

THE NATIONAL BROADBAND PLAN: COMPETITIVE AVAILABILITY OF NAVIGATION DEVICES

HEARING BEFORE THE SUBCOMMITTEE ON COMMUNICATIONS, TECHNOLOGY, AND THE INTERNET OF THE COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES ONE HUNDRED ELEVENTH CONGRESS

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THE NATIONAL BROADBAND PLAN: COMPETITIVE AVAILABILITY OF NAVIGATION DEVICES

THURSDAY, APRIL 29, 2010

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

The subcommittee met, pursuant to notice, at 10:02 a.m., in Room 2123, Rayburn House Office Building, Hon. Rick Boucher [chairman of the subcommittee] presiding.

Present: Representatives Boucher, Markey, Eshoo, Doyle, McNerney, Welch, Stearns, Shimkus, Buyer, and Bono Mack.

Also Present: Representative Latta.

Staff Present: Roger Sherman, Chief Counsel; Tim Powderly, Counsel; Greg Guice, Counsel; Shawn Chang, Counsel; Amy Levine, Counsel; Michiel Perry, Intern; Sarah Fisher, Special Assistant; Neil Fried, Minority Counsel; Will Carty, Minority Professional Staff; and Garrett Golding, Minority Legislative Analyst.

OPENING STATEMENT OF HON. RICK BOUCHER, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF VIRGINIA

Mr. BOUCHER. The subcommittee will come to order. Good morning to everyone. Today the subcommittee considers the steps that will be necessary in order to enable television viewers to go to electronic stores and shop for set-top boxes, much the way that people shop for television sets today. The set-top boxes would be made by a variety of manufacturers who would compete with each other and operate various features such as digital video recording or Internet-based functionality. Competition would also be based on the price of the box. Some of the more capable devices could become the hubs for a home entertainment center, switching information of all kinds throughout the household. The boxes, whether simple or sophisticated, would all have the key capability that is not present today, and that is the ability to receive the input of television channels from any cable or satellite company and then display those channels on television sets.

If that capability is assured, set-top boxes will become competitively available and a tremendous amount of innovation would then occur in the design, the manufacture, and the marketing of set-top boxes. TV viewers will be able to make a one-time purchase of a

set-top box and then keep it in service, even if they switch their cable provider.

We have long tried to achieve the goal of making what we call navigation devices competitively available. In fact, our effort dates from the Telecommunications Act of 1996 in which we directed the FCC to adopt rules to assure plug-and-play capability between competitively available set-top boxes and all cable systems. Now, almost 15 years later, that plug-and-play capability remains an elusive goal.

This morning we consider the next steps that should be taken to help us achieve it. In the National Broadband Plan recently released by the FCC, the Commission appropriately highlighted the need for a direct to consumer market for navigation devices and the benefits that devices with both TV inputs and Internet access can bring to our overall effort to enhance broadband adoption.

I was pleased that the FCC published a notice of inquiry as a first step in assuring that by the end of 2012, all cable and satellite TV providers include with their services a simple gateway device that converts the cable or satellite company's TV signal into a common output that then could be processed by whatever set-top box the viewer may own. In the shorter term, the Commission is proceeding with a notice of proposed rulemaking with the goal of addressing the shortcomings in the existing CableCARD program as an interim measure until gateway devices are widely deployed.

The CableCARD is used by TiVo which is the major provider of digital video recorders that today are available at retail for conditional access to cable programs. A workable CableCARD system could bring other providers into this market as well. To date, the CableCARD regime has been riddled with complications. First, the installation of CableCARDs typically involves several multiple-hour visits by sometimes untrained technicians. Secondly, pricing of the CableCARD has been inconsistent and is often very expensive. Third, some cable operators have been moving programming to switched video platforms to make more efficient use of their bandwidth.

But a CableCARD-enabled device cannot access switched digