration of the costs and benefits of proposed rules is consistent with the agency's legal and regulatory requirements and is an example of good government practice and sound administrative procedure. I am committed to ensuring that such analysis is conducted by the agency in connection with any significant rule-making.

Question 2. Do you support legislation mandating the FCC to survey the marketplace within three years before initiating a rulemaking?

Answer. The Commission regularly engages with the public and industry in the communications marketplace as part of its work. Where necessary, the Commission

initiates proceedings with a Notice of Inquiry, which permits the agency to take a broader look at the market prior to issuing an NPRM. However, the Commission should be able to maintain flexibility to address the specific circumstances of each proceeding before it. There may be instances where a survey requirement would cause unnecessary delay in the Commission's ability to promote innovation, investment, and competition, and protect and empower consumers.

Question 3. Under your chairmanship, 85 percent of the *Notices of Proposed Rulemakings* have contained text of proposed rules. However, in the years before your chairmanship, only 38 percent contained the specific text. Also, at times, these NPRM's have been broad, leading to uncertainty because industries are not clear as to what the FCC is actually looking at. Do you believe that the FCC should include the actual language of any and all proposed new rules in every NPRM?

Answer. As you noted, I have taken steps to include text of proposed NPRMs where appropriate. The Administrative Procedure Act does not require the inclusion of proposed rules in all cases and in some circumstances, rules are not appropriate as the agency is looking to learn more about whether a rule should be issued and what it should look like.

Question 4. These NPRM's can stay open for quite a while costing industry time and resources without any knowledge of whether action will take place or not. I have heard from many of my constituents with business before the Commission that they simply cannot get an answer from the Commission on what seems to be routine petitions, applications, or proceedings.

Nevada has asked for a waiver from the FCC in regards to its 700 megahertz public safety early deployment rules. I understand that a decision on this could have been delayed until Congress passed a public safety spectrum allocation bill. Now, with provisions intended to facilitate a public safety network in place, the FCC still seems to be stalling on this.

Other companies have purchased spectrum in the lower 700 MHz and are awaiting a decision by the FCC on whether rules regarding interoperability, clearing channel 51 or waivers to build out requirements will be granted.

The issue of "special access" has been open for 10 years before the Commission without any resolution. This is an issue worth billions of dollars to the entire industry.

Furthermore, last July, I and a number of my colleagues on this Committee wrote to you and we did not receive a response for 8 weeks and only after multiple follow up letters and calls. When Senators on the Committee of jurisdiction have trouble receiving a response from the FCC, there clearly are problems with answering questions.

All of this leads to uncertainty. There doesn't appear to be much confidence among many companies that the FCC can act expeditiously on much of anything of significance to the industry. Proceedings can languish for 3, 5, or 10 years. Companies, generally, have a hard time investing, or increasing their investment, if they are uncertain what the regulatory environment is going to look like for their business.

You have worked on this issue and established internal 180-day shot clocks; however, this has not solved all the problems of open ended NPRMs. Do you believe that Congressional legislation implementing shot clocks on FCC action is appropriate? If not, why? Does the Commission expect to act on any of the examples listed above?

Answer. The Commission conducts over 70 different types of proceedings, and each individual proceeding involves unique circumstances that the Commission must carefully consider. Where appropriate, the Commission has adopted its own internal shot clocks to facilitate expedited processing of particular types of matters. But a uniform shot clock requirement for all proceedings would deny the Commission the flexibility needed to give appropriate attention to each individual proceeding.

Question 5. Since 2008, the FCC has conducted a number of merger reviews. How many times has the FCC failed to conclude the review within the 180-day shot clock period? How many times was the deadline missed? Was there any reason they were missed?

Answer. The Commission has a self-imposed 180-day shot clock for reviewing applications to assign or transfer control of licenses or authorizations to determine whether the transfer serves the public interest. Better than 95 percent of all license transfer applications received since I became Chairman have been acted on within the 180-day period. Each proceeding is unique, however, and in some cases circumstances require the Commission to take more time to ensure it is fulfilling Congress directive to approve a transaction only upon an affirmative finding that it is in the public interest.

Question 6. Going back to the President's Executive Order 13563, you have fully supported the ideals of the order, which in part states "For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings."

In the days before the record closed on the Commission's reform of the high cost of the Universal Service Fund, the FCC added 114 new pages of its own to use in the final decision. This practice denied public input on information that was used to render a decision which seemed to run counter to the President's Executive Order. Without adequate public and stakeholder input, the chance that a regulation will have unintended consequences increases. One example brought to my attention is that now smaller rural markets like those in my state will miss out on support because of the presence of fixed wireless services. They believe more dialogue and transparency could have avoided this outcome.

Do you believe that relying on reports in rulemaking and adjudications that are without a robust notice and comment process is appropriate? Or substantially altering a report after the period with which industry input or comments are accepted?

Question 6a. Do you agree that it is not the best practices of a government agency to dump data into a report at the 11th hour without industry input?

Question 6b. Do you agree that this method, while perhaps helpful to the Commission, is not open and transparent to the level benefitting an agency that issues regulations that have a significant economic impact?

Answer. With regard to the USF proceeding specifically, the additional material you reference as added to the record was primarily material that was cited by commenters to the proceeding. Commission staff formally placed that material into the record of the proceeding for the convenience of the public and to assist all stakeholders in understanding the materials that the FCC cited in its decision. Subsequently, the Commission's Office of General Counsel issued a public notice seeking comment on alternate means of having materials of this type added to the record, including requiring commenters to submit copies of all underlying materials they cite in their comments. Comments filed in response to that public notice, including from industry, objected to requiring commenters to include a copy of all cited materials. Going forward, I have instructed staff to submit documents into the record prior to the internal circulation of any draft rulemakings.

The FCC rightfully should review transfers of lines under section 214 of the Communications Act and the transfer of licenses under section 309 and 310 of the Communications Act. However, this review should not provide the FCC to extract a list of concessions from the applicant in exchange for approval. For example, in the 2011 Comcast/NBC Universal transaction order, the Commission accepted a "voluntary" commitment from Comcast to comply with net neutrality rules even if a court overturns those rules.

Question 7. This agreement was made through a transaction review and was done without any public scrutiny—as proposed conditions are often unknown until the approval order is announced. Do you believe that this type of rulemaking provides a scenario in which one set of rules exist for those who have merged and another exists for those who have not?

Answer. No. In its review of the Comcast-NBC Universal transaction, the Commission faithfully carried out its statutory responsibility to approve a transaction only upon finding that it is in the public interest.

Question 8. Have there been instances you have experienced when merger conditions have been imposed that was not directly related to the transfer questions?

Answer. During my Chairmanship, the Commission's merger conditions have been directly related to the issues raised by the relevant transaction.

Question 9. Do you believe it is appropriate to require the FCC to end this practice by requiring the FCC to narrowly tailor any conditions it imposes or commitments it accepts to only address harm caused by the transfer of licenses?

Answer. I believe that the Communications Act appropriately directs the Commission in its review of license transfers.

Last November, I introduced S. 1780, the Federal Communications Commission Consolidated Reporting Act. In section 3 of that bill, I identified 24 reports for repeal and elimination. 16 of those reports were ones required of the FCC. Many of these required reports appeared to me to be contemplated during eras long since passed; were ones with an exceedingly narrow focus; or ones that bore little relevance to today's communications marketplace.

Question 10. Have you had the opportunity to review the FCC reports that were identified in S. 1780? Would you take issue with any of the recommended deletions?

Answer. I support efforts to streamline the agency's reporting obligations. The reports identified in S. 1780 would be mandates from Congress, and to the extent Congress directs the Commission to provide alternative reports to Congress, I will work to implement the new requirements.

Notwithstanding my desire to leave the FCC of its reporting burden, S. 1780 calls for the FCC to provide a Report to Congress with respect to the state of the communications marketplace, covering such matters as competition in broadband deployment and barriers to the competitive marketplace. The FCC is currently required to do many of these narrowly focused reports, but it seems to me that what we lack is anything like a comprehensive look at the totality of the marketplace at regular intervals. My thought was that this should be done every two years.

Question 11. What is your opinion of such a proposal? I believe that both the FCC and Congress would benefit from such a Report.

Answer. See answer above.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN D. ROCKEFELLER IV
TO HON. ROBERT M. MCDOWELL

Agency Travel

Question 1. We have all heard the recent accounts of some Federal agencies misusing their travel budgets. I find these reports very disturbing. I therefore want to make sure that nothing similar is taking place at any of the agencies under this committee's jurisdiction.

Accordingly, please provide me the following data from the past twelve months ending June 30, 2012 for you, each of the members of your staff, the detailees to your office, and anyone you have announced as a special advisor, special counsel, or special assistant to your office. Chairman Genachowski, please also include the same data about the heads of the Commission's bureaus and offices.

Please include line items for the following for each person in the report:

- Indicate whether the person is an official member of your staff, a detailee, a special advisor, or other status.
- Dates of travel
- Any events attended while traveling
- Dates events were attended
- Length of stay
- Any registration fees associated with the event
- Total cost of traveling (*e.g.*, airfare, lodging, per diem, etc.)
- Indicate whether and how you or your staff participated in the event (*e.g.*, giving a speech, participating on a panel, etc.)
- If the travel involved or included unofficial business, were personal funds used?
- If the travel was not associated with a particular event, what was the purpose of the travel?
- Were all reimbursable funds spent in accordance with Federal laws?

Answer. Thank you, Senator, for your oversight in this area. At the outset, I respectfully note that throughout my six-year tenure at the FCC, approximately 36 percent of my annual office travel budget has gone unspent, on average, meaning that these funds have been returned. Next, in all cases, any instances of non-official business were paid using personal funds. Also, all reimbursable funds were spent in accordance with Federal laws. Finally, I ask that you please refer to *Exhibit A* for detailed line items.

Public Safety Waivers

This Committee worked hard to pass legislation that will make a nationwide, interoperable public safety network a reality. The law is clear that the network must be based on a single nationwide architecture. I recognize that, before the law was passed the FCC granted several waivers to allow certain jurisdictions, on a conditional basis, to begin building certain facilities. I also understand that a number of other jurisdictions filed waivers that remain pending.

There have been press reports that some at the Commission believe that the law does not speak directly to whether the FCC should grant new, additional authority to jurisdictions to begin building their own networks before the new FirstNet board is put into place. Such a position seems to undermine the clear intent of this Committee and of Congress toward creating a nationwide network. Such a position also

runs the risk of replicating the mistakes of the past by creating separate networks that may never be truly interoperable.

I recognize that allowing one or two of these jurisdictions to move forward with their networks, subject to appropriate conditions and vendor indemnification, may provide some benefits for public safety. But I have heard from experts that allowing a number of jurisdictions to move forward could make it much more expensive and difficult in the long-term to deploy a truly interoperable network nationwide. That was not Congress's intent.

Question 2. Will you commit that when you review whether to allow authority for jurisdictions to begin building their networks before FirstNet is set up that you will act in a manner that is consistent with Congressional intent?

Answer. Yes.

Question 3. In your opinion, how would the granting of new authority not complicate FirstNet's efforts to achieve nationwide interoperability for our first responders?

Answer. The FCC should do everything possible to make our Nation safe sooner rather than later. As you know, FirstNet is not yet established. Further, its operational status, construction plan and construction schedule are not expected for some time. As a result, I am concerned that denying new and additional authority may have the effect of penalizing those jurisdictions that have taken a lead in resolving their individual, localized challenges. A nationwide approach—as recognized in the legislation—may be ideal. At the same time, it is also possible to smartly and efficiently put together a nationwide network. Congress recognized this by establishing an avenue for local jurisdictions to “out opt” of the nationwide network. Likewise, more recently, the FCC's May 22, 2012, report setting forth minimum technical requirements for nationwide interoperability notes that the existing infrastructure elements under construction pursuant to FCC waiver “can be leveraged into the [nationwide public safety broadband network], while meeting the requirements for interoperability.”

Question 4. Also, how would you make sure that grants of new authority would not also run the risk of increasing the overall costs of the network?

Answer. Given that FirstNet is not established, its budget projections do not yet exist. I am hopeful that FirstNet's budget projections would include an array of options, which would allow stakeholders to carefully analyze the costs and benefits of its proposals.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUE TO
HON. ROBERT M. MCDOWELL

Media Ownership by Women and People of Color

Question 1. Are you satisfied with the level of media ownership by women and people of color today? If not, I would appreciate your suggestions on how media ownership by women and people of color can be improved. What role can the FCC play to encourage greater media ownership opportunities for women and people of color?

Answer. I continue to be concerned about the decline of female and minority ownership of broadcast outlets. I voted in favor of the Commission's 2007 Diversity Order, which included several measures designed to help “eligible entities” enter the broadcasting industry. Those measures included easing rules to encourage greater investment in eligible entities and affording such entities additional time to meet broadcast construction deadlines. Six of the 13 rules adopted in 2007 were struck down as arbitrary and capricious by the Third Circuit in *Prometheus II*, 652 F.3d 431 (3d Cir. 2011), because the Commission did not support how this definition would achieve the stated underlying goal of promoting the participation of women and minorities.

One of the rules that survived judicial review was the advertising non-discrimination rule, which prohibits broadcasters from entering into contracts containing provisions that discriminate on the basis of race or ethnicity, also referred to as “no urban/no Hispanic” clauses. In fact, I have been told that our rule banning such discriminatory practices was the first Federal civil rights rule adopted in decades. This rule has had far-reaching, beneficial effects. The Minority Media and Telecommunications Council estimates that the non-discrimination rule would effectively inject approximately \$200 million per year into the cash flow of minority broadcasters. Furthermore, the American Association of Advertising Agencies (4A's) has developed and circulated to the advertising industry—which we do not regulate—a non-discrimination policy framework to end the practice of “no urban/no Hispanic” dictates. In response, the CEOs of the largest advertising agencies, which control about 80

percent of media buys, have signed pledges to implement this non-discrimination policy and complaint process.

In response to the *Prometheus II* decision and as part of the quadrennial media ownership proceeding, we are considering the myriad proposals to enhance media diversity that have been introduced over the past few years. For those proposals aimed at expanding media opportunities for minorities and women, we have to be mindful that any action the Commission takes in this area must also be legally sustainable and satisfy the rigorous demands of the Equal Protection Clause, as interpreted under the Supreme Court's *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995), line of cases.

The Commission must ensure that it does not adopt regulations that are likely to be struck down on constitutional grounds and, for this reason, I have been outspoken about the need to launch new studies designed to overcome the demands of *Adarand*. I am pleased that the Chairman ordered a literature review of research into the critical information needs of the American public and the barriers to participation in the communications industry. The final results of this literature review were filed with the Commission on July 16 and confirmed my long-standing belief that diversity studies are needed.

I also continue to be interested in the potential viability of a new tax certificate program to promote broadcast ownership by economically disadvantaged businesses. Legislators through the years have expressed interest in reviving some form of the old FCC tax certificate policy, which Congress abolished in 1995. I would be pleased to offer lawmakers technical assistance in exploring the options for using a modified tax certificate program to encourage expansion of minority and female ownership of broadcast stations in ways that pass muster under *Adarand*.

In the meantime, the Commission can continue to encourage media ownership by hosting workshops that bring small and minority owned business together with large industry participants. For instance, in July 2012, the FCC hosted a conference on supplier diversity at the FCC and, in November 2012, we will host its fourth annual "Capitalization Strategies Workshop" for small and diverse businesses involved in the media and telecommunications industries.

Furthermore, the Commission can continue to encourage the private sector to reach out to minorities. Mentoring opportunities for minority owners and initiatives that promote real world experience are the best way to create success for minority entrepreneurs. I applaud private sector initiatives, such as the MMTC-Clear Channel Ownership Diversity Initiative, which provides ownership and training opportunities for minorities, women, and other underserved groups.

This program has resulted in four stations being successfully overhauled and relaunched by minority and women entrepreneurial partners of MMTC. Whenever MMTC is donated a broadcast station, the station is used to train minorities and women in broadcasting.

Spectrum Swaps

Question 2. Some industry representatives as well as a few Members of Congress have suggested that spectrum swaps are a direct and faster way to increase competition in the wireless broadband market. Do you agree with this suggestion? What efforts are being taken or can be taken by the FCC to explore spectrum swaps as a way to increase competition in the wireless broadband market?

Answer. I understand that the FCC staff routinely handles transactions that include exchanges of spectrum between wireless service providers. For instance, wireless providers reach agreement to exchange spectrum to align spectrum holdings and create contiguous service areas to promote greater efficiencies. Parties file assignment applications electronically and the staff processes them quickly. Given the ease of process, I agree that these types of swaps, and the certainty in the FCC's processes, aid in increasing competition within the mobile broadband marketplace.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN F. KERRY TO
HON. ROBERT M. MCDOWELL

Updating the Law

Question 1. The FCC has a wireless bureau, a wireline bureau, and a media bureau. Given that all three operate in a broadband world, should we have a broadband bureau at the agency that either incorporates these three separate bureaus or helps us understand the state of broadband competition and define and eliminate duplicative bureau functions?

Answer. Generally speaking, I subscribe to the belief that Congress tells the Commission what to do, not the other way around. Nonetheless, ideas that involve con-

solidation of bureaus and offices with redundant functions can be positive and constructive. The Internet has thrived because the government has generally kept its hands off of it. Therefore, if the creation of a new consolidated broadband bureau were to lead to the imposition of new regulations on the Internet, the creation of such a bureau would be counterproductive.

I do agree, however, with the overall assessment that our current statutory framework, has created market distorting legal stovepipes. This construct has often forced regulators and industry to make decisions based on whether a business model fits into Titles I, II, III, VI or none, even though the services delivered are often indistinguishable to the consumer. Therefore, if Congress contemplates potential legislation, it may want to consider an approach that is more focused on preventing concentrations and abuses of market power that result in consumer harm.

Question 2. The 1992 Act is 20 years old this year, and the 1996 Act is entering its late teens. Should we update these laws and if so, using what set of principles?

Answer. The communications marketplace has changed dramatically since 1992 and 1996 and the statute does not reflect the current marketplace. These laws were written before the Internet and mobile platforms revolutionized the way Americans communicate. As discussed above, the rigid regulatory structure based on the regulatory history of particular delivery platforms no longer works and is no longer applicable to today's dynamic and competitive landscape. As Congress contemplates FCC reform, it may want to consider an approach that is more focused on preventing concentrations and abuses of market power that result in consumer harm. Ideally, there might be a focus on a rewrite that would treat platforms in a like manner.

Spectrum

Cisco's U.S. mobile data forecast projects that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. With that kind of demand for space in our airwaves for wireless broadband, the Commission should be making every effort to make as much existing spectrum as usable as possible quickly.

Question 3. What are the prospects for Federal and private users to share the spectrum that agencies currently hold without disrupting vital public services and what can we do to speed up the process?

Answer. The prospects for commercial entities sharing spectrum held by Federal users is not clear at this time. As a preliminary matter, I note that sharing is an ill-defined concept. While I have strongly supported the FCC's work to promote sharing within the "TV white spaces" in the 700 MHz Band, the 400 MHz Band, and the 5 GHz Band, we must keep in mind that developing these sharing protocols has been challenging, time-consuming and costly. For example, the white spaces initiative began in 2002 and, although it has come a long way, the process is not yet complete. In addition, these sharing arrangements are not designed for or suited to robust, high-powered and ubiquitous commercial availability. Nonetheless, I remain hopeful that stronger leadership will result in agencies relinquishing spectrum for commercial auction. If we are left only talking about sharing, critical needs will be unmet and America's global competitiveness will be severely undermined.

Question 4. As space on the airwaves becomes increasingly congested, how will the FCC better arbitrate interference disputes between neighboring services in the future?

Answer. In my experience, instances of harmful interference between neighboring services arise under unique sets of circumstances and should be examined on a case-by-case basis. 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. By its nature, this undertaking is careful, deliberative and somewhat time-consuming.

I am hopeful that factoring into the Commission's interference analyses the role of receivers may be a means to make our analytical process more efficient. Therefore, I am pleased that the Commission has begun to examine the operation and performance of receivers within its interference analysis. The Commission's Technical Advisory Council recently established a working group on this matter and I look forward to learning more.

Conservative studies and estimates have suggested that use of spectrum on an unlicensed basis contributes at least \$50 billion annually to the U.S. economy, thanks to the benefits we all gain from widespread Wi-Fi availability, or uses like automatic highway toll payment, or business uses for smart inventory.

Question 5. Can you talk about the priority that the Commission places (or that you will place) on ensuring that there is an appropriate mix of spectrum coming to market both for auctions and for such unlicensed use?

Answer. As noted earlier, I have been an outspoken proponent of unlicensed use of the “TV white spaces” in the 700 MHz Band. Unlicensed use provides today’s entrepreneurs with a means to develop new and exciting products without the high barrier to entry posed by licensed spectrum use. In addition, unlicensed Wi-Fi has become an important tool for licensed carriers. Cisco recently reported that IP traffic carried over Wi-Fi alone is expected to surpass the amount of traffic carried over wired networks by 2015. A 2011 Juniper Research report states that, by 2015, 63 percent of traffic generated by mobile devices will transfer onto the fixed network via unlicensed Wi-Fi and femtocell technologies. Furthermore, unlicensed networks will pick up 90 percent of this offloaded data at some point in transit. This means that unlicensed spectrum, no matter where it exists, plays a critical role in the context of mobile broadband services and will continue to do so for the longer term.

Privacy

The FCC recently concluded an investigation into the Google Wi-Fi data collection incident where the agency found that Google’s actions did not violate section 705 of the Communications Act due to the fact that the incident occurred on unencrypted Wi-Fi, rather than a secured network.

Question 6. In light of the result of this investigation, do you believe that Congress should update section 705 to account for this gap in the FCC’s wiretap provisions?

Answer. As noted earlier, I subscribe generally to the philosophy that Congress tells me what to do, not the other way around. Furthermore, I am not familiar with, nor was I involved with, this investigation or its findings. I would note that Wi-Fi, whether encrypted or unencrypted, is an unlicensed, secondary wireless service. Thus, modifying section 705 would confer expanded FCC jurisdiction over a currently unlicensed service.

Interoperability

Interoperability of consumer devices within a spectrum band helps promote competition in wireless services. Since the early 1980s, the Commission has adopted rules or sent strong messages that it expects wireless service licensees to offer consumers equipment that can operate over the entire range of an allocated spectrum band. But interoperability does not yet exist in perhaps the most valuable spectrum bands the FCC has ever allocated—the lower 700 MHz band. In March, the FCC initiated a proceeding to promote interoperability in this band. I noticed that the NPRM would prefer that the industry propose a voluntary solution, as would I, but you also indicated an interest in moving to rules if that voluntary approach is unsuccessful.

Question 7. Do you believe interoperability of devices within this band matters, what is the FCC staff doing to monitor the efforts of the industry at arriving at a voluntary solution for the lower 700 MHz band, and how much more time do you believe the industry should have before you would push to conclude this proceeding and adopt rules if it appears that an industry solution is not possible?

Answer. I hope that all interested parties will come to the negotiating table and work in good faith to resolve the interoperability challenge in the lower 700 MHz Band. Government mandates should be a last resort. That maxim is especially relevant here because minimal regulation in the wireless sector has created an environment that has maximized opportunities for investment, innovation, competition and job creation. Before disrupting this fruitful environment with new government mandates, all stakeholders, including industry and consumers, should work as hard as they can to produce a private sector resolution. An independently-created interoperability framework stands a far better chance of success than would a top-down government regulation. In other words, the private sector is better at this than we are.

With respect to staff responsibilities and timing for FCC action, I respectfully defer to Chairman Genachowski.

Public Broadcasting

As a long-time supporter of public broadcasting, I believe that it plays a special and necessary role in our media landscape. I was pleased to see that on November 4, 2011 the FCC Consumer Advisory Committee adopted a recommendation that the FCC work with the Administration and Congress to support continued Federal funding of the Corporation for Public Broadcasting and local public broad-

cast stations, including those providing service to rural, tribal, native, and disability communities.

Question 8. Do you support this recommendation from the FCC Consumer Advisory Committee and can you share your views on the unique and necessary role that public broadcasting plays in our media landscape?

Answer. The Corporation for Public Broadcasting (CPB) is a non-profit corporation created as part of Public Broadcasting Act of 1967. Congress has found that “it is in the public interest to encourage the growth and development of public radio and television broadcasting, including the use of such media for instructional, educational, and cultural purposes;” “the encouragement and support of public telecommunications, while matters of importance for private and local development, are also of appropriate and important concern to the Federal Government;” and “it is necessary and appropriate for the Federal Government to complement, assist, and support a national policy that will most effectively make public telecommunications services available to all citizens of the United States.” 47 U.S.C. §391(a). The statute regarding the Corporation for Public Broadcasting is codified as Section 396 of the Communications Act of 1934.

The statute dictates that board members of the Corporation for Public Broadcasting are selected by the President of the United States and confirmed by the Senate. The CPB also submits an annual report to the President for transmittal to Congress. Furthermore, the CPB’s annual budget is composed almost entirely of an annual appropriation from Congress, plus interest on those funds. For Fiscal Year 2012, its Federal appropriation was \$444.2 million, along with an additional \$1 million in interest earned. The CPB, in turn, allocates 89 percent of these funds to support programming and station grants. *About CPB: Financial Information*, CPB, <http://cpb.org/aboutcpb/financials/budget/> (last visited July 31, 2012).

As you point out, the FCC Consumer Advisory Committee adopted and re-adopted a recommendation in November 4, 2011 and February 24, 2012, respectively, “that the Federal Communications Commission, in its interaction with the Administration and with the Congress, support continued Federal funding of CPB to continue its support for public broadcast stations, including those providing service to rural, tribal, native, and disability communities.” As demonstrated above, however, the FCC has no jurisdiction over the funding or oversight of CPB.

The U.N. and International Negotiations on Internet Governance

As former Congressman Boucher recently explained, “The best way to understand the current system of global Internet governance is as a hub-and-spoke relationship. At the hub, a loose confederation of standards-setting bodies ensures the Internet’s continued stability and functionality. Little, if any, regulation occurs at the hub. This arrangement leaves tremendous leeway for the sovereign governments—the “spokes”—to regulate the Internet within their borders.”

And that system has worked relatively well, with some unfortunate outliers trying to control their population’s access to information. Yet, there is pressure abroad for a new U.N. agency to assert international governmental control over the Internet. That pressure is coming from countries who wish to impose new tolls on service and countries that fear the power of open discourse on the Internet.

In a recent blog post, NTIA Administrator Strickling wrote about these proposals from China and others, “This is contrary to President Obama’s vision of an Internet that is interoperable the world over, and the United States will vigorously oppose such barriers.” And I know that this is a priority for Ambassador Philip Verveer and the State Department as well.

Question 9. Do all of you share the Administration’s point of view?

Answer. The Administration and I share a common point of view on this matter. I have been pleased to work with Assistant Secretary Strickling, Ambassador Phil Verveer and Ambassador Terry Kramer on this important matter. I am attaching a copy of an op-ed published in the *Wall Street Journal* on February 21, 2012, which outlines my view on this subject.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARIA CANTWELL TO
HON. ROBERT M. MCDOWELL

Question. Commissioner McDowell, what is “light licensing” and do you believe this is something that should be considered in the context of the broadcast white spaces?

Answer. I have long supported *unlicensed* use of spectrum in the broadcast TV white spaces. Among other benefits, unlicensed spectrum serves as an incubator for wireless innovation. TV white spaces, with its use of a geo-location database, serves

as a test bed for innovation in cognitive radio. Opening this band to unlicensed use is an important component of the long-term spectrum planning currently underway in the U.S. While there may be a place for “light licensing,” this concept is not defined, and, to my knowledge, is not yet a factor in the Commission’s analysis within the context of the broadcast TV white spaces rules.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. FRANK R. LAUTENBERG TO
HON. ROBERT M. MCDOWELL

Question 1. In response to a question on News Corporation, Chairman Genachowski responded that the FCC does not comment on the status of investigations and Commissioner McDowell concurred. Yet following the hearing, the press reported that Commissioner McDowell responded to reporters’ questions by commenting on the status of an investigation—saying he was unaware of any investigation into News Corporation. How is it possible that neither of you could comment on the status of the investigation during the Congressional hearing, yet Commissioner McDowell could respond directly and candidly to a reporter immediately after the hearing?

Answer. In response to your question regarding a possible investigation into News Corporation at the hearing on May 16, 2012, I agreed with the statements made by the Chairman, stating that “I think the Chairman has stated it, actually, quite eloquently. . . . I agree with what the Chairman said.” The Chairman’s response to your question was as follows:

Well, obviously, we have important responsibilities under the law. We’re aware of the serious issues that we see in the UK. These matters may come before the FCC as adjudicatory matters. I think it would be inappropriate for us to prejudge them, and also inappropriate to speak about any investigations we may have ongoing.

He then restated that “[w]e don’t comment, as other agencies of government don’t comment, on the status of investigations. Obviously, we have important responsibilities that we will take seriously. It’s important that we not prejudge it.”

In a blog posted on *The Hill* website, dated May 16, 2012, it was reported that “Republican commissioner Robert McDowell told *The Hill* he wasn’t aware of any active investigation into News Corporation at the FCC.” Andrew Feinberg, *Lautenberg wants FCC to probe News Corp.*, THE HILL (May 16, 2012), <http://thehill.com/blogs/hillicon-valley/technology/227869-lautenberg-wants-fcc-to-investigate-news-corporation/>. Further, in an interview on C-SPAN’s *The Communicators*, I stated that:

For any possible adjudicatory matter, we don’t comment. We don’t comment on investigations, whether they are or are not happening. I don’t know of any FCC investigation in this regard, but I may not know, as well. We have an Enforcement Bureau who can investigate things on their own. And, so we will follow the facts and the law and established Commission precedent and procedure in this case, should it become a case, and any other case that comes along as well.

Communicators with Robert McDowell, C-SPAN, May 17, 2012, <http://c-spanvideo.org/program/McDowell>. This interview was covered in the *Communications Daily* on May 18, 2012.

As in my testimony, my statements to *The Hill* and during *The Communicators* interview, I did not comment on the status of a particular investigation, whether an investigation is, in fact, happening or not happening or prejudice the outcome of any potential investigation. I only stated that I have no personal knowledge regarding whether or not an investigation exists and that, if a case were to come before us, we would follow the facts and apply the appropriate law in accordance with Commission precedent and procedure.

Question 2. During the hearing I asked you what it takes for the FCC to begin an investigation into the misconduct of News Corporation and whether that misconduct calls into question News Corporation’s fitness to hold 27 broadcast licenses in the United States. I was not asking you to prejudge the outcome of such an investigation, but rather whether the FCC would initiate one. What does it take for the FCC to begin an investigation into whether News Corporation is fit to hold its broadcast licenses in the United States?

Answer. I defer to the Chairman regarding whether the Commission will initiate an investigation into News Corporation. As stated above, I am not aware of whether or not there are any pending investigations involving News Corporation. However,

any additional investigation into New Corporation's fitness to be a broadcast licensee would be informed by our character qualification policies and precedent.

A review of a licensee's character is fact-specific and generally performed during a licensing proceeding—such as requests for a new authorization or to modify, renew, or transfer a license—to determine whether the public interest would be served by grant of an application. The Commission examines any relevant misconduct (*i.e.*, violations of the Communications Act or the Commission's rules and policies), as well as conduct that takes place outside the Commission's traditional purview (non-FCC misconduct), to determine whether an applicant would be truthful with the FCC and comply with its rules and policies in operating a broadcast station. In considering misconduct outside of the FCC's traditional purview, the Commission generally considers certain forms of adjudicated misconduct, such as felony convictions and misrepresentations to governmental units.¹ The Commission also has policies and precedent for corporate licensees relating to alleged misconduct by parent companies, subsidiaries, affiliates, and employees. Such policies and precedent should be considered in determining whether an investigation should or should not be launched.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK PRYOR TO
HON. ROBERT M. MCDOWELL

CVAA

The 21st Century Communications and Video Accessibility Act (CVAA) was enacted to update the media and communications accessibility requirements and expand access to current and emerging technologies.

I have heard concerns about the population of the statutorily required advisory committees and the resulting recommendations. Consumer and advocacy groups that serve on these committees face technical and legal capacity constraints that many businesses do not.

Question 1. Will you be cognizant of these inherent limitations and keep them in mind as you consider the recommendations put forth by the advisory committees?

Answer. Yes. I have not received any complaints regarding the composition of our statutorily required advisory committees or the resulting recommendations. I will keep such issues in mind when considering the recommendations of our advisory committees.

Question 2. It is my understanding that the Commission will soon consider the Advanced Communications Services provisions of the CVAA. How does the Commission plan to ensure that video conferencing services used by consumers who are deaf or hard of hearing are interoperable with each other?

Answer. I look forward to learning more about the timing and the substance of a forthcoming order implementing the Advanced Communications Services provisions of the CVAA. As we review the draft, we will proceed mindful of your concern and will be happy to work closely with you and your staff.

Phone Theft

In March, I sent a letter to Chairman Genachowski expressing my concern at what seems to be an epidemic of cell phone thefts. It is my understanding that technology within the phone could enable a manufacturer or wireless provider to identify a stolen phone and prevent reactivation of service. This has significant consumer privacy implications. I applaud the Commission's recent initiative to mitigate the theft of cell phones but I remain concerned.

Question 3. Would you walk me through the steps that the Commission has taken with regard to cell phone theft, particularly the establishment of the database and how you have addressed the privacy concerns that have been raised?

¹The Commission will consider unadjudicated non-broadcast related misconduct if it is "so egregious as to shock the conscience and evoke almost universal disapprobation." *E.g.*, Policy Regarding Character Qualifications in Broadcast Licensing Amendment of Part 1, the Rules of Practice and Procedure, Relating to Written Responses to Commission Inquiries and the Making of Misrepresentations to the Commission by Applicants, Permittees, and Licensees, and the Reporting of Information Regarding Character Qualifications, *Policy Statement and Order*, 5 FCC Rcd 3252, 3252 n.5 (1990); Policy Regarding Character Qualifications In Broadcast Licensing Amendment of Rules of Broadcast Practice and Procedure Relating to Written Responses to Commission Inquiries and the Making of Misrepresentations to the Commission by Permittees and Licensees, *Report, Order and Policy Statement*, 102 FCC 2d 1179, 1205 n.60 (1986); *Contemporary Media, Inc. v. FCC*, 214 F.3d 187, 192.

Answer. Given that the initiative to mitigate cell phone theft has been undertaken by Chairman Genachowski and his staff, I respectfully defer to him on this question.

Universal Service Fund Reform

I am concerned about the impact of Universal Service Fund reform on the continuation of public and private investment in broadband deployment.

Question 4. Would you provide more information about the rationale for the retroactive component of the regression caps?

Answer. The reforms are only intended to affect USF support going forward, not support that has been received in the past. Nevertheless, some carriers are concerned that some of the reforms will reduce their future support which will, in turn, make it impossible for them to pay off debts incurred prior to the adoption of our reforms. In such circumstances, carriers have a specific waiver process available to them which was issued as part of the USF Order. Such waiver requests will be considered on a case-by-case basis.

Question 5. What opportunities are there for carriers to correct data in the regression analysis other than submitting corrections to study area boundaries?

Answer. If carriers have concerns regarding the use of flawed data, it is my understanding that they can seek corrections through a streamlined waiver process, and they would not have to follow the stricter waiver requirements set forth in the USF order. I am seeking a formal clarification from the Wireline Competition Bureau regarding this point.

Question 6. Would you explain the Commission's formulation of setting benchmarks for High-Cost Loop Support?

Answer. Generally, the regression analysis approach was adopted by the FCC with the purpose of giving rate-of-return carriers an incentive to invest more efficiently and operate more prudently. It was expected that the analysis would compare carriers' costs to similarly situated carriers and place limits on those carriers whose costs are significantly higher. As for how the benchmarks were specifically formulated, they were developed by the Wireline Competition Bureau staff and did not come to a full vote of the Commission. As such, I respectfully defer to Chairman Genachowski for the details on their formulation.

Question 7. Some contend that regression analysis will change cost recovery revenues from year-to-year which creates uncertainty and may negatively impact investment in rural areas. How will the Commission balance the need to control costs while encouraging network investment in rural areas?

Answer. The current regression analysis was set forth on April 25, 2012, in a Wireline Competition Bureau order. The bureau order provides certainty through 2014. After 2014, it is my understanding that the Wireline Competition Bureau has been working with some of the associations for the rural carriers to help get a more accurate projection of potential fluctuations in funding levels. Having said that, I have consistently said that USF reform is an iterative process and we will constantly monitor its implementation, listen to concerns, and quickly make adjustments, if necessary.

700 MHz Spectrum

Question 8. It is my understanding that the Commission has initiated a Notice of Proposed Rulemaking regarding interoperability in the lower 700 MHz band. Does the Commission anticipate the completion of this proceeding before the end of the year?

Answer. Given that this question pertains to timing of an open proceeding, I respectfully defer to Chairman Genachowski.

Low Power Television

Question 9. For many years, Class A and Low Power Television Service (LPTV) stations have provided valued local, religious, Spanish language, and other programming. Communities have come to rely on this niche programming that may not otherwise be available. How will the Commission work to ensure the viability of Class A and LPTV during its implementation of the Middle Class Tax Relief and Job Creation Act?

Answer. I recognize the benefits that low power TV stations provide to their communities. LPTV, however, is a secondary service and stations are displaced if they cause unacceptable interference to a full power station or other spectrum users. Furthermore, the spectrum legislation does not include or protect LPTV stations. Class A stations, however, have more protection rights and are capable of participating in the spectrum auction. As we start working to implement the Middle Class Tax Relief and Job Creation Act, we will keep your concerns about Class A and LPTV stations in mind and be happy to work with you and your staff.

Question 10. What is your position on mandatory channel sharing for LPTV?

Answer. The idea of *mandatory* channel sharing for LPTV has not been specifically raised with me and, to my knowledge, is not an issue that is currently under consideration by the Commission. The concept of channel sharing, however, is being widely discussed throughout the Commission for many services. For instance, the Commission, in its recent Channel Sharing Order, adopted rules to allow for the sharing of broadcast channels by stations that choose to share a 6 MHz channel with one or more other stations in connection with the incentive auction. These rules permit stations to relinquish spectrum for new wireless services while allowing them to continue to provide broadcast television services and receive a capital infusion from the auction proceeds. The channel sharing permitted by this order is completely voluntary—both in regard to participation and channel sharing partners—and is only available to broadcasters that will participate in the incentive auction. Thus, LPTV stations may not participate at this time. The Commission, however, stated that we “will consider how channel sharing will be applied outside of the incentive auction context in a future proceeding.”

The Commission does have mandatory time sharing for NCE FM stations that do not operate 12 hours per day each day of the year and is seeking comment on whether we should extend this mandatory time-sharing to the LPFM service. These radio services, however, are not auctioned services; whereas, LPTV stations are required to be auctioned pursuant to section 73.5000 of the Commission’s rules. Mandatory channel sharing may be difficult to implement for an auctioned service.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE MCCASKILL TO
HON. ROBERT M. MCDOWELL

Question 1. Last year, I raised concerns with the FCC regarding the Universal Service Fund’s (USF) Lifeline Program. In response to these concerns, the Commission has taken steps to crack down on waste, fraud and abuse within the program. The recent announcement that 20,500 letters will be sent in Missouri to eliminate duplication was welcome news. The implementation of a database to help detect and prevent duplicates is an important tool, but I remain concerned that further action needs to be taken to address fraud. Has the FCC conducted its own investigation into possible fraud occurring within the Lifeline program, and if so what were the findings of that investigation?

Answer. I respectfully defer to Chairman Genachowski on this question since investigations are under the control of the Chairman.

Question 2. Has the Commission examined the marketing agreements providers are using to advertise Lifeline products to consumers?

Answer. Yes, the Commission has been examining the use of marketing materials in the context of the Lifeline program. In fact, the Commission included the following language in its January 31 Lifeline Order:

To increase accountability within the program and to target support where it is needed most, we require that ETCs providing Lifeline-supported services make specific disclosures in all marketing materials related to the supported service. We adopt rules requiring ETCs to explain in clear, easily understood language in all such marketing materials that the offering is a Lifeline-supported service; that only eligible consumers may enroll in the program; that documentation is necessary for enrollment; and that the program is limited to one benefit per household, consisting of either wireline or wireless service. We also require ETCs to explain on certification forms that Lifeline is a government benefit program, and consumers who willfully make false statements in order to obtain the benefit can be punished by fine or imprisonment or can be barred from the program. For purposes of this rule, the term “marketing materials” includes materials in all media, including but not limited to print, audio, video, Internet (including e-mail, web, and social networking media), and outdoor signage, that describe the Lifeline-supported service offering, including application and certification forms. These disclosures will help ensure that only eligible consumers enroll in the program and that those consumers are fully informed of the limitations of the program, so as to prevent duplicative or otherwise ineligible service as well as other forms of waste, fraud, and abuse. Additionally, we require every ETC to disclose the company name under which it does business and the details of its Lifeline service offerings in any Lifeline-related marketing and advertising. (*See* July 31st Lifeline Order, para. 275)

Additionally, in that Order, the Commission directed “USAC to undertake ongoing reviews of ETCs’ marketing materials sufficient to ensure compliance with program

rules.” (*Id.* at para 276). The Commission left “the scope and frequency of those reviews to USAC’s discretion, but direct[ed] the Wireline Competition Bureau to oversee USAC’s efforts to review the ETCs’ materials.” (*Id.*)

Question 3. As required by the Commercial Advertisement Loudness Mitigation (CALM) Act, the FCC published an order last December outlining practices that networks and cable stations must implement by this December. I understand these rules have not yet been published in the *Federal Register*, and I have heard little about progress since December. Are we on track to see this legislation—strongly supported by consumers—fully implemented by the end of the year?

Answer. The Commission adopted and released the Report and Order implementing the CALM Act on December 13, 2011. The Commission published the CALM Act Order in the *Federal Register* on July 9, 2012. Additionally, I have been informed that the Commission has received approval from the Office of Management and Budget (OMB) for the new and modified information collection requirements contained in the CALM Act Order. It is my understanding that the rules should take effect on December 13, 2012 as planned. It is always possible, however, that unforeseen legal challenges could delay implementation.

Question 4. In December, the International Telecommunication Union (ITU) will convene the World Conference on International Telecommunications (WCIT-12) in Dubai to renegotiate the International Telecommunication Regulations. A key topic of discussion is expected to be whether and how to expand it to cover the Internet. To what extent is the FCC involved in policy and technical discussions in advance of the ITU meeting?

Answer. Regarding the policy and technical responsibilities of the FCC staff in general, I respectfully defer to Chairman Genachowski. In the meantime, I have been fully engaged on this important issue. I have written an editorial for the *Wall Street Journal* (which is attached), delivered speeches domestically and internationally and testified before the House Subcommittee on Communications and Technology. In addition, I have met with officials at the International Telecommunications Union, fellow regulators around the world, as well as private sector stakeholders to raise awareness and enlist support.

Question 5. What is the view of the Commission on proposals by other nations to move oversight of critical Internet resources, such as naming and numbering authority, to the ITU or other international body?

Answer. While I cannot speak for the full Commission, I will reiterate that I oppose any and all efforts by the ITU, or any governmental body, to regulate the Internet. For an outline on my position on this matter, please see the attached copy of an op-ed published in the *Wall Street Journal* on February 21, 2012.

Question 6. American companies have had an historical advantage when it comes to the Internet because the innovation that has fueled the growth of the Internet started here. Companies were created in an environment where unconstrained Internet access provided them with a platform to succeed. In this way, America had a “strategic bandwidth advantage” over other countries. It was perhaps inevitable that this advantage would narrow, as broadband speeds have improved around the world. Given that context: Is it your view that this “strategic bandwidth advantage” has led and will continue to lead to job creation and greater innovation?

Answer. The Internet has thrived because government has generally taken a hands-off approach. If we do not alter that approach, it is my belief that America will continue to lead the world in Internet-related job creation and innovation.

Question 7. There has been bipartisan consensus in this body to encourage deployment and adoption of broadband for the economic and social benefits it brings. How do data caps help or hinder in accomplishing that goal?

Answer. The Internet has flourished due to the fact that the government has largely not imposed regulations on it. Government interference in Internet service providers’ abilities to manage their own systems will hinder their ability to freely choose how to allocate resources and will likely slow continued investment in broadband deployment.

Question 8. On the surface, usage-based billing makes sense for consumers but I am concerned about the chilling effect data caps could have on future growth of Internet video and other content. How do we ensure fair billing practices for consumers without creating a system that stifles innovation and growth of the Internet?

Answer. I am sure you would acknowledge the FCC’s long-standing support of low power television and appreciate the success of low power TV since the FCC created the service in 1982. During this span of 30 years you are no doubt aware that low power TV has developed into an essential source of information and entertainment

for many diverse communities across the country. I think two perfect examples of this dynamic would be the audiences who enjoy Spanish-language programming and those who enjoy religious programming. Likewise, LPTV has been the an entry point for small businesses into the broadcast market and today, many LPTV owners are small businessmen who work hard to continue to serve their local communities with news and resources aimed at the community.

Question 9. With this in mind, and also considering the likely end to a great deal of low power programming as a result of the repacking, how do you expect that this approaching void in unique programming will be filled with respect to the core missions of diversity and localism?

Answer. As you know, LPTV is a secondary service. Stations may be displaced if they cause harmful interference to a full-power station or primary user, and the spectrum legislation does not include or protect LPTV stations. Hopefully, some LPTV opportunities will still remain after repacking. We do need to recognize, however, that the video programming landscape has changed dramatically. Broadcast is no longer the only outlet for speech. The Internet has proven to be the most “disruptive” technology in history and has allowed Americans to access programming to watch whenever, wherever and has greatly enhanced competition. It is my hope that original content on the Internet will continue to grow and I would encourage displaced LPTV broadcasters to consider online options.

Question 10. I would ask each of the commissioners, will you support rules that allow LPTV to survive after the repack?

Answer. I recognize the benefits that low power TV stations provide to their communities and would be supportive of rules that enable their success after any “repacking.”

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
HON. ROBERT M. MCDOWELL

Question 1. As I brought up in the FCC nominations hearing in November, we have a population of television stations currently operating on the northern border of Canada, particularly in Lake of the Woods County. They applied for channel reallocation after the DTV transition but had to wait years to get final approval from the Canadian government and the FCC this January.

Looking ahead to the future, the need for international cooperation when it comes to spectrum is important to our translator operators on the northern border. Has the Commission begun coordination with our Canadian counterparts as it relates to incentive auction legislation passed in February? (Senator Klobuchar asked this question in Committee and requested written follow up)

Answer. I agree that there is an important need to closely coordinate with our Canadian counterparts as we move forward to implement the legislation passed in February. The Commission will also need to work with our counterparts in Mexico on this issue. As this question pertains to staff efforts to undertake these responsibilities, I respectfully defer to Chairman Genachowski.

Question 2. I believe of one of the most impressive programs the FCC operates is the E-Rate program supporting communications technology in schools and libraries. Senator Rockefeller and Senator Snowe led the effort in creating a program that truly benefits schools and kids around the country. Minnesota has received a total of \$344 million since the E-Rate program started in 1998. This support has enabled schools and libraries across rural Minnesota to have telecommunications and broadband service giving students the ability to enhance their education. I understand that with the increase in demand from schools for broadband support, E-Rate program resources are stretched thin, including staff time to review and audit applications.

Will you commit to keeping the resources for administering the E-Rate program targeted at the intended focus of connecting schools and libraries with communication technologies?

Answer. Yes. Some have advocated that E-Rate funds be used to establish a digital literacy program, but my interpretation of Section 254 of the Telecom Act is that it does not allow for E-Rate funds to be used for such educational purposes. Therefore, in addition to the establishment of such a program taking from limited E-Rate resources, the FCC may not have the legal authority to administer a digital literacy program to begin with.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TOM UDALL TO
HON. ROBERT M. MCDOWELL

USF Reform and Tribal Communities

Question 1. Chairman McDowell, I support reforms to bring the universal service fund into the broadband era. One of the past failures of USF is on Tribal lands. As you know, Native American communities have the worst telephone connectivity rates in the country. Broadband availability rates are even worse, perhaps just 10 percent of households. These are precisely the areas that can benefit the most from Internet technologies that eliminate geographical distance—whether it is for e-Commerce, distance learning, or telemedicine. So I want to thank you and all the Commissioners for continued attention to the “digital divide” challenge on Tribal lands. Could you discuss how USF reforms will better serve Tribal communities that currently face a digital divide when it comes to broadband?

Answer. Since arriving at the Commission in 2006, I have made support for Tribal and Alaska Native lands a priority during the course of my work on Universal Service reform. Accordingly, the USF Order from last fall recognized the unique needs of Tribal lands in various ways. For example, the Order created special mobility funds—Tribal Mobility Fund Phase I (\$50 million) and Tribal Mobility Phase II (\$100 million)—which were designed to increase deployment of mobile broadband to Tribal lands, established tribal engagement obligations between eligible telecommunications carriers and tribal leaders, and set forth a priority review process for waiver petitions that pertain to Tribal lands.

Question 2. Given the unique digital divide challenge on Tribal lands, how will USF reforms ensure that telecommunications companies in Tribal areas are able to bring broadband to unserved communities?

Answer. Unfortunately, a high proportion of Tribal lands are currently not served by broadband. As part of its USF reform efforts, the Commission tried to find new ways to target funding toward areas of our nation where broadband has not been deployed. To help meet this objective, the Commission reformed certain components of the USF program that were not fiscally prudent. For example, prior to the Commission’s reforms, multiple providers were able to receive high cost fund support for the same locations. Additionally, providers were permitted to receive subsidies to serve areas that were already served by unsubsidized competitors. Ending these components of the USF system will allow for the funds to be retargeted to areas of our nation that are unserved, such as on Tribal lands. Additionally, in addition to the tribal mobility funds discussed above, the Commission also created a special “remote areas” fund which will become available for remote parts of our nation.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK WARNER TO
HON. ROBERT M. MCDOWELL

Question 1. Two years ago, the President announced his intention to free up 500 MHz of spectrum for wireless broadband use. This initiative is even more necessary today due to exploding data usage by consumers, which is leading to faster-than-expected capacity constraints across the country. Are you satisfied with the current pace of the identification and reallocation of spectrum to commercial broadband use? If not, why not? Do you have additional suggestions about how Congress or the Federal Government could accelerate the process?

Answer. The National Broadband Plan, released in March 2010, recommended that the government identify and release 500 megahertz of spectrum for mobile broadband use over the course of ten years. In the intervening years, the government has neither identified nor released any such spectrum. Furthermore, no plans appear on the horizon that would make available new spectrum for mobile broadband use. Accordingly, I am disappointed.

I am all the more disappointed to learn of the recent findings of the President’s Council of Advisors on Science and Technology (PCAST). In its report of July 20, 2012, PCAST concludes that “the traditional practice of clearing and reallocating portions of the spectrum used by Federal agencies is not a sustainable model for spectrum policy.” PCAST further concludes that, instead “the best way to increase capacity is to leverage new technologies that enable larger blocks of spectrum to be shared.”

First of all, “sharing” is an ill-defined term. But more importantly, sharing is not a panacea, and will not likely lead to widespread robust deployment of mobile broadband, let alone result in new revenue to the U.S. Treasury. Therefore, I remain hopeful that the Federal Government will think more creatively to identify new ways to encourage the Executive Branch to relinquish Federal spectrum for

auction, as well as to help create a policy framework that encourages greater technological advancements and investments in spectral efficiency—that is, to squeeze more capacity out of currently available airwaves.

Question 2. The USF reforms—which I supported—seek to deploy more mobile and fixed broadband services to rural and underserved America. At the same time, mobile data forecasts indicate that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. Rural Virginia wants to be part of the broadband economy, however, high quality broadband service just hasn't been available where consumers and rural economic development needs demand it. What would happen to the pace of rural broadband deployment if Universal Service Fund Reforms are blocked or slowed down at this time?

Answer. The USF Order steered USF funding toward areas of our nation that are currently unserved by broadband. To that end, the FCC reformed certain components of the USF program that were not fiscally prudent. For example, prior to the Commission's reforms, multiple providers were able to receive high cost fund support for the same locations. Additionally, providers were permitted to receive subsidies to serve areas that were already served by unsubsidized competitors. If these, among the many other USF reforms, are blocked or slowed down, efforts to support broadband in unserved areas would be thwarted.

Question 2a. Why is it important to move forward in terms of leveraging existing Federal funding to deploy more broadband to rural and underserved America?

Answer. One of the driving forces behind USF reform was the need to ensure that those funds are leveraged to the maximum extent possible. After all, USF is ultimately paid for by the consumers, and the Commission has a responsibility to ensure that these funds are used wisely. In addition to the reforms discussed in the previous question, the USF Order also established a competitive auction process which will hopefully lead to a more efficient system in the future.

Question 2b. I sent a letter to the FCC in 2011 arguing that although 4 Mbps download/1 Mbps upload may be adequate for now, this standard should not be considered an acceptable level of service in the future. How important is it to you to see that the acceptable level of broadband service advances over time?

Answer. It is very important for policymakers to implement policies that encourage—and not hinder—advances in broadband services. As forth in Section 254(b)(3) of the Telecommunications Act, consumers in rural areas of our nation “should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas.” In other words, it's not just a good idea, it's the law.

Question 3. The Commission has a number of highly anticipated open Notices of Proposes Rulemaking. Now that the Commission has five highly capable commissioners, how soon do you expect to reach decisions on key issues? I would encourage you to reach decisions on important matters as soon as possible because the delay of long-standing rulemakings has caused some frustration.

Answer. Thank you. I agree. We should strive to finish all of our tasks as quickly as possible without sacrificing quality.

Question 4. Looking back at FCC data stretching to 2005, the number of full-time equivalents in the Office of Engineering and Technology appears to have dropped from 116 to 81. Do you believe this reduction is the source of the backlog? Why has this office, which would seem to be at the heart of the Commission's work, have declined over time when other bureaus or offices have grown or at least stayed flat?

Answer. Although I applaud intelligent efforts to make government more efficient through beneficial reductions in head counts, by every objective measure I have seen that the decline in the number of quality engineers at the FCC has made it harder for us to carry out our Congressionally mandated obligations. In other words, I share your concern about the decline in the number of engineers in the Commission's Office of Engineering and Technology. In fact, I wrote to Chairman Genachowski on this and other matters in July 2009. The Commission's most precious resource, really its *only* resource, is its people. Many of our most valued team members are nearing retirement age or have already retired. We need to do more to recruit and retain highly-qualified professionals to fill these slots.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
HON. ROBERT M. MCDOWELL

Senator Begich Opening Statement

Chairman Genachowski, I want to thank you for working with me during the FCC's recent efforts to reform the Universal Service Fund. I understand the need for efficiencies, and overall support the notion of USF reform. I also understand the FCC's efforts to work within a reasonable budget. However, the reality is that given Alaska's geography, distance from the Lower 48, and the very remote locations of small rural communities, all of whom must be connected to 'the grid' via "middle-mile" terrestrial, satellite or undersea fiber circuits, means that Alaska is very different. Our distances are greater, our population is smaller, and our costs are much higher, particularly as it relates to the very high cost of middle-mile circuits for broadband.

Question 1. I understand the Commission desire to establish capital expense and operating expense limits for rural rate of return carriers. And, whether I agree or not, I understand that your staff's recent order establishing what is called a "regression analysis" to limit expenses puts a limit on most small companies at their current level of capital and operating expenses. Thank you for revisiting the formula recently, however there are still some companies that will be severely impacted by reductions to be implemented on July 1. I understand that your staff is well aware that the model contains data errors and other possible analytic flaws.

Since your staff admits that these flaws exist, why doesn't the FCC limit the July 1 impact to the proposed limitation of all companies to their current level of expenses instead of implementing the reduction on a few when the reductions may be based on data errors and flaws.

Answer. First, the constructs of the regression analysis were created by Wireline Competition Bureau staff, under the control of the Chairman, and were set forth in a bureau level order. Second, I have consistently said that USF reform is an iterative process and we will constantly monitor its implementation, listen to concerns, and quickly make adjustments, if necessary. Third, if carriers have concerns regarding the use of data that is flawed, in their view, it is my understanding from the Commission's bureau professionals that the carriers can seek correction of the data through a streamlined waiver process, and they would not have to follow the stricter waiver requirements set forth in the USF order. I am seeking further clarification from the bureau regarding this point.

Question 1a. I know that the order limits the initial level of the impact and transitions in the impact, but why implement this reduction on a few until you know that you have it right?

Answer. For those carriers that are concerned that data errors and flaws have incorrectly led to reductions of USF support, it is my understanding that they can file a waiver petition for correction of such data through a streamlined process. I am seeking further clarification from the bureau regarding this point.

Question 2. It appears highly likely that as a result of the November USF/ICC order many rural carriers will lose revenues—both USF support and from elimination of crucial intercarrier compensation. Is that correct?

Answer. While universal service funding levels will be reduced for *some* rate-of-return carriers due to the Commission's USF reforms, other rate-of-return carriers will see an increase in universal service funds due to the reforms. Regarding intercarrier compensation reform, the Commission established a regime to phase-out hidden subsidies. It provided rate of return carriers a longer transition period (9 years) compared to the transition period provided for price cap carriers (6 years). These intercarrier compensation reforms, coupled with the recovery mechanism, were intended to provide more certainty than the previous *status quo* for the rate-of-return industry, especially since many rate-of-return carriers have increasingly faced line loss at an unpredictable rate.

Question 3. Alaska, like 22 other states, has a complimentary state level universal service program. The Alaska state fund disburses over \$15 million to Alaskan carriers each year. Do you anticipate these State funds will have to expand to cover revenue lost from the reforms you are implementing? And if so, have you calculated how much these State funds will need to grow?

Answer. Many of the USF reforms have not yet taken effect and various petitions are still pending before the FCC. Therefore, it is premature to know whether state funds will need to be used.

Question 4. The E-Rate program has always meant a great deal to the State of Alaska, ensuring that the children and educators living and working in our state's most remote towns and villages have access to the Internet and distance learning

and professional development courses that are otherwise unavailable to them locally.

Let me quote from comments filed with the FCC last week by the Superintendent of the Dillingham City School District: As a small, rural school district in Alaska that has high poverty, low socio-economic, and predominantly native Alaskan population (Yupik), "I want to thank the FCC for our current level of E-Rate funding. We are an "off the road" community, meaning the only way in and out is by air, dog sled, snow machine, or boat. We just recently acquired access to high-speed fiber Internet via GCI Corporation extending this service to rural, remote areas of Alaska. The cost for this more than doubled our annual rate and without the current E-Rate support we could not afford this service." Is there a better way to administer the digital literacy program without damaging E-Rate processing?

Answer. First, I recognize that USF has played a critical role in many rural parts of our nation, especially in Alaska, for education, health care and general communication needs. Second, Chairman Rockefeller asked at the hearing whether I promised not to take funds from E-Rate, funnel funds through E-Rate, or use E-Rate legal authority for digital literacy initiatives, and I responded "yes." Finally, as to whether there is a better way to administer a digital literacy program, my interpretation of Section 254 of the Telecom Act is that it does not allow for E-Rate funds to be used for such educational purposes. Therefore, in addition to the establishment of such a program taking from limited E-Rate resources, the FCC may not have the legal authority to administer a digital literacy program to begin with.

Question 5. Also wish to highlight the importance of keeping intact reliable source of communications to relay emergency and lifesaving information to those areas that lack reliable cellular or Internet service.

It is imperative that rural communities continue to have reliable sources of communications in cases of emergency and lifesaving situations.

Can the Commission comment on ways to improve the distribution of emergency alert information?

Answer. See answer below.

Question 6. The due diligence work done day in and day out by local broadcasters will be lost if constituents can't receive it. How does the FCC intend to improve this?

Answer. I have heard from many broadcasters about the benefit of broadcast signals to provide vital information to Americans during emergencies. They stress that one-way broadcast transmissions do not suffer from the capacity constraints experienced by wireless systems when, during an emergency, everyone is attempting to use their devices to contact their families and access the Internet. I have seen demonstrations of Mobile TV and Mobile EAS, which will allow mobile devices to display broadcast signal if they contain the requisite chip and software or which the use of a device with an antenna that can plug into a wireless device. This could develop into a valuable means of distributing emergency alerts and the information compiled by broadcasters to the American people, especially in rural areas.

EXHIBIT A

Commissioner Robert M. McDowell

Dates of Travel/ Length of Stay	Purpose of Travel/Event(s) and Dates	Role at Event	Registration Fee?	Total cost
08/21–08/24/ 2011	To Attend the Tech Policy Institute's Aspen Forum in Aspen, Colorado. Deliver keynote remarks; Speak on panel presentation; Meet with government officials; Meet with industry officials; Meet with representatives from civil society; Give media interviews. (8/21–8/23)	Speaker; Bilateral meetings with government officials and industry; Give media interviews.	None	\$1,869.15
08/29–08/30/ 2011	Sioux Falls, South Dakota. Roundtable discussions hosted by Senator John Thune. To participate in roundtable discussions regarding issues with Senator John Thune, his staff, multiple telecom service providers and broadcasters who serve South Dakota and to tour a telecom carrier's central office facility. (08/30)	Participated in roundtable discussions re USF with Senator John Thune and other speakers; Meet with government and industry officials; Tour a telecom carrier's central office facility.	None	\$1,448.55
09/27–09/29/ 2011	Jackson, Wyoming. Roundtable discussions re universal service fund issues with Wyoming telecommunications companies and state government officials; Meet with WY broadcasters; Tour of cable TV facilities. (9/27–9/28)	Meet with WY broadcasters; Meet with WY telecom companies and state officials; Tour cable TV facilities.	None	\$1,783.81
11/01–11/08/ 2011	London, UK and Brussels, Belgium. <i>London</i> : Speaker at several venues; Meet with investment analysts; Meet with Members of Parliament; Meet with Ministry for Culture, Communications and Creative Industries; Give media interviews; Meet with communications industry representatives; Meet with civil society representatives; Meet with OfCom. (11/02–11/04) <i>Brussels</i> : Keynote speaker at The Global Forum; Meet with foreign government officials; Meet with industry officials; Meet with civil society officials. (11/05–11/07)	Speaker; Meeting with government, industry and civil society officials.	None	\$6,741.75
11/14–11/16/ 2011	Silicon Valley, California. Speaker at Federal Communications Bar Association event; Meet with government and industry officials. (11/14–11/16)	Speaker; Meet with industry officials; Meet with civil society officials; Meet with government officials.	None	\$,1664.51
01/10–01/13/ 2012	To attend the 2012 International Consumer Electronics Show (CES) Las Vegas, Nevada. Speaker on panel presentation; Meet with industry, government and civil society officials; Learn about latest technologies on trade show floor; Give media interviews; Meet with foreign government officials (1/10–1/12).	Speaker; Meet with industry government and civil society officials; Give media interviews; Learn about latest technologies.	None	\$1,869.04
01/19–01/20/ 2012	Speaker, Duke University, Durham, North Carolina. Speaker in academic settings; Meet with industry and civil society officials; Tour charitable community center and meet with its officials. (1/19–1/20)	Speaker; Meet with education industry and civil society officials.	None	\$446.30

Commissioner Robert M. McDowell—Continued

Dates of Travel/ Length of Stay	Purpose of Travel/Event(s) and Dates	Role at Event	Registration Fee?	Total cost
01/21–01/25/ 2012	To Attend the World Radiocommunication Conference (WRC) Geneva, Switzerland as an official member of the U.S. delegation. Meet with foreign government officials; Meet with officials from industry and civil society; Meet with U.S. Government officials. (1/22–1/24)	U.S. Delegate; Speaker; Participate in bilateral discussions.	None	\$4,390.52
02/22–02/29/ 2012	Meetings in Madrid, Spain; GSMA Show, Barcelona. Speaker GSMA Show; Meet with foreign government officials; Meet with civil society officials; Meet with industry executives; Meet with U.S. Government officials; Learn about latest technologies on trade show floor. (2/23–2/28)	Speaker; Meetings with industry; Bilateral meetings with foreign government officials.	None	\$5,134.56
03/15/2012	Speaker, University of Virginia, Charlottesville, Virginia. Speaker at Virginia Broadcasters event; speaker at telemedicine forum at University of Virginia; Meet with UVA officials; Give media interviews. (3/15)	Speaker; Meet with university officials; Meet with rural healthcare officials.	None	\$111.02
04/16–04/18/ 2012	To attend the National Association of Broadcasters Show, Las Vegas, NV. Speaker on panel presentation; Meet with industry officials; Meet with civil society officials; Give media interviews. (4/16–4/18)	Speaker; Meet with industry and civil society officials.	None	\$1,426.30
05/08/2012	Speak at CTIA Show, New Orleans, Louisiana. Speaker on panel presentation; Meet with industry and civil society officials; Learn about newest technologies on trade show floor; Give media interviews. (5/08)	Speaker; Meet with industry and civil society officials.	None	\$966.45
05/22/2012	Speak at The Cable Show 2012 (National Cable & Telecommunications Association) in Boston, Massachusetts. Speaker on panel presentation; Meet with industry and civil society officials; learn about the latest technologies on trade show floor. Give media interviews. (5/22)	Speaker; Meet with industry and civil society officials.	None	\$232.91
06/07/2012	Speak at TIA Show, Dallas, Texas. Give keynote address; Speak at civil society event; Meet with industry officials; Give media interviews. (6/07)	Speaker; Meet with industry and civil society officials.	None	\$949.07
06/24–07/02/ 2012	Rome, Italy. Speaker at civil society event held in Italian Parliament; Bilateral meetings with officials from Italian government; Meet with industry officials; Bilateral meetings with officials from the Holy See; Meet with U.S. Government officials; Give press interviews; Tour communications facilities of Vatican City. (6/25–6/30)	Speaker; Meet with foreign government officials; Meet with civil society and industry officials; Tour government radio and TV facilities.	None	\$6,180.19

Angela Giancarlo, Chief of Staff and Senior Legal Advisor to Commissioner McDowell

Dates of Travel/ Length of Stay	Purpose of Travel/ Event(s) and Dates	Role at Event	Registration Fee?	Total Cost
11/01-08/2011	To support and assist Commissioner in official business meetings in London, England (11/02-11/05); to support commissioner's participation in GlobalForum conference in Brussels, Belgium (11/06-11/07)	support and assist Commissioner	none	\$5,969.71
11/13-15/2011	To speak at a Continuing Legal Education seminar, "Federal Communications Commission and Federal Activity Review: Update on Key Wireless Developments in the Federal Government," sponsored by Law Seminars International, in Seattle, Washington (11/14)	speaker	none	\$1,849.44
1/21-28/2012	To support U.S. Government by serving as Senior Member, U.S. Delegation, 2012 World Radio Communication Conference in Geneva, Switzerland (1/22-27)	Senior U.S. Delegate	none	\$6,282.53
2/22-29/2012	To support and assist Commissioner in official business meetings in Madrid, Spain (2/23-25); to support commissioner's participation in GSMA Conference in Barcelona, Spain (2/26-28)	support and assist Commissioner	none	\$5,882.99
4/27-29/2012	To speak on panel, "View from the Agencies," sponsored by the Telecommunications Industry Association, in Cambridge, Maryland (4/28)	speaker	none	\$324.12
5/07-10/2012	To participate in official meetings, to support and assist Commissioner (who was also a speaker), and to speak on panel, "Time to Fuel Up? Spectrum, Auctions, and Steps to Meet Rising Demand," at the CTIA Conference in New Orleans, Louisiana (5/09)	support and assist Commissioner, speaker	none	\$2,244.64

Erin McGrath, Legal Advisor, Media, to Commissioner McDowell

(on detail from the Wireless Telecommunications Bureau)

Dates of Travel/ Length of Stay	Purpose of Travel/ Event(s) and Dates	Role at Event	Registration Fee?	Total cost
4/14/2012- 4/18/2012	NAB Show 2012 (National Association of Broadcasters) (4/15-4/17) To speak on luncheon panel at ABA/FCBA/NAB Presents "The 31 Flavors of Local Broadcasting" (4/15); to participate in official meetings (4/16-4/17); to support and assist Commissioner (who was also a speaker); to meet with industry participants; and to learn about the latest technologies on the show floor	Speaker; support and assist Commissioner	None	\$1,751.21
5/21/2012- 5/23/2012	The Cable Show 2012 (National Cable & Telecommunications Association) (5/21-5/22) To speak on panel, "Legally Speaking: FCC Advisors on Law, Policy, Telecom, and the Future" (5/22); to participate in official meetings (5/22); to support and assist Commissioner (who was also a speaker); to meet with industry participants; and to learn about the latest technologies on the show floor	Speaker; support and assist Commissioner	None	\$890.67

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. OLYMPIA J. SNOWE TO
HON. ROBERT M. MCDOWELL

Comprehensive Spectrum Inventory

As you know I have been calling for a comprehensive inventory for over three years now. A comprehensive inventory of both Federal and non-federal spectrum would provide decision makers at the FCC, NTIA, and Congress a clearer, more detailed, and up-to-date understanding of how spectrum is currently being used and by whom—data essential to sound policy decisions and spectrum management—mainly given the FCC manages over 2 million active licenses and NTIA administers over 450,000 assignments.

While I appreciate the Commission's effort in conducting a "baseline" spectrum inventory and creating Spectrum Dashboard and the LicenseView, it is not a sufficient substitute to conducting a comprehensive inventory. In addition, Representative Stearns, Senator Warner and former Commissioner Copps have all recently called for a comprehensive spectrum inventory. So there is a growing appeal for such effort to have a better understanding of spectrum usage.

Question 1. How important would having more detailed data on spectrum usage and infrastructure and device deployment be to pursuing sharing opportunities between spectrum users and promoting more spectral efficiency?

Answer. I am not convinced that undertaking a formal spectrum inventory would be an effective use of the Commission's limited resources. For instance, any data captured would reflect a mere snapshot in time, rather than paint a full picture of spectrum use on a given channel, within a given band and/or at a given location. To the extent that private sector spectrum users seek additional information on spectrum matters in connection with the pursuit of sharing opportunities, I would hope that the FCC's databases and personnel would be helpful resources.

FCC Technical Expertise

In Chairman Genachowski's remarks, he stated the Commission is operating with its lowest number of employees. The FCC is also unfortunately operating at one of its lowest number of engineers—over a 60 percent reduction in engineers from the 1950s to today—yet the Commission is dealing with significantly more technically complex issues such as advanced wireless communications, commercial cable & satellite industries, public safety interoperability, more device certifications, and broadband.

Engineers at the FCC play an essential role in regulatory matters by providing technical consultation on policy matters, managing spectrum allocations, and creating new opportunities for competitive technologies. I'm concerned this lack of expertise is hampering innovation and job growth because of the excessive delays to businesses that are waiting approval to technical waivers, experimental licenses, and filed petitions at the agency.

Others share my concern, a 2009 Government Accountability Office report found that the agency "faces challenges in ensuring it has the expertise needed to adapt to a changing market place." And 2011 Wireless Report by the National Research Council suggested the FCC would benefit from "enhancing its technology assessment and engineering capabilities" due to "entering an era in which technical issues are likely to arise on a sustained basis."

Question 2. Do you believe the FCC has the sufficient level of technical resources, given the concerns various entities have raised?

Answer. The FCC has the sufficient level of technical resources. Any additional staff would increase the FCC budget and is not necessary. Throughout my tenure, I have enjoyed a positive and enjoyable working relationship with Julius Knapp, our Chief of Office of Engineering and Technology (OET) and his entire team of in-house engineers and technologists. OET is an invaluable resource to my staff and me—incredibly knowledgeable, not to mention responsive—on engineering and IT matters.

Competition and Innovation

A growing number of consumers are combing traditional media services with more innovative products that allow them to stream online content. Some products allow consumers to stream online content of all types and aggregate it with either free OTA broadcasts or basic cable service.

The Commission is considering an order that would allow for the encryption of basic cable signals. While there are several benefits to encrypting basic cable service, there are also some concerns that innovative devices allowing users to combine online content with basic cable service may no longer be compatible without additional hardware or software or reduce functionality of the device, and may face addi-

tional monthly fees for a cable box. As you know, Congress specifically addresses this issue in Section 624A of the statute (47 U.S.C. 544a), which requires the FCC to assure compatibility between consumer electronics equipment and cable systems so cable customers can enjoy the full benefits of both.

Question 3. Is there a solution that would provide the positive benefits of cable encryption to cable operators while also allowing for IP-based devices and other innovative products that more consumers are purchasing to have the opportunity for success in the marketplace? Are there any risks to consumers of allowing innovative devices the ability to decrypt the basic cable signals so they can access those channels unencumbered by additional equipment or reduced functionality?

Answer. These issues regarding the connectivity of IP-based devices to equipment provided by cable operators have been raised in the basic service tier encryption proceeding. Numerous parties have filed in what has become an extensive record. We are reviewing the record thoroughly. As this matter is currently before the Commission in the form of an open proceeding, it is not appropriate to comment on the current state of deliberations at this time.

Question 4. It's my understanding that other non-cable MPVDs are able to encrypt all of their video signals, even basic video service. Should Congress revisit the statute to provide greater parity in regards to signal encryption?

Answer. Generally speaking, I subscribe to the belief that Congress tells the Commission what to do, not the other way around. Nonetheless, I have maintained that all of our rules should be modernized to reflect the current marketplace. As stated above, the Commission is currently considering whether to allow cable operators to encrypt the basic service tier so it is not appropriate for me to comment on an open proceeding.

Universal Service Fund & E-Rate

The National Broadband Plan and subsequent research have identified the lack of digital literacy among low-income Americans as a major barrier to broadband adoption. To address this, the Commission proposed implementing and operating a digital literacy program through the E-Rate program's administrative structure. The FCC has proposed \$50 million in annual funding over a four year period and that such funds would be provided through saving from the restructuring of the Lifeline program. While I'm a strong advocate for a greater focus on improving digital literacy to spur broadband adoption, I'm concerned about the impact this proposed program will have on the E-Rate program, if it is administered through it.

Question 5. I'm concerned the proposed Digital Literacy program will be difficult to monitor. With E-Rate, it is possible and cost-effective to send auditors to school and library sites to ensure applicants have actually purchased and installed the equipment for which they received E-Rate support and providers have actually delivered promised services. By contrast, it seems it may be difficult for auditors to determine this proposed digital literacy initiative's funds have actually been spent on courses. Can you tell me how USAC could properly audit this digital literacy initiative?

Answer. I share your concern that a proper audit of such a program could prove challenging. Nonetheless, I have long advocated a comprehensive audit of USAC. We should keep in mind that universal service funds are paid by consumers. The FCC should ensure certain thresholds are met when administering USF programs. First and foremost, the funds should be used for purposes that are authorized by Congress. Also, the FCC should ensure that the funds are used in an efficient and transparent manner. Although addressing digital literacy issues may be important, I question whether the proposed digital literacy program would meet either of these threshold questions.

Competitive Access to Spectrum

The "spectrum crunch" is not exclusive to just one or two carriers, it is industry wide. And while the top four carriers provide wireless service to 90 percent of the total subscribers in the U.S., more than 30 million other subscribers use someone else. As you know, Section 309(j)(3) of the statute (47 U.S.C. 309(j)(3)) requires Commission to promote "economic opportunity and competition" by "disseminating licenses among a wide variety of applicants" including small businesses, rural carriers, and minority and woman-owned businesses.

Question 6. How should the FCC ensure, in a fair and competitive manner, that all carriers—large and small—have adequate access to this critical but finite resource?

Answer. As the FCC moves forward to implement the new incentive auction law, I will work with my colleagues to ensure that our auction rules are minimal and

“future proof,” allowing for flexible uses in the years to come as technology and markets change. I am hopeful that new rules should include band plans that offer opportunities for small, medium and large companies to bid for and secure licenses without having to exclude *any* player from the auctions. Recognizing that overly-complex rules governing the C and D Blocks of the 700 MHz auction held in 2007–2008 produced several harmful unintended consequences, we should learn from the past and keep new auction rules minimal. As an overarching matter, I hope our new rules will stick with the Commission’s more recent “flexible use” policy. Old style “command and control” (prescriptive) rules hamper creative entrepreneurs who are in the best position to understand and satisfy consumer demands. Otherwise, the main goals of the new law, putting more bandwidth into the hands of consumers as quickly as possible and maximizing revenue at auction, may not be attained. In order to create greater certainty and thus a higher participation level, I hope that we will implement the law with humility, simplicity and restraint.

Several countries have recently held or plan to hold spectrum auctions to make more spectrum available for next generation wireless communications and broadband. Some of these countries have applied certain conditions to their auctions rules. For example:

1. In its 4G auction, France’s ARCEP provided bidding preferences to carriers that agreed to host MVNOs on its networks and had enhanced rural build-out requirements. It also required roaming agreements—to a losing bidder—for any carrier that won more than one frequency block.
2. Germany’s regulator, Bundesnetzagentur, applied rural build-out requirements for its 800 MHz auction and placed bidding restrictions on certain carriers.
3. The Netherlands reserved two spectrum blocks in the 800 MHz band and one in the 900 MHz band for new entrants.
4. Canada, in its 2008 AWS auction, set aside spectrum for a new entrant.
5. Czech Republic’s CTU has reserved the 1.8 GHz block for a new entrant.
6. Ofcom has proposed spectrum caps in its upcoming LTE spectrum auction.
7. Australia has proposed spectrum caps for its upcoming auction.

Question 7. It should be noted that several of these auctions ended up exceeding revenue expectations. I’m not advocating for the implementation of any conditions on any future auctions but I’m curious as to why these countries deemed it necessary to apply such conditions in their auctions rules? Do you believe the FCC should closely examination the recent 4G auctions in other countries to assist in determining how best to design future domestic auctions?

Answer. I would expect that the team responsible for designing the forthcoming incentive auctions will examine the recent auctions in other countries as part of their work. At the same time, America is leading the way in rolling out advanced mobile technologies as it always has. We have led because long ago we adopted a lightly-regulated framework for the wireless sector.

For example, the United States has approximately 21 percent of the world’s 3G and 4G subscribers, and approximately 69 percent 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 2011, over \$25 billion was invested in the United States’ wireless infrastructure versus \$18.6 billion invested in 15 of the largest European countries combined.

Furthermore, the American mobile market enjoys more competition than most international markets, which may suggest that perhaps we are studying the efforts of other countries while making different and more constructive policy choices here. According to the most recent FCC statistics, nine 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)—4 cents per minute in the U.S. versus 17 cents generally in the EU. Wireless subscriber usage on average in the United States is often three to seven times more than some countries. 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 you know, Section 309(j)(7) of the statute (47 U.S.C. 309(j)(7)) expressly prohibits the Commission from using the expected revenue from a spectrum auction as a basis for determining the public interest of frequency assignments. Furthermore, Congress, in H.R. Rep. No. 111, 103d Cong., 1st Sess. 258 (1993), emphasized that “important communications policy objectives should not be sacrificed in the interest of maximizing revenues.”

Question 8. While there is broad agreement auctions are the best mechanism to distribute spectrum licenses, is there too much emphasis currently being placed on maximizing auction revenues instead of the longer term economic benefit that may result? How might such skewed focus on proceeds hinder achieving the strategic goals necessary for the long term health of the spectrum ecosystem?

Answer. As discussed above, a minimal amount of regulation created the climate for the American private sector to make the American wireless sector the best in the world. Policy makers should keep this important fact in mind when contemplating the wireless industry's regulatory future. Congress determines whether auction proceeds should be a priority and it codified that directive in the recent spectrum legislation set forth in the Middle Class Tax Relief and Job Creation Act of 2012.

Spectrum Efficiency Metrics

One of the primary, long-standing goals of the FCC has been to promote more efficient use of spectrum. The FCC's 1999 Spectrum Policy Statement highlighted "with increased demand for a finite supply of spectrum, the Commission's spectrum management activities must focus on allowing spectrum markets to become more efficient.." and Strategic Plan for FY 2003–2008 (published in 2002) indicated its general spectrum management goal is to "encourage the highest and best use of spectrum . . ."

In its 2002 report, the Spectrum Policy Task Force developed three definitions: spectrum efficiency, technical efficiency, and economical efficiency. However, the SPTF concluded "it is not possible, nor appropriate, to select a single, objective metric that could be used to compare efficiencies across different radio services."

Question 9. In the FCC's search to free up more spectrum for wireless broadband, how does the FCC effectively determine and compare the spectral efficiency of different types of radio-based services when targeting various frequencies for reallocation?

Answer. As these types of analyses and conclusions are made by the bureaus and Office of the Chairman, I respectfully defer to Chairman Genachowski and the FCC's technical staff on this question.

One of the common spectrum efficiency metrics for wireless communications is in terms of bits/second/hertz. Some parties have suggested more granular metrics such as bits/second/hertz/pop or bits/second/hertz/cell. It seems like there could be several different metrics within each definition of efficiency.

Robin Bienenstock of Sanford Bernstein raised the issue of network density and highlighted the difference between the U.S. and European countries. Specifically, Ms. Bienenstock compared California with Spain (noting similar size, topography, and population density). A major carrier in Spain had 33,000 base stations, whereas a major U.S. carrier in California had only 6,000 sites. Across the board, the network density for operators in Spain is three to six times higher than that of operators in California. With more cell sites, there is greater spectrum reuse, which means more efficient use, and a lessening of demand for the raw material (spectrum).

Question 10. Does the FCC use network density as a component of its spectrum efficiency metric? If not, given the FCC already imposes build-out requirements to licensees, should the FCC explore requiring network density guidelines too as a way to promote more efficient use of spectrum?

Answer. As these types of analyses and conclusions are made by the bureaus and Office of the Chairman, I respectfully defer to Chairman Genachowski and the FCC's technical staff on this question.

Question 11. Does the FCC have any additional data on network density comparisons of the U.S. in relation to other countries?

Answer. As these types of analyses and conclusions are made by the bureaus and Office of the Chairman, I respectfully defer to Chairman Genachowski and the FCC's technical staff on this question.

Resolving the "Spectrum Crunch" Through Technology

I'm concerned there is not enough focus on the role of technology in meeting the growing demand for wireless network capacity. An Ofcom report rightfully points out increasing wireless network capacity depends on a combination of "spectrum, technology, and topology." Given the challenges we face with reallocation, I believe technology will play an even more prominent role.

For example, research by Ofcom found that early 4G mobile networks will be 230 percent more spectrally efficient than 3G networks and that efficiency will increase to 450 percent by 2020. Technologies like dynamic spectrum access and cognitive radio can considerably improve utilization by allowing more aggressive spectrum

sharing, and, though many years off, quantum entanglement and “twisted” waves hold amazing potential to significantly, and even possibly infinitely, increase capacity without any additional spectrum.

However, I’m concerned about the threats the U.S. is facing in regards to its leadership in innovation, primarily with ICT. Many reports highlight most of the global R&D growth will be mainly attributed to Asian economies—according to NSF, the United States’ share of global R&D expenditures dropped from 38 percent to 31 percent between 1999 and 2009, while the Asia region grew from 24 percent to 35 percent. In addition, more U.S.-based companies are locating R&D operations overseas—the number of overseas researchers employed by U.S. multinationals nearly doubled from 138,000 in 2004 to 267,000 in 2009.

Question 12. What more can the government do (besides make the R&D tax credit permanent) to foster greater R&D investment, primarily in ICT?

Answer. The Executive Branch should act more aggressively to identify and relinquish spectrum held by the Federal Government. The underlying message from the recent report from our colleagues at National Telecommunications and Information Administration (NTIA) on the viability of accommodating commercial wireless broadband in the 1755–1850 MHz band is disappointing. It appears that other Executive Branch agencies did not provide NTIA with sufficient data to support many of the assumptions and conclusions. The thrust of the report seems to indicate that the Executive Branch is going to resist relinquishing more spectrum. For starters, the report does not discuss how efficiently, or inefficiently, the Federal Government uses spectrum.

We must also acknowledge that the Federal Government occupies about 60 percent of the best spectrum. Federal users have no incentive to move off of this prime real estate but do have an incentive to keep the rest of us in the dark about how much it really would cost to move them and how long that task would really take. In theory, the Executive Branch should be especially incentivized to find a way to liberate more spectrum to auction for private sector uses in light of the fact that Congress updated the National Telecommunications and Information Administration Organization Act as part of the recent spectrum legislation (set forth in the Middle Class Tax Relief and Job Creation Act of 2012) to accommodate reimbursing Federal spectrum users willing to move.

Question 13. Given the benefits that both the private and public sectors will reap from more advanced technologies, how can there be more collaboration between both sectors to see these technologies to fruition?

Answer. Private and public sectors could collaborate by working with greater alacrity to identify sharing opportunities for low power operations. Over the years, I have consistently encouraged FCC efforts to promote different forms of spectrum sharing—for instance, in the “TV white spaces” within the 700 MHz Band, the 400 MHz Band, and the 5 GHz Band. These projects have been complex and time consuming, however. I am hopeful that these discussions and opportunities would proceed with greater speed. At the same time, I caution that the term “sharing” is amorphous and the notion of “sharing” has not been defined in the context of current deliberations. While spectrum sharing opportunities can be beneficial, sharing should not be viewed as a panacea to resolve the long-term need for more spectrum in the marketplace.

Question 14. Does the FCC have any estimates on the amount of domestic private sector funding in wireless R&D as a percentage of overall industry capital investment? Do you believe there is enough domestic R&D investment in advanced wireless communications in comparison to other countries?

Answer. While U.S. industries fund approximately 70 percent of domestic R&D, the Federal Government is the primary source of funding for basic research, providing approximately 60 percent of funding, and industry conducts less than 20 percent of the basic research done in the U.S., according to the Science Coalition.

According to CTIA—The Wireless Association, in 2011, over \$25 billion was invested in United States’ wireless infrastructure versus \$18.6 billion invested in 15 of the largest European countries combined. I would like to see policies adopted that would make that figure spike upward. Time and again, however, business leaders tell me that policies that grow government instead of the private sector are inhibiting investment. Overall, they say, increased regulation coupled with uncertainties over monetary and other government policies are to blame for flat growth curves.

Question 15. How important are Federal programs like NSF EARS and DARPA STO to the long-term growth and health of innovation in the spectrum ecosystem and should Congress provide greater funding for basic research in this area?

Answer. Generally speaking, I subscribe to the belief that Congress tells the Commission what to do, not the other way around. This is especially so with regard to

budget decisions. That said, these programs have added value over the years and it is appropriate to review them regularly.

Spectrum Flexibility

The National Broadband Plan highlighted the importance of spectrum flexibility. The NBP concluded that “flexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency” and “spectrum flexibility, both for service rules and license transfers, has created enormous value.” That innovation and capital formation could be beneficial to addressing the challenges that exist in making more affordable and faster broadband available in rural areas.

As you know, Section 336 of the statute (47 U.S.C. 336) allows broadcasters to offer ancillary and supplementary services, which includes data transmission and interactive materials. Section 336 also prescribes the assessment and collection of fees related to such service offerings, and the FCC, back in 1998, adopted rules requiring broadcasters to pay a fee of 5 percent of gross revenues from such services for which they charge subscription fees or other specified compensation.

Question 16. If we need to get broadband into rural areas, why not let other licensees, like broadcasters, attempt to close the digital divide that exists? Mainly, since they may have infrastructure already in place to build off of.

Answer. I am supportive of allowing broadcasters to use their spectrum in innovative ways. I believe that our rules should provide flexibility to ensure that innovation is not stifled in the years to come as technology and markets change. Broadcasters should be allowed to put any excess capacity to its highest value use whether it is for the creation of multicast stations, Mobile TV, or broadband solutions.

Even though the FCC adopted rules to avoid unjust enrichment, some parties have still raised concerns that such flexibility would be unfair since the broadcasters weren’t assigned the spectrum via an auction. However, as you know, the FCC has only auctioned licenses since 1994 and prior to that used comparative hearings and then lotteries for frequency assignments—including licenses for wireless communications.

Question 17. If there is concern about “unjust enrichment” if broadcasters provide broadband, why isn’t there the same concern with wireless communications licenses issued prior to 1994? Wouldn’t the 5 percent of gross revenue that broadcasters have to pay if they add broadband to their signals fairly compensate the government, mainly since such service would have to be “ancillary and supplementary” to their broadcast television signal?

Answer. As stated above, I support flexible use policies that ensure spectrum is always put to its highest-value use. Further, to promote spectral efficiency and alleviate capacity constraints, we need to encourage secondary market transactions to get our spectrum resources into the hands of industry participants that will rapidly deploy the bandwidth for the benefit of all Americans. Licensees—whether they are broadcasters or mobile wireless providers—or innovators hoping to launch new technologies and products should be able to acquire spectrum through transfers, assignments, leasing arrangements and/or channel sharing without being constrained by Commission-created barriers dictating that specified frequencies be used to provide defined services. Flexibility will hasten the deployment of broadband and enable the wireless sector to continue to flourish, which will promote job creation and economic growth throughout America.

Spectrum Fees

Recommendation 5.6 of the National Broadband Plan suggested “Congress should consider granting authority to the FCC to impose spectrum fees on license holders and to NTIA to impose spectrum fees on users of government spectrum” to address inefficiencies in spectrum allocations and promote more efficient use of spectrum. It is my understanding that every administration since Clinton has requested spectrum fee authority from Congress.

Ofcom imposed similar fees (known as Administrative Incentive Pricing) in the late 1990s and issued a report in 2009 that concluded the fees “met its primary objective in helping to incentivise spectrum users to consider more carefully the value of the spectrum they use alongside that of other inputs, and to take decisions that are more likely to lead to optimal use of the available spectrum.” The report also “found no evidence to suggest that the application of AIP has given rise to material adverse consequences for spectrum efficiency.”

Question 18. Should Congress grant the FCC and NTIA spectrum fee authority either on all licenses and assignments or just on non-auctioned licenses, mainly if the FCC moves to implement greater flexibility of spectrum use? Do you believe the FCC can strike the proper balance in applying spectrum fees to promote more effi-

cient use of spectrum but not to a point that it presents an undue financial burden to the licensee?

Answer. I do not support imposing fees on any entity holding rights to use spectrum as the costs will be passed on to consumers.

Question 19. Some parties have opposed spectrum fees calling them a tax. But what is the difference between a spectrum fee that is paid annually and a licensee paying a lump sum at an auction? If a spectrum fee is a tax, isn't an auction payment a tax as well since it too goes to Treasury? Or are both not considered taxes since they are transfers to government for the right to use a public good?

Answer. Congress enacted Section 309(j), authority for awarding spectrum based on competitive bidding, in order to determine the highest and best use for the spectrum, and to promote economic opportunity and competition and ensure that new and innovative technologies are readily accessible to the American people. Given this rationale, I do not support imposing fees on any entity holding rights to use spectrum because the costs will be passed on to consumers.

Question 20. If not spectrum fees, how should the FCC impose economic fairness between licensees that are/were awarded via auctions versus those that were awarded via comparative hearings and lotteries?

Answer. During my time at the FCC, I have advocated for market-based solutions to public policy challenges, or toward the lightest regulatory touch possible and only when absolutely necessary. Therefore, I do not support imposing fees on any entity holding rights to use spectrum as the costs will be passed on to consumers.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO
HON. ROBERT M. MCDOWELL

Question 1. An important issue with respect to Universal Service Fund Reform that has not been addressed is the industry contribution mechanism that pays for USF subsidies.

Mr. McDowell, you have called on the Commission to act on this important matter by this fall. Could you share your views with the Committee on the importance of concluding contribution reform in a timely fashion?

Answer. The universal service fund (USF) contribution factor, a "tax" on consumers' phone bills, has risen dramatically over the years. It was approximately 5.5 percent in 1998 and spiked to almost 18 percent in the first quarter of this year. Such a trend is unsustainable and is an automatic tax increase on consumers. There have been various proposals to reform and update the USF contribution methodology for over a decade but none has succeeded in garnering a Commission vote. It is imperative that the FCC take its recent reform efforts seriously and come to resolution no later than this fall so that we can slow down this steady increase of the contribution factor.

Question 2. Congress recently passed spectrum auction legislation and the Commission will begin setting rules for implementation perhaps as early as this fall. I'm hearing from some low power television (LPTV) interests in my state who are concerned about how the FCC will handle low power stations when the FCC conducts their incentive auctions, and subsequently goes through a process of clearing channels 31–51. Low power TV stations provide a valuable service, such as local public meetings and religious broadcasting. LPTV has been the entry point for small businesses into the broadcast market and today, many LPTV owners are small businesses who work hard to continue to serve their local communities with news and resources aimed at the community.

Would you support rules that allow LPTV to survive? What assurance can you provide that low power television stations will be protected?

Answer. I recognize the benefits that low power TV stations provide to their communities. LPTV is a secondary service and stations are displaced if they cause interference to a full power station. I would be supportive of rules that enable their success; however, the spectrum legislation does not include or protect LPTV stations.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. ROGER F. WICKER TO
HON. ROBERT M. MCDOWELL

Question. Should the pending 700 MHz public safety waivers be dismissed/denied?

Answer. No. Common sense dictates that the Commission handle these pending requests on a case-by-case basis rather than dismiss the lot out of hand. In my experience, one-size-fits-all policy making in this context rarely works, especially when we are working with jurisdictions that have unique characteristics. By examining

each waiver request individually, we will not delay the deployment of broadband networks to the first responders in these communities. Furthermore, the technology to knit the interoperable network together, should that be necessary, already exists thanks to private sector innovation. It's not clear to me why the Commission would want to stand in the way of early adopters and the beneficial economies of scale completion of these projects will bring to the public safety sphere.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROY BLUNT TO
HON. ROBERT M. MCDOWELL

Question 1. To what extent has the Commission taken into account online radio and news providers in your most recent quadrennial media ownership review proceeding? Are/were online mediums viewed as equal competitors to radio and television broadcasters and newspapers?

Answer. I concurred to the majority of the December 2011 notice, because I am concerned that the Commission appears to be prepared to accept a regulatory status quo. The Commission should modernize its rules to reflect the economic realities of the marketplace, such as the growth of digital outlets. We should be realistic and pragmatic, instead of pursuing an overly-cautious, wait-and-see approach regarding the further development of new media platforms, such as the Internet and mobile devices, even though they have already revolutionized the market. Further, we have a statutory obligation under section 202(h) to eliminate unnecessary mandates and bring our rules into line with the modern marketplace.

Question 2. I'm interested in the progress that the FCC and NTIA are making to clear the additional 300 megahertz before 2015, and 500 megahertz total, that the Administration and industry agree is needed to address the pending spectrum crunch. How much spectrum do you currently have in the pipeline to auction today that could be used for broadband services? Let's assume that incentive auctions yield 100 MHz, where does the balance of the spectrum needed come from? Will you and NTIA be able to meet this 2015 deadline?

Answer. I am not aware of any substantial amount of new spectrum that is in the pipeline for auction. Accordingly, I respectfully defer to Chairman Genachowski on this question as he and his team exclusively handle negotiations relations with NTIA.

Question 3. What do you believe are the main impediments to freeing up more government spectrum and getting it into the commercial spectrum pipeline? 4. What do you believe the Commission's role is in identifying and clearing additional, government spectrum?

Answer. The Executive Branch should act more aggressively to identify and relinquish spectrum held by the Federal Government. The underlying message from the recent report from our colleagues at National Telecommunications and Information Administration (NTIA) on the viability of accommodating commercial wireless broadband in the 1755–1850 MHz band is disappointing. It appears that other Executive Branch agencies did not provide NTIA with sufficient data to support many of the assumptions and conclusions. The thrust of the report seems to indicate that the Executive Branch is going to resist relinquishing more spectrum. For starters, the report does not discuss how efficiently, or inefficiently, the Federal Government uses spectrum.

We must also acknowledge that the Federal Government occupies about 60 percent of the best spectrum. Federal users have no incentive to move off of this prime real estate but do have an incentive to keep the rest of us in the dark about how much it really would cost to move them and how long that task would really take. In theory, the Executive Branch should be especially incentivized to find a way to liberate more spectrum to auction for private sector uses in light of the fact that Congress updated the National Telecommunications and Information Administration Organization Act as part of the recent spectrum legislation (set forth in the Middle Class Tax Relief and Job Creation Act of 2012) to accommodate reimbursing Federal spectrum users willing to move.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN BOOZMAN TO
HON. ROBERT M. MCDOWELL

Question. What short-term solutions for spectrum needs can be utilized while longer-term solutions, such as incentive auctions, are implemented?

Answer. While we identify and analyze the complex issues that will arise as we implement the new spectrum legislation, I will continue to call for an increased

focus on technologies and strategies to improve spectral efficiency. Greater emphasis and education in this area will improve the ability of mobile service providers, engineers, application and content developers as well as consumers to take better advantage of the immediate fixes already available in the marketplace. Spectral efficiency solutions include more robust deployment of enhanced antenna systems; improved development, testing and roll-out of creative technologies where appropriate, such as cognitive radios; and enhanced consideration of, and more targeted consumer education on, the use of femtocells. Each of these technological options augments capacity and coverage, which is especially important for data and multimedia transmissions. The Commission's recent workshop on receiver standards is a step in the right direction.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. PATRICK J. TOOMEY TO
HON. ROBERT M. MCDOWELL

Question 1. Do you believe the FCC has conducted thorough cost-benefit analyses before implementing new regulations?

Answer. No.

Question 2. In response to a question I posed at the hearing, you said the Commission has never classified broadband Internet access services as Title II telecommunications services. You went on to say that you are willing to provide to this committee supplementary information on this point. Please provide any and all additional information on this issue that you believe this committee will find informative.

Answer. The Commission has never classified broadband Internet access services as "telecommunications services" under Title II of the Communications Act, as illustrated in the following summary of the history of the regulatory classification of broadband Internet access services.

Within two years of the privatization of the Internet in 1994, Congress overwhelmingly enacted the landmark Telecommunications Act of 1996 (1996 Act) and President Clinton signed it into law. Previously, the FCC had never regulated "information services" or "Internet access services" as common carriage under Title II. Rather, such services were classified as "enhanced services" under Title I. And, to the extent that regulated common carriers offered their own enhanced services, using their own transmission facilities, the FCC required the underlying, local transmission component to be offered on a common carrier basis.¹ Furthermore, no provider of retail information services was ever required to tariff such service. With the 1996 Act, Congress had the opportunity to reverse the Commission and regulate information services, including Internet access services, as traditional common carriers, but chose not to do so. Instead, Congress codified the Commission's existing classification of "enhanced services" as "information services" under Title I.

Subsequently, in 1998, Congress directed the Commission to report on its interpretation of various parts of the 1996 Act, including the definition of "information service."² In response, on April 10, 1998, under the Clinton-era leadership of Chairman William Kennard, the FCC issued a *Report to Congress* finding that "Internet access services are appropriately classed as information, rather than telecommunications, services."³ The Commission reasoned as follows:

The provision of Internet access service . . . offers end users *information-service capabilities inextricably intertwined with data transport*. As such, we conclude that it is appropriately classed as an "information service."⁴

The Commission further reasoned that treating Internet access services as telecommunications services would lead to "negative policy consequences."⁵

¹Some who are advocating that broadband Internet access service should be regulated under Title II cite to the Commission's 1998 *GTE ADSL Order* to support their assertion. See *GTE Telephone Operating Cos.*, CC Docket No. 98-79, Memorandum Opinion and Order, 13 FCC Red. 22,466 (1998) (*GTE ADSL Order*). The *GTE ADSL Order*, however, is not on point, because in that order the Commission determined that GTE-ADSL service was an interstate service for the purpose of resolving a tariff question.

²Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 1998, Pub. L. No. 105-119, 111 Stat. 2440, 2521-2522, § 623.

³*Federal-State Board on Universal Service*, CC Docket No. 96-45, Report to Congress, 13 FCC Red. 11501, ¶ 73 (1998) (*Report to Congress*).

⁴*Id.* at ¶ 80 (emphasis added).

⁵*Id.* at ¶ 82 ("Our findings in this regard are reinforced by the negative policy consequences of a conclusion that Internet access services should be classed as 'telecommunications.'").

To be clear, the FCC consistently held that any provider of information services could do so pursuant to Title I.⁶ The Commission made no distinction in the way that retail providers of Internet access service offered that information service to the public. The only distinction of note was under the FCC's *Computer Inquiry* rules, which required common carriers that were also providing information services to offer the transmission component of the information service as a separate, tariffed telecommunications service. But again, this requirement had no effect on the classification of retail Internet access service as an information service.

Meanwhile, during the final days of the Clinton Administration in 2000, the Commission initiated a Notice of Inquiry (NOI) to examine formalizing the regulatory classification of cable modem services as information services.⁷ As a result of the *Cable Modem NOI*, the Commission issued a declaratory ruling classifying cable modem service as an information service on March 14, 2002.⁸ In the Commission's *Cable Modem Declaratory Ruling*, it pointed out that "[t]o date . . . the Commission has declined to determine a regulatory classification for, or to regulate, cable modem service on an industry-wide basis."⁹ Only one month earlier, on February 14, 2002, in its Notice of Proposed Rulemaking¹⁰ regarding the classification of broadband Internet access services provided over wireline facilities, the Commission underscored its view that information services integrated with telecommunications services cannot simultaneously be deemed to contain a telecommunications service, even though the combined offering has telecommunications components.

Subsequently, on June 27, 2005, the Supreme Court upheld the Commission's determination that cable modem services should be classified as information services.¹¹ The Court, in upholding the Commission's *Cable Modem Order*, explained the Commission's historical regulatory treatment of "enhanced" or "information" services:

By contrast to basic service, the Commission decided not to subject providers of enhanced service, *even enhanced service offered via transmission wires*, to Title II common-carrier regulation. The Commission explained that it was unwise to subject enhanced service to common-carrier regulation given the "fast-moving, competitive market" in which they were offered.¹²

After the Supreme Court upheld the Commission's classification of cable modem service as an information service in its *Brand X* decision, the Commission *without dissent* issued a series of orders classifying all broadband services as information

⁶As Seth P. Waxman, former Solicitor General under President Clinton, wrote in an April 28, 2010 letter to the Commission, "[t]he Commission has *never* classified any form of broadband Internet access as a Title II 'telecommunications service' in whole or in part, and it has classified all forms of that retail service as integrated 'information services' subject only to a light-touch regulatory approach under Title I. These statutory determinations are one reason why the Clinton Administration rejected proposals to impose 'open access' obligations on cable companies when they began providing broadband Internet access in the late 1990s, even though they then held a commanding share of the market. The Internet has thrived under this approach." (Emphasis in the original.)

⁷*Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, GN Docket No. 00-185, Notice of Inquiry, 15 FCC Rcd 19287 (2000) (*Cable Modem NOI*).

⁸*Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002) (*Cable Modem Declaratory Ruling*), *aff'd*, *Nat'l. Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005) (*Brand X*).

⁹*Id.* at ¶ 2.

¹⁰*Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Universal Service Obligations of Broadband Providers*, CC Docket No. 02-33, Notice of Proposed Rulemaking, 17 FCC Rcd 3019 (2002) (*Wireline Broadband NPRM*).

¹¹*Brand X*, 545 U.S. 967.

¹²*Id.* at 977 (emphasis added, internal citations to the Commission's *Computer Inquiry II* decision omitted).

services: wireline (2005)¹³, powerline (2006)¹⁴ and wireless (2007).¹⁵ Consistent with the Court's holding and reasoning in its *Brand X* decision, the Commission made these classifications to catch up to market developments, to treat similar services alike and to provide certainty to those entities provisioning broadband services, or contemplating doing so. Prior to these rulings, however, such services were never classified as telecommunications services under Title II.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARCO RUBIO TO
HON. ROBERT M. MCDOWELL

Internet Governance

Question 1. Besides the upcoming World Conference on Information Technology, are there other conferences, summits, etc., occurring in which the United States needs to be concerned about other countries advocating for a more state controlled Internet governance model?

Answer. Even if this effort is unsuccessful in December, we must continue to be vigilant. Internet governance will no doubt be on the agenda for international conferences and discussions throughout 2013 and beyond. Given the high profile, not to mention the dedicated efforts by some countries, I cannot imagine that this matter will disappear. Similarly, I urge skepticism for the “minor tweak” or “light touch.” As we all know, regulation only seems to grow. We must remain vigilant for years to come.

Spectrum

Question 2. Cisco's U.S. mobile data forecast projects that mobile data traffic will increase 16 times from 2011 to 2016—a compound annual growth rate of 74 percent. What happens if we do not have enough spectrum to keep pace with that demand? How would that impact consumers?

Answer. As these statistics illustrate, more powerful 4G networks, sophisticated devices and complex mobile applications are taxing spectrum availability. Recognizing the need for spectrum to flow toward its highest and best use, in February, Congress passed the Middle Class Tax Relief Act of 2012, which included language for incentive auctions of broadcast spectrum. Some estimate these auctions could place up to an additional 80 megahertz of prime television broadcast spectrum into American consumers' hands.

My ideas for satisfying consumer demand for faster and more robust mobile communication are: First, the FCC should implement the new spectrum law with humility, simplicity and regulatory restraint; Next, the Executive Branch should be far more aggressive in identifying and relinquishing for private sector use spectrum held by the Federal Government; Third, the FCC should do more to encourage a free-flowing secondary spectrum market by completing transaction reviews more quickly and with a minimal amount of conditions; and finally, the FCC should provide local public safety entities the flexibility and certainty necessary to leverage economies of scale by continuing to operate, build and deploy interoperable LTE networks pursuant to waiver on a case-by-case basis.

Question 3. Based on previous spectrum auctions, what lessons do you hope the Commission has learned in order to avoid missteps in the upcoming auctions?

Answer. As the FCC moves forward to implement the new incentive auction law, I will work with my colleagues to ensure that our auction rules are minimal and “future proof,” allowing for flexible uses in the years to come as technology and markets change. I am hopeful that new rules should include band plans that offer op-

¹³*Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings; Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. §160(c) with Regard to Broadband Services Provided Via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided Via Fiber to the Premises; Consumer Protection in the Broadband Era*, CC Docket Nos. 02–33, 95–20, 98–10, 01–337, WC Docket Nos. 04–242, 05–271, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005) (*Wireline Broadband Order*), *affd.*, *Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007).

¹⁴*United Power Line Council's Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, WC Docket No. 06–10, Memorandum Opinion and Order, 21 FCC Rcd 13281 (2006).

¹⁵*Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07–53, Declaratory Ruling, 22 FCC Rcd 5901 (2007).

portunities for small, medium and large companies to bid for and secure licenses without having to exclude *any* player from the auctions. Recognizing that overly-complex rules governing the C and D Blocks of the 700 MHz auction held in 2007–2008 produced several harmful unintended consequences, we should learn from the past and keep new auction rules minimal. As an overarching matter, I hope our new rules will stick with the Commission’s more recent “flexible use” policy. Old style “command and control” (prescriptive) rules hamper creative entrepreneurs who are in the best position to understand and satisfy consumer demands. Otherwise, the main goals of the new law, putting more bandwidth into the hands of consumers as quickly as possible and maximizing revenue at auction, may not be attained. In order to create greater certainty and thus a higher participation level, I hope that we will implement the law with humility, simplicity and restraint.

Wireless Policies

Question 4. In your written testimony, you state that “America has *always* led the world when it comes to wireless innovation and if we choose the correct policies we will further strengthen America’s global leadership.” What are examples of “correct policies” that we should choose? What are examples of wrong policies that we should not choose?

Answer. As noted earlier, in order to create greater certainty and thus a higher participation level, I hope that we will implement the law with humility, simplicity and restraint. Congress clearly expressed its intent that no entities should be excluded from participating in these auctions. Keeping in mind that overly-complex rules governing the C and D Blocks of the 700 MHz auction produced several harmful unintended consequences, as we go forward, we should learn from the past and keep new auction rules minimal. Otherwise, the main goals of the new law, putting more bandwidth into the hands of consumers as quickly as possible and maximizing revenue at auction, may not be attained.

Regulatory Reform

Question 5. At the Committee’s recent hearing on online video, there was consensus—among the witnesses and some members of the Committee—that Congress needs to rewrite the Telecommunications Act. And as you are probably aware, some industry stakeholders advocate for the need to reform the Act and break down the regulatory silos. Do you think that Congress should rewrite the Telecommunications Act to better reflect the current telecommunications environment?

Answer. Yes.

Question 5a. And if so, what parts of the Act should Congress update or rewrite?

Answer. Today’s consumers seek to use their favorite applications and content whenever and wherever they choose. Such material may be delivered over coaxial cable, copper wires, fiber or radio waves, and the distinction is of little consequence to most consumers as long as the supply of products and services satisfies consumers’ demands. Legacy statutory constructs, however, have created market distorting legal stovepipes based on the regulatory history of particular delivery platforms. As a result, the current statutory requirements have forced regulators and industry to make decisions based on whether a business model fits into Titles I, II, III, VI, or none. As Congress contemplates FCC reform, it may want to consider an approach that is more focused on preventing concentrations and abuses of market power that result in consumer harm. Additionally, I agree with the notion that Congress could consider building on the deregulatory bent of Sections 10 and 11 from the Telecommunications Act of 1996 by adding an evidentiary presumption during periodic regulatory reviews that would enhance the likelihood of the Commission reaching a deregulatory decision.

Question 6. The President recently commended the Commission for supposedly cutting 190 regulations and cited the FCC’s efforts as a prime example of regulatory reform under his Administration. In your view, does the Commission take seriously the need for regulatory reform? How rigorous and consistent is the use of cost-benefit analysis, and how enthusiastically does the Commission approach its obligation to engage in a biennial review—and trimming—of its regulations?

Answer. Unfortunately, the Commission’s record on using a cost-benefit analysis has neither been rigorous nor consistent when reviewing its current regulations. If the FCC had engaged in a more rigorous and consistent analysis, its previous biennial reviews likely would have resulted in the repeal of many more unnecessary regulations over the years. Additionally, the Commission should seriously employ a cost-benefit analysis when contemplating adopting *new* rules, as well, because new regulations almost always cause collateral and unpredictable economic effects, and regulatory burdens are ultimately passed on to consumers.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEAN HELLER TO
HON. ROBERT M. MCDOWELL

Thank you for your testimony before the Committee. I appreciate the time you spent and your thoughtful answers to the following questions.

As you all know, our economy benefits greatly from the communications and technology sector. Competition and innovation have created new services and devices as well as high-quality jobs that have changed the lives of Americans. This sector is incredibly important to sustainable growth of our economy. That is why Congress must push the Federal Communications Commission to be the most open and transparent agency in the Federal Government. The industries you regulate are too important to our nation.

Under Chairman Genachowski, I have seen notable steps in the right direction, and he has made process a "top priority." That being said, I am concerned that the FCC is not always as open and transparent as it should be. The problem as I see it today is that the FCC can pick and choose the rules it wants to follow when it wants to follow them. This method is convenient for the FCC, but it is not good government, and we owe more to Americans with business before the FCC.

I introduced legislation that pushes the FCC toward more transparency and openness. The intent of my legislation is not to hamstring the agency. It is to push them to be exactly what Americans expect from their government, open and transparent regulators of the laws passed by Congress.

A more predictable and consistent FCC will create jobs in Nevada, which has the unfortunate distinction of leading our Nation in unemployment for over two years. Every government agency should be committed to policies that promote job creation, investment and innovation. The technology sector has helped growth in our country for the last twenty years and will continue to if big government does not overburden it.

I introduced two measures, the Telecommunications Jobs Act (S. 1817) and the Federal Communications Commission Consolidated Reporting Act (S. 1780). These bills push the FCC to be the most open and transparent agency in the Federal Government and provide a streamlined method of reporting to Congress.

The following questions are in regards to those bills, and I would ask you to please respond to each question.

Question 1. One of the most important reforms I introduced would force the Commission to demonstrate beyond any doubt the need for regulation before intervening in the marketplace. I strongly believe that a cost-benefit analysis should be conducted on any regulation that will have a significant market impact, and I believe that before the FCC begins a rule proposal, they survey industry within three years of proposing a rule to determine whether that regulation is even necessary. A cost-benefit analysis mandating the FCC to identify actual consumer harm and conduct an economic, market-benefit analysis is consistent with President Obama's Executive Order 13563 on Improving Regulation and Regulatory Review. Would you support legislation that implements a cost benefit analysis consistent with the President's Executive Order? If not, why?

Answer. Yes.

Question 2. Do you support legislation mandating the FCC to survey the marketplace within three years before initiating a rulemaking?

Answer. Yes.

Question 3. Under the Chairman, 85 percent of the *Notices of Proposed Rulemakings* have contained text of proposed rules. However, in the years before Chairman Genachowski, only 38 percent contained the specific text. Also, at times, these NPRMs have been broad, leading to uncertainty because industries are not clear as to what the FCC is actually looking at. Do you believe that the FCC should include the actual language of any and all proposed new rules in every NPRM?

Answer. Yes. During his tenure at the FCC, Chairman Genachowski has made progress on ensuring that many notices of proposed rulemaking contain actual proposed rules. I support a continuation of this practice.

Question 4. These NPRMs can stay open for quite a while costing industry time and resources without any knowledge of whether action will take place or not. I have heard from many of my constituents with business before the Commission that they simply cannot get an answer from the Commission on what seems to be routine petitions, applications, or proceedings.

Nevada has asked for a waiver from the FCC in regards to its 700 megahertz public safety early deployment rules. I understand that a decision on this could have been delayed until Congress passed a public safety spectrum allocation bill. Now,

with provisions intended to facilitate a public safety network in place, the FCC still seems to be stalling on this.

Other companies have purchased spectrum in the lower 700 MHz and are awaiting a decision by the FCC on whether rules regarding interoperability, clearing channel 51 or waivers to build out requirements will be granted.

The issue of “special access” has been open for 10 years before the Commission without any resolution. This is an issue worth billions of dollars to the entire industry.

Furthermore, last July, I and a number of my colleagues on this Committee wrote to you and we did not receive a response for 8 weeks and only after multiple follow up letters and calls. When Senators on the Committee of jurisdiction have trouble receiving a response from the FCC, there clearly are problems with answering questions.

All of this leads to uncertainty. There doesn’t appear to be much confidence among many companies that the FCC can act expeditiously on much of anything of significance to the industry. Proceedings can languish for 3, 5, or 10 years. Companies, generally, have a hard time investing, or increasing their investment, if they are uncertain what the regulatory environment is going to look like for their business.

Chairman Genachowski has worked on this issue and established internal 180-day shot clocks; however, this has not solved all the problems of open ended NPRMs.

Do you believe that Congressional legislation implementing shot clocks on FCC action is appropriate? If not, why? Does the Commission expect to act on any of the examples listed above?

Answer. I believe that Congressional legislation implementing shot clocks could be helpful in many circumstances provided the ability to allow for reasonable exceptions is granted. Regarding the timing of pending FCC proceedings, I respectfully defer to Chairman Genachowski because the Chairman controls the Commission’s agenda.

Question 5. Since 2008, the FCC has conducted a number of merger reviews. How many times has the FCC failed to conclude the review within the 180-day shot clock period? How many times was the deadline missed? Was there any reason they were missed?

Answer. The FCC failed to conclude its review of major transactions within the 180-day shot clock period at least twelve times since January 1, 2009.¹⁶ I respectfully defer to Chairman Genachowski as to why certain deadlines were missed because the timing of merger reviews is within the control of the Chairman.

Question 6. Going back to the President’s Executive Order 13563, the Chairman has fully supported the ideals of the order, which in part states “For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings.”

In the days before the record closed on the Commission’s reform of the high cost of the Universal Service Fund, the FCC added 114 new pages of its own to use in the final decision. This practice denied public input on information that was used to render a decision which seemed to run counter to the President’s Executive Order. Without adequate public and stakeholder input, the chance that a regulation will have unintended consequences increases. One example brought to my attention is that now smaller rural markets like those in my state will miss out on support because of the presence of fixed wireless services. They believe more dialogue and transparency could have avoided this outcome.

Do you believe that relying on reports in rulemaking and adjudications that are without a robust notice and comment process is appropriate?

Answer. No.

Question 6a. Or substantially altering a report after the period with which industry input or comments are accepted?

Answer. No.

Question 7. Do you agree that it is not the best practices of a government agency to dump data into a report at the 11th hour without industry input?

Answer. Yes.

¹⁶ Additionally, according to the Commission’s timeline, the applications for the proposed AT&T-Mobile transaction were dismissed on day 178. It was dismissed after the parties requested that the applications be withdrawn. The clock, however, was tolled for 38 days. Thus, the transaction was acted upon more than 180 days after the applications appeared on public notice.

Question 8. Do you agree that this method, while perhaps helpful to the Commission, is not open and transparent to the level benefitting an agency that issues regulations that have a significant economic impact?

Answer. Yes.

Question 9. The FCC rightfully should review transfers of lines under section 214 of the Communications Act and the transfer of licenses under section 309 and 310 of the Communications Act. However, this review should not provide the FCC to extract a list of concessions from the applicant in exchange for approval. For example, in the 2011 Comcast/NBC Universal transaction order, the Commission accepted a “voluntary” commitment from Comcast to comply with net neutrality rules even if a court overturns those rules.

This agreement was made through a transaction review and was done without any public scrutiny—as proposed conditions are often unknown until the approval order is announced.

Do you believe that this type of rulemaking provides a scenario in which one set of rules exist for those who have merged and another exists for those who have not?

Answer. Yes. The Commission has imposed conditions and accepted “voluntary” commitments in approving transactions that are aimed at industry-wide concerns resulting in disparate requirements among private sector participants.

Question 10. Have there been instances you have experienced when merger conditions have been imposed that was not directly related to the transfer questions?

Answer. Yes.

Question 11. Do you believe it is appropriate to require the FCC to end this practice by requiring the FCC to narrowly tailor any conditions it imposes or commitments it accepts to only address harm caused by the transfer of licenses?

Answer. I believe that, in reviewing a transaction to ensure it is in the public interest, narrowly-tailored conditions and commitments should only be imposed or accepted to ameliorate transaction-specific harms, so I would support such a requirement if Congress should decide legislation is appropriate.

Question 12. Last November, I introduced S. 1780, the Federal Communications Commission Consolidated Reporting Act. In section 3 of that bill, I identified 24 reports for repeal and elimination. 16 of those reports were ones required of the FCC. Many of these required reports appeared to me to be contemplated during eras long since passed; were ones with an exceedingly narrow focus; or ones that bore little relevance to today’s communications marketplace. Have you had the opportunity to review the FCC reports that were identified in S. 1780?

Answer. Yes.

Question 12a. Would you take issue with any of the recommended deletions?

Answer. No.

Question 13. Notwithstanding my desire to leave the FCC of its reporting burden, S. 1780 calls for the FCC to provide a Report to Congress with respect to the state of the communications marketplace, covering such matters as competition in broadband deployment and barriers to the competitive marketplace. The FCC is currently required to do many of these narrowly focused reports, but it seems to me that what we lack is anything like a comprehensive look at the totality of the marketplace at regular intervals. My thought was that this should be done every two years. What is your opinion of such a proposal? I believe that both the FCC and Congress would benefit from such a Report.

Answer. I agree that such a report would be beneficial to the FCC, Congress and the public.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN D. ROCKEFELLER IV
TO HON. MIGNON L. CLYBURN

Public Safety Waivers

This Committee worked hard to pass legislation that will make a nationwide, interoperable public safety network a reality. The law is clear that the network must be based on a single nationwide architecture. I recognize that, before the law was passed the FCC granted several waivers to allow certain jurisdictions, on a conditional basis, to begin building certain facilities. I also understand that a number of other jurisdictions filed waivers that remain pending.

There have been press reports that some at the Commission believe that the law does not speak directly to whether the FCC should grant new, additional authority to jurisdictions to begin building their own networks before the new FirstNet board is put into place. Such a position seems to undermine the clear intent of this Com-

mittee and of Congress toward creating a nationwide network. Such a position also runs the risk of replicating the mistakes of the past by creating separate networks that may never be truly interoperable.

I recognize that allowing one or two of these jurisdictions to move forward with their networks, subject to appropriate conditions and vendor indemnification, may provide some benefits for public safety. But I have heard from experts that allowing a number of jurisdictions to move forward could make it much more expensive and difficult in the long-term to deploy a truly interoperable network nationwide. That was not Congress's intent.

Question 1. Will you commit that when you review whether to allow authority for jurisdictions to begin building their networks before FirstNet is set up that you will act in a manner that is consistent with Congressional intent?

Answer. Yes. I will faithfully adhere to the specific language and spirit of the Middle Class Tax Relief and Job Creation Act of 2012.

Question 2. In your opinion, do you agree that the granting of new authority would complicate FirstNet's efforts to achieve nationwide interoperability for our first responders?

Answer. I believe that any early deployment plans should be carefully evaluated on their own merits to ensure that such any proposed deployment provides concrete, near-term public safety benefits. With appropriate safeguards, I believe this is possible to do without undermining the important tasks that FirstNet has been given by Congress, including preserving and promoting interoperability.

Question 3. Also, if the Commission were to grant some jurisdictions new authority, how would you make sure that they would not run the risk of increasing the overall costs of the network?

Answer. Appropriate safeguards, such as requiring adherence to the recommendations of the Technical Advisory Board for First Responder Interoperability, can help minimize risk. It also makes sense to avoid stranding assets that have already been purchased by local jurisdictions to the extent possible.

Political File

Question 4. For more than five decades, broadcasters have kept paper copies of their public files. The FCC recently required television broadcasters to move into this century and finally make their public and political files available online. I wholeheartedly support this requirement. We're moving to a digital world, and government transparency cannot be stuck in the dark ages. However, I question the wisdom of exempting from the rule broadcasters who are not in the top 50 markets. I understand that you are worried about the bottom line for broadcasters in rural areas—but I am concerned about the citizens they serve. It is often more difficult for citizens in rural areas to make the trip to their nearest broadcaster's station to review paper files. Should you not make sure that citizens in rural areas can access the same information as those in the largest markets?

Answer. As I understand the Order, it is not a permanent exemption in that all TV stations will have to start filing online in July 2014.

Broadcasters urged us to give them time to gain experience working with the online public file system before requiring that they maintain their political file online. We opted to give that time to the smaller broadcasters that could most be in need.

As our Order points out, the record found that stations affiliated with the top four broadcast networks often provide the highest-rated programming, and therefore the most-watched advertising, including a large proportion of political advertising. The 11 percent of stations that have to initially comply reach 65 percent of Americans, and account for roughly 60 percent of the total television political advertising dollars spent in each major election cycle.

Our rulemaking further notes that delayed implementation for stations with a smaller market reach will ensure that the Commission is able to target assistance to these stations, if necessary. We go on to point out that FCC staff will gain experience with the process of assisting the smaller first wave of broadcasters transitioning to the online political file. This will enable staff to more efficiently assist the larger number of stations that will transition later, that may need enhanced support because of their more limited IT resources.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUE TO
HON. MIGNON L. CLYBURN

Media Ownership by Women and People of Color

Question 1. Are you satisfied with the level of media ownership by women and people of color today? If not, I would appreciate your suggestions on how media ownership by women and people of color can be improved. What role can the FCC play to encourage greater media ownership opportunities for women and people of color?

Answer. No, I am not satisfied, and I feel that the FCC needs to gather the most current data on ownership demographics in order to appropriately update our media ownership rules. Assessing the critical information needs of American communities is essential to our media ownership landscape, and currently, the Commission lacks comprehensive data on how citizens are accessing and digesting media content and from what sources.

Once we gather the data we need to assess market entry barriers and other obstacles to female and minority ownership, we can move forward with more complete media ownership analysis and subsequent changes to our rules.

Spectrum Swaps

Question 2. Some industry representatives as well as a few Members of Congress have suggested that spectrum swaps are a direct and faster way to increase competition in the wireless broadband market. Do you agree with this suggestion? What efforts are being taken or can be taken by the FCC to explore spectrum swaps as a way to increase competition in the wireless broadband market?

Answer. If by spectrum swaps, Senator, you mean leases from spectrum licensees to other parties following the FCC's rules and policies on secondary market transactions, then yes, I wholeheartedly agree. In my opinion, the Commission should encourage mobile wireless carriers to be more efficient when using the spectrum they currently hold. Under Chairman Genachowski's leadership, the Commission has initiated proceedings, held workshops, and taken other steps to encourage commercial mobile wireless carriers to be more efficient. For example, in late 2010, the Commission adopted a Notice of Inquiry to seek comment on issues related to promoting greater use of dynamic spectrum access technologies and secondary market transactions.

Also, small cells can significantly increase the density of network deployment and the efficiency of spectrum use. The Commission is working with NTIA on enabling small cells in the 3.5-GHz band, which could free up 100 MHz of spectrum for wireless broadband.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN F. KERRY TO
HON. MIGNON L. CLYBURN

Updating the Law

Question 1. The FCC has a wireless bureau, a wireline bureau, and a media bureau. Given that all three operate in a broadband world, should we have a broadband bureau at the agency that either incorporates these three separate bureaus or helps us understand the state of broadband competition and define and eliminate duplicative bureau functions?

Answer. Updating the agency's organization to keep pace with changes in the communications industry benefits the public interest in a number of ways. However, the FCC Chairman should maintain the statutory discretion to organize the Commission in the manner that best allows her or him to resolve the numerous rulemakings, petitions, and proceedings that come before the agency.

During my time at the agency, the Commission's Bureaus have worked together on the drafting of the National Broadband Plan and its implementation, and their individual perspectives, such as licensing and technical understanding, have played an important role in the development of our overall policy goals. It's not clear to me that a separate Bureau is necessary at this time given the collaborative nature of the Bureaus' work to date.

Question 2. The 1992 Act is 20 years old this year, and the 1996 Act is entering its late teens. Should we update these laws and if so, using what set of principles?

Answer. The recent hearings on the 1992 Act have been extremely worthwhile. Some industry stakeholders have called for an update, and I think it is important for us to begin the groundwork for broad, possible adjustments of our current telecommunications laws.

That said, I support the preservation of the Commission's authority to ensure that the communications marketplace is robustly competitive and properly serves consumers. Our public interest mandate is an important facet of that objective.

Spectrum

Cisco's U.S. mobile data forecast projects that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. With that kind of demand for space in our airwaves for wireless broadband, the Commission should be making every effort to make as much existing spectrum as usable as possible quickly.

Question 3. What are the prospects for Federal and private users to share the spectrum that agencies currently hold without disrupting vital public services and what can we do to speed up the process?

Answer. The prospects for Federal agencies and commercial licensees to share spectrum are strong. On July 20, 2012, the President's Council of Advisors for Science and Technology (PCAST) released a report that recommended this type of sharing as the most practical, cost effective, and quickest way to ensure that the commercial mobile wireless industry can keep up with the demand that American consumers have for mobile broadband services.

To move quickly to implement the recommendations in the PCAST Report, I would suggest that the Senate and the House each appoint a task force to study the Report and meet regularly with the appropriate staff members of the NTIA and the FCC to determine if new Federal laws are necessary and appropriate to efficiently implement the sharing recommendations.

Question 4. As space on the airwaves becomes increasingly congested, how will the FCC better arbitrate interference disputes between neighboring services in the future?

Answer. Section 6408 of the Middle Class Tax Relief and Job Creation Act of 2012, directs the Comptroller General of the United States to conduct a study to consider efforts to ensure that each transmission system is designed and operated, so that reasonable use of adjacent spectrum does not excessively impair the functioning of such system. That statute also requires the Comptroller General to consider receiver performance as it relates to spectral efficiency. The Commission should consider whether it has authority to take action to improve receiver performance. If the Commission has that authority, it should initiate a proceeding to consider rules to improve receiver standards.

Question 5. Conservative studies and estimates have suggested that use of spectrum on an unlicensed basis contributes at least \$50 billion annually to the U.S. economy, thanks to the benefits we all gain from widespread Wi-Fi availability, or uses like automatic highway toll payment, or business uses for smart inventory. Can you talk about the priority that the Commission places (or that you will place) on ensuring that there is an appropriate mix of spectrum coming to market both for auctions and for such unlicensed use?

Answer. The Commission must make it a priority to ensure that there is an appropriate mix of spectrum for auctions and for unlicensed use. I appreciate the bipartisan effort that Senators and Representatives led to ensure that the Middle Class Tax Relief and Job Creation Act of 2012 contained statutory provisions to protect unlicensed spectrum. It is estimated that unlicensed spectrum generates between \$16-37 billion each year for the U.S. economy. In November of last year, the Consumer Federation of America issued a report, which found that 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.

Last month, New America Foundation, GiG.U, the United Negro College Fund, Google, Microsoft, and the other founding partners announced a project called AIR U. This initiative recognizes that universities located in certain rural areas are struggling to find access to affordable broadband networks. This challenge often makes it more difficult for these institutions to attract the best faculty and students. By employing unlicensed TV White Space services, AIR U can offer a low-cost means to provide these universities with increased coverage and capacity. In addition, the initiative will stimulate and aggregate demand in the adjacent community. All of this will encourage greater investment in, and development of, new services. This further underscores the public interest merits of ensuring that there is sufficient unlicensed spectrum available.

Privacy

The FCC recently concluded an investigation into the Google Wi-Fi data collection incident where the agency found that Google's actions did not violate section 705

of the Communications Act due to the fact that the incident occurred on unencrypted Wi-Fi, rather than a secured network.

Question 6. In light of the result of this investigation, do you believe that Congress should update section 705 to account for this gap in the FCC's wiretap provisions?

Answer. Yes. The Google Street View investigation highlighted that section 705, written long before Wi-Fi existed, is outdated. The Commission is happy to serve as a technical resource in considering possible revisions. We would also recommend consultation with the Department of Justice, given the overlap between section 705 and the Wiretap Act.

Interoperability

Interoperability of consumer devices within a spectrum band helps promote competition in wireless services. Since the early 1980s, the Commission has adopted rules or sent strong messages that it expects wireless service licensees to offer consumers equipment that can operate over the entire range of an allocated spectrum band. But interoperability does not yet exist in perhaps the most valuable spectrum bands the FCC has ever allocated—the lower 700 MHz band. In March, the FCC initiated a proceeding to promote interoperability in this band. I noticed that the NPRM would prefer that the industry propose a voluntary solution, as would I, but you also indicated an interest in moving to rules if that voluntary approach is unsuccessful.

Question 7. Do you believe interoperability of devices within this band matters, what is the FCC staff doing to monitor the efforts of the industry at arriving at a voluntary solution for the lower 700 MHz band, and how much more time do you believe the industry should have before you would push to conclude this proceeding and adopt rules if it appears that an industry solution is not possible?

Answer. Yes; interoperability in the lower 700 MHz band matters a great deal to mobile wireless consumers.

- Throughout the history of the mobile wireless industry, whenever it appeared that a lack of interoperability might arise with regard to a spectrum band the Commission was about to allocate for mobile wireless service, the Commission has either issued an order mandating interoperability, as it did in the 1981 Cellular Report and Order, or strongly instructed the industry that it expects consumer equipment to operate over the entire range of that spectrum band. The lower 700 MHz band, as you mentioned, is the only spectrum band the Commission has allocated that lacks interoperability.
- The proceeding to develop auction rules for the 700 MHz band, which the FCC initiated in 2006, was closely followed by the industry and consumer advocates because it was widely anticipated that the excellent engineering characteristics of the band would lead to unforeseen innovation in broadband applications and devices. The lack of interoperability in the 700 MHz band is preventing some American consumers, such as rural customers who subscribe to service from companies who won licenses in the A Block of the lower 700 MHz band, from enjoying the access to this innovation that other Americans can enjoy. It is also preventing carriers from offering competitive options for comparable mobile broadband services which, in turn, leads to higher quality services and lower prices.

When Congress enacted the voluntary incentive auction and other spectrum provisions of the Middle Class Tax Relief and Job Creation Act of 2012, it received well deserved praise, because our Nation's demand for mobile broadband services has created a spectrum crunch. If finding new ways to repurpose spectrum for commercial mobile broadband services is a national policy priority, then removing a barrier to productive use of the 700 MHz band, which is perhaps the most valuable spectrum the Commission has ever repurposed, should be just as important for this Commission.

Chairman Genachowski is the appropriate person to answer how the FCC staff is monitoring the industry's progress towards a voluntary solution.

I do not think the Commission should give the industry more than a few more months to find a voluntary solution before circulating an Order that mandates interoperability in the lower 700 MHz band.

- The industry has already had more than two years to arrive at a voluntary solution and, to date, remain very far apart on the issue. Holders of B Block and C Block licenses in the lower 700 MHz band allege that operations from holders of Channel 51 broadcast licenses and holders of E Block licenses in the 700 MHz band will cause harmful interference to any networks that will use A

Block licenses in the lower 700 MHz band. Therefore, the holders of B and C Block licenses do not want to be in a unified band class with A Block licenses. The holders of A Block licenses disagree and believe that appropriately conducted tests and analyses persuasively rebut the arguments from the B and C Block licensees. In my opinion, without a mandate that the parties must achieve interoperability by a certain date, there will not be a voluntary solution because it is not in the interests of the holders of B and C Block licenses, who compete with many of the A Block licensees, to reach such an agreement.

- The March 2012 Notice of Proposed Rulemaking asks technical questions to examine the merits of these competing arguments. The period for filing comments and reply comments ended earlier this month. The A Block licensees have conducted tests of handsets with A Block license networks and tests of handsets with B and C Block license networks, near Channel 51 and E Block operations and the test results showed no harmful interference to the A Block or B and C Block networks. The interoperability advocates have also filed technical analyses and empirical to show that, A Block license operations would not cause harmful interference to B Block and C Block licensed operations if all three were unified in a single band class. The opponents of interoperability have also conducted tests that, they contend, support their position. The FCC staff needs to review all the test results and decide which are the most persuasive. The interoperability advocates believe that this can be accomplished in a few months.

Public Broadcasting

As a long-time supporter of public broadcasting, I believe that it plays a special and necessary role in our media landscape. I was pleased to see that on November 4, 2011 the FCC Consumer Advisory Committee adopted a recommendation that the FCC work with the Administration and Congress to support continued Federal funding of the Corporation for Public Broadcasting and local public broadcast stations, including those providing service to rural, tribal, native, and disability communities.

Question 8. Do you support this recommendation from the FCC Consumer Advisory Committee and can you share your views on the unique and necessary role that public broadcasting plays in our media landscape?

Answer. I often include public broadcasting stations in my list of the top networks because of my great affinity for the content that they offer. Their programming for children and adults alike inspires, educates, and enriches viewers all across America.

I agree with the Consumer Advisory Committee's recommendation that the loss or significant reduction of Federal funds to CPB would negatively impact all currently funded stations, and may force some to go off the air. Acutely impacted would be those in rural, tribal, native, and disability communities.

The U.N. and International Negotiations on Internet Governance

Question 9. As former Congressman Boucher recently explained, "The best way to understand the current system of global Internet governance is as a hub-and-spoke relationship. At the hub, a loose confederation of standards-setting bodies ensures the Internet's continued stability and functionality. Little, if any, regulation occurs at the hub. This arrangement leaves tremendous leeway for the sovereign governments—the "spokes"—to regulate the Internet within their borders."

And that system has worked relatively well, with some unfortunate outliers trying to control their population's access to information. Yet, there is pressure abroad for a new U.N. agency to assert international governmental control over the Internet. That pressure is coming from countries who wish to impose new tolls on service and countries that fear the power of open discourse on the Internet.

In a recent blog post, NTIA Administrator Strickling wrote about these proposals from China and others, "This is contrary to President Obama's vision of an Internet that is interoperable the world over, and the United States will vigorously oppose such barriers." And I know that this is a priority for Ambassador Philip Verveer and the State Department as well. Do all of you share the Administration's point of view?

Answer. Yes I do.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK PRYOR TO
HON. MIGNON L. CLYBURN

CVAA

The 21st Century Communications and Video Accessibility Act (CVAA) was enacted to update the media and communications accessibility requirements and expand access to current and emerging technologies.

I have heard concerns about the population of the statutorily required advisory committees and the resulting recommendations. Consumer and advocacy groups that serve on these committees face technical and legal capacity constraints that many businesses do not.

Question 1. Will you be cognizant of these inherent limitations and keep them in mind as you consider the recommendations put forth by the advisory committees?

Answer. Yes. Implementing the CVAA to comply with both the language and the spirit of the most important accessibility legislation since the Americans with Disabilities Act is one of my highest policy priorities.

Further, the Video Programming Accessibility Advisory Committee's (VPAAC) reports show where consensus has not been reached on this issue. It also received alternate views and identified areas that need further review. It is all part of the record and will be considered when we undertake future rulemakings.

Question 2. It is my understanding that the Commission will soon consider the Advanced Communications Services provisions of the CVAA. How does the Commission plan to ensure that video conferencing services used by consumers who are deaf or hard of hearing are interoperable with each other?

Answer. We are considering this issue in a forthcoming Notice of Proposed Rulemaking, and its comment period has now closed. The Commission will undertake the next step of this rulemaking soon.

Phone Theft

In March, I sent a letter to Chairman Genachowski expressing my concern at what seems to be an epidemic of cell phone thefts. It is my understanding that technology within the phone could enable a manufacturer or wireless provider to identify a stolen phone and prevent reactivation of service. This has significant consumer privacy implications. I applaud the Commission's recent initiative to mitigate the theft of cell phones but I remain concerned.

Question 3. Would you walk me through the steps that the Commission has taken with regard to cell phone theft, particularly the establishment of the database and how you have addressed the privacy concerns that have been raised?

Answer.

- On April 10, 2012, Chairman Genachowski brought together major city police chiefs and the wireless industry to announce new initiatives by wireless carriers to deter theft and secure customer data.
- Implementation of a database to prevent use of stolen smartphones. Within six months of their agreement when Americans call their participating wireless provider and report their wireless devices stolen, their provider will block that device from being used again. This system will be rolling out globally using common databases across carriers over the next 18 months.
- Encourage users to lock their phones with passwords. Smartphone makers will notify and educate users in the most highly visible ways—through messages on the smartphone itself and through “Quick Start” user guides—about how to use passwords to deter theft and protect their data.
- Educate users on lock/locate/wipe applications. Wireless providers will directly inform their customers about how to find and use applications that enable customers to lock/locate/and wipe smartphones remotely.
- Public education campaign on how to protect your smartphone and consumers. The wireless industry will launch a campaign, with media buys, to educate consumers on how to protect their smartphones and themselves from crime.
- Progress benchmarks and ongoing dialog. The wireless industry will publish quarterly updates and submit them to the FCC on progress on these initiatives. We received the first of the required quarterly compliance updates on June 29, 2012.

Universal Service Fund Reform

I am concerned about the impact of Universal Service Fund reform on the continuation of public and private investment in broadband deployment.

Question 4. Would you provide more information about the rationale for the retroactive component of the regression caps?

Answer. The regression methodology for high cost loop support uses carriers' latest cost information—and that cost data is updated annually—in order to establish reasonable limits for reimbursable capital and operating costs for rate-of-return companies. The methodology only affects support going forward, beginning on July 1, 2012.

Question 5. What opportunities are there for carriers to correct data in the regression analysis other than submitting corrections to study area boundaries?

Answer. Carriers may file a streamlined waiver request of the regression analysis, if they conclude that the results will have a limiting effect of their reimbursable costs due to resulting errors. So far, the Commission has only received two waiver requests on the study area boundaries, and the Bureau granted those waivers within two weeks of receiving those requests.

Question 6. Would you explain the Commission's formulation of setting benchmarks for High-Cost Loop Support?

Answer. The methodology uses quantile regression analyses to generate a set of limits for each rate-of-return cost company study area for capital and operating expenditures, based on the carriers' own cost information, which the National Exchange Carrier Association files annually with the Commission. At the direction of the Commission's USF/ICC Reform Order, the Wireline Competition Bureau compared each company's costs using statistical techniques, to determine which companies are similarly situated. The Bureau then set the regression-derived limits at the 90th percentile of costs, for both capital expenditures and operating expenditures, as compared to the similarly situated companies.

The policy rationale for adopting quantile regression analyses stemmed from two main observations. First, under the prior rules, carriers with high loop costs may have up to 100 percent of their marginal loop costs above a certain threshold reimbursed from the USF. This gave carriers the incentive to increase their loop costs and recover that marginal amount from the Fund, without regard for efficient investment or impact of availability of funds for other high cost areas. Second, carriers that took measures to control their costs or invest and operate more efficiently were losing support to the carriers that were increasing their costs under the old rules.

The limitations imposed through the regression analyses are meant to address these issues and incentivize carriers to be more efficient in their investment and operations. Thus, by comparing similarly situated carriers through a quantile regression analyses, we can observe which carriers have been more efficient, and through the limitations, incentivize those carriers with expenses in the 90th and above percentile to become more efficient in their investment and operating expenses.

Question 7. Some contend that regression analysis will change cost recovery revenues from year-to-year which creates uncertainty and may negatively impact investment in rural areas. How will the Commission balance the need to control costs while encouraging network investment in rural areas?

Answer. Concerns with the predictability of the costs that will be reimbursable if the regression analyses are conducted annually have been raised in the Petitions for Reconsideration. The Bureau's Order enables companies to calculate their expected support amounts until 2014, providing more certainty to rate-of-return carriers in the short-term. In the meantime, the Commission is considering the issues raised by the carriers in the Petitions for Reconsideration, including whether the regression analyses should be set for multiple years.

700 MHz Spectrum

It is my understanding that the Commission has initiated a Notice of Proposed Rulemaking regarding interoperability in the lower 700 MHz band.

Question 8. Does the Commission anticipate the completion of this proceeding before the end of the year?

Answer. Holders of B Block and C Block licenses in the lower 700 MHz band allege that operations from holders of Channel 51 broadcast licenses and holders of E Block licenses in the 700 MHz band will cause harmful interference to any networks that will use A Block licenses in the lower 700 MHz band. The holders of A Block licenses continue to disagree. In my opinion, without a mandate that the parties must achieve interoperability by a certain date, there will not be a voluntary solution because it is not in the interests of the B and C Block licensees, who compete against many of the A Block licensees, to reach such an agreement.

The March 2012 Notice of Proposed Rulemaking asks technical questions to examine the merits of these competing arguments. The period for filing comments and reply comments ended earlier this month. The A Block licensees have conducted

tests of handsets with A Block license networks and tests of handsets with B and C Block license networks, near Channel 51 and E Block operations and the test results showed no harmful interference to the A Block or B and C Block networks. The interoperability advocates have also filed technical analyses and empirical to show that, A Block license operations would not cause harmful interference to B Block and C Block licensed operations if all three were unified in a single band class. The opponents of interoperability have also conducted tests that, they contend, support their position. The FCC staff needs to review all the test results and decide which are the most persuasive. The interoperability advocates believe that this can be accomplished in a few months.

Low Power Television

For many years, Class A and Low Power Television Service (LPTV) stations have provided valued local, religious, Spanish language, and other programming. Communities have come to rely on this niche programming that may not otherwise be available.

Question 9. How will the Commission work to ensure the viability of Class A and LPTV during its implementation of the Middle Class Tax Relief and Job Creation Act?

Answer. As I understand it, the Act made no specific mention of LPTV. However, I am a strong proponent of LPTV broadcasters and the unique content they provide, and look forward to continuing to work with them on any assistance the Commission can offer going forward.

Question 10. What is your position on mandatory channel sharing for LPTV?

Answer. I have heard concerns from LPTV broadcasters, and intend to have further conversations with stakeholders and the FCC's Media Bureau to ensure that LPTV stations are protected to the greatest extent possible as we move toward greater spectrum efficiency.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE McCASKILL TO HON. MIGNON L. CLYBURN

Last year, I raised concerns with the FCC regarding the Universal Service Fund's (USF) Lifeline Program. In response to these concerns, the Commission has taken steps to crack down on waste, fraud and abuse within the program. The recent announcement that 20,500 letters will be sent in Missouri to eliminate duplication was welcome news. The implementation of a database to help detect and prevent duplicates is an important tool, but I remain concerned that further action needs to be taken to address fraud.

Question 1. Has the FCC conducted its own investigation into possible fraud occurring within the Lifeline program, and if so what were the findings of that investigation?

Answer. While I cannot comment on current investigations, as you note, the Commission became aware of duplicative services to consumers in the Lifeline program, and issued an Order last summer prior to our major reform of the Lifeline program in January 2012, to clarify our Lifeline requirements and resolve duplicates in numerous states. That process has continued and is expected to save the Universal Service Fund approximately \$50 million through 2012.

Question 2. Has the Commission examined the marketing agreements providers are using to advertise Lifeline products to consumers?

Answer. The Commission's overhaul of the Lifeline program required that the providers disclose to Lifeline consumers the requirements for participating in the program and to certify annually that they follow those requirements. Those requirements include eligibility for participating in the program. As such, carriers may no longer state that proof of eligibility is not required, as evidenced by prior advertising before our reform Order was adopted. Moreover, the Bureau is reviewing carriers' marketing and advertising material in the course of its review of pending compliance plans with the Lifeline reforms adopted by the Commission where the carrier is relying upon the Commission's conditional grant of forbearance from the facilities-based requirements of the Act. Carriers are required to include in their compliance plans "a detailed explanation of how the carrier will comply with the Commission's marketing and disclosure requirements for participation in the Lifeline program." In order to fulfill that requirement, many are submitting their marketing and advertising materials which the Bureau is reviewing for compliance with our new rules.

Question 3. As required by the Commercial Advertisement Loudness Mitigation (CALM) Act, the FCC published an order last December outlining practices that net-

works and cable stations must implement by this December. I understand these rules have not yet been published in the *Federal Register*, and I have heard little about progress since December. Are we on track to see this legislation—strongly supported by consumers—fully implemented by the end of the year?

Answer. Yes. We are on track to achieve implementation by December 13th of this year.

Question 4. In December, the International Telecommunication Union (ITU) will convene the World Conference on International Telecommunications (WCIT-12) in Dubai to renegotiate the International Telecommunication Regulations. A key topic of discussion is expected to be whether and how to expand it to cover the Internet. To what extent is the FCC involved in policy and technical discussions in advance of the ITU meeting?

Answer. The ITU World Conference on International Telecommunications (WCIT) will take place in December 2012, in Dubai to revise the International Telecommunications Regulations (ITRs), a treaty instrument governing the exchange of international telecommunications traffic. As the U.S. Government agency with primary responsibility for implementing the 1988 ITRs, the FCC has actively engaged in domestic and international preparations for the WCIT.

The domestic preparatory process is headed by the State Department, with participation from other U.S. Government agencies and information and communications technology (ICT) stakeholders. The international preparatory process took place in an ITU Council Working Group (CWG), open to all ITU Member States and Sector Members. The CWG developed draft revisions to the ITRs based on contributions to the CWG, which will be submitted for consideration to the WCIT.

The CWG for the WCIT met for the last time on June 20–22, 2012. The CWG's report, with proposed changes to the ITRs, was finalized at the June meeting and made available to Member States so that they can prepare national positions. The FCC will continue to participate in any future preparatory meetings and to conduct outreach with other countries.

There has been concern that some countries would attempt to use the WCIT to give the ITU authority over Internet governance (including naming, numbering and addressing), undermining the long-standing multi-stakeholder governance model. No specific proposals to grant such authority were received by the CWG, and, significantly, the existing ITRs have been accepted as a framework for negotiations. This should help limit the new issues that may be brought into the treaty. However, critical Internet public policy issues will be discussed at the WCIT. Of particular concern are proposals that would change Internet protocol interconnection and charging mechanisms, as well as limit the ability of companies to manage their traffic by requiring them to provide calling party number identification information so that countries can track where traffic originates. In addition, some countries have proposed to add provisions concerning cybersecurity to the ITRs.

Question 5. What is the view of the Commission on proposals by other nations to move oversight of critical Internet resources, such as naming and numbering authority, to the ITU or other international body?

Answer. The FCC will continue to reinforce the U.S. Government position not to expand the ITRs to issues related to Internet governance. Moreover, we will continue to coordinate with our allies to form a strong coalition of like-minded countries that can work together to maintain a free and open Internet that is not encumbered by detailed ITU regulations that would jeopardize innovation and the free flow of information.

Question 6. American companies have had a historical advantage when it comes to the Internet because the innovation that has fueled the growth of the Internet started here. Companies were created in an environment where unconstrained Internet access provided them with a platform to succeed. In this way, America had a "strategic bandwidth advantage" over other countries. It was perhaps inevitable that this advantage would narrow, as broadband speeds have improved around the world. Given that context: Is it your view that this "strategic bandwidth advantage" has led and will continue to lead to job creation and greater innovation?

Answer. Yes, but we must continue on our path to achieve the goals of universal broadband deployment, adoption, and use in this great nation. 19 million Americans do not have access to robust broadband, and 1/3 of Americans still have not adopted broadband. For those who are indigent, minority, living on Tribal Lands or in the Territories, the statistics are worse. The Commission is using every tool at its disposal to address these issues. We have reformed our Universal Service Fund to direct the investment of high-cost support to broadband-capable networks in order to reach millions of consumers within the decade. We are working with the private sector in a program called Connect to Compete to address broadband adoption for low-

income families who have school-age children, and we have adopted a pilot program to determine how we can begin to address the broadband needs of all low-income Americans who qualify for our Lifeline program that currently supports telephone service. We also must continue along the path of supporting private sector investment in broadband networks to increase bandwidth capabilities and services, and encouraging access to an Open Internet by all consumers throughout the globe.

Question 7. There has been bipartisan consensus in this body to encourage deployment and adoption of broadband for the economic and social benefits it brings. How do data caps help or hinder in accomplishing that goal?

Answer. The broadband marketplace continues to evolve, and the Commission is monitoring the delivery of broadband service to consumers, as required by Section 706 of the Telecommunications Act, for instance. As part of that effort, studying the impact of speeds delivered, data caps, and other terms and conditions is a useful endeavor for us to observe the changes that are occurring, including how those changes impact the adoption and use rate of broadband and the benefits that ensue as a result. The Commission currently is considering an expansion of its Section 706 review that aligns with our goals of promoting the deployment, adoption and use of broadband by all Americans.

Question 8. On the surface, usage-based billing makes sense for consumers but I am concerned about the chilling effect data caps could have on future growth of Internet video and other content. How do we ensure fair billing practices for consumers without creating a system that stifles innovation and growth of the Internet?

Answer. As described above, the Commission is actively monitoring the broadband marketplace to promote the deployment, adoption, and use of broadband and encourage the benefits it offers. Such review includes the competitive effects of services offered on the Internet, including whether the terms and conditions of that offering, have a limiting effect on innovative services that may compete directly with incumbents. To date, my observation is that the marketplace is evolving, and we should continue monitoring that evolution and the impact it has on the deployment, adoption and use of broadband by consumers; and we should address complaints about unfair practices as quickly as possible so as to ensure continued innovation and investment in broadband.

Question 9. I am sure you would acknowledge the FCC's long-standing support of low power television and appreciate the success of low power TV since the FCC created the service in 1982. During this span of 30 years you are no doubt aware that low power TV has developed into an essential source of information and entertainment for many diverse communities across the country. I think two perfect examples of this dynamic would be the audiences who enjoy Spanish-language programming and those who enjoy religious programming. Likewise, LPTV has been the an entry point for small businesses into the broadcast market and today, many LPTV owners are small businessmen who work hard to continue to serve their local communities with news and resources aimed at the community.

With this in mind, and also considering the likely end to a great deal of low power programming as a result of the repacking, how do you expect that this approaching void in unique programming will be filled with respect to the core missions of diversity and localism?

Answer. I am fully aware of the great value that LPTV gives to their communities of viewers, and my office has had had multiple interactions with LPTV broadcasters who have given us windows into the content they produce and how their audiences depend on it. I intend to continue listening to the concerns of LPTV station owners and broadcasters to better shape our repacking plans in order to protect these unique content providers.

Question 10. I would ask each of the commissioners, will you support rules that allow LPTV to survive after the repack?

Answer. Yes.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
HON. MIGNON L. CLYBURN

As I brought up in the FCC nominations hearing in November, we have a population of television stations currently operating on the northern border of Canada, particularly in Lake of the Woods County. They applied for channel reallocation after the DTV transition but had to wait years to get final approval from the Canadian government and the FCC this January.

Question 1. Looking ahead to the future, the need for international cooperation when it comes to spectrum is important to our translator operators on the northern border. Has the Commission begun coordination with our Canadian counterparts as it relates to incentive auction legislation passed in February?*** (*Senator Klobuchar asked this question in Committee and requested written follow up*)

Answer. The United States has had a long and successful history of close cooperation on use of the radio spectrum along the border with Canada. The FCC's International Bureau routinely communicates with its Canadian counterparts on a wide variety of regulatory and other coordination matters, ranging from wireless to satellite to radio and television broadcast. Cooperating on the incentive auctions is no different.

The United States currently has international agreements for sharing TV spectrum along the border with Canada and Mexico. These agreements will be respected and can affect the FCC's ability to efficiently repack the spectrum.

The Canadians are in the planning stages of finalizing their digital television transition, and both sides agree that we should maintain open communications to maximize beneficial opportunities in our repacking. We will continue to work closely with the Canadians to find satisfactory solutions to whatever repacking challenges may occur.

Since the release of the National Broadband Plan, the FCC has kept our counterparts in Canada informed—at quarterly meetings of the FCC-Industry Canada spectrum working group, or Radio Technical Liaison Committee (RTLCL) and at two other bilateral meetings—of the possibility of reallocating a portion of the TV spectrum for wireless broadband. Since the passage of the incentive auctions legislation last February, FCC staff has met with Industry Canada twice to discuss the specifics of the legislation.

Once the Commission releases its Notice of Proposed Rulemaking in the fall of 2012, the International Bureau, in conjunction with the State Department, will be in a better position to begin more formal technical coordination discussions with Industry Canada.

Question 2. I believe of one of the most impressive programs the FCC operates is the E-Rate program supporting communications technology in schools and libraries. Senator Rockefeller and Senator Snowe led the effort in creating a program that truly benefits schools and kids around the country. Minnesota has received a total of \$344 million since the E-Rate program started in 1998. This support has enabled schools and libraries across rural Minnesota to have telecommunications and broadband service giving students the ability to enhance their education. I understand that with the increase in demand from schools for broadband support, E-Rate program resources are stretched thin, including staff time to review and audit applications. Will you commit to keeping the resources for administering the E-Rate program targeted at the intended focus of connecting schools and libraries with communication technologies?

Answer. As you know, our primary goal in the reform and modernization of our USF programs is to ensure that they all Americans are connected to robust broadband. I commit to you that we will continue to strive to achieve that goal in an efficient and effective way. It is not our intent to make any changes to the E-Rate program that would damage USAC's administration of the E-Rate program.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK WARNER TO
HON. MIGNON L. CLYBURN

Two years ago, the President announced his intention to free up 500 MHz of spectrum for wireless broadband use. This initiative is even more necessary today due to exploding data usage by consumers, which is leading to faster-than-expected capacity constraints across the country.

Question 1. Are you satisfied with the current pace of the identification and reallocation of spectrum to commercial broadband use? If not, why not?

Answer. I am pleased with the FCC staff's efforts, to date, to faithfully implement the voluntary incentive auction authority provisions of the Middle Class Tax Relief and Job Creation Act of 2012. Less than two months after President Obama signed the bill into law, Chairman Genachowski circulated a draft Order to implement the channel sharing provisions of the new legislation.

In light of the Nation's dramatic surge in demand for mobile broadband services over the past few years, I believe all relevant branches and agencies of the Federal Government need to collaborate on a more efficient process for finding spectrum that can be repurposed from Federal use towards commercial mobile use.

Question 1a. Do you have additional suggestions about how Congress or the Federal Government could accelerate the process?

Answer. On July 20, 2012, the President's Council of Advisors on Science and Technology (PCAST) released a report that recommended the FCC and NTIA find 1000 MHz of spectrum that could be shared by Federal agencies and commercial mobile wireless carriers. The Report finds this type of sharing to be the most practical, cost effective, and quickest way to ensure that the commercial mobile wireless industry can keep up with the demand that American consumers have for mobile broadband services.

To move quickly in order to implement the recommendations in the PCAST Report, I would suggest that the Senate and the House each appoint a task force to study the Report and meet regularly with the appropriate staff members of the NTIA and the FCC to determine if new Federal laws are necessary and appropriate to efficiently implement the sharing recommendations.

Question 2. The USF reforms—which I supported—seek to deploy more mobile and fixed broadband services to rural and underserved America. At the same time, mobile data forecasts indicate that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. Rural Virginia wants to be part of the broadband economy, however, high quality broadband service just hasn't been available where consumers and rural economic development needs demand it.

What would happen to the pace of rural broadband deployment if Universal Service Fund Reforms are blocked or slowed down at this time? Why is it important to move forward in terms of leveraging existing Federal funding to deploy more broadband to rural and underserved America?

Answer. It would be unfortunate for the Commission's reform of the USF system to be delayed because unserved consumers may not have broadband delivered to them as quickly. We anticipate that with the changes we made to our high-cost fund, we can deliver more fixed and mobile services to unserved consumers. The reason it is so important to leverage these funds to address the unserved needs is that broadband service is so important for delivering economic benefits to communities and individuals.

Question 2a. I sent a letter to the FCC in 2011 arguing that although 4 Mbps download/1 Mbps upload may be adequate for now, this standard should not be considered an acceptable level of service in the future. How important is it to you to see that the acceptable level of broadband service advances over time?

Answer. I agree that the definition of broadband is not a static definition. It will change as American consumers' use of broadband changes. I also believe that we must continue to monitor the speeds that consumers need. We are doing just this in our review of the marketplace as required by Section 706 of the Telecommunications Act. As the speeds increase, so too must our definition of broadband, and it is important to me that communities and consumers attain the broadband speeds they need in order to participate in the 21st century communications marketplace. This is especially so for rural areas which need connectivity for economic development and the delivery of important services, such as healthcare.

Question 3. The Commission has a number of highly anticipated open Notices of Proposed Rulemaking. Now that the Commission has five highly capable commissioners, how soon do you expect to reach decisions on key issues? I would encourage you to reach decisions on important matters as soon as possible because the delay of long-standing rulemakings has caused some frustration.

Answer. I agree, and am eager to reduce our backlog as quickly as possible. I have found my new colleagues to be equally as determined in clearing our pending items, and look forward to working with them and our existing leadership team to do so.

Question 4. Looking back at FCC data stretching to 2005, the number of full-time equivalents in the Office of Engineering and Technology appears to have dropped from 116 to 81. Do you believe this reduction is the source of the backlog? Why has this office, which would seem to be at the heart of the Commission's work, have declined over time when other bureaus or offices have grown or at least stayed flat?

Answer. Our OET is one of the most crucial and hard-working bureaus at the Commission. I am absolutely in favor of increasing its personnel back to the previous number if not higher, and advocate similar action for additional bureaus as well.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
HON. MIGNON L. CLYBURN

Senator Begich Opening Statement

Chairman Genachowski, I want to thank you for working with me during the FCC's recent efforts to reform the Universal Service Fund. I understand the need for efficiencies, and overall support the notion of USF reform. I also understand the FCC's efforts to work within a reasonable budget. However, the reality is that given Alaska's geography, distance from the Lower 48, and the very remote locations of small rural communities, all of whom must be connected to 'the grid' via "middle-mile" terrestrial, satellite or undersea fiber circuits, means that Alaska is very different. Our distances are greater, our population is smaller, and our costs are much higher, particularly as it relates to the very high cost of middle-mile circuits for broadband.

I understand the Commission desire to establish capital expense and operating expense limits for rural rate of return carriers. And, whether I agree or not, I understand that your staff's recent order establishing what is called a "regression analysis" to limit expenses puts a limit on most small companies at their current level of capital and operating expenses. Thank you for revisiting the formula recently, however there are still some companies that will be severely impacted by reductions to be implemented on July 1. I understand that your staff is well aware that the model contains data errors and other possible analytic flaws.

Question 1. Since your staff admits that these flaws exist, why doesn't the FCC limit the July 1 impact to the proposed limitation of all companies to their current level of expenses instead of implementing the reduction on a few when the reductions may be based on data errors and flaws. I know that the order limits the initial level of the impact and transitions in the impact, but why implement this reduction on a few until you know that you have it right?

Answer. I do not believe such action is necessary for the following reasons. The Bureau used the latest information available to it at that time for the high-cost loop regression analyses. The streamlined process created to correct study area boundaries was appropriate given that only 129 study areas were negatively impacted by the regression analyses (and not all of those who are capped were likely to have erroneous study area boundaries). This has been confirmed by the fact that only two streamlined waivers have been sought. Both were granted within two weeks of receipt. Staff has begun the process to obtain the study area boundary data from carriers for future regression analyses.

Moreover, the policy rationale for adopting quantile regression analyses stemmed from two main observations. First, under the prior rules, carriers with high loop costs may have up to 100 percent of their marginal loop costs above a certain threshold reimbursed from the USF. This gave carriers the incentive to increase their loop costs and recover that marginal amount from the Fund, without regard for efficient investment or impact of availability of funds for other high cost areas. Second, carriers that took measures to control their costs or invest and operate more efficiently were losing support to the carriers that were increasing their costs under the old rules.

The limitations imposed through the regression analyses are meant to address these issues and incentivize carriers to be more efficient in their investment and operations. Thus, by comparing similarly situated carriers through a quantile regression analyses, we can observe which carriers have been more efficient, and through the limitations, incentivize those carriers with expenses in the 90th and above percentile to become more efficient in their investment and operating expenses. Delay in the regression analyses would mean delay in incentivizing carriers to be more efficient.

Finally, to the extent any carrier needs adjustments to the reforms, it may file a waiver request with the Commission and demonstrate that support is not sufficient for it to serve consumers.

Question 2. It appears highly likely that as a result of the November USF/ICC order many rural carriers will lose revenues—both USF support and from elimination of crucial intercarrier compensation. Is that correct?

Answer. It depends on each carrier's situation vis-à-vis the reforms with respect to USF. For some carriers serving rural areas, such as mid-sized carriers like ACS, they actually have access to more support to serve unserved consumers by deploying broadband. As for ICC, carriers were already losing ICC support due to market changes. The modifications we made to the ICC system actually provide the carriers more certainty about their ongoing ICC compensation than they would have had otherwise. For example, our changes have provided that some of their losses can be

made up from consumers and the USF—revenues that otherwise would not have been available to them, but for the FCC's reforms.

Question 3. Alaska, like 22 other states, has a complimentary State level universal service program. The Alaska state fund disburses over \$15 million to Alaskan carriers each year. Do you anticipate these State funds will have to expand to cover revenue lost from the reforms you are implementing? And if so, have you calculated how much these State funds will need to grow?

Answer. The FCC has continually encouraged states to work with us in ensuring that the high-cost areas of their states have reasonable and comparable services, and we continue to engage with them as our USF/ICC Reform Order is implemented.

As a former state Commissioner and Chair of the Federal-State Joint Board on Universal Service, I have met with my state counterparts to discuss reform numerous times. Those exchanges have been helpful in our consideration and implementation of the reforms. This is a fruitful dialogue that continues.

Question 4. The E-Rate program has always meant a great deal to the State of Alaska, ensuring that the children and educators living and working in our state's most remote towns and villages have access to the Internet and distance learning and professional development courses that are otherwise unavailable to them locally.

Let me quote from comments filed with the FCC last week by the Superintendent of the Dillingham City School District: As a small, rural school district in Alaska that has high poverty, low socio-economic, and predominantly native Alaskan population (Yupik), "I want to thank the FCC for our current level of E-Rate funding. We are an "off the road" community, meaning the only way in and out is by air, dog sled, snow machine, or boat. We just recently acquired access to high-speed fiber Internet via GCI Corporation extending this service to rural, remote areas of Alaska. The cost for this more than doubled our annual rate and without the current E-Rate support we could not afford this service." Is there a better way to administer the digital literacy program without damaging E-Rate processing?

Answer. The Commission asked questions about implementing a digital literacy program in its Further Notice accompanying the universal service Lifeline Reform Order. It sought comment on several different ways that the program would be administered. We continue to review that record. It is not our intent to make any changes to the E-Rate program that would damage USAC's processing of E-Rate applications/claims.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. OLYMPIA J. SNOWE TO
HON. MIGNON L. CLYBURN

Comprehensive Spectrum Inventory

As you know I have been calling for a comprehensive inventory for over three years now. A comprehensive inventory of both Federal and non-federal spectrum would provide decision makers at the FCC, NTIA, and Congress a clearer, more detailed, and up-to-date understanding of how spectrum is currently being used and by whom—data essential to sound policy decisions and spectrum management—mainly given the FCC manages over 2 million active licenses and NTIA administers over 450,000 assignments.

While I appreciate the Commission's effort in conducting a "baseline" spectrum inventory and creating Spectrum Dashboard and the LicenseView, it is not a sufficient substitute to conducting a comprehensive inventory. In addition, Representative Stearns, Senator Warner and former Commissioner Copps have all recently called for a comprehensive spectrum inventory. So there is a growing appeal for such effort to have a better understanding of spectrum usage.

Question 1. How important would having more detailed data on spectrum usage and infrastructure and device deployment be to pursuing sharing opportunities between spectrum users and promoting more spectral efficiency?

Answer. I believe the Commission should continue to improve the information it has on spectrum usage and infrastructure and device deployment. I have consistently said that, in addition to finding more spectrum that can be repurposed for commercial services, we need to encourage licensees to become more efficient at using the spectrum that is already allocated for commercial services. Having more information about how licensees use allocated spectrum will help us promote more efficient use of spectrum.

FCC Technical Expertise

In Chairman Genachowski's remarks, he stated the Commission is operating with its lowest number of employees. The FCC is also unfortunately operating at one of its lowest number of engineers—over a 60 percent reduction in engineers from the 1950s to today—yet the Commission is dealing with significantly more technically complex issues such as advanced wireless communications, commercial cable & satellite industries, public safety interoperability, more device certifications, and broadband.

Engineers at the FCC play an essential role in regulatory matters by providing technical consultation on policy matters, managing spectrum allocations, and creating new opportunities for competitive technologies. I'm concerned this lack of expertise is hampering innovation and job growth because of the excessive delays to businesses that are waiting approval to technical waivers, experimental licenses, and filed petitions at the agency.

Others share my concern, a 2009 Government Accountability Office report found that the agency "faces challenges in ensuring it has the expertise needed to adapt to a changing market place." And 2011 Wireless Report by the National Research Council suggested the FCC would benefit from "enhancing its technology assessment and engineering capabilities" due to "entering an era in which technical issues are likely to arise on a sustained basis."

Question 2. Do you believe the FCC has the sufficient level of technical resources, given the concerns various entities have raised?

Answer. I am proud of the talented engineers and other professionals at the FCC. During Chairman Genachowski's testimony before the Senate Financial Services Committee, on May 9, 2012, he mentioned that currently, the agency has the lowest number of full time employees in 10 years. To your point, the FCC is in the process of conducting an evaluation of the engineering needs and resources at the agency.

Competition and Innovation

A growing number of consumers are combing traditional media services with more innovative products that allow them to stream online content. Some products allow consumers to stream online content of all types and aggregate it with either free OTA broadcasts or basic cable service.

Question 2a. The Commission is considering an order that would allow for the encryption of basic cable signals. While there are several benefits to encrypting basic cable service, there are also some concerns that innovative devices allowing users to combine online content with basic cable service may no longer be compatible without additional hardware or software or reduce functionality of the device, and may face additional monthly fees for a cable box. As you know, Congress specifically addresses this issue in Section 624A of the statute (47 U.S.C. 544a), which requires the FCC to assure compatibility between consumer electronics equipment and cable systems so cable customers can enjoy the full benefits of both.

Answer. We are looking at this issue carefully, and weighing the benefits of encryption against any costs to consumers. We are exploring this via our NPRM on the issue, and intend to take the time to strike a proper balance in order to get it right.

Question 3. It's my understanding that other non-cable MVPDs are able to encrypt all of their video signals, even basic video service. Should Congress revisit the statute to provide greater parity in regards to signal encryption?

Answer. While it is true that non-cable MVPDs can encrypt video signals, most consumers would nonetheless need equipment to view their cable signals. We have the authority to eliminate the ban, and doing so may achieve greater regulatory parity. And as always, I welcome any input from Congress on this.

Universal Service Fund & E-Rate

The National Broadband Plan and subsequent research have identified the lack of digital literacy among low-income Americans as a major barrier to broadband adoption. To address this, the Commission proposed implementing and operating a digital literacy program through the E-Rate program's administrative structure. The FCC has proposed \$50 million in annual funding over a four year period and that such funds would be provided through saving from the restructuring of the Lifeline program. While I'm a strong advocate for a greater focus on improving digital literacy to spur broadband adoption, I'm concerned about the impact this proposed program will have on the E-Rate program, if it is administered through it.

Question 4. I'm concerned the proposed Digital Literacy program will be difficult to monitor. With E-Rate, it is possible and cost-effective to send auditors to school and library sites to ensure applicants have actually purchased and installed the

equipment for which they received E-Rate support and providers have actually delivered promised services. By contrast, it seems it may be difficult for auditors to determine this proposed digital literacy initiative's funds have actually been spent on courses. Can you tell me how USAC could properly audit this digital literacy initiative?

Answer. As with other reforms to the Universal Service Fund, combating waste, fraud, and abuse is a top priority. Our new program will not be taking money from E-Rate, and will be budget-neutral. What we are proposing is a new initiative to address digital literacy, which will not affect E-Rate and will be imminently auditable.

Competitive Access to Spectrum

The "spectrum crunch" is not exclusive to just one or two carriers, it is industry wide. And while the top four carriers provide wireless service to 90 percent of the total subscribers in the U.S., more than 30 million other subscribers use someone else. As you know, Section 309(j)(3) of the statute (47 U.S.C. 309(j)(3)) requires Commission to promote "economic opportunity and competition" by "disseminating licenses among a wide variety of applicants" including small businesses, rural carriers, and minority and woman-owned businesses.

Question 5. How should the FCC ensure, in a fair and competitive manner, that all carriers—large and small—have adequate access to this critical but finite resource?

Answer. Section 309(j)(3) of the Communications Act of 1934, directs the FCC to establish a competitive bidding methodology, considering such factors as: the development and rapid deployment of new technologies, promoting economic opportunity and competition, and the efficient and intensive use of spectrum. Consistent with this statutory authority, among the many options we could consider is limiting the amount of spectrum an entity could acquire at an auction. All entities, irrespective of annual revenues or number of subscribers, would and should be able to participate. However, the agency may address this challenge by imposing limits on how much spectrum any one entity could acquire.

Question 6. Several countries have recently held or plan to hold spectrum auctions to make more spectrum available for next generation wireless communications and broadband. Some of these countries have applied certain conditions to their auctions rules. For example:

1. In its 4G auction, France's ARCEP provided bidding preferences to carriers that agreed to host MVNOs on its networks and had enhanced rural build-out requirements. It also required roaming agreements—to a losing bidder—for any carrier that won more than one frequency block.
2. Germany's regulator, Bundesnetzagentur, applied rural build-out requirements for its 800 MHz auction and placed bidding restrictions on certain carriers.
3. The Netherlands reserved two spectrum blocks in the 800 MHz band and one in the 900 MHz band for new entrants.
4. Canada, in its 2008 AWS auction, set aside spectrum for a new entrant.
5. Czech Republic's CTU has reserved the 1.8 GHz block for a new entrant.
6. Ofcom has proposed spectrum caps in its upcoming LTE spectrum auction.
7. Australia has proposed spectrum caps for its upcoming auction.

It should be noted that several of these auctions ended up exceeding revenue expectations. I'm not advocating for the implementation of any conditions on any future auctions but I'm curious as to why these countries deemed it necessary to apply such conditions in their auctions rules? Do you believe the FCC should closely examine the recent 4G auctions in other countries to assist in determining how best to design future domestic auctions?

Answer. Again, Section 309(j) enables the FCC to consider other options that have successfully led to more competitive options for consumers. A number of the proposals identified above were designed to reserve spectrum for new entrants. New entrants provide additional options to consumers and I think the FCC should also consider offering a new entrant bidding credit. During the 700 MHz proceeding in 2007 that led to the auction (Auction No. 73) of those highly valuable licenses, Public Knowledge and other parties proposed this new entrant credit. The FCC ultimately decided against adopting this credit for two reasons. First, according to that Order, there was a "scant record" on this issue. Second, the FCC's Order claimed that there were other such proposals that the agency did adopt that could promote participation by new service providers. One such proposal was package bidding. Another was making multiple licenses available in each and every market. Another

was offering credits for small businesses. But, according to comments filed at the FCC, small businesses won only 2.6 percent of the licenses offered in Auction No. 73. If we want to encourage more participation by small businesses, we should consider other options such as a new entrant bidding credit.

Question 7. As you know, Section 309(j)(7) of the statute (47 U.S.C. 309(j)(7)) expressly prohibits the Commission from using the expected revenue from a spectrum auction as a basis for determining the public interest of frequency assignments. Furthermore, Congress, in H.R. Rep. No. 111, 103d Cong., 1st Sess. 258 (1993), emphasized that “important communications policy objectives should not be sacrificed in the interest of maximizing revenues.”

While there is broad agreement auctions are the best mechanism to distribute spectrum licenses, is there too much emphasis currently being placed on maximizing auction revenues instead of the longer term economic benefit that may result? How might such skewed focus on proceeds hinder achieving the strategic goals necessary for the long term health of the spectrum ecosystem?

Answer. As Congress mandated in those statutes you identified, the FCC should design auctions to achieve important national communications policies such as promoting the broadest deployment of advanced communications services and putting spectrum to its highest and best use. The primary interest in designing auctions should not be to maximize auction revenues.

Spectrum Efficiency Metrics

One of the primary, long-standing goals of the FCC has been to promote more efficient use of spectrum. The FCC’s 1999 Spectrum Policy Statement highlighted “with increased demand for a finite supply of spectrum, the Commission’s spectrum management activities must focus on allowing spectrum markets to become more efficient” and Strategic Plan for FY 2003–2008 (published in 2002) indicated its general spectrum management goal is to “encourage the highest and best use of spectrum

.” In its 2002 report, the Spectrum Policy Task Force developed three definitions: spectrum efficiency, technical efficiency, and economical efficiency. However, the SPTF concluded “it is not possible, nor appropriate, to select a single, objective metric that could be used to compare efficiencies across different radio services.”

Question 8. In the FCC’s search to free up more spectrum for wireless broadband, how does the FCC effectively determine and compare the spectral efficiency of different types of radio-based services when targeting various frequencies for reallocation?

Answer. The FCC generally has not applied a spectral efficiency metric for different types of services. The FCC’s Technological Advisory Council (TAC) considered such metrics and determined that a single metric to compare spectral efficiency among different services is not feasible. However, the TAC prepared a white paper on the subject that is available on the FCC website at http://transition.fcc.gov/oet/tac/tacdocs/meeting92711/Spectrum_Efficiency_Metrics_White_Paper_by_TAC_Sharing_Working_Group_25Sep2011.doc

The TAC made a number of suggestions for improving overall spectral efficiency, such as increasing sharing among services, which are under consideration. See http://transition.fcc.gov/oet/tac/tacdocs/Dec2011_mtg_full.ppt#443,46,Spectrum_Efficiency_Metrics_Actionable_Recommendations

Question 9. One of the common spectrum efficiency metrics for wireless communications is in terms of *bits/second/hertz*. Some parties have suggested more granular metrics such as *bits/second/hertz/pop* or *bits/second/hertz/cell*. It seems like there could be several different metrics within each definition of efficiency.

Robin Bienenstock of Sanford Bernstein raised the issue of network density and highlighted the difference between the U.S. and European countries. Specifically, Ms. Bienenstock compared California with Spain (noting similar size, topography, and population density). A major carrier in Spain had 33,000 base stations, whereas a major U.S. carrier in California had only 6,000 sites. Across the board, the network density for operators in Spain is three to six times higher than that of operators in California. With more cell sites, there is greater spectrum reuse, which means more efficient use, and a lessening of demand for the raw material (spectrum).

Does the FCC use network density as a component of its spectrum efficiency metric? If not, given the FCC already imposes build-out requirements to licensees, should the FCC explore requiring network density guidelines too as a way to promote more efficient use of spectrum?

Answer. The number of cell towers would be considered in evaluating spectrum efficiency for a commercial wireless service licensee, but it is only one of many fac-

tors that determine whether the spectrum is being used efficiently. Generally, cell towers are added to achieve coverage and capacity where needed. A lower number of cell towers in one location as compared to another may simply be a reflection of lower traffic demands. The key consideration is whether a wireless carrier is using reasonably available techniques to meet traffic demands in the most dense areas. Other factors that would be considered are the amount of spectrum, the wireless technology that is used and any constraints that may limit deployment such as the need to protect against interference to services operating in adjacent spectrum.

Question 10. Does the FCC have any additional data on network density comparisons of the U.S. in relation to other countries?

Answer. The FCC has data on many but not all wireless towers in the U.S. We do not have any direct access to data on network density in other countries. Moreover, carriers have increasingly deployed wireless base stations that provide service capacity in crowded areas and are not located on towers but rather on buildings and a variety of objects. We have no data on these small cells.

Resolving the “Spectrum Crunch” Through Technology

I’m concerned there is not enough focus on the role of technology in meeting the growing demand for wireless network capacity. An Ofcom report rightfully points out increasing wireless network capacity depends on a combination of “spectrum, technology, and topology.” Given the challenges we face with reallocation, I believe technology will play an even more prominent role.

For example, research by Ofcom found that early 4G mobile networks will be 230 percent more spectrally efficient than 3G networks and that efficiency will increase to 450 percent by 2020. Technologies like dynamic spectrum access and cognitive radio can considerably improve utilization by allowing more aggressive spectrum sharing, and, though many years off, quantum entanglement and “twisted” waves hold amazing potential to significantly, and even possibly infinitely, increase capacity without any additional spectrum.

However, I’m concerned about the threats the U.S. is facing in regards to its leadership in innovation, primarily with ICT. Many reports highlight most of the global R&D growth will be mainly attributed to Asian economies—according to NSF, the United States’ share of global R&D expenditures dropped from 38 percent to 31 percent between 1999 and 2009, while the Asia region grew from 24 percent to 35 percent. In addition, more U.S.-based companies are locating R&D operations overseas—the number of overseas researchers employed by U.S. multinationals nearly doubled from 138,000 in 2004 to 267,000 in 2009.

Question 11. What more can the government do (besides make the R&D tax credit permanent) to foster greater R&D investment, primarily in ICT?

Answer. The government can play a major role by identifying and reducing any unnecessary regulatory burdens. It is my understanding that, during Chairman Genachowski’s tenure, we have eliminated 210 obsolete regulations and identified 25 data collections for elimination.

Question 12. Given the benefits that both the private and public sectors will reap from more advanced technologies, how can there be more collaboration between both sectors to see these technologies to fruition?

Answer. The Commission has worked well with Federal advisory committees to identify issues that can be addressed by promoting best practices. I would encourage other Federal agencies to engage in similar collaborations if they are not already doing so.

Question 13. Does the FCC have any estimates on the amount of domestic private sector funding in wireless R&D as a percentage of overall industry capital investment? Do you believe there is enough domestic R&D investment in advanced wireless communications in comparison to other countries?

Answer. We do not collect data on the amount of domestic private sector funding in wireless R&D. Chapter 7 of the National Broadband Plan discussed research and development in broadband technologies and made a number of recommendations for action by other Federal agencies. See <http://www.broadband.gov/>. The FCC participates in Wireless Spectrum Research and Development (WISARD) group of the National Coordination Office for Networking and Information Technology Research and Development to help develop priorities, encourage private investment, and develop public/private partnerships where appropriate. See <http://www.nitr.gov/>. You may wish to contact that organization for further information on private sector research and development.

Question 14. While U.S. industries fund approximately 70 percent of domestic R&D, the Federal Government is the primary source of funding for basic research,

providing approximately 60 percent of funding, and industry conducts less than 20 percent of the basic research done in the U.S., according to the Science Coalition.

How important are Federal programs like NSF EARS and DARPA STO to the long-term growth and health of innovation in the spectrum ecosystem and should Congress provide greater funding for basic research in this area?

Answer. Federal Government research initiatives, such as the National Science Foundation's Enhancing Access to the Radio Spectrum initiative Defense Advanced Research Projects Agency's Strategic Technology Office, provide valuable insights on ways to promote spectrum efficiency. With regard to whether Congress should provide greater funding to those program, however, I must refer you to those who assist President Obama in overseeing those agencies.

Spectrum Flexibility

The National Broadband Plan highlighted the importance of spectrum flexibility. The NBP concluded that "flexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency" and "spectrum flexibility, both for service rules and license transfers, has created enormous value." That innovation and capital formation could be beneficial to addressing the challenges that exist in making more affordable and faster broadband available in rural areas.

As you know, Section 336 of the statute (47 U.S.C. 336) allows broadcasters to offer ancillary and supplementary services, which includes data transmission and interactive materials. Section 336 also prescribes the assessment and collection of fees related to such service offerings, and the FCC, back in 1998, adopted rules requiring broadcasters to pay a fee of 5 percent of gross revenues from such services for which they charge subscription fees or other specified compensation.

Question 15. If we need to get broadband into rural areas, why not let other licensees, like broadcasters, attempt to close the digital divide that exists? Mainly, since they may have infrastructure already in place to build off of.

Answer. Broadcasters are currently allowed to provide ancillary services over their licensed spectrum, if they also provide one stream of standard stream of free television programming. This may not be the most efficient way to meet the growing need for commercial mobile services, because broadcast television spectrum is licensed to stations in six megahertz channels within a defined local area. Wireless broadband services, especially those using the most advanced technologies, such as Long Term Evolution or LTE, are most efficiently deployed when using different sized channels over larger geographic areas. One of the reasons for conducting voluntary incentive auctions is to enable the Commission to receive the six megahertz channels from broadcasters and reorganize the spectrum into a band plan that can be more efficiently allocated for mobile services including mobile broadband services.

Question 16. Even though the FCC adopted rules to avoid unjust enrichment, some parties have still raised concerns that such flexibility would be unfair since the broadcasters weren't assigned the spectrum via an auction. However, as you know, the FCC has only auctioned licenses since 1994 and prior to that used comparative hearings and then lotteries for frequency assignments—including licenses for wireless communications.

If there is concern about "unjust enrichment" if broadcasters provide broadband, why isn't there the same concern with wireless communications licenses issued prior to 1994? Wouldn't the 5 percent of gross revenue that broadcasters have to pay if they add broadband to their signals fairly compensate the government, mainly since such service would have to be "ancillary and supplementary" to their broadcast television signal?

Answer. As your question suggests, today, broadcasters may add broadband to their signals, if they can offer a standard definition stream of free television programming. They pay a five percent fee to the government on those ancillary services. Broadcasters have not, however, taken much advantage of this capability. Therefore, this approach, thus far, has not been sufficient to help the Nation meeting the explosive demand for spectrum that can be used commercial mobile broadband services. One reason for this may be that the television band plan is ill suited for today's advanced mobile broadband networks. Congress likely reached a similar conclusion when it enacted the voluntary incentive auction authority provisions of the Middle Class Tax Relief and Job Creation Act of 2012.

Spectrum Fees

Recommendation 5.6 of the National Broadband Plan suggested "Congress should consider granting authority to the FCC to impose spectrum fees on license holders and to NTIA to impose spectrum fees on users of government spectrum" to address inefficiencies in spectrum allocations and promote more efficient use of spectrum.

It is my understanding that every administration since Clinton has requested spectrum fee authority from Congress.

Ofcom imposed similar fees (known as Administrative Incentive Pricing) in the late 1990s and issued a report in 2009 that concluded the fees “met its primary objective in helping to incentivise spectrum users to consider more carefully the value of the spectrum they use alongside that of other inputs, and to take decisions that are more likely to lead to optimal use of the available spectrum.” The report also “found no evidence to suggest that the application of AIP has given rise to material adverse consequences for spectrum efficiency.”

Question 17. Should Congress grant the FCC and NTIA spectrum fee authority either on all licenses and assignments or just on non-auctioned licenses, mainly if the FCC moves to implement greater flexibility of spectrum use? Do you believe the FCC can strike the proper balance in applying spectrum fees to promote more efficient use of spectrum but not to a point that it presents an undue financial burden to the licensee?

Question 17a. Some parties have opposed spectrum fees calling them a tax. But what is the difference between a spectrum fee that is paid annually and a licensee paying a lump sum at an auction? If a spectrum fee is a tax, isn't an auction payment a tax as well since it too goes to Treasury? Or are both not considered taxes since they are transfers to government for the right to use a public good?

Question 17b. If not spectrum fees, how should the FCC impose economic fairness between licensees that are/were awarded via auctions versus those that were awarded via comparative hearings and lotteries?

Answer. Allow me to respond to all three questions on spectrum fees. This was a recommendation in the March 2010 National Broadband Plan, designed to address certain concerns about those spectrum licensees with inflexible licenses that limit the spectrum to specific uses. As the Plan explains, these licensees do not incur opportunity costs for use of their spectrum. Therefore, they are not apt to receive market signals about new uses with potentially higher value than current uses. The result can be inadequate consideration of alternative uses and artificial constraints on spectrum supply. The Plan recommended that Congress provide the FCC and NTIA with authority to issue spectrum fees on these licensees but not on spectrum that is licensed for exclusive flexible use. In my opinion, the FCC and NTIA should coordinate closely and hear from all relevant stakeholders, especially licensees, before we take a position on such a proposal.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO
HON. MIGNON L. CLYBURN

Question. Congress recently passed spectrum auction legislation and the Commission will begin setting rules for implementation perhaps as early as this fall. I'm hearing from some low power television (LPTV) interests in my state who are concerned about how the FCC will handle low power stations when the FCC conducts their incentive auctions, and subsequently goes through a process of clearing channels 31–51. Low power TV stations provide a valuable service, such as local public meetings and religious broadcasting. LPTV has been the entry point for small businesses into the broadcast market and today, many LPTV owners are small businesses who work hard to continue to serve their local communities with news and resources aimed at the community. Would you support rules that allow LPTV to survive? What assurance can you provide that low power television stations will be protected?

Answer. We recognize the importance of LPTV stations as they encourage growth and strengthen the means by which information is disseminated especially among small communities. Although the Spectrum Act did not totally address LPTV auction issues we do recognize the need for specificity. Therefore, the Commission has and will continue to work with the providers to ensure that they have a sustainable avenue for continued distribution of LPTV content.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN BOOZMAN TO
HON. MIGNON L. CLYBURN

Question. What short-term solutions for spectrum needs can be utilized while longer-term solutions, such as incentive auctions, are implemented?

Answer. In my opinion, the Commission should encourage mobile wireless carriers to be more efficient when using the spectrum they currently hold. Under Chairman Genachowski's tenure, the Commission has initiated proceedings, held workshops,

and taken other steps to encourage commercial mobile wireless carriers to be more efficient. For example, in late 2010, the Commission adopted a Notice of Inquiry to seek comment on issues related to promoting greater use of dynamic spectrum access technologies and secondary markets. Earlier this year, the Commission held a workshop on distributed antenna systems and small cell technology that augment mobile broadband and wireless services in cities and communities. At that workshop, FCC staff members, and invited panelists, discussed successful deployments of DAS and small cell technologies in both outdoor and indoor public spaces, including hospitals, campuses, buildings, business and historical districts, and transit systems.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEAN HELLER TO
HON. MIGNON L. CLYBURN

Thank you for your testimony before the Committee. I appreciate the time you spent and your thoughtful answers to the following questions.

As you all know, our economy benefits greatly from the communications and technology sector. Competition and innovation have created new services and devices as well as high-quality jobs that have changed the lives of Americans. This sector is incredibly important to sustainable growth of our economy. That is why Congress must push the Federal Communications Commission to be the most open and transparent agency in the Federal Government. The industries you regulate are too important to our Nation.

Under Chairman Genachowski, I have seen notable steps in the right direction, and he has made process a "top priority." That being said, I am concerned that the FCC is not always as open and transparent as it should be. The problem as I see it today is that the FCC can pick and choose the rules it wants to follow when it wants to follow them. This method is convenient for the FCC, but it is not good government, and we owe more to Americans with business before the FCC.

I introduced legislation that pushes the FCC toward more transparency and openness. The intent of my legislation is not to hamstring the agency. It is to push them to be exactly what Americans expect from their government, open and transparent regulators of the laws passed by Congress.

A more predictable and consistent FCC will create jobs in Nevada, which has the unfortunate distinction of leading our nation in unemployment for over two years. Every government agency should be committed to policies that promote job creation, investment and innovation. The technology sector has helped growth in our country for the last twenty years and will continue to if big government does not overburden it.

I introduced two measures, the Telecommunications Jobs Act (S. 1817) and the Federal Communications Commission Consolidated Reporting Act (S. 1780). These bills push the FCC to be the most open and transparent agency in the Federal Government and provide a streamlined method of reporting to Congress.

The following questions are in regards to those bills, and I would ask you to please respond to each question.

Question 1. One of the most important reforms I introduced would force the Commission to demonstrate beyond any doubt the need for regulation before intervening in the marketplace. I strongly believe that a cost-benefit analysis should be conducted on any regulation that will have a significant market impact, and I believe that before the FCC begins a rule proposal, they survey industry within three years of proposing a rule to determine whether that regulation is even necessary. A cost-benefit analysis mandating the FCC to identify actual consumer harm and conduct an economic, market-benefit analysis is consistent with President Obama's Executive Order 13563 on Improving Regulation and Regulatory Review. Would you support legislation that implements a cost benefit analysis consistent with the President's Executive Order? If not, why?

Answer. In my opinion, a Federal statute is not necessary because the Commission has been complying with President Obama's Executive Order. The cost benefit analysis is a key factor that the Commission considers before it adopts any rules. I welcome any and all ideas on minimizing consumer harm and improving transparency. But, I would need to see specific legislative language on targeted analyses prior to rendering any opinion.

Question 2. Do you support legislation mandating the FCC to survey the marketplace within three years before initiating a rulemaking?

Answer. At this point, and without knowing more details about such possible legislation, I would find it difficult to support a Federal statute requiring the FCC to survey the marketplace within three years before initiating a rulemaking pro-

ceeding. As an initial matter, Congress already has statutes requiring the Commission to report about various industries that we regulate on an annual basis. For example, with regard to the video programming industry, the FCC researches the industry language and releases annual competition reports on trends, user habits, and market place shifts. These reports inform us about what fluctuations are happening and why. They are thorough and well laid out. They assist us in our rulemakings and guide us in addressing areas of concerns in the various industries we regulate. I feel they are a sufficient means of assessing the market.

In addition, requirements to study the marketplace before initiating rulemaking proceedings would prevent the Commission from being flexible enough to adjust to changes in technology and, therefore, changes in the needs of both consumers and communications companies. In addition, in many instances, the Commission initiates rulemaking proceedings to reduce regulatory burdens. For example, in May 2012, the Commission adopted rule changes that would permit Specialized Mobile Radio licensees in the 800 MHz to use these licenses to provide 3G voice and data services. The Commission moved very quickly to initiate and adopt these rule changes. Sprint filed its petition for a declaratory ruling or a rulemaking in June 2011. The Commission its Notice of Proposed Rulemaking in March and adopted the rule changes in May 2012. The Commission would not have been able to move so expeditiously in this proceeding if there had been a Federal statute requiring the agency to first conduct a survey before initiating a proceeding.

Question 3. Under the Chairman, 85 percent of the *Notices of Proposed Rulemakings* have contained text of proposed rules. However, in the years before Chairman Genachowski, only 38 percent contained the specific text. Also, at times, these NPRM's have been broad, leading to uncertainty because industries are not clear as to what the FCC is actually looking at. Do you believe that the FCC should include the actual language of any and all proposed new rules in every NPRM?

Answer. In my opinion, the Administrative Procedures Act, which governs all Federal agencies, has sufficient notice and comment requirements to give the public, including FCC licensees, adequate information about rules the Commission might adopt and sufficient opportunity to comment on any such proposed rules. In some cases, it might be difficult to specify every detail of such proposed rules. The Commission should have flexibility, when those few instances present themselves, to not specify every detail of every proposed rule.

Question 4. These NPRM's can stay open for quite a while costing industry time and resources without any knowledge of whether action will take place or not. I have heard from many of my constituents with business before the Commission that they simply cannot get an answer from the Commission on what seems to be routine petitions, applications, or proceedings.

Nevada has asked for a waiver from the FCC in regards to its 700 megahertz public safety early deployment rules. I understand that a decision on this could have been delayed until Congress passed a public safety spectrum allocation bill. Now, with provisions intended to facilitate a public safety network in place, the FCC still seems to be stalling on this.

Other companies have purchased spectrum in the lower 700 MHz and are awaiting a decision by the FCC on whether rules regarding interoperability, clearing channel 51 or waivers to build out requirements will be granted.

The issue of "special access" has been open for 10 years before the Commission without any resolution. This is an issue worth billions of dollars to the entire industry.

Furthermore, last July, I and a number of my colleagues on this Committee wrote to you and we did not receive a response for 8 weeks and only after multiple follow up letters and calls. When Senators on the Committee of jurisdiction have trouble receiving a response from the FCC, there clearly are problems with answering questions.

All of this leads to uncertainty. There doesn't appear to be much confidence among many companies that the FCC can act expeditiously on much of anything of significance to the industry. Proceedings can languish for 3, 5, or 10 years. Companies, generally, have a hard time investing, or increasing their investment, if they are uncertain what the regulatory environment is going to look like for their business.

Chairman Genachowski has worked on this issue and established internal 180-day shot clocks; however, this has not solved all the problems of open ended NPRMs.

Do you believe that Congressional legislation implementing shot clocks on FCC action is appropriate? If not, why? Does the Commission expect to act on any of the examples listed above?

Answer. I support measures that encourage efficiency, transparency, and a more productive FCC, but I am wary of reform measures that would restrict our deliberative and adjudicatory process and force us to speed up meetings with outside parties, and internal deliberations in order to meet a deadline that does not afford enough time for thoughtful and extensive review.

Question 5. Since 2008, the FCC has conducted a number of merger reviews. How many times has the FCC failed to conclude the review within the 180-day shot clock period? How many times was the deadline missed? Was there any reason they were missed?

Answer. Not all license transfer applications are decided at Commission level. The operating Bureaus decide several of these transfer applications. As I understand it, the 180-day “shot clock” was introduced in 2000 as an informal, non-binding tool to give the public a better sense of the timing of agency review and to provide the agency with a target to shoot for in most transactions. It is my understanding that, since Chairman Genachowski was sworn in, the Commission has decided over 95 percent of all applications within 180 days. For the specific reasons why certain license transfer applications, I respectfully refer you to the Office of General Counsel’s Transaction Team at the Commission. That team is responsible for coordinating the FCC’s review of applications for the transfer of control and assignment of licenses and authorizations involved in major transactions, such as mergers. The Transaction Team helps ensure that the Commission’s internal procedures are transparent and uniform across the various Bureaus. It is also responsible for recommending how to improve the review process to promote faster and more consistent review of applications.

Question 6. Going back to the President’s Executive Order 13563, the Chairman has fully supported the ideals of the order, which in part states “For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings.”

In the days before the record closed on the Commission’s reform of the high cost of the Universal Service Fund, the FCC added 114 new pages of its own to use in the final decision. This practice denied public input on information that was used to render a decision which seemed to run counter to the President’s Executive Order. Without adequate public and stakeholder input, the chance that a regulation will have unintended consequences increases. One example brought to my attention is that now smaller rural markets like those in my state will miss out on support because of the presence of fixed wireless services. They believe more dialogue and transparency could have avoided this outcome.

Do you believe that relying on reports in rulemaking and adjudications that are without a robust notice and comment process is appropriate? Or substantially altering a report after the period with which industry input or comments are accepted?

Answer. As it relates to our recent USF proceeding, the additional pages were added to assist consumers and all stakeholders so that they have a better understanding of the materials that the FCC cited in its decision. In addition, a substantial portion of these materials (law review articles, journals, magazine articles, etc) were cited by commenters. Thus, as a service to consumers, the Commission decided to include them in record.

Question 7. Do you agree that it is not the best practices of a government agency to dump data into a report at the 11th hour without industry input?

Answer. Per to the response offered for the previous question, much of the material in the USF proceeding was actually cited by industry. To address this shortcoming, the FCC’s Office of General Counsel issued a Public Notice seeking comment on alternate means of having these materials added to the record, including requiring industry to submit copies of materials that they cite in their comments.

Question 8. Do you agree that this method, while perhaps helpful to the Commission, is not open and transparent to the level benefitting an agency that issues regulations that have a significant economic impact?

Answer. Guidance has been given to the FCC staff that documents which submissions need to occur prior to the internal circulation of any draft rulemakings. This procedure should alleviate the concerns you have raised on this point.

Question 9. The FCC rightfully should review transfers of lines under section 214 of the Communications Act and the transfer of licenses under section 309 and 310 of the Communications Act. However, this review should not provide the FCC to extract a list of concessions from the applicant in exchange for approval. For example, in the 2011 Comcast/NBC Universal transaction order, the Commission accepted a “voluntary” commitment from Comcast to comply with net neutrality rules even if a court overturns those rules.

This agreement was made through a transaction review and was done without any public scrutiny—as proposed conditions are often unknown until the approval order is announced.

Do you believe that this type of rulemaking provides a scenario in which one set of rules exist for those who have merged and another exists for those who have not?

Answer. In my opinion, this is not a rulemaking proceeding, it is an adjudication of a license transfer application. Since the Commission follows the mandates set forth in the relevant sections of the Communications Act, the Commission applies the same laws and agency precedent to the relevant facts raised by each particular license transfer application.

Question 10. Have there been instances you have experienced when merger conditions have been imposed that was not directly related to the transfer questions?

Answer. No, I have not experienced such an instance. Under Section 310 of the Communications Act, a party that applies to acquire an FCC license has the burden of demonstrating that the license transfer would serve the public interest. In some cases, the applicants will attempt to meet that burden by voluntarily committing themselves to take an action they claim would provide a public interest benefit. The applicants may also voluntarily commit to conditions that address potential competitive harms especially when parties have filed petitions to deny an application because the license transfer would cause harm to competition and harm to consumers. Since the applicants have the interest in acquiring the spectrum and they also bear the burden of proof, it is for the applicants to decide if the voluntary commitments serve their best interests.

Question 11. Do you believe it is appropriate to require the FCC to end this practice by requiring the FCC to narrowly tailor any conditions it imposes or commitments it accepts to only address harm caused by the transfer of licenses?

Answer. Section 310 of the Communications Act requires the FCC to ensure that the license transfer applicants have met their burden of proving that an application serves the public interest. As with any regulatory action, it requires a balancing of costs and benefits. That mandate does not limit the FCC's authority to only address harms and, I respectfully submit, it should not.

Question 12. Last November, I introduced S. 1780, the Federal Communications Commission Consolidated Reporting Act. In section 3 of that bill, I identified 24 reports for repeal and elimination. 16 of those reports were ones required of the FCC. Many of these required reports appeared to me to be contemplated during eras long since passed; were ones with an exceedingly narrow focus; or ones that bore little relevance to today's communications marketplace. Have you had the opportunity to review the FCC reports that were identified in S. 1780? Would you take issue with any of the recommended deletions?

Answer. As you note, many of the reports you mention are mandates from Congress. If Congress chooses to amend the Communications Act and no longer require those reports, I expect the Commission will faithfully comply.

Question 13. Notwithstanding my desire to leave the FCC of its reporting burden, S. 1780 calls for the FCC to provide a Report to Congress with respect to the state of the communications marketplace, covering such matters as competition in broadband deployment and barriers to the competitive marketplace. The FCC is currently required to do many of these narrowly focused reports, but it seems to me that what we lack is anything like a comprehensive look at the totality of the marketplace at regular intervals. My thought was that this should be done every two years. What is your opinion of such a proposal? I believe that both the FCC and Congress would benefit from such a Report.

Answer. The Commission already covers competition in broadband deployment and barriers to a competitive marketplace in a number of Congressionally mandated reports such as the triennial Section 257 Reports, and the annual Mobile Service Competition Reports. Depending on the details of the mandate, a report that looks at the totality of the marketplace could prove useful. I expect the Commission will faithfully comply with any mandate from Congress.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUE TO
HON. JESSICA ROSENWORCEL

Media Ownership by Women and People of Color

Question 1. Are you satisfied with the level of media ownership by women and people of color today? If not, I would appreciate your suggestions on how media ownership by women and people of color can be improved. What role can the FCC play to encourage greater media ownership opportunities for women and people of color?

Answer. According to the Commission staff, data from 2009 indicate that 2.1 percent of the 1349 full-power television stations are minority owned. According to a study from Santa Clara University based on data from 2007 examining the ownership of 11,249 AM and FM full-power commercial stations, 7.24 percent are minority owned. The most widely cited data from 2006 and 2007 suggest that women own 4.97 percent of commercial television stations and 6 percent of full-power commercial radio stations.

These numbers paint a troubling picture. But they also suggest that the Commission needs more recent data to better understand trends in ownership. As a result, I support the agency's ongoing efforts to update its ownership numbers in the Form 323 process. I believe that good data should inform our efforts on this front, and right now we lack current numbers and analysis that will support the development of legally sustainable policy.

However, as a general matter, I believe that the single most effective way to encourage greater media ownership opportunities for women and people of color would be to reinstate the minority tax certificate program. This program, which began in 1978, dramatically increased broadcast ownership diversity before its repeal by Congress in 1995. It encouraged the sale of broadcast and cable properties to minority-owned entities by deferring the capital gains taxes of the seller. While adjustments may be warranted to prevent waste and abuse, I believe that it is time to take a fresh look at this program and how it can be updated to encourage more diverse ownership of media properties.

Spectrum Swaps

Question 2. Some industry representatives as well as a few Members of Congress have suggested that spectrum swaps are a direct and faster way to increase competition in the wireless . broadband market. Do you agree with this suggestion? What efforts are being taken or can be taken by the FCC to explore spectrum swaps as a way to increase competition in the wireless broadband market?

Answer. I agree that spectrum swaps can provide opportunities to use our airwaves more efficiently. Depending on the particular spectrum involved, swaps may present one avenue that should be considered by the Commission as a means to promote both competition and effective use of our airwaves. Voluntary spectrum swaps in the secondary market have enabled many licensees to use frequency bands or serve in geographic locations that may be better suited for their services.

Other types of spectrum swaps, including those involving government spectrum, may merit consideration if they present opportunities to rationalize spectrum or improve spectrum efficiency. However, history suggests such swaps can take a long time and may be costly. For instance, the spectrum swap involving Nextel Communications and the 800 MHz band began in 2004. It is still underway. There have been difficulties with relocating government and other incumbent users, and the transition has taken much longer and has been much more expensive than originally anticipated.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN F. KERRY TO
HON. JESSICA ROSENWORCEL

Updating the Law

Question 1. The FCC has a wireless bureau, a wireline bureau, and a media bureau. Given that all three operate in a broadband world, should we have a broadband bureau at the agency that either incorporates these three separate bureaus or helps us understand the state of broadband competition and define and eliminate duplicative bureau functions?

Answer. The Commission's existing organization largely matches the structure of the Communications Act. In other words, the silos that have come to characterize the law have their parallels in the agency Bureaus. But as you acknowledge, a variety of communications technologies now provide broadband service. In many markets these technologies compete with one another. But I do not believe that it necessarily follows that a single Bureau devoted to broadband would improve policy development. The expertise in each Bureau is substantial from engineering to network economics to legal authority-and it is important to incorporate this knowledge to facilitate good decision-making.

Nonetheless, I recognize that thinking across disciplines has value. For this reason, I would support an agency task force to ensure that broadband decisions across technologies are reasonably harmonized and to prevent duplication of efforts. I also think it would be prudent to direct such a group to update in a streamlined way some of the major objectives of the National Broadband Plan.

Question 2. The 1992 Act is 20 years old this year, and the 1996 Act is entering its late teens. Should we update these laws and if so, using what set of principles?

Answer. Communications technology changes at a blistering pace. It is a challenge for both legislators and regulators to keep up with the evolution of our markets and the expanding range of services used by consumers and businesses. Inevitably, laws that are more than a decade old can feel dated-and may not reflect the evolution of technology.

The challenge, however, is to consider what comes next. While consensus may exist for the need to update the Communications Act, consensus on how to do this is more elusive. In this environment, I believe that the proper starting point is identifying the essential values in existing law.

For my part, I believe that four key elements should anchor this conversation. First, public safety is critical. Second, universal service helps ensure that everyone in this country, no matter who they are and where they live, has access to communications services that are an important part of opportunity in the digital age. Third, competition delivers innovative services and promotes investment. Fourth, consumer protection is essential.

Rebuilding the law around these principles is not simple, however. In addition, it is not easy to migrate existing stakeholders from the current system to a wholly new framework. Because dislocation has consequences for both businesses and consumers, I believe that a sweeping new law could be a positive force-but also a destabilizing one. As a result, while a longer-term conversation starts regarding the rewrite of the Communications Act, a shorter-term discussion about smaller fixes would be beneficial. To this end, I believe agency deliberations would benefit from reform of the Government in the Sunshine Act. I also believe that additional resources for engineering to speed the certification of wireless devices would expedite the delivery of new and innovative services in the marketplace. Finally, I believe that expanding the role of Administrative Law Judges at the agency merits consideration. This could result in swifter resolution of disputes, which in time could yield both more certainty and more investment.

Spectrum

Cisco's U.S. mobile data forecast projects that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. With that kind of demand for space in our airwaves for wireless broadband, the Commission should be making every effort to make as much existing spectrum as usable as possible quickly.

Question 3. What are the prospects for Federal and private users to share the spectrum that agencies currently hold without disrupting vital public services and what can we do to speed up the process?

Answer. The demand for mobile broadband is growing at a breathtaking pace. As a result, it is vitally important that we find new and innovative ways to manage our spectrum resources. These efforts will need to include incentive auctions, sharing, and an ongoing effort to identify new and innovative ways to meet the increased pressures on our airwaves.

With passage of the Middle Class Tax Relief and Job Creation Act, the Commission has incentive auction authority, which will permit it to encourage existing licensees to return underutilized airwaves in exchange for a portion of the auction proceeds. This will facilitate putting more of our spectrum resources into use for new mobile broadband services.

I support efforts to promote sharing of Federal spectrum with commercial users where doing so provides protection for critical Federal services that make use of our airwaves. To this end, I am encouraged by government and industry efforts to develop opportunities for sharing of Federal spectrum with commercial licensees in the 1755-1850 MHz band. This is an exciting development that could become a model for additional sharing opportunities. Furthermore, I am intrigued by the recent report on spectrum sharing from the President's Council of Advisors on Science and Technology. While not all the ideas in this report have been met with enthusiasm from commercial licensees, the concept of expanding sharing across all Federal users merits further consideration. In particular, I believe that the recommendation to develop expanded geolocation databases to facilitate access to spectrum could speed the development of sharing. The information in these databases could provide a framework that would foster additional investment in cognitive and sensing technologies that over time would increase the viability of sharing, provide greater protection for existing Federal users, and promote more efficient use of our airwaves.

Finally, we must think creatively. While past efforts to reclaim spectrum from Federal users have involved the stick, I think going forward we should explore the carrot. Today, the Commercial Spectrum Enhancement Act provides funding to Fed-

eral users for relocation when their airwaves are reallocated for commercial use. It also provides upfront funding for planning. What is missing is a series of clear incentives. To this end, I believe we should explore ways to financially reward Federal authorities for efficient use of their spectrum resource. As a related matter, I am intrigued by the recommendation of the President's Council of Advisors on Science and Technology regarding development of a synthetic currency for Federal spectrum use. This kind of accounting system might provide a clearer picture of existing Federal demands on our airwaves. Moreover, it could be used for the basis of developing a system that rewards Federal agencies when they return underutilized spectrum, perhaps through an increase in their budget.

Question 4. As space on the airwaves becomes increasingly congested, how will the FCC better arbitrate interference disputes between neighboring services in the future?

Answer. Radio spectrum is a scarce but valuable resource. The demands placed on it are only going to grow over time. Reducing harmful interference is an essential part of making more efficient and more reliable use of our limited spectrum resource. To this end, the Commission may want to consider more clearly defining what constitutes "harmful interference." At the same time, I am aware that adding additional detail to this concept could result in rigid application over time, denying necessary flexibility and stifling the ability to innovate.

In addition, the Commission should consider the role receivers play in spectral efficiency and interference. Currently, the agency attempts to limit interference through rules that prohibit transmitters from emitting excessive energy into spectrum allocated for other services. This approach depends on the private sector to manufacture receivers that comply with those technical parameters. Service providers can then alert the Commission when a receiver is being overloaded. However, I believe that this issue merits a fresh look. Accordingly, I support the efforts of the Commission's Technological Advisory Council, which has been exploring these issues. The Commission staff also held a workshop on spectrum efficiency and receivers on March 12, 2012. Finally, the recent spectrum report from the President's Council of Advisors on Science and Technology recommends a flexible approach to receiver management in order to increase spectral efficiency without harming functionality.

Question 5. Can you talk about the priority that the Commission places (or that you will place) on ensuring that there is an appropriate mix of spectrum coming to market both for auctions and for such unlicensed use?

Answer. I believe that good spectrum policy requires a mix of licensed and unlicensed services. Licensed services provide reliability and interference protection. Unlicensed services can stimulate innovation because they have low barriers to entry. They can also assist with network congestion and facilitate rural deployment.

It has been more than a quarter of a century since the Commission first designated specific bands for unlicensed use. In that time, a wide range of devices using unlicensed spectrum—from garage door openers and cordless telephones to Internet services and "hot spots"—have changed the way we live and work. Going forward, the potential for unlicensed use is even greater. Already, use of the 2.4 GHz band for Wi-Fi has dramatically changed the way we use wireless networking and access the Internet.

More recently, in the Middle Class Tax Relief and Job Creation Act, Congress provided the Commission with authority to develop band plans with guard bands in the broadcast television spectrum following an incentive auction. While such bands are limited to a size technically reasonable to prevent harmful interference to adjacent licensed uses, they are also permitted under the law to allow for unlicensed use within the guard bands. As the Commission develops band plans in the aftermath of its incentive auction of the broadcast television spectrum, it should keep in mind the power of unlicensed applications to stimulate the development of innovative new devices and grow our economy.

In the same legislation, Congress directed the Commission to conduct a rule-making concerning unlicensed use in the 5350–5470 MHz band. Furthermore, it directed the National Telecommunications and Information Administration to study the impact on Federal users of making both the 5350–5470 MHz band and 5850–5925 MHz band unlicensed. Exploring these further opportunities for unlicensed use is the right thing to do. I fully support it.

Privacy

The FCC recently concluded an investigation into the Google Wi-Fi data collection incident where the agency found that Google's actions did not violate section 705 of the Communications Act due to the fact that the incident occurred on unencrypted Wi-Fi, rather than a secured network.

Question 6. In light of the result of this investigation, do you believe that Congress should update section 705 to account for this gap in the FCC's wiretap provisions?

Answer. I find the collection of payload data that this investigation revealed very troubling. Section 705(a) of the Communications Act prohibits unauthorized publication or use of communications. In critical part, it prevents any unauthorized person from "intercept[ing] any radio communications and divulge[ing] or publish[ing]" the communications to anyone else. While the agency's Enforcement Bureau found that an employee at Google knowingly collected Wi-Fi payload data between 2007 and 2010, it decided not to take enforcement action against Google under section 705(a) because the data was unencrypted. Yet it seems troubling that user activities in our own homes must be encrypted in order to be protected under the law. If Congress updates the law, I would faithfully follow the direction in any new statute.

Interoperability

Interoperability of consumer devices within a spectrum band helps promote competition in wireless services. Since the early 1980s, the Commission has adopted rules or sent strong messages that it expects wireless service licensees to offer consumers equipment that can operate over the entire range of an allocated spectrum band. But interoperability does not yet exist in perhaps the most valuable spectrum bands the FCC has ever allocated—the lower 700 MHz band. In March, the FCC initiated a proceeding to promote interoperability in this band. I noticed that the NPRM would prefer that the industry propose a voluntary solution, as would I, but you also indicated an interest in moving to rules if that voluntary approach is unsuccessful.

Question 7. Do you believe interoperability of devices within this band matters, what is the FCC staff doing to monitor the efforts of the industry at arriving at a voluntary solution for the lower 700 MHz band, and how much more time do you believe the industry should have before you would push to conclude this proceeding and adopt rules if it appears that an industry solution is not possible?

Answer. Interoperability is an essential component of a diverse communications system. I am pleased that Commission staff has been actively monitoring the work of the industry standard setting bodies to address interference-related concerns.

As a related matter, on March 21, 2012, the Commission adopted a Notice of Proposed Rulemaking to evaluate whether or not interoperability in the lower 700 MHz band will cause interference for licensees and to explore next steps. The record developed in response to this proceeding just closed on July 16, 2012. I am examining this record carefully and will make sure that my office is open for discussion with all relevant stakeholders. If progress is not being made on a voluntary basis, however, I would be willing to explore what further actions the Commission could take to promote interoperability in a timely fashion. If an agency decision completing this proceeding is presented before my office by the Chairman, I would vote it expeditiously.

Public Broadcasting

As a long-time supporter of public broadcasting, I believe that it plays a special and necessary role in our media landscape. I was pleased to see that on November 4, 2011 the FCC Consumer Advisory Committee adopted a recommendation that the FCC work with the Administration and Congress to support continued Federal funding of the Corporation for Public Broadcasting and local public broadcast stations, including those providing service to rural, tribal, native, and disability communities.

Question 8. Do you support this recommendation from the FCC Consumer Advisory Committee and can you share your views on the unique and necessary role that public broadcasting plays in our media landscape?

Answer. I agree that public broadcasting is a vital part of our media landscape. I also support continued Federal funding of the Corporation for Public Broadcasting. As the Commission's Consumer Advisory Committee noted, "[a] loss or significant reduction of Federal funds to [the Corporation for Public Broadcasting] would impact—negatively and dramatically—all currently funded stations" and while "[s]uch impacts would be of nationwide scope," they would be "particularly acute in rural, tribal, native, and disability communities."

The U.N. and International Negotiations on Internet Governance

As former Congressman Boucher recently explained, "The best way to understand the current system of global Internet governance is as a hub-and-spoke relationship. At the hub, a loose confederation of standards-setting bodies ensures the Internet's continued stability and functionality. Little, if any, regulation occurs at the hub.

This arrangement leaves tremendous leeway for the sovereign governments—the “spokes”—to regulate the Internet within their borders.”

And that system has worked relatively well, with some unfortunate outliers trying to control their population’s access to information. Yet, there is pressure abroad for a new U.N. agency to assert international governmental control over the Internet. That pressure is coming from countries who wish to impose new tolls on service and countries that fear the power of open discourse on the Internet.

Question 9. In a recent blog post, NTIA Administrator Strickling wrote about these proposals from China and others, “This is contrary to President Obama’s vision of an Internet that is interoperable the world over, and the United States will vigorously oppose such barriers.” And I know that this is a priority for Ambassador Philip Verveer and the State Department as well. Do all of you share the Administration’s point of view?

Answer. I unequivocally share the Administration’s goal of maintaining an open and interconnected global Internet. The multi-stakeholder approach to governance has allowed the Internet to develop into a successful platform for innovation, democracy, access to information, and scientific progress. I therefore support the Administration in its efforts to resist attempts to use the World Conference on International Telecommunications (WCIT) to centralize control of the Internet within the International Telecommunications Union. To this end, I support the August 2, 2012 submission of the Department of State to the International Telecommunications Union, which represents the first set of proposals of the United States for the upcoming WCIT. Moreover, last week at the Asia Pacific Economic Cooperation telecommunications ministerial meeting in St. Petersburg, I represented the United States with Ambassador Verveer and Ambassador Kramer in a series of bilateral meetings with other nations to develop international support for our WCIT submission.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK PRYOR TO
HON. JESSICA ROSENWORCEL

CVAA

The 21st Century Communications and Video Accessibility Act (CVAA) was enacted to update the media and communications accessibility requirements and expand access to current and emerging technologies.

I have heard concerns about the population of the statutorily required advisory committees and the resulting recommendations. Consumer and advocacy groups that serve on these committees face technical and legal capacity constraints that many businesses do not.

Question 1. Will you be cognizant of these inherent limitations and keep them in mind as you consider the recommendations put forth by the advisory committees?

Answer. Yes. I fully understand and appreciate that consumer and advocacy groups that serve on these committees may face technical, legal, and financial restraints that their business counterparts do not. However, to date, Commission staff that works with these advisory committees report that consumer and advocacy groups have played a significant role in the Video Programming Access Advisory Committee and the Emergency Access Advisory Committee, both of which are statutorily required by the 21st Century Communications and Video Accessibility Act. In particular, the Video Programming Access Advisory Committee provided vital input that informed the agency’s work on IP captioning. In addition, the Emergency Access Advisory Committee has put forth a resolution on texting to 911 that merits further consideration. This latter committee also has discussed seeking to be rechartered for an additional year. I would support such an extension. Going forward, I commit to working with all stakeholders, including consumer and advocacy groups, to see that the implementation of the 21st Century Communications and Video Accessibility Act continues to expand access to modern communications technologies for all consumers.

Question 2. It is my understanding that the Commission will soon consider the Advanced Communications Services provisions of the CVAA. How does the Commission plan to ensure that video conferencing services used by consumers who are deaf or hard of hearing are interoperable with each other?

Answer. Video conferencing services are an important communications technology for consumers who are deaf or hard of hearing. On October 7, 2011, the Commission released a rulemaking that included a request for comment on the definition of “interoperable video conferencing services.” This record is currently under review. As the Commission continues to implement the Advanced Communications Services provisions of the 21st Century Communications and Video Accessibility Act, I will

strive to consider carefully how the authority provided to the agency under the law could help ensure that video conferencing services used by consumers who are deaf or hard of hearing are interoperable.

700 MHz Spectrum

It is my understanding that the Commission has initiated a Notice of Proposed Rulemaking regarding interoperability in the lower 700 MHz band.

Question 3. Does the Commission anticipate the completion of this proceeding before the end of the year?

Answer. Interoperability is an essential component of a diverse communications system. I am pleased that Commission staff has been actively monitoring the work of industry standard-setting bodies to address interference-related concerns.

As a related matter, on March 21, 2012, the Commission adopted a Notice of Proposed Rulemaking to evaluate whether or not interoperability in the lower 700 MHz band will cause interference for licensees and to explore potential next steps. The record developed in response to this proceeding just closed on July 16, 2012. I am examining this record carefully and will make sure that my office is open for discussion with all relevant stakeholders. If progress is not being made on a voluntary basis, however, I would be willing to explore what further actions the Commission could take to promote interoperability in a timely fashion. If an agency decision completing this proceeding is presented before my office by the Chairman, I would vote it expeditiously.

Low Power Television

For many years, Class A and Low Power Television Service (LPTV) stations have provided valued local, religious, Spanish language, and other programming. Communities have come to rely on this niche programming that may not otherwise be available.

Question 4. How will the Commission work to ensure the viability of Class A and LPTV during its implementation of the Middle Class Tax Relief and Job Creation Act?

Answer. Class A and low-power television broadcasters can provide important services to their communities. They often offer truly local programming options that are not available elsewhere on the proverbial television dial. As you note, these stations also historically have provided unique programming for niche audiences.

In the Middle Class Tax Relief and Job Creation Act, Congress directed the Commission to conduct incentive auctions and, as necessary, subject to a specific series of conditions, repack television broadcast licensees. Note that the law expressly defines Class A television licensees as broadcast television licensees and therefore provides them with rights comparable to full-power stations in the incentive auction process. However, Section 6403(b)(5) of the Middle Class Tax Relief and Job Creation Act expressly states that it does not alter the spectrum usage rights of low-power television stations. In crafting rules for incentive auctions and developing processes for repacking, the Commission must be faithful to the direction it received from Congress.

Question 5. What is your position on mandatory channel sharing for LPTV?

Answer. Channel sharing can offer a number of benefits for broadcasters. For instance, by sharing channels broadcasters can retain separate licenses and call signs, but can save costs by using the same facilities. These advantages can be especially important for low-power stations that can allow them to use their resources to provide better programming for their viewers. I believe that channel sharing should be an option for broadcasters. I recognize that a voluntary approach is preferable. At the same time, the Commission ultimately must abide by Section 6403(b)(5) of the Middle Class Tax Relief and Job Creation Act which expressly states that the law does not alter the existing spectrum usage rights of low-power television licensees.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE McCASKILL TO HON. JESSICA ROSENWORCEL

Last year, I raised concerns with the FCC regarding the Universal Service Fund's (USF) Lifeline Program. In response to these concerns, the Commission has taken steps to crack down on waste, fraud and abuse within the program. The recent announcement that 20,500 letters will be sent in Missouri to eliminate duplication was welcome news. The implementation of a database to help detect and prevent duplicates is an important tool, but I remain concerned that further action needs to be taken to address fraud.

Question 1. Has the FCC conducted its own investigation into possible fraud occurring within the Lifeline program, and if so what were the findings of that investigation?

Answer. I fully support the actions that the Commission has taken to prevent duplicates in the universal service Lifeline program. However, I am not privy to nor authorized to comment on ongoing investigation by the agency's Office of Inspector General. To the extent that investigation is ongoing, I commit to carefully reviewing any materials that the Office of Inspector General shares with my office. Furthermore, I will support continued efforts of the agency to detect and eliminate waste, fraud, and abuse within the Lifeline program.

Question 2. Has the Commission examined the marketing agreements providers are using to advertise Lifeline products to consumers?

Answer. Yes. Before my tenure, on February 6, 2012, the Commission released an Order increasing provider accountability within the Lifeline Program. This decision required providers of Lifeline-supported services to include plain, easy-to-understand language in all of their Lifeline marketing materials that the offering is a Lifeline-supported service; that Lifeline is a government assistance program; that only eligible consumers may enroll in the program; that specific documentation is necessary for enrollment; and that the program is limited to one benefit per household, consisting of either wireline or wireless service. I support this effort. I also believe that the Commission should periodically review these rules to ensure that they are effective.

Question 3. As required by the Commercial Advertisement Loudness Mitigation (CALM) Act, the FCC published an order last December outlining practices that networks and cable stations must implement by this December. I understand these rules have not yet been published in the *Federal Register*, and I have heard little about progress since December. Are we on track to see this legislation—strongly supported by consumers—fully implemented by the end of the year?

Answer. Work is being done to ensure that rules relating to the Commercial Advertisement Loudness Mitigation (CALM) Act will be fully in effect by the end of the year. On July 9, 2012, the rules necessary to implement the CALM Act were published in the *Federal Register*. In addition, the Office of Management and Budget recently approved the rules, eliminating any implementation obstacles under the Paperwork Reduction Act. Consequently, the Commission is on course to have its CALM rules in effect on December 13, 2012. I understand that in industry efforts are underway right now to ensure compliance by this date.

Question 4. In December, the International Telecommunication Union (ITU) will convene the World Conference on International Telecommunications (WCIT-12) in Dubai to renegotiate the International Telecommunication Regulations. A key topic of discussion is expected to be whether and how to expand it to cover the Internet. To what extent is the FCC involved in policy and technical discussions in advance of the ITU meeting?

Answer. The Commission has primary responsibility for implementing the 1988 International Telecommunications Regulations. Because these regulations have been accepted as a framework for negotiations at the World Conference on International Telecommunications in Dubai (WCIT), the agency is participating in both domestic and international preparations for the Conference. To this end, I support the August 2, 2012 submission of the Department of State to the International Telecommunications Union, which represents the first set of proposals of the United States for the upcoming WCIT. Moreover, last week at the Asia Pacific Economic Cooperation telecommunications ministerial meeting in St. Petersburg, I represented the United States with Ambassador Verveer and Ambassador Kramer in a series of bilateral meetings with other nations to develop international support for our WCIT submission.

Question 5. What is the view of the Commission on proposals by other nations to move oversight of critical Internet resources, such as naming and numbering authority, to the ITU or other international body?

Answer. I unequivocally share the Administration's goal of maintaining an open and interconnected global Internet. The multi-stakeholder approach to governance has allowed the Internet to develop into a successful platform for innovation, democracy, access to information, and scientific progress. Consequently, I support the Administration in its efforts to resist attempts to use the WCIT to centralize control of the Internet within the ITU on a range of issues, including naming and numbering authority. As noted above, last week at the Asia Pacific Economic Cooperation telecommunications ministerial meeting in St. Petersburg, I represented the United States with Ambassador Verveer and Ambassador Kramer in a series of bi-

lateral meetings with other nations to develop international support for our position in advance of the WCIT meeting in Dubai.

Question 6. American companies have had an historical advantage when it comes to the Internet because the innovation that has fueled the growth of the Internet started here. Companies were created in an environment where unconstrained Internet access provided them with a platform to succeed. In this way, America had a “strategic bandwidth advantage” over other countries. It was perhaps inevitable that this advantage would narrow, as broadband speeds have improved around the world. Given that context: Is it your view that this “strategic bandwidth advantage” has led and will continue to lead to job creation and greater innovation?

Answer. Yes. I believe that the United States has been a global leader in innovation and the deployment of new technologies and services. For example, today, the United States has more than 60 percent of the world’s 4G LTE subscribers. These next-generation networks are projected to add \$151 billion in GDP growth over the next four years, creating roughly 770,000 new American jobs. Continued investment in next-generation networks, both mobile and wired, is essential to the long-term health of our economy, and our ability to remain competitive and facilitate continued job creation and wage growth. Moreover, next-generation networks are a key platform for innovation in the United States.

Question 7. There has been bipartisan consensus in this body to encourage deployment and adoption of broadband for the economic and social benefits it brings. How do data caps help or hinder in accomplishing that goal?

Answer. This is a question that merits further study. On the one hand, if data caps are transparent and address real network capacity concerns, they can be a legitimate tool to manage congestion. Furthermore, I am not adverse to the idea that those who use more network capacity pay more. On the other hand, if these caps are set simply to generate fees for exceeding the limits, this can reduce incentives for robust broadband deployment. Given the increasing use of data caps by broadband service providers, I support the Commission’s efforts to seek comment on broadband capacity issues in its recent Notice of Inquiry pursuant to Section 706 of the Telecommunications Act of 1996. The information provided in response to this inquiry will inform the Commission’s upcoming annual report on broadband deployment progress.

Question 8. On the surface, usage-based billing makes sense for consumers but I am concerned about the chilling effect data caps could have on future growth of Internet video and other content. How do we ensure fair billing practices for consumers without creating a system that stifles innovation and growth of the Internet?

Answer. This is a legitimate concern. I believe that many consumers are not familiar with how common activities online, including video streaming, may cause them to quickly reach or exceed their data caps. In light of this, more consumer education is necessary, and optimally would be coupled with tools that allow consumers to easily track their data usage. At the same time, the Commission must review the record that results from its recent Notice of Inquiry pursuant to Section 706 of the Telecommunications Act of 1996 to better understand how data caps operate and their impact on innovation and growth of the Internet.

Question 9. I am sure you would acknowledge the FCC’s long-standing support of low power television and appreciate the success of low power TV since the FCC created the service in 1982. During this span of 30 years you are no doubt aware that low power TV has developed into an essential source of information and entertainment for many diverse communities across the country. I think two perfect examples of this dynamic would be the audiences who enjoy Spanish-language programming and those who enjoy religious programming. Likewise, LPTV has been the entry point for small businesses into the broadcast market and today, many LPTV owners are small businessmen who work hard to continue to serve their local communities with news and resources aimed at the community.

With this in mind, and also considering the likely end to a great deal of low power programming as a result of the repacking, how do you expect that this approaching void in unique programming will be filled with respect to the core missions of diversity and localism?

Answer. Low-power television broadcasters can provide important services to their communities. They can offer truly local and unique programming options that are not available elsewhere on the proverbial television dial. As you note, these stations also historically have been an important entry point for small businesses seeking to gain a foothold in the broadcasting market.

In the Middle Class Tax Relief and Job Creation Act, Congress directed the Commission to conduct incentive auctions and, as necessary and, subject to a specific se-

ries of conditions, repack television broadcast licensees. Section 6403(b)(5) of this law expressly states that it does not alter the spectrum usage rights of low-power television stations. I am aware of the value that low-power television stations have provided viewers across the country and will strive to faithfully implement the law.

Question 10. I would ask each of the commissioners, will you support rules that allow LPTV to survive after the repack?

Answer. As discussed above, Section 6403(b)(5) of the Middle Class Tax Relief and Job Creation Act expressly states that it does not alter the spectrum usage rights of low-power television stations. In crafting rules for incentive auctions and developing processes for repacking, the Commission must be faithful to the direction it received from Congress.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
HON. JESSICA ROSENWORCEL

As I brought up in the FCC nominations hearing in November, we have a population of television stations currently operating on the northern border of Canada, particularly in Lake of the Woods County. They applied for channel reallocation after the DTV transition but had to wait years to get final approval from the Canadian government and the FCC this January.

Question 1. Looking ahead to the future, the need for international cooperation when it comes to spectrum is important to our translator operators on the northern border. Has the Commission begun coordination with our Canadian counterparts as it relates to incentive auction legislation passed in February?

Answer. The United States has had a long and successful history of close cooperation on the use of radio spectrum along the border with Canada. It is my understanding, based on public statements by the Chairman, that coordination with Canada on our incentive auction process is already underway.

Question 2. I believe of one of the most impressive programs the FCC operates is the E-Rate program supporting communications technology in schools and libraries. Senator Rockefeller and Senator Snowe led the effort in creating a program that truly benefits schools and kids around the country. Minnesota has received a total of \$344 million since the E-Rate program started in 1998. This support has enabled schools and libraries across rural Minnesota to have telecommunications and broadband service giving students the ability to enhance their education. I understand that with the increase in demand from schools for broadband support, E-Rate program resources are stretched thin, including staff time to review and audit applications. Will you commit to keeping the resources for administering the E-Rate program targeted at the intended focus of connecting schools and libraries with communication technologies?

Answer. Yes. The E-Rate program has a long record of providing low-income and rural schools and libraries with the connectivity they need to help their students and patrons become digitally literate and capable of using communications and information technology. Year-in and year-out, the demand for E-Rate support has been twice as great as the funding available. It is a very popular and important program. To make sure that E-Rate has a bright future, the agency must regularly evaluate the application process to make sure that it does not inappropriately burden schools and libraries with limited resources, while still including measures to prevent waste, fraud, and abuse.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK WARNER TO
HON. JESSICA ROSENWORCEL

Question 1. Two years ago, the President announced his intention to free up 500 MHz of spectrum for wireless broadband use. This initiative is even more necessary today due to exploding data usage by consumers, which is leading to faster-than-expected capacity constraints across the country. Are you satisfied with the current pace of the identification and reallocation of spectrum to commercial broadband use? If not, why not?

Answer. The work done so far to identify and reallocate spectrum has been a good start, but additional effort is required. The evidence is all around us. It is more than just the proliferation of smart phones and tablet computers. Within the next decade, machine to machine devices may number as high as 50 billion.

This is an extraordinary challenge. To meet it will require effort on multiple fronts at the same time. With passage of the Middle Class Tax Relief and Job Creation Act, the Commission has incentive auction authority, which will permit it to

encourage existing licensees to return underutilized airwaves in exchange for a portion of the auction proceeds. This will facilitate putting more of our spectrum resources into use for new mobile broadband services.

I also believe we will need to consider new ways of sharing of Federal spectrum with commercial users where doing so provides protection for critical Federal services that make use of our airwaves. To this end, I am encouraged by government and industry efforts to develop opportunities for sharing of Federal spectrum with commercial licensees in the 1755–1850 MHz band. Furthermore, I am intrigued by the recent report on spectrum sharing from the President’s Council of Advisors on Science and Technology. While not all the ideas in this report have been met with enthusiasm from commercial licensees, the concept of expanding sharing across all Federal spectrum merits further consideration. In particular, I believe that the recommendation to develop expanded geolocation databases to facilitate access to spectrum could speed the development of sharing.

In addition, I believe that the information in these databases could help foster additional investment in cognitive and sensing technologies that over time would increase the viability of sharing, provide greater protection for existing Federal users, and promote more efficient use of our airwaves. The Commission also should explore what steps it can take to facilitate the deployment of small cells. By making more efficient use of existing frequencies, small cells can help cover geographies that larger towers may not adequately serve.

Question 1a. Do you have additional suggestions about how Congress or the Federal Government could accelerate the process?

Answer. While past efforts to reclaim spectrum from Federal users have involved the stick, I think going forward we should explore the carrot. Today, the Commercial Spectrum Enhancement Act provides funding to Federal users for relocation when their airwaves are reallocated for commercial use. It also provides upfront funding for planning. What is missing is a series of clear incentives. To this end, I believe we should explore ways to financially reward Federal authorities for efficient use of their spectrum resource. To this end, I am intrigued by the recommendation of the President’s Council of Advisors on Science and Technology regarding development of a synthetic currency for Federal spectrum use. I believe this kind of accounting system might provide a clearer picture of existing Federal demands on our airwaves. Moreover, it could be used for the basis of developing a system that rewards Federal agencies when they return underutilized spectrum, perhaps through an increase in their budget.

Question 2. The USF reforms—which I supported—seek to deploy more mobile and fixed broadband services to rural and underserved America. At the same time, mobile data forecasts indicate that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. Rural Virginia wants to be part of the broadband economy, however, high quality broadband service just hasn’t been available where consumers and rural economic development needs demand it. What would happen to the pace of rural broadband deployment if Universal Service Fund Reforms are blocked or slowed down at this time? Why is it important to move forward in terms of leveraging existing Federal funding to deploy more broadband to rural and underserved America?

Answer. I believe that all Americans, whoever they are, wherever they live, should have access to first-rate communications services. In the past, the Commission’s high-cost universal service program has focused on the delivery of voice telephony to every community in this country. Going forward, as a result of the Commission’s recent universal service reforms, the goal is the delivery of wired and wireless services, both voice and broadband, to all Americans.

This is a good development. Today, as many as 19 million Americans have no broadband service available. The reform framework developed by the agency, which predates my arrival at the Commission, is designed to provide additional support to carriers serving in these areas that presently lack broadband and wireless service. At the same time, it is designed to provide a predictable path forward for carriers that have historically relied on support from the high-cost universal service fund for voice service. Furthermore, it is designed to accomplish these things while leveraging existing deployments and staying within a budget of roughly \$4.5 billion annually.

This is a complex process, and there are many details subject to dispute by stakeholders dependent on the former system of support. These details will require continued assessment and review by the agency. But at a high level, it is reform that is worth pursuing. Making sure that broadband and wireless services are available everywhere in this country is an essential part of making sure that the opportunity for prosperity in the 21st century reaches all of our communities. I fear that if these

reforms are substantially set back, as many as 19 million Americans may be put at risk, without access to the networks necessary for modern commerce and civic life.

Question 2a. I sent a letter to the FCC in 2011 arguing that although 4 Mbps download/1 Mbps upload may be adequate for now, this standard should not be considered an acceptable level of service in the future. How important is it to you to see that the acceptable level of broadband service advances over time?

Answer. I agree that the Commission's speed benchmarks for broadband services should not be set in stone. Broadband services and technologies are dynamic-and so are the ways that consumers use these technologies. The Commission should continue to monitor technological developments and consumer demand as it evaluates and sets speed benchmarks in the future.

Question 3. The Commission has a number of highly anticipated open Notices of Proposed Rulemaking. Now that the Commission has five highly capable commissioners, how soon do you expect to reach decisions on key issues? I would encourage you to reach decisions on important matters as soon as possible because the delay of long-standing rulemakings has caused some frustration.

Answer. While the Chairman of the agency sets the agenda and determines when issues can be considered by the full Commission, I will strive to vote decisions in a timely way, without unnecessary delay. Communications is a dynamic sector in our economy, and the agency should, within its resources, make decisions in a way that facilitates investment and expedites the opportunity for consumers to benefit from new and innovative services. To this end, I have repeatedly called for the agency to establish a timeline for upcoming wireless auctions.

Question 4. Looking back at FCC data stretching to 2005, the number of full-time equivalents in the Office of Engineering and Technology appears to have dropped from 116 to 81. Do you believe this reduction is the source of the backlog? Why has this office, which would seem to be at the heart of the Commission's work, have declined over time when other bureaus or offices have grown or at least stayed flat?

Answer. I believe that the Commission would benefit from additional technical resources. It is my understanding that today there are less than 300 engineers working at the agency overall. Those that are here are a talented group. However, the pressures on them are substantial because we are entering an era in which technical issues are likely to come up with greater frequency.

At the same time, it is important to consider how these individuals have an opportunity to contribute to the decision-making of the agency. To this end, I believe that the engineers could help the agency prevent backlogs by assisting with technical review, playing a consulting role in major decisions, and also contributing to idea generation and policy development within the agency. In addition, the experts in the Office of Engineering and Technology should be freely available to every part of the Commission, including the Commissioner offices.

While I do not have information regarding past hiring practices, I believe the agency may be able to attract new engineering graduates by developing an engineering honors program similar to the attorney honors program it has today. The attorney honors program is a two-year employment and training program designed to introduce new and recent law school graduates to the field of communications and the law. A similar program for engineers could introduce young people with engineering backgrounds to how their technical expertise can be used to inform public policy at the Commission.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
HON. JESSICA ROSENWORCEL

Senator Begich Opening Statement

Chairman Genachowski, I want to thank you for working with me during the FCC's recent efforts to reform the Universal Service Fund. I understand the need for efficiencies, and overall support the notion of USF reform. I also understand the FCC's efforts to work within a reasonable budget. However, the reality is that given Alaska's geography, distance from the Lower 48, and the very remote locations of small rural communities, all of whom must be connected to 'the grid' via "middle-mile" terrestrial, satellite or undersea fiber circuits, means that Alaska is very different. Our distances are greater, our population is smaller, and our costs are much higher, particularly as it relates to the very high cost of middle-mile circuits for broadband.

I understand the Commission desire to establish capital expense and operating expense limits for rural rate of return carriers. And, whether I agree or not, I under-

stand that your staff's recent order establishing what is called a "regression analysis" to limit expenses puts a limit on most small companies at their current level of capital and operating expenses. Thank you for revisiting the formula recently, however there are still some companies that will be severely impacted by reductions to be implemented on July 1. I understand that your staff is well aware that the model contains data errors and other possible analytic flaws.

Question 1. Since your staff admits that these flaws exist, why doesn't the FCC limit the July 1 impact to the proposed limitation of all companies to their current level of expenses instead of implementing the reduction on a few when the reductions may be based on data errors and flaws. I know that the order limits the initial level of the impact and transitions in the impact, but why implement this reduction on a few until you know that you have it right?

Answer. The Commission has worked to correct data errors in the rural carrier benchmarks quickly and efficiently through a streamlined waiver process. As a result, two streamlined waivers have already been granted, both within two weeks of filing. In addition, I understand that Commission staff has begun the process of gathering additional data from carriers directly. I support this effort. Going forward, it is clear that implementing the universal service reforms in the Commission's November 18, 2011 decision will be a complex process that may require additional adjustments along the way.

Question 2. It appears highly likely that as a result of the November USF/ICC order many rural carriers will lose revenues—both USF support and from elimination of crucial intercarrier compensation. Is that correct?

Answer. As a result of the reforms set forth in the decision by the Commission on November 18, 2011, I understand that some carriers will lose revenues while other carriers will gain revenues in the form of additional universal service support. For example, ACS recently accepted more than \$4 million to deploy broadband to unserved areas in Alaska. In addition, a number of smaller, rural carriers will be eligible to gain additional universal service support if they fall below the Commission's capital and operating expense benchmarks. With respect to intercarrier compensation, the decision permits some of the lost intercarrier compensation revenue to be made up through a new recovery mechanism that was not previously available. This, however, is a process that requires constant monitoring, in order to ensure that it is fair, within budgetary parameters, and above all consistent with the law. I recognize the important role that rural carriers play in delivering communications services to the hardest-to-serve parts of this country, and I will keep this in mind as the Commission continues to implement its universal service reforms.

Question 3. Alaska, like 22 other states, has a complimentary State level universal service program. The Alaska state fund-disburses over \$15 million to Alaskan carriers each year. Do you anticipate these State funds will have to expand to cover revenue lost from the reforms you are implementing? And if so, have you calculated how much these State funds will need to grow?

Answer. The Commission's November 18, 2011 decision anticipates that carriers seeking to replace lost revenues that result from universal service and intercarrier compensation reforms would have several avenues for relief: petitioning the Commission for a waiver; replacing lost intercarrier compensation revenue through a new end-user pass-through and through the Connect America Fund; petitioning the Commission for additional intercarrier compensation support; and seeking to replace lost intercarrier compensation through state universal service funds.

As we continue to implement the Commission's universal service reforms and better understand its broader impact on all stakeholders, I welcome input from our State partners. In particular, I understand the unique challenges that carriers in Alaska face as they deploy communications networks in the most remote regions of the country. Going forward with reform, I will keep this in mind.

Question 4. The E-Rate program has always meant a great deal to the State of Alaska, ensuring that the children and educators living and working in our state's most remote towns and villages have access to the Internet and distance learning and professional development courses that are otherwise unavailable to them locally.

Let me quote from comments filed with the FCC last week by the Superintendent of the Dillingham City School District: As a small, rural school district in Alaska that has high poverty, low socio-economic, and predominantly native Alaskan population (Yupik), "I want to thank the FCC for our current level of E-Rate funding. We are an "off the road" community, meaning the only way in and out is by air, dog sled, snow machine, or boat. We just recently acquired access to high-speed fiber Internet via GCI Corporation extending this service to rural, remote areas of Alaska. The cost for this more than doubled our annual rate and without the current

E-Rate support we could not afford this service.” Is there a better way to administer the digital literacy program without damaging E-Rate processing?

Answer. I share your concerns. I strongly believe that digital literacy initiatives developed by the Commission should in no way harm the funding or legal foundation of E-Rate. The E-Rate program has a long record of providing low-income and rural schools and libraries with the connectivity they need to help their students and patrons become digitally literate and capable of using communications and information technology. We must ensure that it has a bright future, so that it can continue to help schools like those in Dillingham.

At the same time, I recognize that digital literacy is an increasingly critical component of obtaining an education, searching for a job, developing job-related skills, accessing government information, and participating in civic life. Consequently, I would be open to looking at new ways to consider supporting digital literacy through public-private partnerships with broadband providers. This also could I include efforts through Connect2Compete, a national nonprofit initiative that aims to provide low-income families with school-aged children with free digital literacy training, low-cost computers, and low-cost Internet access.

Question 5. Also wish to highlight the importance of keeping intact reliable source of communications to relay emergency and lifesaving information to those areas that lack reliable cellular or Internet service.

It is imperative that rural communities continue to have reliable sources of communications in cases of emergency and lifesaving situations. Can the Commission comment on ways to improve the distribution of emergency alert information?

Answer. I agree that all communities, including rural communities, must have reliable sources of communications in emergency situations. Furthermore, we should be consistently looking for ways to improve the distribution of this information. To this end, the Commission is working with Federal Emergency Management Agency and Early Alert System (EAS) participants to implement advances in the distribution of emergency information. As of June 30, 2012, EAS participants—including broadcasters and cable and satellite providers—must be able to accept EAS messages using a common messaging protocol, Common Alerting Protocol (CAP). CAP allows emergency alert originators to send one alert over multiple communications platforms, and also allows EAS participants to receive EAS alerts directly from the alert originators, including the Federal Emergency Management Agency, National Weather Service, and the relevant State and local governments. This distribution method can offer much richer alert content that can be more precisely targeted to reach affected populations, including those with disabilities and those who do not speak English.

In addition, recent testing has shown that there are ways to improve implementation of the system. On November 9, 2011, the Federal Emergency Management Agency and the Commission collaborated on the first nationwide test of the EAS. The Commission is working with participants to address issues that were identified in the test, in order to further strengthen this emergency information system.

Question 6. The due diligence work done day in and day out by local broadcasters will be lost if constituents can't receive it. How does the FCC intend to improve this?

Answer. The Commission works with the Federal Emergency Management Agency and other Federal authorities with responsibility for disaster response, to continually improve communications with EAS participants, including local broadcasters. In addition to the CAP adoption discussed above, the Commission has implemented the Disaster Information Reporting System (DIRS) to improve communication with EAS participants during emergencies. DIRS is a voluntary web-based tool that allows broadcasters and other EAS participants to quickly and efficiently inform the Commission about their operating status and needs during times of crises. It provides the Commission and other agencies with information regarding communications status during and after a major emergency, and provides broadcasters and other service providers with ability to ask for and receive assistance, if necessary.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. OLYMPIA J. SNOWE TO
HON. JESSICA ROSENWORCEL

FCC Technical Expertise

In Chairman Genachowski's remarks, he stated the Commission is operating with its lowest number of employees. The FCC is also unfortunately operating at one of its lowest number of engineers—over a 60 percent reduction in engineers from the 1950s to today—yet the Commission is dealing with significantly more technically

complex issues such as advanced wireless communications, commercial cable & satellite industries, public safety interoperability, more device certifications, and broadband.

Engineers at the FCC play an essential role in regulatory matters by providing technical consultation on policy matters, managing spectrum allocations, and creating new opportunities for competitive technologies. I'm concerned this lack of expertise is hampering innovation and job growth because of the excessive delays to businesses that are waiting approval to technical waivers, experimental licenses, and filed petitions at the agency.

Others share my concern, a 2009 Government Accountability Office report found that the agency "faces challenges in ensuring it has the expertise needed to adapt to a changing market place." And 2011 Wireless Report by the National Research Council suggested the FCC would benefit from "enhancing its technology assessment and engineering capabilities" due to "entering an era in which technical issues are likely to arise on a sustained basis."

Question 1. Do you believe the FCC has the sufficient level of technical resources, given the concerns various entities have raised?

Answer. The FCC would benefit from additional technical resources. It is my understanding that today there are less than 300 engineers working at the agency. They are a talented group. However, the pressures on them are substantial because, as the National Research Council suggests, we are entering an era in which technical issues are likely to come up with greater frequency.

At the same time, it is important to consider how these individuals have an opportunity to contribute to the decision-making of the agency. To this end, I believe they should assist with technical review, play a consulting role in major decisions, and also contribute to idea generation and policy development within the agency. In addition, the experts in the Office of Engineering and Technology should be freely available to every part of the FCC, including the Commissioner offices.

Unlicensed Spectrum

In your opening statement, you highlight the importance of incentive auctions to meeting the growing demand for wireless broadband. Obviously, the spectrum made available through incentive auctions will primarily be exclusive licenses—the recently passed legislation does allow unlicensed use in the guard and gap bands but it isn't clear how much will be available.

As you may be aware, one concern I had about the legislation was its impact on unlicensed opportunities in the TV band. My belief is that possible such allocation would allow for a new wave of innovation different from but complimentary to the work in the licensed space—it shouldn't be an "either-or" scenario but an environment where both can thrive.

Unlicensed use created markets for Wi-Fi, Bluetooth devices, cordless phones, and countless other innovations and with it hundreds of companies and thousands of jobs. And the consumer demand for unlicensed spectrum and devices is undeniable—*more than 80 percent of smartphone users prefer Wi-Fi over cellular for mobile data and 65 percent of tablet users utilize Wi-Fi connections exclusively.*

In addition, over 1 billion Wi-Fi devices shipped globally in 2011, and by 2014, 90 percent of smartphones will be Wi-Fi enabled. The economic impact is also significant—a 2009 report by Perspective Associates estimated unlicensed applications could provide up to \$37 billion of economic benefit annually over the next 15 years to our economy.

Question 2. What are your views on the role of unlicensed spectrum and should the FCC explore greater opportunities for unlicensed use outside of the traditional bands, such as 2.4 GHz and 5 GHz?

Answer. I believe that good spectrum policy requires a mix of licensed and unlicensed services. Licensed services provide reliability and interference protection. Unlicensed services can stimulate innovation because they have low barriers to entry. They can also assist with network congestion and facilitate rural deployment.

It has been more than a quarter of a century since the FCC first designated specific bands for unlicensed use. In that time, a wide range of devices using unlicensed spectrum—from garage door openers and cordless telephones to Internet services and "hot spots"—have changed the way we live and work. Going forward, the potential for unlicensed use is even greater. Already, use of the 2.4 GHz band for Wi-Fi has dramatically changed the way we use wireless networking and access the Internet.

More recently, in the Middle Class Tax Relief and Job Creation Act, Congress provided the FCC with authority to develop band plans with guard bands in the broadcast television spectrum following an incentive auction. While such bands are limited to a size technically reasonable to prevent harmful interference to adjacent li-

censed uses, they are also permitted under the law to allow for unlicensed use within the guard bands. As the FCC develops band plans in the aftermath of its incentive auction of the broadcast television spectrum, it should keep in mind the power of unlicensed applications to stimulate the development of innovative new devices and grow our economy.

In the same legislation, Congress directed the FCC to conduct a rulemaking concerning unlicensed use in the 5350–5470 MHz band. Furthermore, it directed the National Telecommunications and Information Administration to study the impact on Federal users of making both the 5350–5470 MHz band and 5850–5925 MHz band unlicensed. Exploring these further opportunities for unlicensed use is the right thing to do. I fully support it.

Question 3. Should the FCC perform a similar exercise to Ofcom, the U.K. regulator, in creating a report (*License-Exemption Framework Review*) that provides a framework for exploring and managing unlicensed use of spectrum?

Answer. As noted above, I believe that good spectrum policy requires a balanced mix of licensed and unlicensed services. In our consideration of how best to achieve this balance, we may wish to consider studying the licensed and unlicensed spectrum ecosystem in this country in a manner similar to the framework developed by Ofcom.

Competition and Innovation

A growing number of consumers are combining traditional media services with more innovative products that allow them to stream online content. Some products allow consumers to stream online content of all types and aggregate it with either free OTA broadcasts or basic cable service.

The Commission is considering an order that would allow for the encryption of basic cable signals. While there are several benefits to encrypting basic cable service, there are also some concerns that innovative devices allowing users to combine online content with basic cable service may no longer be compatible without additional hardware or software or reduce functionality of the device, and may face additional monthly fees for a cable box. As you know, Congress specifically addresses this issue in Section 624A of the statute (47 U.S.C. 544a), which requires the FCC to assure compatibility between consumer electronics equipment and cable systems so cable customers can enjoy the full benefits of both.

Question 4. Is there a solution that would provide the positive benefits of cable encryption to cable operators while also allowing for IP-based devices and other innovative products that more consumers are purchasing to have the opportunity for success in the marketplace? Are there any risks to consumers of allowing innovative devices the ability to decrypt the basic cable signals so they can access those channels unencumbered by additional equipment or reduced functionality?

Answer. Viewing habits are evolving and consumers are turning to new avenues to find content. The FCC's rules must address this changing media landscape while still allowing providers the ability to protect their content.

In October 2011, the FCC began a proceeding exploring the best ways to balance these interests and asking whether to eliminate the rule prohibiting basic service tier encryption for all-digital cable systems. The agency proposed to allow cable operators to encrypt the basic service tier in all-digital systems but require any operators who choose this option to take steps to minimize the potential for disruption for their subscribers. In determining whether to implement these proposals, the Commission must be sure to abide by the direction Congress provided in Section 624A to maximize “open competition in the market for all features, functions, protocols and other product and service options” while also protecting “the integrity of signals transmitted to the cable operator.” At the same time, any further Commission action should enhance the ability of innovative products to reach consumers in the marketplace.

In the meantime, device manufacturers can develop new IP-based devices that are consistent with existing encryption protections incorporating CableCARD compatibility to decrypt linear cable services. CableCARD technology does require a small piece of additional equipment, but it can also provide consumers with the benefit of new devices while allowing cable companies to realize the benefits of encryption.

Question 5. It's my understanding that other non-cable MPVDs are able to encrypt all of their video signals, even basic video service. Should Congress revisit the statute to provide greater parity in regards to signal encryption?

Answer. I believe that the FCC has adequate authority to address these issues under existing law, while taking into account consumer expectations and the need to ensure compatibility with existing consumer devices. However, as a matter of

principle, I believe that the agency should always welcome additional guidance from Congress.

Universal Service Fund & E-Rate

The National Broadband Plan and subsequent research have identified the lack of digital literacy among low-income Americans as a major barrier to broadband adoption. To address this, the Commission proposed implementing and operating a digital literacy program through the E-Rate program's administrative structure. The FCC has proposed \$50 million in annual funding over a four year period and that such funds would be provided through saving from the restructuring of the Lifeline program. While I'm a strong advocate for a greater focus on improving digital literacy to spur broadband adoption, I'm concerned about the impact this proposed program will have on the E-Rate program, if it is administered through it.

Question 6. I'm concerned the proposed Digital Literacy program will be difficult to monitor. With E-Rate, it is possible and cost-effective to send auditors to school and library sites to ensure applicants have actually purchased and installed the equipment for which they received E-Rate support and providers have actually delivered promised services. By contrast, it seems it may be difficult for auditors to determine this proposed digital literacy initiative's funds have actually been spent on courses. Can you tell me how USAC could properly audit this digital literacy initiative?

Answer. Digital literacy is an increasingly critical component of obtaining an education, searching for a job, developing job-related skills, accessing government information, and participating in civic life. While I fully support efforts to address digital literacy, I also share your concerns. First, I believe digital literacy initiatives developed by the FCC should in no way harm the funding or legal foundation of E-Rate. This is a program with a strong record of providing low-income and rural schools and libraries with the connectivity they need to help their students and patrons become digitally literate and capable of using communications and information technology. Second, I believe auditing is an important part of ensuring the effectiveness of government programs. As you note, auditing has improved the E-Rate program and helped ensure that providers deliver promised services. Accordingly, any effort to develop digital literacy programs will need to include measures to prevent waste, fraud, and abuse.

Competitive Access to Spectrum

The "spectrum crunch" is not exclusive to just one or two carriers, it is industry wide. And while the top four carriers provide wireless service to 90 percent of the total subscribers in the U.S., more than 30 million other subscribers use someone else. As you know, Section 309(j)(3) of the statute (47 U.S.C. 309(j)(3)) requires Commission to promote "economic opportunity and competition" by "disseminating licenses among a wide variety of applicants" including small businesses, rural carriers, and minority and woman-owned businesses.

Question 7. How should the FCC ensure, in a fair and competitive manner, that all carriers—large and small—have adequate access to this critical but finite resource?

Answer. As you note, Section 309(j)(3)(B) of the Communications Act directs the FCC to promote economic opportunity and competition in its spectrum auctions "by disseminating licenses among a wide variety of applicants, small businesses, rural telephone companies, and businesses owned by members of minority groups and women." The statute also provides the agency with a variety of means it can use to accomplish this goal, including, pursuant to Section 309(j)(4)(D), "the use of tax certificates, bidding preferences, and other procedures." Under Sections 309(j)(4)(A) and 309(j)(4)(C), the FCC also is authorized to promote access to spectrum licenses by allowing alternative payment methods and by providing licenses in a variety of geographic sizes and frequency ranges.

To implement these provisions of the Communications Act, the FCC historically has used tools that have included set-asides and bidding credits. The former work by limiting auction participation to classes of entities, including, for instance, new entrants; the latter work by providing credits to small businesses to assist with payment for winning bids.

This complex legal landscape was altered by Section 6404 of the Middle Class Tax Relief and Job Creation Act, which amended Section 309(j), limiting the agency's authority to prohibit participation in future spectrum auctions. At the same time, this new law specifically retained the Commission's ability to use rules of general applicability to promote competition. Going forward, the agency will need to identify how all of this legal authority—both new and old—can provide spectrum opportunities for wireless providers—both large and small.

Furthermore, the FCC can promote access to spectrum through secondary markets. Secondary markets can provide more companies with opportunities to purchase spectrum outside of the Commission's auction process. The FCC should continue to investigate ways to encourage the fair and efficient development of robust secondary markets.

Question 8. Several countries have recently held or plan to hold spectrum auctions to make more spectrum available for next generation wireless communications and broadband. Some of these countries have applied certain conditions to their auctions rules. For example:

1. In its 4G auction, France's ARCEP provided bidding preferences to carriers that agreed to host MVNOs on its networks and had enhanced rural build-out requirements. It also required roaming agreements—to a losing bidder—for any carrier that won more than one frequency block.
2. Germany's regulator, Bundesnetzagentur, applied rural build-out requirements for its 800 MHz auction and placed bidding restrictions on certain carriers.
3. The Netherlands reserved two spectrum blocks in the 800 MHz band and one in the 900 MHz band for new entrants.
4. Canada, in its 2008 AWS auction, set aside spectrum for a new entrant.
5. Czech Republic's CTU has reserved the 1.8 GHz block for a new entrant.
6. Ofcom has proposed spectrum caps in its upcoming LTE spectrum auction.
7. Australia has proposed spectrum caps for its upcoming auction.

It should be noted that several of these auctions ended up exceeding revenue expectations. I'm not advocating for the implementation of any conditions on any future auctions but I'm curious as to why these countries deemed it necessary to apply such conditions in their auctions rules? Do you believe the FCC should closely examine the recent 4G auctions in other countries to assist in determining how best to design future domestic auctions?

Answer. I believe that the development of auction rules is a process that incorporates relevant law, evolutionary change in spectrum markets, and a range of interests that are often unique to the country whose regulator or legislature is responsible for developing the framework for bidding opportunities. As we develop upcoming auctions, the FCC should consider examining 4G auction efforts abroad. There may be important and useful lessons that we can import to our own auction policies and process.

Question 9. As you know, Section 309(j)(7) of the statute (47 U.S.C. 309(j)(7)) expressly prohibits the Commission from using the expected revenue from a spectrum auction as a basis for determining the public interest of frequency assignments. Furthermore, Congress, in H.R. Rep. No. 111, 103d Cong., 1st Sess. 258 (1993), emphasized that "important communications policy objectives should not be sacrificed in the interest of maximizing revenues."

While there is broad agreement auctions are the best mechanism to distribute spectrum licenses, is there too much emphasis currently being placed on maximizing auction revenues instead of the longer term economic benefit that may result? How might such skewed focus on proceeds hinder achieving the strategic goals necessary for the long term health of the spectrum ecosystem?

Answer. Section 309(j)(7) of the Communications Act limits the FCC's ability to consider expectation of Federal revenues when making determinations on allocating and assigning spectrum. Instead, under Section 309(j)(3) the statute directs the agency to consider a number of other factors, including developing and rapidly deploying new technologies, products, and services; promoting economic opportunity and competition; avoiding unjust enrichment; and furthering the efficient and intensive use of spectrum. Simply put, the FCC has a duty to weigh these factors as the statute instructs. In doing so, it should naturally consider the long-term health of the spectrum ecosystem.

Spectrum Efficiency Metrics

One of the primary, long-standing goals of the FCC has been to promote more efficient use of spectrum. The FCC's 1999 Spectrum Policy Statement highlighted "with increased demand for a finite supply of spectrum, the Commission's spectrum management activities must focus on allowing spectrum markets to become more efficient . . ." and Strategic Plan for FY 2003–2008 (published in 2002) indicated its general spectrum management goal is to "encourage the highest and best use of spectrum . . ."

In its 2002 report, the Spectrum Policy Task Force developed three definitions: spectrum efficiency, technical efficiency, and economical efficiency. However, the

SPTF concluded “it is not possible, nor appropriate, to select a single, objective metric that could be used to compare efficiencies across different radio services.”

Question 10. In the FCC’s search to free up more spectrum for wireless broadband, how does the FCC effectively determine and compare the spectral efficiency of different types of radio-based services when targeting various frequencies for reallocation?

Answer. The FCC generally has not applied a spectral efficiency metric for different types of services. The agency’s Technological Advisory Council considered such metrics, but determined that a single point of comparison to assess spectral efficiency among different services is neither feasible nor desirable. The Technological Advisory Council produced a white paper on this subject in September 2011. I am reviewing this document, and anticipate that the guidance it provides will inform my thinking more generally on efficient spectrum use.

Question 11. One of the common spectrum efficiency metrics for wireless communications is in terms of bits/second/hertz. Some parties have suggested more granular metrics such as bits/second/hertz/pop or bits/second/hertz/cell. It seems like there could be several different metrics within each definition of efficiency.

Robin Bienenstock of Sanford Bernstein raised the issue of network density and highlighted the difference between the U.S. and European countries. Specifically, Ms. Bienenstock compared California with Spain (noting similar size, topography, and population density). A major carrier in Spain had 33,000 base stations, whereas a major U.S. carrier in California had only 6,000 sites. Across the board, the network density for operators in Spain is three to six times higher than that of operators in California. With more cell sites, there is greater spectrum reuse, which means more efficient use, and a lessening of demand for the raw material (spectrum).

Does the FCC use network density as a component of its spectrum efficiency metric? If not, given the FCC already imposes build-out requirements to licensees, should the FCC explore requiring network density guidelines too as a way to promote more efficient use of spectrum?

Answer. As you note, different metrics may be used for examining whether or not spectrum is being used efficiently. To the best of my knowledge, the FCC has not generally used network density. Instead, requirements for building networks tend to focus on the coverage of some level of service, rather than the number of towers deployed. This is because a variety of factors can impact tower deployment, including the propagation features of the relevant spectrum, the quantity of spectrum available, and the local terrain and regional topography. Moreover, a lower number of towers in one location as compared to another may simply be a reflection of lower traffic demand. Furthermore, deployment may be limited by the need to protect against interference to services operating in adjacent spectrum. In sum, while network density guidelines may help facilitate the efficient use of spectrum, they are one of a wide variety of considerations.

Question 12. Does the FCC have any additional data on network density comparisons of the U.S. in relation to other countries?

Answer. The FCC has data on many, but not all, wireless towers in the United States. However, it does not have direct access to information on network density in other countries, which limits the ability to develop comparisons. At the same time, changes in technology may complicate efforts to make use of such comparisons. With the increasing deployment of wireless base stations that provide service capacity in crowded areas that are not located on towers but on buildings and other objects, assessment of density nationally and internationally may become substantially more complex.

Resolving the “Spectrum Crunch” Through Technology

I’m concerned there is not enough focus on the role of technology in meeting the growing demand for wireless network capacity. An Ofcom report rightfully points out increasing wireless network capacity depends on a combination of “spectrum, technology, and topology.” Given the challenges we face with reallocation, I believe technology will play an even more prominent role.

For example, research by Ofcom found that early 4G mobile networks will be 230 percent more spectrally efficient than 3G networks and that efficiency will increase to 450 percent by 2020. Technologies like dynamic spectrum access and cognitive radio can considerably improve utilization by allowing more aggressive spectrum sharing, and, though many years off, quantum entanglement and “twisted” waves hold amazing potential to significantly, and even possibly infinitely, increase capacity without any additional spectrum.

However, I'm concerned about the threats the U.S. is facing in regards to its leadership in innovation, primarily with ICT. Many reports highlight most of the global R&D growth will be mainly attributed to Asian economies—according to NSF, the United States' share of global R&D expenditures dropped from 38 percent to 31 percent between 1999 and 2009, while the Asia region grew from 24 percent to 35 percent. In addition, more U.S.-based companies are locating R&D operations overseas—the number of overseas researchers employed by U.S. multinationals nearly doubled from 138,000 in 2004 to 267,000 in 2009.

Question 13. What more can the government do (besides make the R&D tax credit permanent) to foster greater R&D investment, primarily in ICT?

Answer. I believe that innovation is the development of new ideas and the realization of those ideas on a large scale. The long-term health of our economy depends on our ability to foster innovation. It can drive job growth, improve wages, and facilitate our ability to produce goods and services that are competitive in global markets.

Consequently, I believe that the FCC has a duty to consider all of its substantive policies in light of the importance of innovation. In addition, the agency should develop processes that facilitate smart and swift decision-making, which can, in turn, speed the deployment of new technologies and creation of new markets. To this end, I support the efforts of the Commission's Office of Engineering and Technology to consider ways to improve the equipment authorization process, thereby creating more opportunities to certify more innovative devices. Finally, the agency should be in a continuous dialogue with other Federal authorities with interests in research and development, as well as business leaders, to make sure that government efforts consistently promote innovation, opportunity, and economic growth.

Question 14. Given the benefits that both the private and public sectors will reap from more advanced technologies, how can there be more collaboration between both sectors to see these technologies to fruition?

Answer. I believe that government efforts to collaborate with industry are an essential part of managing our growing need for spectrum resources. The FCC, working with the National Telecommunications and Information Administration, can serve a critical role in helping foster this collaboration. I am encouraged, for instance, by joint intergovernmental and industry efforts to find opportunities for sharing of Federal spectrum in the 1755–1850 MHz band with commercial licensees. This is an exciting development that could become a model for additional sharing opportunities. As finding new, unencumbered spectrum becomes more difficult, efforts like this one will become an increasingly important part of our ongoing effort to relieve our spectrum crunch.

Question 15. Does the FCC have any estimates on the amount of domestic private sector funding in wireless R&D as a percentage of overall industry capital investment? Do you believe there is enough domestic R&D investment in advanced wireless communications in comparison to other countries?

Answer. In its annual report to Congress on the state of competition in the mobile wireless sector, the FCC examines a variety of data concerning the mobile wireless marketplace, including estimates regarding research and development. Today, the United States has 64 percent of the world's 4G LTE subscribers. These next-generation networks are projected to add \$151 billion in GDP growth over the next four years, creating roughly 770,000 new American jobs. These data make clear that the United States has emerged as a global leader in mobile innovation. Going forward, I will support efforts by the agency to promote innovation and investment in advanced wireless communications, so that the United States can continue to be a leader in providing these services.

Question 16. While U.S. industries fund approximately 70 percent of domestic R&D, the Federal Government is the primary source of funding for basic research, providing approximately 60 percent of funding, and industry conducts less than 20 percent of the basic research done in the U.S., according to the Science Coalition.

How important are Federal programs like NSF EARS and DARPA STO to the long-term growth and health of innovation in the spectrum ecosystem and should Congress provide greater funding for basic research in this area?

Answer. Federal programs like the National Science Foundation's Enhancing Access to Radio Spectrum and the Defense Advanced Research Project Agency's Strategic Technology Office can promote growth and innovation in the spectrum ecosystem. I support efforts by Congress to advance innovation through funding for basic research in these or similar programs.

Q8—Spectrum Flexibility

The National Broadband Plan highlighted the importance of spectrum flexibility. The NBP concluded that “flexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency” and “spectrum flexibility, both for service rules and license transfers, has created enormous value.” That innovation and capital formation could be beneficial to addressing the challenges that exist in making more affordable and faster broadband available in rural areas.

As you know, Section 336 of the statute (47 U.S.C. 336) allows broadcasters to offer ancillary and supplementary services, which includes data transmission and interactive materials. Section 336 also prescribes the assessment and collection of fees related to such service offerings, and the FCC, back in 1998, adopted rules requiring broadcasters to pay a fee of 5 percent of gross revenues from such services for which they charge subscription fees or other specified compensation.

Question 17. If we need to get broadband into rural areas, why not let other licensees, like broadcasters, attempt to close the digital divide that exists? Mainly, since they may have infrastructure already in place to build off of.

Answer. Millions of Americans rely on free, over-the-air television as their primary source of news, information, and entertainment. As the Nation reassesses its spectrum resources, it is imperative for the FCC to consider this role in the broader communications landscape. To this end, I am open to hearing about proposals for new ways to bring wireless broadband service to rural areas that involve broadcasting. At the same time, allowing a piecemeal approach to freeing up spectrum for wireless broadband has the potential to undermine comprehensive efforts to make sure that spectrum resources are used as effectively and efficiently as possible. As a result, in considering any proposal to alter existing licenses, the FCC must take into consideration the broader need to maximize spectral efficiency.

Question 18. Even though the FCC adopted rules to avoid unjust enrichment, some parties have still raised concerns that such flexibility would be unfair since the broadcasters weren’t assigned the spectrum via an auction. However, as you know, the FCC has only auctioned licenses since 1994 and prior to that used comparative hearings and then lotteries for frequency assignments—including licenses for wireless communications.

If there is concern about “unjust enrichment” if broadcasters provide broadband, why isn’t there the same concern with wireless communications licenses issued prior to 1994? Wouldn’t the 5 percent of gross revenue that broadcasters have to pay if they add broadband to their signals fairly compensate the government, mainly since such service would have to be “ancillary and supplementary” to their broadcast television signal?

Answer. As a general matter, the FCC has a duty to ensure that spectrum is used in smart and efficient ways—both locally and nationally—in order to optimize the value of this public resource. Providing additional flexibility to existing licensees may be one way of achieving this goal. At the same time, in Section 309(j)(3)(C) and 309(j)(4)(E) of the Communications Act, Congress directed the FCC to take steps to avoid unjust enrichment when recovering spectrum for the public as well as when in issuing wireless licenses and permits. The Commission must therefore account for concerns about unjust enrichment that may arise if broadcasters, or other licensees that received their spectrum prior to the Commission obtaining auction authority in 1994, are later permitted to use their licenses to offer services other than those originally intended. Of course, these concerns must be taken into consideration along with other statutory criteria and the broader need to promote smart and efficient use of our spectrum resource.

Q9—Spectrum Fees

Recommendation 5.6 of the National Broadband Plan suggested “Congress should consider granting authority to the FCC to impose spectrum fees on license holders and to NTIA to impose spectrum fees on users of government spectrum” to address inefficiencies in spectrum allocations and promote more efficient use of spectrum. It is my understanding that every administration since Clinton has requested spectrum fee authority from Congress.

Ofcom imposed similar fees (known as Administrative Incentive Pricing) in the late 1990s and issued a report in 2009 that concluded the fees “met its primary objective in helping to incentivize spectrum users to consider more carefully the value of the spectrum they use alongside that of other inputs, and to take decisions that are more likely to lead to optimal use of the available spectrum.” The report also “found no evidence to suggest that the application of AIP has given rise to material adverse consequences for spectrum efficiency.”

Question 19. Should Congress grant the FCC and NTIA spectrum fee authority either on all licenses and assignments or just on non-auctioned licenses, mainly if the FCC moves to implement greater flexibility of spectrum use? Do you believe the FCC can strike the proper balance in applying spectrum fees to promote more efficient use of spectrum but not to a point that it presents an undue financial burden to the licensee?

Answer. As you note, in recent years different Administrations have proposed that Congress provide the FCC with the authority to use economic measures, like spectrum fees, to promote more efficient use of this scarce resource. Were Congress to provide this authority to the agency, I would be interested in fully exploring how such fees could be useful in promoting this purpose, while at the same time not imposing an undue burden on licensees.

Question 20. Some parties have opposed spectrum fees calling them a tax. But what is the difference between a spectrum fee that is paid annually and a licensee paying a lump sum at an auction? If a spectrum fee is a tax, isn't an auction payment a tax as well since it too goes to Treasury? Or are both not considered taxes since they are transfers to government for the right to use a public good?

Answer. The proper characterization of spectrum fees would depend on how they are established by Congress and whether they impose undue burdens on licensees.

Question 21. If not spectrum fees, how should the FCC impose economic fairness between licensees that are/were awarded via auctions versus those that were awarded via comparative hearings and lotteries?

Answer. I recognize that concerns regarding economic fairness may arise when additional flexibility is granted to spectrum licensees outside of the auction process. Consequently, I believe that the FCC must consider these issues while also rendering decisions that are faithful to the Communications Act and consistent with the broader need to promote smart and efficient use of our spectrum resource.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO
HON. JESSICA ROSENWORCEL

Question. Congress recently passed spectrum auction legislation and the Commission will begin setting rules for implementation perhaps as early as this fall. I'm hearing from some low power television (LPTV) interests in my state who are concerned about how the FCC will handle low power stations when the FCC conducts their incentive auctions, and subsequently goes through a process of clearing channels 31–51. Low power TV stations provide a valuable service, such as local public meetings and religious broadcasting. LPTV has been the entry point for small businesses into the broadcast market and today, many LPTV owners are small businesses who work hard to continue to serve their local communities with news and resources aimed at the community. Would you support rules that allow LPTV to survive? What assurance can you provide that low power television stations will be protected?

Answer. Low-power television broadcasters can provide important services to their communities. They can offer truly local and unique programming options that are not available elsewhere on the proverbial television dial. As you note, these stations also historically have been an important entry point for small businesses seeking to gain a toehold in the broadcasting market.

In the Middle Class Tax Relief and Job Creation Act, Congress directed the Commission to conduct incentive auctions and, as necessary and, subject to a specific series of conditions, repack television broadcast licensees. Section 6403(b)(5) of this law expressly states that it does not alter the spectrum usage rights of low-power television stations. In crafting rules for incentive auctions and developing processes for repacking, the Commission must be faithful to the direction it received from Congress.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. ROY BLUNT TO
HON. JESSICA ROSENWORCEL

Question. Local radio and television stations are currently competing with a vibrant and growing online marketplace for listeners and viewers. However, their online competitors are not saddled with the same regulations. Do you think that in trying to protect localism and a multitude of voices the regulations might actually be stifling growth opportunities?

Answer. Under Title III of the Communications Act, the FCC has duties to ensure that the services it oversees that make use of our scarce spectrum resources do so

in the public interest. Historically, with respect to broadcasting, this assessment has included consideration of how these services support localism, competition, and diversity.

While the Commission must unequivocally honor the law and consider its precedent, I agree that it also must mind the evolution of the marketplace. To this end, it is important for the agency to recognize that an emerging class of online services provides new viewing and listening options for the public. While these emerging services may lack the same obligations as traditional broadcasters, in some cases they also do not enjoy the same protections, including, for instance, must carry rights.

In sum, this is a complex marketplace, with a mix of legacy obligations and new technologies that provide emerging business opportunities. In approaching this issue, I believe that the agency must be faithful to the Communications Act and consistent with the law, promote the public interest. In doing so, however, it should also continuously assess how the evolution of media markets is changing the way that listeners and viewers seek to hear and watch and how this in turn, impacts localism, competition, and diversity.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN BOOZMAN TO
HON. JESSICA ROSENWORCEL

Question. What short-term solutions for spectrum needs can be utilized while longer-term solutions, such as incentive auctions, are implemented?

Answer. Radio spectrum is a scarce but valuable resource. The proliferation of wireless devices and growing demand for wireless data services puts new pressures on the use of our airwaves. As you may know, the President set a goal of developing an additional 500 megahertz of spectrum over the next ten years for new commercial use. This is an important effort. It is also a serious challenge. To this end, you suggest that to meet this challenge we need to consider nearer term solutions to address our growing spectrum needs, while longer-term efforts like incentive auctions are put in place. I wholeheartedly agree.

I believe these efforts should include continued examination of opportunities that come from spectrum sharing. I am encouraged, for instance, by joint intergovernmental and industry efforts to find opportunities for sharing of Federal spectrum in the 1755–1850 MHz band with commercial licenses.

At the same time, it is important that we recognize that relocation of Federal spectrum users is complicated and expensive, so designing systems that provide clear incentives and rewards for Federal authorities to be more efficient with this resource needs additional consideration. As a related matter, it may be useful to consider the recommendations of the President’s Council of Advisors on Science and Technology, which suggest use of a synthetic currency system to encourage Federal agencies to return underutilized spectrum resources in return for a budget increase.

Finally, technologies that enable more efficient spectrum use need both industry investment and Commission support. I believe that the public and private sectors should further explore how best to promote technologies like spectrum sensing and cognitive radios, which can facilitate multiple users accessing the same spectrum. This effort should also include consideration of small cell technologies that can provide wireless coverage and capacity in limited areas. These include technologies like femtocells, which are small wireless base stations that look like wireless routers but use wireline technologies for backhaul. I understand that the FCC held a forum on small cells in October 2011. Going forward, I believe that the agency should spend additional time and attention on these technologies and identifying the role that they can play in addressing our spectrum challenge.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARCO RUBIO TO
HON. JESSICA ROSENWORCEL

Telecommunications Act

Question. At the Committee’s recent hearing on online video, there was consensus—among the witnesses and some members of the Committee—that Congress needs to rewrite the Telecommunications Act. And as you are probably aware, some industry stakeholders advocate for the need to reform the Act and break down the regulatory silos. Do you think that Congress should rewrite the Telecommunications Act to better reflect the current telecommunications environment? And if so, what parts of the Act should Congress update or rewrite?

Answer. As you suggest, the Communications Act is often described as a series of silos. Title II of the law is built around wireline services. Title III is designed to address services that make use of radio spectrum—from wireless broadband to broadcasting. Title VI is constructed to address cable systems. While at one time this approach may have been logical, the evolution of technology has dated this structure and rendered it less than ideal.

The challenge, however, is to consider what comes next. While consensus may exist for the need to update the Communications Act, consensus on how to do this is more elusive. In this environment, I believe that the proper starting point is identifying the essential values in existing law. For my part, I believe that four key elements should anchor this conversation. First, public safety is critical. Second, universal service helps ensure that everyone in this country, no matter who they are and where they live, has access to communications services that are an important part of opportunity in the digital age. Third, competition delivers innovative services and promotes investment. Fourth, consumer protection is essential.

Rebuilding the law around these principles, however, is not simple. In addition, it is not easy to migrate existing stakeholders from the current system to a wholly new framework. Because dislocation has consequences for both businesses and consumers, I believe that a sweeping new law could be a positive force—but also a destabilizing one. As a result, while a longer term conversation starts regarding the rewrite of the Communications Act, a shorter term discussion about smaller fixes would be beneficial. To this end, I believe agency deliberations would benefit from reform of the Government in the Sunshine Act. I also believe that additional resources for engineering to speed the certification of wireless devices would expedite the delivery of new and innovative services in the marketplace. Finally, I believe that expanding the role of Administrative Law Judges at the agency merits consideration. This could result in swifter resolution of disputes, which in time could yield both more certainty and more investment.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEAN HELLER TO
HON. JESSICA ROSENWORCEL

Thank you for your testimony before the Committee. I appreciate the time you spent and your thoughtful answers to the following questions.

As you all know, our economy benefits greatly from the communications and technology sector. Competition and innovation have created new services and devices as well as high-quality jobs that have changed the lives of Americans. This sector is incredibly important to sustainable growth of our economy. That is why Congress must push the Federal Communications Commission to be the most open and transparent agency in the Federal Government. The industries you regulate are too important to our Nation.

Under Chairman Genachowski, I have seen notable steps in the right direction, and he has made process a “top priority.” That being said, I am concerned that the FCC is not always as open and transparent as it should be. The problem as I see it today is that the FCC can pick and choose the rules it wants to follow when it wants to follow them. This method is convenient for the FCC, but it is not good government, and we owe more to Americans with business before the FCC.

I introduced legislation that pushes the FCC toward more transparency and openness. The intent of my legislation is not to hamstring the agency. It is to push them to be exactly what Americans expect from their government, open and transparent regulators of the laws passed by Congress.

A more predictable and consistent FCC will create jobs in Nevada, which has the unfortunate distinction of leading our Nation in unemployment for over two years. Every government agency should be committed to policies that promote job creation, investment and innovation. The technology sector has helped growth in our country for the last twenty years and will continue to if big government does not overburden it.

I introduced two measures, the Telecommunications Jobs Act (S. 1817) and the Federal Communications Commission Consolidated Reporting Act (S. 1780). These bills push the FCC to be the most open and transparent agency in the Federal Government and provide a streamlined method of reporting to Congress.

The following questions are in regards to those bills, and I would ask you to please respond to each question.

Question 1. One of the most important reforms I introduced would force the Commission to demonstrate beyond any doubt the need for regulation before intervening in the marketplace. I strongly believe that a cost-benefit analysis should be conducted on any regulation that will have a significant market impact, and I believe

that before the FCC begins a rule proposal, they survey industry within three years of proposing a rule to determine whether that regulation is even necessary. A cost-benefit analysis mandating the FCC to identify actual consumer harm and conduct an economic, market-benefit analysis is consistent with President Obama's Executive Order 13563 on Improving Regulation and Regulatory Review. Would you support legislation that implements a cost benefit analysis consistent with the President's Executive Order? If not, why?

Answer. I support the objectives of Executive Order 13563 and as a related matter, Executive Order 13579. Cost-benefit analysis can be a useful tool for evaluating the relative merits of any particular policy. In many cases, balancing benefits with costs can help identify efficient outcomes and facilitate good public policy.

At the same time, as an analytical method, it may not always be fully compatible with the statutory direction in the Communications Act. It would be complex, for instance, to integrate cost-benefit analysis with the six principles governing universal service policy that are enumerated in the law. It would be similarly complex to use cost-benefit analysis to evaluate obligations under the Communications Assistance for Law Enforcement Act, which defines the duty of carriers to cooperate in the interception of communications for law enforcement purposes.

As a result, the utility of cost-benefit analysis must be considered in conjunction with other objectives in the law. However, with this caveat, I believe it can be a useful and important analytical tool for the agency in its decision-making process in major rulemakings.

Question 2. Do you support legislation mandating the FCC to survey the marketplace within three years before initiating a rulemaking?

Answer. I agree that the FCC should regularly survey the communications marketplace to ensure that its rules and policies are up to date. However, I fear that a unilateral obligation to have a particular marketplace survey in effect three years in advance of any rulemaking may have the unintended effect of precluding the agency from responding in a sufficiently swift fashion to developments in communications markets that may require its immediate attention—to protect consumers, to maintain fair opportunities in our markets, and to ensure that our goods and services are globally competitive.

Question 3. Under the Chairman, 85 percent of the *Notices of Proposed Rulemakings* have contained text of proposed rules. However, in the years before Chairman Genachowski, only 38 percent contained the specific text. Also, at times, these NPRMs have been broad, leading to uncertainty because industries are not clear as to what the FCC is actually looking at. Do you believe that the FCC should include the actual language of any and all proposed new rules in every NPRM?

Answer. In general, yes. The clarity that proposed rules may provide can be useful for all stakeholders with an interest in FCC policies. It can improve the fairness of agency proceedings. At the same time, I fear that layering extensive new procedural requirements on top of existing ones may prevent the agency from responding in a nimble fashion to the developments in dynamic communications markets that may require its immediate attention. In addition, it is important to recognize that a rulemaking proposal is often improved when comments address more than the specific language choices in proposed rules, and thereby compel the agency to think more broadly about the policies it may be proposing.

Question 4. These NPRMs can stay open for quite a while costing industry time and resources without any knowledge of whether action will take place or not. I have heard from many of my constituents with business before the Commission that they simply cannot get an answer from the Commission on what seems to be routine petitions, applications, or proceedings.

Nevada has asked for a waiver from the FCC in regards to its 700 megahertz public safety early deployment rules. I understand that a decision on this could have been delayed until Congress passed a public safety spectrum allocation bill. Now, with provisions intended to facilitate a public safety network in place, the FCC still seems to be stalling on this.

Other companies have purchased spectrum in the lower 700 MHz and are awaiting a decision by the FCC on whether rules regarding interoperability, clearing channel 51 or waivers to build out requirements will be granted.

The issue of "special access" has been open for 10 years before the Commission without any resolution. This is an issue worth billions of dollars to the entire industry.

Furthermore, last July, I and a number of my colleagues on this Committee wrote to you and we did not receive a response for 8 weeks and only after multiple follow up letters and calls. When Senators on the Committee of jurisdiction have trouble

receiving a response from the FCC, there clearly are problems with answering questions.

All of this leads to uncertainty. There doesn't appear to be much confidence among many companies that the FCC can act expeditiously on much of anything of significance to the industry. Proceedings can languish for 3, 5, or 10 years. Companies, generally, have a hard time investing, or increasing their investment, if they are uncertain what the regulatory environment is going to look like for their business.

Chairman Genachowski has worked on this issue and established internal 180-day shot clocks; however, this has not solved all the problems of open ended NPRMs.

Do you believe that Congressional legislation implementing shot clocks on FCC action is appropriate? If not, why? Does the Commission expect to act on any of the examples listed above?

Answer. Communications is a dynamic sector in our economy, and the agency should, within its resources and consistent with the law, make decisions in a way that facilitates investment and expedites the opportunity for consumers to benefit from new and innovative services. This is especially important for small businesses, which are essential to job creation.

As a new Commissioner at the agency, I believe that it is important to study the source of any delay. If regulatory inertia is responsible, that needs to be addressed. If the technical expertise necessary to render a timely decision is not available, that likewise needs to be addressed. If, however, applicants are resolving disputes on their own, that is often preferable to regulatory intervention. Similarly, if delays are the result of ongoing litigation, that is a right that should be respected by the agency decision-making process.

While I believe that the Commission has adequate authority to address issues before it in a timely way, I welcome further guidance from Congress.

Many of the proceedings cited above began well before my tenure at the agency. I will endeavor to study the record, consider the interests of all stakeholders, and vote what is before me in a timely fashion.

Question 5. Since 2008, the FCC has conducted a number of merger reviews. How many times has the FCC failed to conclude the review within the 180-day shot clock period? How many times was the deadline missed? Was there any reason they were missed?

Answer. It is my understanding that during the last three years, over 95 percent of license transfer applications were acted upon within 180 days. As a new Commissioner, I cannot speak to the reasons that may have required any particular transaction to take longer than the informal shot clock period. However, as a general matter, I believe the agency should act swiftly in its review, provided that while doing so it can faithfully perform its statutory duties under the Communications Act.

Question 6. Going back to the President's Executive Order 13563, the Chairman has fully supported the ideals of the order, which in part states "For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings."

In the days before the record closed on the Commission's reform of the high cost of the Universal Service Fund, the FCC added 114 new pages of its own to use in the final decision. This practice denied public input on information that was used to render a decision which seemed to run counter to the President's Executive Order. Without adequate public and stakeholder input, the chance that a regulation will have unintended consequences increases. One example brought to my attention is that now smaller rural markets like those in my state will miss out on support because of the presence of fixed wireless services. They believe more dialogue and transparency could have avoided this outcome.

Do you believe that relying on reports in rulemaking and adjudications that are without a robust notice and comment process is appropriate? Or substantially altering a report after the period with which industry input or comments are accepted?

Answer. I was not a member of the Commission at the time for the decisions you cite above. However, I believe that the agency should always have the ability to rely on publicly available information. Likewise, I believe it should always strive to make its processes transparent and fair.

In November 2011, the Commission issued a Public Notice seeking comment on ways to increase transparency in agency proceedings, in order to ensure that all stakeholders have access to relevant information when filing pleadings and other materials. I support this effort.

Question 7. Do you agree that it is not the best practices of a government agency to dump data into a report at the 11th hour without industry input?

Answer. Yes.

Question 8. Do you agree that this method, while perhaps helpful to the Commission, is not open and transparent to the level benefitting an agency that issues regulations that have a significant economic impact?

Answer. The agency should always strive to be faithful to the laws that govern its processes, transparent, and fair.

Question 9. The FCC rightfully should review transfers of lines under section 214 of the Communications Act and the transfer of licenses under section 309 and 310 of the Communications Act. However, this review should not provide the FCC to extract a list of concessions from the applicant in exchange for approval. For example, in the 2011 Comcast/NBC Universal transaction order, the Commission accepted a “voluntary” commitment from Comcast to comply with net neutrality rules even if a court overturns those rules.

This agreement was made through a transaction review and was done without any public scrutiny—as proposed conditions are often unknown until the approval order is announced.

Do you believe that this type of rulemaking provides a scenario in which one set of rules exist for those who have merged and another exists for those who have not?

Answer. I believe that the FCC should render its decisions in a manner faithful to the law, consistent with the record, and taking into account the interests of all stakeholders.

Question 10. Have there been instances you have experienced when merger conditions have been imposed that was not directly related to the transfer questions?

Answer. I was sworn into office as a Commissioner last month. Consequently, I have not yet rendered a decision on a transfer proceeding or directly “experienced when merger conditions have been imposed” that were “not directly related to the transfer questions.”

Question 11. Do you believe it is appropriate to require the FCC to end this practice by requiring the FCC to narrowly tailor any conditions it imposes or commitments it accepts to only address harm caused by the transfer of licenses?

Answer. I believe merger conditions should be rationally related to the transaction at issue.

Question 12. Last November, I introduced S. 1780, the Federal Communications Commission Consolidated Reporting Act. In section 3 of that bill, I identified 24 reports for repeal and elimination. 16 of those reports were ones required of the FCC. Many of these required reports appeared to me to be contemplated during eras long since passed; were ones with an exceedingly narrow focus; or ones that bore little relevance to today’s communications marketplace. Have you had the opportunity to review the FCC reports that were identified in S. 1780? Would you take issue with any of the recommended deletions?

Answer. As a general matter, I support the effort to streamline the range of reporting obligations that the FCC is presently subject to under a variety of laws. However, before committing to the repeal of all 24 reports contemplated in the legislation, I would like to further assess how these reports are used—by industry and consumers—to assess the current marketplace.

Question 13. Notwithstanding my desire to leave the FCC of its reporting burden, S. 1780 calls for the FCC to provide a Report to Congress with respect to the state of the communications marketplace, covering such matters as competition in broadband deployment and barriers to the competitive marketplace. The FCC is currently required to do many of these narrowly focused reports, but it seems to me that what we lack is anything like a comprehensive look at the totality of the marketplace at regular intervals. My thought was that this should be done every two years. What is your opinion of such a proposal? I believe that both the FCC and Congress would benefit from such a Report.

Answer. I believe such a report could be beneficial. However, I think it is important that when the FCC collects this kind of data, it does so in a manner that is useful for consumers.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN D. ROCKEFELLER IV
TO HON. AJIT PAI

Public Safety Waivers

This Committee worked hard to pass legislation that will make a nationwide, interoperable public safety network a reality. The law is clear that the network must be based on a single nationwide architecture. I recognize that, before the law was passed the FCC granted several waivers to allow certain jurisdictions, on a conditional basis, to begin building certain facilities. I also understand that a number of other jurisdictions filed waivers that remain pending.

There have been press reports that some at the Commission believe that the law does not speak directly to whether the FCC should grant new, additional authority to jurisdictions to begin building their own networks before the new FirstNet board is put into place. Such a position seems to undermine the clear intent of this Committee and of Congress toward creating a nationwide network. Such a position also runs the risk of replicating the mistakes of the past by creating separate networks that may never be truly interoperable.

I recognize that allowing one or two of these jurisdictions to move forward with their networks, subject to appropriate conditions and vendor indemnification, may provide some benefits for public safety. But I have heard from experts that allowing a number of jurisdictions to move forward could make it much more expensive and difficult in the long-term to deploy a truly interoperable network nationwide. That was not Congress's intent.

Question 1. Will you commit that when you review whether to allow authority for jurisdictions to begin building their networks before FirstNet is set up that you will act in a manner that is consistent with Congressional intent?

Answer. Yes, as a Commissioner, I take very seriously my responsibility to implement the laws enacted by Congress in a faithful manner.

Question 2. In your opinion, how would the granting of new authority not complicate FirstNet's efforts to achieve nationwide interoperability for our first responders?

Answer. In evaluating whether jurisdictions should be provided with interim authority to move forward with their own networks, the Commission must consider very carefully whether such action would hamper FirstNet's efforts to achieve nationwide interoperability. For this reason, the Commission indicated in its recent order that "adherence to the 'recommended minimum technical requirements' for nationwide interoperability developed by the Interoperability Board and transmitted to FirstNet under Section 6203 of the Public Safety Spectrum Act will be critical in determining whether a [jurisdiction will receive an STA]." I strongly agree with this statement.

Question 3. Also, how would you make sure that grants of new authority would not also run the risk of increasing the overall costs of the network?

Answer. This is another important factor for the Commission to consider. On one hand, were jurisdictions to spend money on equipment and infrastructure that would need to be replaced by

FirstNet, then overall costs would increase. If, on the other hand, such equipment and infrastructure could be integrated into FirstNet's network, then FirstNet would save money that could then be used to broaden the coverage of its network, especially in rural areas.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUE TO
HON. AJIT PAI

Media Ownership by Women and People of Color

Question 1. Are you satisfied with the level of media ownership by women and people of color today? If not, I would appreciate your suggestions on how media ownership by women and people of color can be improved. What role can the FCC play to encourage greater media ownership opportunities for women and people of color?

Answer. Right now, the Commission is in the midst of a rulemaking proceeding designed to enhance ownership diversity. I look forward to carefully reviewing the record that has been compiled by the Commission, and it is my hope that we will be able to reach consensus on creative proposals for diversifying broadcast ownership by the end of the year. In particular, I am grateful that the Minority Media and Telecommunications Council (MMTC) has offered 47 suggestions for the Commission's consideration, and I believe that MMTC's recommendations deserve serious study.

Spectrum Swaps

Question 2. Some industry representatives as well as a few Members of Congress have suggested that spectrum swaps are a direct and faster way to increase competition in the wireless broadband market. Do you agree with this suggestion? What efforts are being taken or can be taken by the FCC to explore spectrum swaps as a way to increase competition in the wireless broadband market?

Answer. When it comes to spectrum policy, the overarching goal is to get spectrum into the hands of those who will use it best. That is why the FCC should do all that it can to allow these licenses to migrate to their highest use in the secondary market. Spectrum swaps can play a key role in this by enabling operators to trade spectrum so that they can put together more contiguous blocks and achieve greater efficiency. Although the FCC has taken steps to make secondary markets function more smoothly over the years, more needs to be done. In the near term, I think that codifying in the FCC's rules reasonable shot-clocks for various types of spectrum sales and modernizing the spectrum screen that the Commission uses to evaluate spectrum transactions would help create greater certainty for the marketplace.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN F. KERRY TO
HON. AJIT PAI

Updating the Law

Question 1. The FCC has a wireless bureau, a wireline bureau, and a media bureau. Given that all three operate in a broadband world, should we have a broadband bureau at the agency that either incorporates these three separate bureaus or helps us understand the state of broadband competition and define and eliminate duplicative bureau functions?

Answer. Today, the FCC's bureau structure divides the communications marketplace into silos of technologies and services. But convergence and competition have rendered this approach hopelessly outdated. Cable operators offer phone and Internet services. Telecommunications carriers promote video service. Voice over Internet Protocol (or VoIP) providers sell voice service and video teleconferencing. Companies like Netflix use the Internet to deliver video service. And wireless providers, once known for selling phones the size of a brick, give consumers new, multifunctional ways to connect on the go. Given these dramatic changes in the marketplace, the Commission should absolutely consider restructuring its operations.

Question 2. The 1992 Act is 20 years old this year, and the 1996 Act is entering its late teens. Should we update these laws and if so, using what set of principles?

Answer. Ultimately, it is up to Congress to decide whether to update the Communications Act. However, the technological landscape and communications marketplace have changed enormously in the sixteen years since the Act was last subject to significant revisions, and it is therefore often very challenging for the Commission to apply the Act to today's world. Should Congress move forward with revising the Act, I believe that it would be helpful to adhere to the principle of competitive neutrality; the Act should not seek to advantage or disadvantage any particular technology or competitor. I also believe that the Act should allow the FCC to focus on removing barriers to technological innovation and infrastructure investment while at the same time ensuring that the communications marketplace works for the benefit of consumers.

Spectrum

Cisco's U.S. mobile data forecast projects that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. With that kind of demand for space in our airwaves for wireless broadband, the Commission should be making every effort to make as much existing spectrum as usable as possible quickly.

Question 3. What are the prospects for Federal and private users to share the spectrum that agencies currently hold without disrupting vital public services and what can we do to speed up the process?

Answer. As part of my "all-of-the-above" approach to spectrum policy, I believe that we should pursue spectrum sharing, particularly geographic spectrum sharing, where appropriate. In this regard, the President's Council of Advisors on Science and Technology recently released a report containing many ideas that merit careful study. I stand ready to work with my colleagues at the Commission as well as with the National Telecommunications and Information Administration to evaluate these proposals. At the same time, however, I also believe that it is important to continue

efforts to clear as many Federal spectrum bands as possible and reallocate them for exclusive commercial use.

Question 4. As space on the airwaves becomes increasingly congested, how will the FCC better arbitrate interference disputes between neighboring services in the future?

Answer. To avoid interference, the Commission is very careful to set heavily-tested power limits and other technical rules for devices and those using various spectrum bands. Should interference occur, the parties usually work together to resolve the problem and only come to the Commission as a last resort. Going forward, the FCC will have to continue to be vigilant about properly calibrating our rules and ensuring that carriers and device manufacturers comply with them.

Question 5. Conservative studies and estimates have suggested that use of spectrum on an unlicensed basis contributes at least \$50 billion annually to the U.S. economy, thanks to the benefits we all gain from widespread Wi-Fi availability, or uses like automatic highway toll payment, or business uses for smart inventory. Can you talk about the priority that the Commission places (or that you will place) on ensuring that there is an appropriate mix of spectrum coming to market both for auctions and for such unlicensed use?

Answer. Unlicensed spectrum has flourished in certain spaces, most notably Wi-Fi, and is an important component to successful spectrum policy. Section 6406 of the recently enacted Middle Class Tax Relief and Job Creation Act directs the Commission to begin a proceeding to allow unlicensed devices in the 5350–5470 MHz bands. I will work with my colleagues to implement this provision as expeditiously as possible.

Privacy

The FCC recently concluded an investigation into the Google Wi-Fi data collection incident where the agency found that Google's actions did not violate section 705 of the Communications Act due to the fact that the incident occurred on unencrypted Wi-Fi, rather than a secured network.

Question 6. In light of the result of this investigation, do you believe that Congress should update section 705 to account for this gap in the FCC's wiretap provisions?

Answer. As the Enforcement Bureau noted in concluding its investigation of this incident, "there is no Commission precedent addressing the application of section 705(a) in connection with Wi-Fi communications." *Google, Inc.*, File No. EB-10-IH-4055, NAL/Acct. No. 201232080020, FRNs: 0010119691, 0014720239, Notice of Apparent Liability for Forfeiture, DA 12-592, at para. 53 (Apr. 13, 2012) (*Google Order*). Rather than decide whether section 705 applied to unencrypted Wi-Fi networks (which would have required a Commission-level decision since the Bureau does not have authority to resolve "novel" issues of law, *see* 47 C.F.R. § 0.311(a)(3)), the Bureau declined to prosecute the action given its view that there was a lack of "sufficient evidence" of a violation. *See Google Order* at para. 53. As such, the Commission has not yet determined whether a gap exists in section 705's wiretap protections.

Interoperability

Interoperability of consumer devices within a spectrum band helps promote competition in wireless services. Since the early 1980s, the Commission has adopted rules or sent strong messages that it expects wireless service licensees to offer consumers equipment that can operate over the entire range of an allocated spectrum band. But interoperability does not yet exist in perhaps the most valuable spectrum bands the FCC has ever allocated—the lower 700 MHz band. In March, the FCC initiated a proceeding to promote interoperability in this band. I noticed that the NPRM would prefer that the industry propose a voluntary solution, as would I, but you also indicated an interest in moving to rules if that voluntary approach is unsuccessful.

Question 7. Do you believe interoperability of devices within this band matters, what is the FCC staff doing to monitor the efforts of the industry at arriving at a voluntary solution for the lower 700 MHz band, and how much more time do you believe the industry should have before you would push to conclude this proceeding and adopt rules if it appears that an industry solution is not possible?

Answer. As you indicated above, before I was confirmed by the Senate, the FCC adopted a Notice of Proposed Rule Making (NPRM) addressing this issue. That rule-making proceeding remains open, and I have met with interested parties to hear their perspectives on the issue. It is my hope that that the parties involved will work collaboratively to develop a private-sector solution. At this point, I am skep-

tical that publicly announcing a Commission deadline for those efforts would give both sides the proper incentives to reach an agreement.

Public Broadcasting

As a long-time supporter of public broadcasting, I believe that it plays a special and necessary role in our media landscape. I was pleased to see that on November 4, 2011 the FCC Consumer Advisory Committee adopted a recommendation that the FCC work with the Administration and Congress to support continued Federal funding of the Corporation for Public Broadcasting and local public broadcast stations, including those providing service to rural, tribal, native, and disability communities.

Question 8. Do you support this recommendation from the FCC Consumer Advisory Committee and can you share your views on the unique and necessary role that public broadcasting plays in our media landscape?

Answer. I believe that non-commercial broadcasters, including public broadcasters, play a vital role in our media landscape. As a parent, for example, I have a firsthand appreciation of the valuable children's educational programming aired by public broadcasters. At the FCC, it is our job to maintain a regulatory environment that allows non-commercial broadcasters to do what they do best. Congress, for its part, determines the funding level received by public broadcasters and in making that decision must consider the important service those broadcasters provide along with many other factors. As an FCC Commissioner, I am reluctant to step outside my lane and involve myself in appropriations decisions involving non-FCC funds.

The U.N. and International Negotiations on Internet Governance

As former Congressman Boucher recently explained, "The best way to understand the current system of global Internet governance is as a hub-and-spoke relationship. At the hub, a loose confederation of standards-setting bodies ensures the Internet's continued stability and functionality. Little, if any, regulation occurs at the hub. This arrangement leaves tremendous leeway for the sovereign governments—the "spokes"—to regulate the Internet within their borders."

And that system has worked relatively well, with some unfortunate outliers trying to control their population's access to information. Yet, there is pressure abroad for a new U.N. agency to assert international governmental control over the Internet. That pressure is coming from countries who wish to impose new tolls on service and countries that fear the power of open discourse on the Internet.

In a recent blog post, NTIA Administrator Strickling wrote about these proposals from China and others, "This is contrary to President Obama's vision of an Internet that is interoperable the world over, and the United States will vigorously oppose such barriers." And I know that this is a priority for Ambassador Philip Verweer and the State Department as well.

Question 9. Do all of you share the Administration's point of view?

Answer. I believe that the Commission should continue to support the Administration's work to promote a global Internet free from government control and to preserve and advance the successful multi-stakeholder model that governs the Internet today.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK PRYOR TO
HON. AJIT PAI

CVAA

The 21st Century Communications and Video Accessibility Act (CVAA) was enacted to update the media and communications accessibility requirements and expand access to current and emerging technologies.

I have heard concerns about the population of the statutorily required advisory committees and the resulting recommendations. Consumer and advocacy groups that serve on these committees face technical and legal capacity constraints that many businesses do not.

Question 10. Will you be cognizant of these inherent limitations and keep them in mind as you consider the recommendations put forth by the advisory committees?

Answer. Yes.

Question 11. How does the Commission plan to ensure that video conferencing services used by consumers who are deaf or hard of hearing are interoperable with each other?

Answer. The Commission's rules require that Video Relay Services (VRS) and equipment be fully interoperable. This obligation is designed to ensure that those who obtain VRS video conferencing services and equipment are able to communicate with each other. The Commission has sought comment on how interoperability should work in the broader context of advanced communications services, including for users who are deaf or hard of hearing, and I look forward to reviewing the record that has been compiled in that proceeding.

700 MHz Spectrum

It is my understanding that the Commission has initiated a Notice of Proposed Rulemaking regarding interoperability in the lower 700 MHz band.

Question 12. Does the Commission anticipate the completion of this proceeding before the end of the year?

Answer. As a Commissioner, I do not have control over when items are brought to the floor for the Commission's consideration, so I cannot say when the Commission will complete this proceeding. In the meantime, I hope that the interested parties will work together to develop a private-sector solution.

Low Power Television

For many years, Class A and Low Power Television Service (LPTV) stations have provided valued local, religious, Spanish language, and other programming. Communities have come to rely on this niche programming that may not otherwise be available.

Question 13. How will the Commission work to ensure the viability of Class A and LPTV during its implementation of the Middle Class Tax Relief and Job Creation Act?

Answer. The Middle Class Tax Relief and Job Creation Act provides Class A stations with all of the protections provided full-power television stations, and the Commission must comply with this statutory mandate when implementing our incentive auction authority. With respect to LPTV stations, I believe that they should continue to be part of the media landscape. In section 6403(b)(5) of the Middle Class Tax Relief and Job Creation Act of 2012, Congress specifically addressed the spectrum usage rights of LPTV stations, and it is the Commission's duty to implement the legislation as written.

Question 14. What is your position on mandatory channel sharing for LPTV?

Answer. In an order adopted earlier this year, the Commission decided that LPTV stations would not be eligible to participate in channel sharing arrangements as a part of the incentive auction process but that the Commission would consider in a future proceeding whether to allow LPTV stations to enter into such arrangements. I had not yet arrived at the Commission when that order was issued, and I have not had the opportunity to review the record that was developed by the Commission. As a result, I do not have a firm view on this issue.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE McCASKILL TO HON. AJIT PAI

Last year, I raised concerns with the FCC regarding the Universal Service Fund's (USF) Lifeline Program. In response to these concerns, the Commission has taken steps to crack down on waste, fraud and abuse within the program. The recent announcement that 20,500 letters will be sent in Missouri to eliminate duplication was welcome news. The implementation of a database to help detect and prevent duplicates is an important tool, but I remain concerned that further action needs to be taken to address fraud.

Question 1. Has the FCC conducted its own investigation into possible fraud occurring within the Lifeline program, and if so what were the findings of that investigation?

Answer. Waste, fraud, and abuse of universal service funding is unacceptable, and although I was not a Commissioner at the time, I welcomed many of the reforms the Commission adopted for the Lifeline program in February. I understand that the Commission has instructed the Universal Service Administrative Company to investigate allegations of fraud regarding duplication through a process known as in-depth data validation. I understand that project is ongoing and is likely to result in the savings of millions of dollars of universal service funding that would have otherwise been wasted.

Question 2. Has the Commission examined the marketing agreements providers are using to advertise Lifeline products to consumers?

Answer. Although the Commission's rules require eligible telecommunications carriers to advertise the availability of their services, including Lifeline services, I am unaware of any specific inquiries by the Commission regarding the marketing agreements providers are using to advertise Lifeline products.

Question 3. As required by the Commercial Advertisement Loudness Mitigation (CALM) Act, the FCC published an order last December outlining practices that networks and cable stations must implement by this December. I understand these rules have not yet been published in the *Federal Register*, and I have heard little about progress since December. Are we on track to see this legislation—strongly supported by consumers—fully implemented by the end of the year?

Answer. I have been informed by the Media Bureau that the regulations implementing the CALM Act are scheduled to take effect on December 13, 2012.

Question 4. In December, the International Telecommunication Union (ITU) will convene the World Conference on International Telecommunications (WCIT-12) in Dubai to renegotiate the International Telecommunication Regulations. A key topic of discussion is expected to be whether and how to expand it to cover the Internet. To what extent is the FCC involved in policy and technical discussions in advance of the ITU meeting?

Answer. I understand that the Commission has been actively engaged in and supportive of administration and congressional efforts to retain the multi-stakeholder governance model that has become so central to the success of the Internet.

Question 5. What is the view of the Commission on proposals by other nations to move oversight of critical Internet resources, such as naming and numbering authority, to the ITU or other international body?

Answer. I oppose such proposals, and several of my colleagues (including the Chairman) share the view that the global Internet should remain free from government control and that we should preserve the successful multi-stakeholder model that governs the Internet today.

Question 6. American companies have had an historical advantage when it comes to the Internet because the innovation that has fueled the growth of the Internet started here. Companies were created in an environment where unconstrained Internet access provided them with a platform to succeed. In this way, America had a "strategic bandwidth advantage" over other countries. It was perhaps inevitable that this advantage would narrow, as broadband speeds have improved around the world. Given that context: Is it your view that this "strategic bandwidth advantage" has led and will continue to lead to job creation and greater innovation?

Answer. Our country's historic decision to allow the commercial Internet to develop and grow unfettered by government regulation has led to the blossoming of the online economy, the creation of hundreds of thousands of jobs, and greater innovation. To retain our advantage over other countries, however, we must redouble our efforts to remove regulatory barriers to technological innovation and infrastructure investment.

Question 7. There has been bipartisan consensus in this body to encourage deployment and adoption of broadband for the economic and social benefits it brings. How do data caps help or hinder in accomplishing that goal?

Answer. Like the meters that measure electricity usage and the buckets-of-minutes consumers purchase for their cellphones, data caps may be a method of ensuring that consumers get what they pay for and that low-use consumers are not penalized for the demands others put on the network. They can also help manage congestion and thus improve customers' broadband experience.

Question 8. On the surface, usage-based billing makes sense for consumers but I am concerned about the chilling effect data caps could have on future growth of Internet video and other content. How do we ensure fair billing practices for consumers without creating a system that stifles innovation and growth of the Internet?

Answer. Given the dynamism of and swift innovation in the online environment—not to mention the explosion in Internet video products in recent years—I believe that we should carefully monitor the situation but at the same time remain cautious about intervening in this area.

Question 9. I am sure you would acknowledge the FCC's long-standing support of low power television and appreciate the success of low power TV since the FCC created the service in 1982. During this span of 30 years you are no doubt aware that low power TV has developed into an essential source of information and entertainment for many diverse communities across the country. I think two perfect examples of this dynamic would be the audiences who enjoy Spanish-language programming and those who enjoy religious programming. Likewise, LPTV has been the an

entry point for small businesses into the broadcast market and today, many LPTV owners are small businessmen who work hard to continue to serve their local communities with news and resources aimed at the community.

With this in mind, and also considering the likely end to a great deal of low power programming as a result of the repacking, how do you expect that this approaching void in unique programming will be filled with respect to the core missions of diversity and localism?

Answer. I agree with your assessment of the valuable role played by LPTV stations and believe that they should continue to be a part of the media landscape. As the Commission begins to implement its incentive auction authority, we must closely examine the issues that you raise in your question. We are in the earliest stages of the implementation process; in fact, we have not yet issued a notice of proposed rulemaking to commence the proceeding. Accordingly, at this point, it is too soon to say whether and how repacking will affect LPTV stations' operations and programming.

Question 10. I would ask each of the commissioners, will you support rules that allow LPTV to survive after the repack?

Answer. I believe that low-power TV stations should continue to be a part of the media landscape. The Middle Class Tax Relief and Job Creation Act provides Class A low-power stations with all of the protections provided full-power television stations, and the Commission must comply with this statutory mandate when implementing our incentive auction authority. In section 6403(b)(5) of the Middle Class Tax Relief and Job Creation Act of 2012, Congress specifically addressed the spectrum usage rights of other LPTV stations, and it is the Commission's duty to implement the legislation as written.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
HON. AJIT PAI

As I brought up in the FCC nominations hearing in November, we have a population of television stations currently operating on the northern border of Canada, particularly in Lake of the Woods County. They applied for channel reallocation after the DTV transition but had to wait years to get final approval from the Canadian government and the FCC this January.

Question 1. Looking ahead to the future, the need for international cooperation when it comes to spectrum is important to our translator operators on the northern border. Has the Commission begun coordination with our Canadian counterparts as it relates to incentive auction legislation passed in February? ** (*Senator Klobuchar asked this question in Committee and requested written follow up*)

Answer. Yes. I have been informed that staff from the International Bureau has already met with their Canadian counterparts to discuss the incentive auction legislation.

Question 2. I believe of one of the most impressive programs the FCC operates is the E-Rate program supporting communications technology in schools and libraries. Senator Rockefeller and Senator Snowe led the effort in creating a program that truly benefits schools and kids around the country. Minnesota has received a total of \$344 million since the E-Rate program started in 1998. This support has enabled schools and libraries across rural Minnesota to have telecommunications and broadband service giving students the ability to enhance their education. I understand that with the increase in demand from schools for broadband support, E-Rate program resources are stretched thin, including staff time to review and audit applications. Will you commit to keeping the resources for administering the E-Rate program targeted at the intended focus of connecting schools and libraries with communication technologies?

Answer. Yes. As I indicated at the hearing, I oppose the use of E-Rate funds for a digital literacy program.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK WARNER TO
HON. AJIT PAI

Two years ago, the President announced his intention to free up 500 MHz of spectrum for wireless broadband use. This initiative is even more necessary today due to exploding data usage by consumers, which is leading to faster-than-expected capacity constraints across the country.

Question 1. Are you satisfied with the current pace of the identification and re-allocation of spectrum to commercial broadband use? If not, why not?

Answer. I am deeply concerned that the Commission is not on track to meet the goals set forth in the National Broadband Plan. In particular, our goal of reallocating 300 MHz for mobile broadband by 2015 will soon slip out of reach unless we turn things around. According to the timetable set forth in the National Broadband Plan, by 2012 we were supposed to have reallocated 180 MHz for mobile broadband. Unfortunately, however, no new spectrum has been made available that can be used effectively for wireless broadband in the more than two years since the National Broadband Plan was released.

Question 1a. Do you have additional suggestions about how Congress or the Federal Government could accelerate the process?

Answer. There are three things that the Commission should do in the near term to get us back on track to meeting the goals set forth in the National Broadband Plan. First, we should adopt service, technical, and licensing rules for AWS-4 by the end of September to put an additional 40 MHz of spectrum toward terrestrial mobile broadband. Second, we should take action by the end of August so that 4G LTE technology can be deployed in the Wireless Communications Services (WCS) band. Finally, we should initiate the rulemaking process for implementing incentive auctions by this fall and set a deadline of June 30, 2014 for conducting those auctions.

Question 2. The USF reforms—which I supported—seek to deploy more mobile and fixed broadband services to rural and underserved America. At the same time, mobile data forecasts indicate that the volume of data traffic on mobile service provider networks will increase 16 times from 2011 to 2016. Rural Virginia wants to be part of the broadband economy, however, high quality broadband service just hasn't been available where consumers and rural economic development needs demand it.

What would happen to the pace of rural broadband deployment if Universal Service Fund Reforms are blocked or slowed down at this time? Why is it important to move forward in terms of leveraging existing Federal funding to deploy more broadband to rural and underserved America?

Answer. Communications infrastructure requires not a one-or two-year investment, but a five-or ten-year commitment. As such, a constant stream of reforms every year or two is unlikely to give investors much certainty. Instead, the Commission needs a long-term strategy and must sometimes be patient before demanding more from the industry. Indeed, Congress recognized that smart infrastructure investment takes time when it instructed the Commission to make universal service support “predictable.” Phase I of the Connect America Fund provides only short-term, one-time subsidies for deployment, without the long-term stability needed to create a business plan in rural America. The Commission must move past the one-off distributions of funds in Phase I and move onto the long-term support envisioned by Phase II of the Connect America Fund in order to provide predictable Federal funding to support rural broadband deployment. That's not to say the Commission should rush to judgment, only that we cannot delay in making the hard choices in order to accelerate rural broadband deployment.

Question 2a. I sent a letter to the FCC in 2011 arguing that although 4 Mbps download/1 Mbps upload may be adequate for now, this standard should not be considered an acceptable level of service in the future. How important is it to you to see that the acceptable level of broadband service advances over time?

Answer. As the marketplace evolves and consumers adopt faster broadband connections, the Commission must continue to evaluate whether the speed tiers it has adopted are adequately fulfilling their purpose, while constantly balancing the consumer benefits of faster speeds against the budgetary implications of such requirements.

Question 3. The Commission has a number of highly anticipated open Notices of Proposes Rulemaking. Now that the Commission has five highly capable commissioners, how soon do you expect to reach decisions on key issues? I would encourage you to reach decisions on important matters as soon as possible because the delay of long-standing rulemakings has caused some frustration.

Answer. The FCC should be as nimble as the industry we oversee. As the pace of private sector innovation accelerates, it is imperative that the FCC become more agile. Bureaucratic inertia should not be a barrier to the deployment of new services or capital investment. Rather, the Commission should facilitate economic growth and job creation by making decisions in a timely manner.

As a Commissioner, I do not set the Commission's agenda, and so I cannot speak with certainty when the Commission will act in any particular rulemaking proceeding. However, I can state my commitment to act promptly when presented with an agency proposal that is based on a well-developed record. Delays at the Commis-

sion can do a disservice to the parties to a proceeding and ultimately to the American public.

Question 4. Looking back at FCC data stretching to 2005, the number of full-time equivalents in the Office of Engineering and Technology appears to have dropped from 116 to 81. Do you believe this reduction is the source of the backlog? Why has this office, which would seem to be at the heart of the Commission's work, have declined over time when other bureaus or offices have grown or at least stayed flat?

Answer. Today's communications marketplace is dynamic, and it is accordingly essential for the Commission to have the personnel necessary to successfully execute its mission. Based on my experience, the engineers in the Commission's Office of Engineering and Technology, as well as engineers working in the Commission's various Bureaus, do outstanding work and provide the Commission with invaluable counsel. However, I do agree that the Commission should bolster its engineering resources to the extent that it has the resources to do so.

As a Commissioner, I do not make the Commission's staffing decisions, and I thus cannot speak authoritatively as to why there has been a decline in staff within the Office of Engineering and Technology since 2005.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
HON. AJIT PAI

Chairman Genachowski, I want to thank you for working with me during the FCC's recent efforts to reform the Universal Service Fund. I understand the need for efficiencies, and overall support the notion of USF reform. I also understand the FCC's efforts to work within a reasonable budget. However, the reality is that given Alaska's geography, distance from the lower 48, and the very remote locations of small rural communities, all of whom must be connected to "the grid" via "middle-mile" terrestrial, satellite or undersea fiber circuits, means that Alaska is very different. Our distances are greater, our population is smaller, and our costs are much higher, particularly as it relates to the very high cost of middle-mile circuits for broadband.

Question 1. I understand the Commission desire to establish capital expense and operating expense limits for rural rate of return carriers. And, whether I agree or not, I understand that your staff's recent order establishing what is called a "regression analysis" to limit expenses puts a limit on most small companies at their current level of capital and operating expenses. Thank you for revisiting the formula recently, however there are still some companies that will be severely impacted by reductions to be implemented on July 1. I understand that your staff is well aware that the model contains data errors and other possible analytic flaws.

Since your staff admits that these flaws exist, why doesn't the FCC limit the July 1 impact to the proposed limitation of all companies to their current level of expenses instead of implementing the reduction on a few when the reductions may be based on data errors and flaws. I know that the order limits the initial level of the impact and transitions in the impact, but why implement this reduction on a few until you know that you have it right?

Answer. Given the known errors in the study area boundary maps used by the quantile regression analysis, as well as anomalies such as the additional limitations on capital expenditures that the quantile regression analysis imposes on Alaska companies (despite the difficulties carriers have deploying service in Alaska), I support suspending implementation of the quantile regression analysis until the end of 2012 to give the Commission time to review the pending applications for review and fix any errors in the analysis. It is important to note that taking this step would *not* increase overall universal service expenditures.

Question 2. It appears highly likely that as a result of the November USF/ICC order many rural carriers will lose revenues—both USF support and from elimination of crucial intercarrier compensation. Is that correct?

Answer. Although I was not a Commissioner at the time of the adoption of the *USF/ICC Transformation Order*, I have looked at the staff analysis of the impacts of that order, and I understand that some rural carriers will lose a significant amount of USF support and others will gain a small amount of USF support. Rural carriers will also receive reduced intercarrier compensation over time, although the *USF/ICC Transformation Order* also included methods to offset those losses, at least in part.

Question 3. Alaska, like 22 other states, has a complimentary state level universal service program. The Alaska state fund disburses over \$15 million to Alaskan carriers each year. Do you anticipate these State funds will have to expand to cover

revenue lost from the reforms you are implementing? And if so, have you calculated how much these State funds will need to grow?

Answer. Some states have considered expanding the size of their state-level funds in response to the *USF/ICC Transformation Order*; others have not. It is up to each state (or state commission) to determine the response most appropriate to the unique challenges that state faces in deploying telecommunications to its people. I am not aware of any staff analysis of how much these state-level funds may grow in light of the *USF/ICC Transformation Order's* reforms.

Question 4. The E-Rate program has always meant a great deal to the State of Alaska, ensuring that the children and educators living and working in our state's most remote towns and villages have access to the Internet and distance learning and professional development courses that are otherwise unavailable to them locally.

Let me quote from comments filed with the FCC last week by the Superintendent of the Dillingham City School District: As a small, rural school district in Alaska that has high poverty, low socio-economic, and predominantly native Alaskan population (Yupik), "I want to thank the FCC for our current level of E-Rate funding. We are an "off the road" community, meaning the only way in and out is by air, dog sled, snow machine, or boat. We just recently acquired access to high-speed fiber Internet via GCI Corporation extending this service to rural, remote areas of Alaska. The cost for this more than doubled our annual rate and without the current E-Rate support we could not afford this service."

Is there a better way to administer the digital literacy program without damaging E-Rate processing?

Answer. As I indicated at the hearing, I oppose the use of E-Rate funds for a digital literacy program. And I share your concern that the creation of a digital literacy program may make it difficult for the Universal Service Administrative Company to administer the E-Rate program as well.

Question 5. Also wish to highlight the importance of keeping intact reliable source of communications to relay emergency and lifesaving information to those areas that lack reliable cellular or Internet service.

It is imperative that rural communities continue to have reliable sources of communications in cases of emergency and lifesaving situations. Can the Commission comment on ways to improve the distribution of emergency alert information?

Answer. Over the past five years, the Commission has issued a series of orders to improve the Emergency Alert System (EAS), and we must continue this important work. In general, I believe that we must emphasize technological redundancy when it comes to emergency alert information. That is, such information should be distributed through a variety of different methods (*e.g.*, broadcast, cable, mobile, etc.). Greater redundancy will increase the chances that a particular individual will receive emergency alert information.

Question 6. The due diligence work done day in and day out by local broadcasters will be lost if constituents can't receive it. How does the FCC intend to improve this?

Answer. I believe that it is very important that we continue to maintain the broadcast-based legacy EAS. The Commission noted earlier this year that switching to a fully Common Alerting Protocol (CAP) EAS system is not technically feasible at the present time. Therefore, we must work to improve the efficacy of the broadcast-based system while we phase in CAP capabilities.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. OLYMPIA J. SNOWE TO
HON. AJIT PAI

FCC Technical Expertise

In Chairman Genachowski's remarks, he stated the Commission is operating with its lowest number of employees. The FCC is also unfortunately operating at one of its lowest number of engineers—over a 60 percent reduction in engineers from the 1950s to today—yet the Commission is dealing with significantly more technically complex issues such as advanced wireless communications, commercial cable & satellite industries, public safety interoperability, more device certifications, and broadband.

Engineers at the FCC play an essential role in regulatory matters by providing technical consultation on policy matters, managing spectrum allocations, and creating new opportunities for competitive technologies. I'm concerned this lack of expertise is hampering innovation and job growth because of the excessive delays to

businesses that are waiting approval to technical waivers, experimental licenses, and filed petitions at the agency.

Others share my concern, a 2009 Government Accountability Office report found that the agency “faces challenges in ensuring it has the expertise needed to adapt to a changing market place.” And 2011 Wireless Report by the National Research Council suggested the FCC would benefit from “enhancing its technology assessment and engineering capabilities” due to “entering an era in which technical issues are likely to arise on a sustained basis.”

Question 1. Do you believe the FCC has the sufficient level of technical resources, given the concerns various entities have raised?

Answer. It is essential to the successful execution of its mission that the Commission has the necessary technical capabilities and engineering expertise available to inform its work as it responds to the many technically complex issues facing it in today’s dynamic telecommunications marketplace. Based on my experience, the engineers in the Commission’s Office of Engineering and Technology, as well as engineers working in the Commission’s various Bureaus, do outstanding work and provide the Commission with invaluable counsel. However, I do agree that the Commission should further bolster its engineering resources to the extent that it has the resources to do so.

Unlicensed Spectrum

In your opening statement, you highlight the importance of incentive auctions to meeting the growing demand for wireless broadband. Obviously, the spectrum made available through incentive auctions will primarily be exclusive licenses—the recently passed legislation does allow unlicensed use in the guard and gap bands but it isn’t clear how much will be available.

As you may be aware, one concern I had about the legislation was its impact on unlicensed opportunities in the TV band. My belief is that possible such allocation would allow for a new wave of innovation different from but complimentary to the work in the licensed space—it shouldn’t be an “either-or” scenario but an environment where both can thrive.

Unlicensed use created markets for Wi-Fi, Bluetooth devices, cordless phones, and countless other innovations and with it hundreds of companies and thousands of jobs. And the consumer demand for unlicensed spectrum and devices is undeniable—*more than 80 percent of smartphone users prefer Wi-Fi over cellular for mobile data and 65 percent of tablet users utilize Wi-Fi connections exclusively.*

In addition, over 1 billion Wi-Fi devices shipped globally in 2011, and by 2014, 90 percent of smartphones will be Wi-Fi enabled. The economic impact is also significant—a 2009 report by Perspective Associates estimated unlicensed applications could provide up to \$37 billion of economic benefit annually over the next 15 years to our economy.

Question 2. What are your views on the role of unlicensed spectrum and should the FCC explore greater opportunities for unlicensed use outside of the traditional bands, such as 2.4 GHz and 5 GHz?

Answer. With the growing proliferation of wireless services and devices in the marketplace, the FCC must do all that it can to make more spectrum available for commercial use and to utilize spectrum that is already in use more efficiently. To meet this challenge, I intend to take an “all of the above” approach to spectrum policy, which includes exploring opportunities for unlicensed spectrum where feasible.

Question 3. Should the FCC perform a similar exercise to Ofcom, the U.K. regulator, in creating a report (*License-Exemption Framework Review*) that provides a framework for exploring and managing unlicensed use of spectrum?

Answer. The FCC should study Ofcom’s License-Exemption Framework Review (LEFR) carefully and then decide whether to perform a similar exercise.

Competition and Innovation

A growing number of consumers are combing traditional media services with more innovative products that allow them to stream online content. Some products allow consumers to stream online content of all types and aggregate it with either free OTA broadcasts or basic cable service.

The Commission is considering an order that would allow for the encryption of basic cable signals. While there are several benefits to encrypting basic cable service, there are also some concerns that innovative devices allowing users to combine online content with basic cable service may no longer be compatible without additional hardware or software or reduce functionality of the device, and may face additional monthly fees for a cable box. As you know, Congress specifically addresses this issue in Section 624A of the statute (47 U.S.C. 544a), which requires the FCC

to assure compatibility between consumer electronics equipment and cable systems so cable customers can enjoy the full benefits of both.

Question 4. Is there a solution that would provide the positive benefits of cable encryption to cable operators while also allowing for IP-based devices and other innovative products that more consumers are purchasing to have the opportunity for success in the marketplace? Are there any risks to consumers of allowing innovative devices the ability to decrypt the basic cable signals so they can access those channels unencumbered by additional equipment or reduced functionality?

Answer. The Commissioners have not yet been presented with an item addressing the encryption of basic cable service. It is my understanding, however, that efforts are underway to find common ground on this issue between cable operators and other device manufacturers. Once an item is circulated for the Commission's consideration, I look forward to reviewing it and assessing whether it should be adopted given the potential benefits and risks mentioned above.

Question 5. It's my understanding that other non-cable MVPDs are able to encrypt all of their video signals, even basic video service. Should Congress revisit the statute to provide greater parity in regards to signal encryption?

Answer. It is true that other non-cable MVPDs, such as DBS providers, are able to encrypt all of their programming. As a general matter, I believe that there should be regulatory parity among competitors so that the government is not in a position of picking winners and losers in the marketplace. To the extent that there is not a persuasive technological justification for the disparate treatment of MVPDs with respect to encryption, it would be appropriate for Congress to take another look at the statute.

Universal Service Fund & E-Rate

The National Broadband Plan and subsequent research have identified the lack of digital literacy among low-income Americans as a major barrier to broadband adoption. To address this, the Commission proposed implementing and operating a digital literacy program through the E-Rate program's administrative structure. The FCC has proposed \$50 million in annual funding over a four year period and that such funds would be provided through saving from the restructuring of the Lifeline program. While I'm a strong advocate for a greater focus on improving digital literacy to spur broadband adoption, I'm concerned about the impact this proposed program will have on the E-Rate program, if it is administered through it.

Question 6. I'm concerned the proposed Digital Literacy program will be difficult to monitor. With E-Rate, it is possible and cost-effective to send auditors to school and library sites to ensure applicants have actually purchased and installed the equipment for which they received E-Rate support and providers have actually delivered promised services. By contrast, it seems it may be difficult for auditors to determine this proposed digital literacy initiative's funds have actually been spent on courses. Can you tell me how USAC could properly audit this digital literacy initiative?

Answer. As I indicated at the hearing, I oppose the use of E-Rate funds for a Digital Literacy program. With respect to using other universal service funds for a Digital Literacy Program, I share your concern that it would be difficult for USAC to properly audit it. Along these lines, I would note that although the Commission sought comment generally in its recent Further Notice of Proposed Rulemaking on whether USAC should administer the program, the Commission's inquiry did not specifically seek comment on whether USAC could properly audit the program if given this responsibility or whether any of the existing auditing procedures employed by USAC in its oversight of other universal service programs could be used effectively to guard against waste, fraud, and abuse in the proposed program. Moreover, the FNPRM did not ask whether the additional responsibility of overseeing a Digital Literacy program would compromise USAC's ability to aggressively uncover waste, fraud, and abuse in the existing universal service programs. These are all important questions that must be answered.

Competitive Access to Spectrum

The "spectrum crunch" is not exclusive to just one or two carriers, it is industry wide. And while the top four carriers provide wireless service to 90 percent of the total subscribers in the U.S., more than 30 million other subscribers use someone else. As you know, Section 309(j)(3) of the statute (47 U.S.C. 309(j)(3)) requires Commission to promote "economic opportunity and competition" by "disseminating licenses among a wide variety of applicants" including small businesses, rural carriers, and minority and woman-owned businesses.

Question 7. How should the FCC ensure, in a fair and competitive manner, that all carriers—large and small—have adequate access to this critical but finite resource?

Answer. The best way to solve the spectrum access problem is to get as much additional spectrum into the marketplace as possible, encourage more efficient use, and have a robust secondary market. Moreover, by developing band plans with a mix of geographic licensing areas, we can provide better opportunities for smaller businesses and rural carriers to obtain spectrum.

Question 8. Several countries have recently held or plan to hold spectrum auctions to make more spectrum available for next generation wireless communications and broadband. Some of these countries have applied certain conditions to their auctions rules. For example:

1. In its 4G auction, France's ARCEP provided bidding preferences to carriers that agreed to host MVNOs on its networks and had enhanced rural build-out requirements. It also required roaming agreements—to a losing bidder—for any carrier that won more than one frequency block.
2. Germany's regulator, Bundesnetzagentur, applied rural build-out requirements for its 800 MHz auction and placed bidding restrictions on certain carriers.
3. The Netherlands reserved two spectrum blocks in the 800 MHz band and one in the 900 MHz band for new entrants.
4. Canada, in its 2008 AWS auction, set aside spectrum for a new entrant.
5. Czech Republic's CTU has reserved the 1.8 GHz block for a new entrant.
6. Ofcom has proposed spectrum caps in its upcoming LTE spectrum auction.
7. Australia has proposed spectrum caps for its upcoming auction.

It should be noted that several of these auctions ended up exceeding revenue expectations. I'm not advocating for the implementation of any conditions on any future auctions but I'm curious as to why these countries deemed it necessary to apply such conditions in their auctions rules? Do you believe the FCC should closely examine the recent 4G auctions in other countries to assist in determining how best to design future domestic auctions?

Answer. To the extent that foreign communications policies can provide lessons (both positive and negative) for the Commission, I agree that the Commission should examine the structure and results of spectrum auctions conducted abroad.

Question 9. As you know, Section 309(j)(7) of the statute (47 U.S.C. 309(j)(7)) expressly prohibits the Commission from using the expected revenue from a spectrum auction as a basis for determining the public interest of frequency assignments. Furthermore, Congress, in H.R. Rep. No. 111, 103d Cong., 1st Sess. 258 (1993), emphasized that "important communications policy objectives should not be sacrificed in the interest of maximizing revenues."

While there is broad agreement auctions are the best mechanism to distribute spectrum licenses, is there too much emphasis currently being placed on maximizing auction revenues instead of the longer term economic benefit that may result? How might such skewed focus on proceeds hinder achieving the strategic goals necessary for the long term health of the spectrum ecosystem?

Answer. As you note, section 309(j)(7) of the Communications Act prohibits the FCC from making revenues the sole focus of our auction efforts. At the same time, revenue to the U.S. Treasury is one of the many benefits of spectrum auctions. Over the years, deficit reduction from auction proceeds has been a significant factor in compelling Congress to make the difficult political decisions necessary to free up much-needed spectrum. Large proceeds can also be the sign of a well-designed auction. As a general matter, I believe that the agency should focus on making spectrum available to those who will quickly put it to the most productive use. As a result, for example, while it may be the case that rules prohibiting the warehousing of spectrum could reduce auction revenues under certain situations, it is nevertheless appropriate for the Commission to adopt such requirements.

Spectrum Efficiency Metrics

One of the primary, long-standing goals of the FCC has been to promote more efficient use of spectrum. The FCC's 1999 Spectrum Policy Statement highlighted "with increased demand for a finite supply of spectrum, the Commission's spectrum management activities must focus on allowing spectrum markets to become more efficient..." and Strategic Plan for FY2003–2008 (published in 2002) indicated its general spectrum management goal is to "encourage the highest and best use of spectrum . . ."

In its 2002 report, the Spectrum Policy Task Force developed three definitions: spectrum efficiency, technical efficiency, and economical efficiency. However, the SPTF concluded “it is not possible, nor appropriate, to select a single, objective metric that could be used to compare efficiencies across different radio services.”

Question 10. In the FCC’s search to free up more spectrum for wireless broadband, how does the FCC effectively determine and compare the spectral efficiency of different types of radio-based services when targeting various frequencies for reallocation?

Answer. The Office of Engineering and Technology informs me that the Commission has not yet found a feasible way to apply one specific measurement for spectral efficiency across all types of wireless services. Instead, the FCC’s Technological Advisory Council (TAC) has identified a number of metrics that enable efficiency comparisons across a variety of satellite and terrestrial based systems categories. TAC released a draft white paper on this subject that includes a number of suggestions for improving spectral efficiency which are under consideration at the Commission.

Question 11. One of the common spectrum efficiency metrics for wireless communications is in terms of bits/second/hertz. Some parties have suggested more granular metrics such as bits/second/hertz/pop or bits/second/hertz/cell. It seems like there could be several different metrics within each definition of efficiency.

Robin Bienenstock of Sanford Bernstein raised the issue of network density and highlighted the difference between the U.S. and European countries. Specifically, Ms. Bienenstock compared California with Spain (noting similar size, topography, and population density). A major carrier in Spain had 33,000 base stations, whereas a major U.S. carrier in California had only 6,000 sites. Across the board, the network density for operators in Spain is three to six times higher than that of operators in California. With more cell sites, there is greater spectrum reuse, which means more efficient use, and a lessening of demand for the raw material (spectrum).

Does the FCC use network density as a component of its spectrum efficiency metric? If not, given the FCC already imposes build-out requirements to licensees, should the FCC explore requiring network density guidelines too as a way to promote more efficient use of spectrum?

Answer. The number of cell towers is one of the many factors that are considered when evaluating the spectral efficiency of a commercial wireless service licensee. The overall analysis hinges on whether the licensee is using reasonable available techniques to meet traffic demands in dense areas. With respect to your second question, I am open to considering any methods by which the agency can promote the more efficient use of spectrum, consistent with its statutory authority and technical and economic feasibility.

Question 12. Does the FCC have any additional data on network density comparisons of the U.S. in relation to other countries?

Answer. I have been informed by the Office of Engineering and Technology that the FCC has data on many but not all wireless towers in the United States and no data on the increasing number of small cells being deployed on top of buildings and other objects in dense areas. Similarly, the Commission does not have direct access to data on network density in other countries.

Resolving the “Spectrum Crunch” Through Technology

I’m concerned there is not enough focus on the role of technology in meeting the growing demand for wireless network capacity. An Ofcom report rightfully points out increasing wireless network capacity depends on a combination of “spectrum, technology, and topology.” Given the challenges we face with reallocation, I believe technology will play an even more prominent role.

For example, research by Ofcom found that early 4G mobile networks will be 230 percent more spectrally efficient than 3G networks and that efficiency will increase to 450 percent by 2020. Technologies like dynamic spectrum access and cognitive radio can considerably improve utilization by allowing more aggressive spectrum sharing, and, though many years off, quantum entanglement and “twisted” waves hold amazing potential to significantly, and even possibly infinitely, increase capacity without any additional spectrum.

However, I’m concerned about the threats the U.S. is facing in regards to its leadership in innovation, primarily with ICT. Many reports highlight most of the global R&D growth will be mainly attributed to Asian economies—according to NSF, the United States’ share of global R&D expenditures dropped from 38 percent to 31 percent between 1999 and 2009, while the Asia region grew from 24 percent to 35 percent. In addition, more U.S.-based companies are locating R&D operations over-

seas—the number of overseas researchers employed by U.S. multinationals nearly doubled from 138,000 in 2004 to 267,000 in 2009.

Question 13. What more can the government do (besides make the R&D tax credit permanent) to foster greater R&D investment, primarily in ICT?

Answer. The government should embrace tax policies and regulatory policies that make the United States the best place in the world to do business. We must create an environment that is attractive to investment and allows the entrepreneurial spirit of the American people to flourish. We also must provide companies with regulatory certainty so that they have the confidence to commence long-term projects in our country.

Question 14. Given the benefits that both the private and public sectors will reap from more advanced technologies, how can there be more collaboration between both sectors to see these technologies to fruition?

Answer. The Commission should approve equipment and devices as quickly as possible so that they can be brought to the market with dispatch. The Commission should also pursue flexible spectrum policies so that new technologies may be deployed into the field without undue delay. For companies to pursue new technologies, they must have confidence that they will be able to earn a return on their investment in a reasonable amount of time.

Question 15. Does the FCC have any estimates on the amount of domestic private sector funding in wireless R&D as a percentage of overall industry capital investment? Do you believe there is enough domestic R&D investment in advanced wireless communications in comparison to other countries?

Answer. I am informed that the Commission does not have data on the amount of domestic private sector funding in wireless R&D. Chapter 7 of the National Broadband Plan discussed research and development in broadband technologies and made a number of recommendations for action by other Federal agencies. The FCC participates in the Wireless Spectrum Research and Development (WISARD) group of the National Coordination Office for Networking and Information Technology Research and Development to help develop priorities, encourage private investment, and develop public/private partnerships where appropriate. You may wish to contact that organization for further information on private sector research and development.

Question 16. While U.S. industries fund approximately 70 percent of domestic R&D, the Federal Government is the primary source of funding for basic research, providing approximately 60 percent of funding, and industry conducts less than 20 percent of the basic research done in the U.S., according to the Science Coalition.

How important are Federal programs like NSF EARS and DARPA STO to the long-term growth and health of innovation in the spectrum ecosystem and should Congress provide greater funding for basic research in this area?

Answer. Federal programs that conduct basic research that would not otherwise be done in the private sector are important and should receive funding. In light of the substantial fiscal challenges faced by our country, however, the question whether funding for such programs should be increased is one committed in the first instance to Congress' discretion.

Spectrum Flexibility

The National Broadband Plan highlighted the importance of spectrum flexibility. The NBP concluded that “flexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency” and “spectrum flexibility, both for service rules and license transfers, has created enormous value.” That innovation and capital formation could be beneficial to addressing the challenges that exist in making more affordable and faster broadband available in rural areas.

As you know, Section 336 of the statute (47 U.S.C. 336) allows broadcasters to offer ancillary and supplementary services, which includes data transmission and interactive materials. Section 336 also prescribes the assessment and collection of fees related to such service offerings, and the FCC, back in 1998, adopted rules requiring broadcasters to pay a fee of 5 percent of gross revenues from such services for which they charge subscription fees or other specified compensation.

Question 17. If we need to get broadband into rural areas, why not let other licensees, like broadcasters, attempt to close the digital divide that exists? Mainly, since they may have infrastructure already in place to build off of.

Answer. I believe that accelerating the deployment of broadband into rural areas is a high priority and do not believe that we should foreclose the consideration of creative ideas for closing the digital divide.

Question 18. Even though the FCC adopted rules to avoid unjust enrichment, some parties have still raised concerns that such flexibility would be unfair since the broadcasters weren't assigned the spectrum via an auction. However, as you know, the FCC has only auctioned licenses since 1994 and prior to that used comparative hearings and then lotteries for frequency assignments—including licenses for wireless communications.

If there is concern about "unjust enrichment" if broadcasters provide broadband, why isn't there the same concern with wireless communications licenses issued prior to 1994? Wouldn't the 5 percent of gross revenue that broadcasters have to pay if they add broadband to their signals fairly compensate the government, mainly since such service would have to be "ancillary and supplementary" to their broadcast television signal?

Answer. Before reaching a conclusion on these issues, I would want to review a properly developed record in the context of a formal agency rulemaking.

Spectrum Fees

Recommendation 5.6 of the National Broadband Plan suggested "Congress should consider granting authority to the FCC to impose spectrum fees on license holders and to NTIA to impose spectrum fees on users of government spectrum" to address inefficiencies in spectrum allocations and promote more efficient use of spectrum. It is my understanding that every administration since Clinton has requested spectrum fee authority from Congress.

Ofcom imposed similar fees (known as Administrative Incentive Pricing) in the late 1990s and issued a report in 2009 that concluded the fees "met its primary objective in helping to incentivise spectrum users to consider more carefully the value of the spectrum they use alongside that of other inputs, and to take decisions that are more likely to lead to optimal use of the available spectrum." The report also "found no evidence to suggest that the application of AIP has given rise to material adverse consequences for spectrum efficiency."

Question 19. Should Congress grant the FCC and NTIA spectrum fee authority either on all licenses and assignments or just on non-auctioned licenses, mainly if the FCC moves to implement greater flexibility of spectrum use? Do you believe the FCC can strike the proper balance in applying spectrum fees to promote more efficient use of spectrum but not to a point that it presents an undue financial burden to the licensee?

Answer. I prefer auctions to spectrum fees as an efficient way to get commercial spectrum into the hands of those who will use it most productively and to compensate the American people for this valuable asset. As a practical matter, I believe it would be difficult to apply spectrum fees fairly and effectively to spectrum licensees for a number of reasons, including retroactivity issues, waivers for particular services, and decisions about how far up the band they would apply. With respect to placing spectrum fees on Federal spectrum, I am open to considering a wide range of proposals for encouraging the Federal Government to make more efficient use of its current spectrum and to relinquish additional spectrum for commercial use.

Question 20. Some parties have opposed spectrum fees calling them a tax. But what is the difference between a spectrum fee that is paid annually and a licensee paying a lump sum at an auction? If a spectrum fee is a tax, isn't an auction payment a tax as well since it too goes to Treasury? Or are both not considered taxes since they are transfers to government for the right to use a public good?

Answer. In my view, the main difference between auctions and spectrum fees is that auction prices are determined through a market mechanism while fees are generally imposed by government fiat.

Question 21. If not spectrum fees, how should the FCC impose economic fairness between licensees that are/were awarded via auctions versus those that were awarded via comparative hearings and lotteries?

Answer. Some have argued that there is inequity among existing wireless licensees because some licensees had to buy their spectrum at auction, while others received their spectrum licenses outside of the auction process. While I will remain mindful of this concern, my main focus will be getting as much spectrum into the marketplace as quickly as possible, and with as much flexibility as possible, for the benefit of consumers.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO
HON. AJIT PAI

Question. Congress recently passed spectrum auction legislation and the Commission will begin setting rules for implementation perhaps as early as this fall. I'm hearing from some low power television (LPTV) interests in my state who are concerned about how the FCC will handle low power stations when the FCC conducts their incentive auctions, and subsequently goes through a process of clearing channels 31–51. Low power TV stations provide a valuable service, such as local public meetings and religious broadcasting. LPTV has been the entry point for small businesses into the broadcast market and today, many LPTV owners are small businesses who work hard to continue to serve their local communities with news and resources aimed at the community. Would you support rules that allow LPTV to survive? What assurance can you provide that low power television stations will be protected?

Answer. I believe that LPTV stations should continue to be part of the media landscape. In section 6403(b)(5) of the Middle Class Tax Relief and Job Creation Act of 2012, Congress specifically addressed the spectrum usage rights of LPTV stations, and it is the Commission's duty to implement the legislation as written.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. ROGER F. WICKER TO
HON. AJIT PAI

Question. Should the pending 700 MHz public safety waivers be dismissed/denied?

Answer. In granting 700 MHz public safety waivers to twenty-one recipients more than two years ago, the Commission expressly acknowledged the pressing need for public safety to begin development and deployment of wireless broadband network infrastructure. It also acknowledged that by granting waiver relief, these entities would be given a degree of certainty, allowing them to take advantage of funding opportunities and to leverage existing deployment plans that may be time-sensitive. Moreover, the Commission further acknowledged that these early deployments could serve to identify what additional issues may arise for public safety in connection with the larger goal of establishing a nationwide interoperable broadband network. These considerations and benefits have not necessarily changed with regard to the waivers that have been granted and may also apply to pending requests for waivers. To that end, the wholesale termination of the existing waivers and denial of the pending requests for waiver authority would be a missed opportunity, which could further delay the provision of a critical tool to First Responders and the citizens they protect. For these reasons, I believe that each waiver must be analyzed carefully on a case-by-case basis.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROY BLUNT TO
HON. AJIT PAI

Question 1. With the Internet allowing for an almost unlimited number of radio competitors to the basic FM and AM stations available today, should the Commission look to raise or eliminate the local radio ownership caps? If diversity of opinion and meeting the public interest are the reasons for having the caps, with Internet competition as robust and growing as it is now, why do the caps remain so low?

Answer. The Commission's media ownership regulations must reflect the current state of the marketplace and technological landscape, including the Internet, while at the same time safeguarding the principles of competition, localism, and diversity. With these principles in mind, I will examine the record compiled by the Commission in the 2010 quadrennial review proceeding and assess whether the current radio ownership limits should be modified.

Question 2. With numerous print newspapers closing down over the past decade, do you think that limiting the ownership pool of potential buyers for struggling newspapers might be contributing to this? Put another way, if the choice is between a local television station owner buying the newspaper or the newspaper ceasing to operate, which is the ideal?

Answer. Under this scenario, I would strongly prefer to see a local television station buy a newspaper than to see a newspaper cease to operate.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN BOOZMAN TO
HON. AJIT PAI

Question. What short-term solutions for spectrum needs can be utilized while longer-term solutions, such as incentive auctions, are implemented?

Answer. The most important thing that the Commission could do in the short term is to expedite its consideration of secondary market transactions that facilitate the transfer of spectrum to those who will put it to the most productive use. Our current process often takes far too long and is a major impediment to the efficient use of spectrum. Furthermore, the FCC should identify and expedite the consideration of all spectrum-related proceedings in cases where spectrum is laying fallow or could be put to more productive uses. A recent example of this is the Commission's recent order modernizing a burdensome regulatory requirement in order to provide certain spectrum licensees the flexibility to deploy advanced wireless services in portions of the 800 MHz band. *See Report and Order, In the Matter of Improving Spectrum Efficiency Through Flexible Channel Spacing and Bandwidth Utilization for Economic Area-based 800 MHz Specialized Mobile Radio Licensees*, WT Docket No. 12-64 (May 24, 2012), available at <http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0524/FCC-12-55A1.pdf>. By removing outdated rules, the Commission can enable licensees to more efficiently utilize spectrum in the short term.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARCO RUBIO TO
HON. AJIT PAI

Spectrum

Question. Cisco's U.S. mobile data forecast projects that mobile data traffic will increase 16 times from 2011 to 2016—a compound annual growth rate of 74 percent. How will consumers be affected if we do not have enough spectrum to keep pace with that demand? How will application developers be affected if we do not have enough spectrum to keep pace with that demand?

Answer. If demand exceeds the availability of spectrum, consumers would bear the brunt of the impact. They would experience slower data speeds, worse service quality, and increased prices. Moreover, investment and innovation would suffer. Bandwidth scarcity would deter capital investment in the communications industry and discourage developers from creating new products and applications for consumers to use.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEAN HELLER TO
HON. AJIT PAI

Thank you for your testimony before the Committee. I appreciate the time you spent and your thoughtful answers to the following questions.

As you all know, our economy benefits greatly from the communications and technology sector. Competition and innovation have created new services and devices as well as high-quality jobs that have changed the lives of Americans. This sector is incredibly important to sustainable growth of our economy. That is why Congress must push the Federal Communications Commission to be the most open and transparent agency in the Federal Government. The industries you regulate are too important to our Nation.

Under Chairman Genachowski, I have seen notable steps in the right direction, and he has made process a "top priority." That being said, I am concerned that the FCC is not always as open and transparent as it should be. The problem as I see it today is that the FCC can pick and choose the rules it wants to follow when it wants to follow them. This method is convenient for the FCC, but it is not good government, and we owe more to Americans with business before the FCC.

I introduced legislation that pushes the FCC toward more transparency and openness. The intent of my legislation is not to hamstring the agency. It is to push them to be exactly what Americans expect from their government, open and transparent regulators of the laws passed by Congress.

A more predictable and consistent FCC will create jobs in Nevada, which has the unfortunate distinction of leading our Nation in unemployment for over two years. Every government agency should be committed to policies that promote job creation, investment and innovation. The technology sector has helped growth in our country for the last twenty years and will continue to if big government does not overburden it.

I introduced two measures, the Telecommunications Jobs Act (S. 1817) and the Federal Communications Commission Consolidated Reporting Act (S. 1780). These bills push the FCC to be the most open and transparent agency in the Federal Government and provide a streamlined method of reporting to Congress.

The following questions are in regards to those bills, and I would ask you to please respond to each question.

Question 1. One of the most important reforms I introduced would force the Commission to demonstrate beyond any doubt the need for regulation before intervening in the marketplace. I strongly believe that a cost-benefit analysis should be conducted on any regulation that will have a significant market impact, and I believe that before the FCC begins a rule proposal, they survey industry within three years of proposing a rule to determine whether that regulation is even necessary. A cost-benefit analysis mandating the FCC to identify actual consumer harm and conduct an economic, market-benefit analysis is consistent with President Obama's Executive Order 13563 on Improving Regulation and Regulatory Review. Would you support legislation that implements a cost benefit analysis consistent with the President's Executive Order? If not, why?

Answer. Yes, I believe that the Commission should make a determination that the benefits of any proposed rule outweigh its costs before any new rule is adopted.

Question 2. Do you support legislation mandating the FCC to survey the marketplace within three years before initiating a rulemaking?

Answer. I believe that the Commission should regularly survey the marketplace and that it is important to do so before enacting new rules.

Question 3. Under the Chairman, 85 percent of the *Notices of Proposed Rulemakings* have contained text of proposed rules. However, in the years before Chairman Genachowski, only 38 percent contained the specific text. Also, at times, these NPRMs have been broad, leading to uncertainty because industries are not clear as to what the FCC is actually looking at. Do you believe that the FCC should include the actual language of any and all proposed new rules in every NPRM?

Answer. I believe that including the actual language of proposed rules in NPRMs improves the rulemaking process by enabling stakeholders and members of the public to provide more focused and specific input to the Commission.

Question 4. These NPRMs can stay open for quite a while costing industry time and resources without any knowledge of whether action will take place or not. I have heard from many of my constituents with business before the Commission that they simply cannot get an answer from the Commission on what seems to be routine petitions, applications, or proceedings.

Nevada has asked for a waiver from the FCC in regards to its 700 megahertz public safety early deployment rules. I understand that a decision on this could have been delayed until Congress passed a public safety spectrum allocation bill. Now, with provisions intended to facilitate a public safety network in place, the FCC still seems to be stalling on this.

Other companies have purchased spectrum in the lower 700 MHz and are awaiting a decision by the FCC on whether rules regarding interoperability, clearing channel 51 or waivers to build out requirements will be granted.

The issue of "special access" has been open for 10 years before the Commission without any resolution. This is an issue worth billions of dollars to the entire industry.

Furthermore, last July, I and a number of my colleagues on this Committee wrote to you and we did not receive a response for 8 weeks and only after multiple follow up letters and calls. When Senators on the Committee of jurisdiction have trouble receiving a response from the FCC, there clearly are problems with answering questions.

All of this leads to uncertainty. There doesn't appear to be much confidence among many companies that the FCC can act expeditiously on much of anything of significance to the industry. Proceedings can languish for 3, 5, or 10 years. Companies, generally, have a hard time investing, or increasing their investment, if they are uncertain what the regulatory environment is going to look like for their business.

Chairman Genachowski has worked on this issue and established internal 180-day shot clocks; however, this has not solved all the problems of open ended NPRMs.

Do you believe that Congressional legislation implementing shot clocks on FCC action is appropriate? If not, why? Does the Commission expect to act on any of the examples listed above?

Answer. The tempo of our economy has been set by rapid technological innovation and a dynamic competitive landscape. This is perhaps best observed in the conver-

gence that we are witnessing in the telecommunications marketplace and explosion in new products and services made available to our Nation's consumers. It is therefore essential that the FCC exercise its regulatory authority in a well-informed and expeditious manner to ensure certainty not only for those that seek to invest and grow our economy but for all participants. If the Commission demonstrates an inability to respond in this fashion, then Congress justifiably could decide to impose shot-clock requirements upon the Commission.

As a Commissioner, I do not set the Commission's agenda, and so I cannot speak with certainty when the Commission will act on any of the examples above. However, I can state my commitment to act promptly when presented with an agency proposal that is based on a well-developed record.

Question 5. Since 2008, the FCC has conducted a number of merger reviews. How many times has the FCC failed to conclude the review within the 180-day shot clock period? How many times was the deadline missed? Was there any reason they were missed?

Answer. I have not had an opportunity to vote on a proposed transaction that requires Commission approval since I was sworn in on May 14, 2012, and cannot speak authoritatively to the Commission's reasons for missing deadlines prior to that date. Going forward, I intend to review the record in any transaction in a timely fashion and to take action that enables the Commission to make a determination within the shot clock period.

Question 6. Going back to the President's Executive Order 13563, the Chairman has fully supported the ideals of the order, which in part states "For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings."

In the days before the record closed on the Commission's reform of the high cost of the Universal Service Fund, the FCC added 114 new pages of its own to use in the final decision. This practice denied public input on information that was used to render a decision which seemed to run counter to the President's Executive Order. Without adequate public and stakeholder input, the chance that a regulation will have unintended consequences increases. One example brought to my attention is that now smaller rural markets like those in my state will miss out on support because of the presence of fixed wireless services. They believe more dialogue and transparency could have avoided this outcome.

Do you believe that relying on reports in rulemaking and adjudications that are without a robust notice and comment process is appropriate? Or substantially altering a report after the period with which industry input or comments are accepted?

Answer. It is essential to the Commission's proper execution of its rulemaking functions that the public have a full and fair opportunity to participate in the notice-and-comment process. Adherence to the values of openness and transparency requires nothing less. I therefore am troubled when an agency relies on reports that have not been made subject to the scrutiny of all interested stakeholders through sufficient notice. Likewise, altering a report after the close of the comment process and without allowing an additional period of comment is troubling.

Question 7. Do you agree that it is not the best practices of a government agency to dump data into a report at the 11th hour without industry input?

Answer. Yes, the introduction of data into a report without sufficient opportunity for public comment compromises the sufficiency of the record and consequently, the conclusions based on that record.

Question 8. Do you agree that this method, while perhaps helpful to the Commission, is not open and transparent to the level benefitting an agency that issues regulations that have a significant economic impact?

Answer. Yes, it is essential for the Commission to do its work in an open and transparent manner. In the Commission's Strategic Plan for 2012–2016, Strategic Goal 8, "Operational Excellence," specifically sets forth the FCC's objective of making "the FCC a model for excellence in government . . . by making decisions based on sound data and analyses; and by maintaining a commitment to transparent and responsive processes that encourage public involvement and best serve the public interest." The method described in your question is in stark conflict with that goal.

Question 9. The FCC rightfully should review transfers of lines under section 214 of the Communications Act and the transfer of licenses under section 309 and 310 of the Communications Act. However, this review should not provide the FCC to extract a list of concessions from the applicant in exchange for approval. For example, in the 2011 Comcast/NBC Universal transaction order, the Commission accepted a "voluntary" commitment from Comcast to comply with net neutrality rules even if a court overturns those rules.

This agreement was made through a transaction review and was done without any public scrutiny—as proposed conditions are often unknown until the approval order is announced.

Do you believe that this type of rulemaking provides a scenario in which one set of rules exist for those who have merged and another exists for those who have not?

Answer. Yes, the scenario outlined above can lead to a situation where different legal requirements apply to different companies.

Question 10. Have there been instances you have experienced when merger conditions have been imposed that was not directly related to the transfer questions?

Answer. I have not had occasion to evaluate FCC-proposed conditions extraneous to the merits of a transaction in the several weeks since I was sworn in. But I am aware that the Commission in the past has imposed merger conditions that were not designed to ameliorate a transaction-specific harm.

Question 11. Do you believe it is appropriate to require the FCC to end this practice by requiring the FCC to narrowly tailor any conditions it imposes or commitments it accepts to only address harm caused by the transfer of licenses?

Answer. Yes, I believe that the FCC should only impose merger conditions (or require parties to adhere to so-called “voluntary commitments”) in order to remedy transaction-specific harms that have been established in the record.

Question 12. Last November, I introduced S. 1780, the Federal Communications Commission Consolidated Reporting Act. In section 3 of that bill, I identified 24 reports for repeal and elimination. 16 of those reports were ones required of the FCC. Many of these required reports appeared to me to be contemplated during eras long since passed; were ones with an exceedingly narrow focus; or ones that bore little relevance to today’s communications marketplace. Have you had the opportunity to review the FCC reports that were identified in S. 1780? Would you take issue with any of the recommended deletions?

Answer. Yes, I have had the opportunity to review the reports identified in S. 1780, and I do not oppose any of the recommended deletions.

Question 13. Notwithstanding my desire to leave the FCC of its reporting burden, S. 1780 calls for the FCC to provide a Report to Congress with respect to the state of the communications marketplace, covering such matters as competition in broadband deployment and barriers to the competitive marketplace. The FCC is currently required to do many of these narrowly focused reports, but it seems to me that what we lack is anything like a comprehensive look at the totality of the marketplace at regular intervals. My thought was that this should be done every two years. What is your opinion of such a proposal? I believe that both the FCC and Congress would benefit from such a Report.

Answer. I support this proposal, as well as S. 1780 in its entirety. In my view, S. 1780 would modernize the Commission’s reporting obligations to reflect the convergence that has taken place in the communications marketplace and at the same time ensure that policymakers receive information critical to making data-driven decisions.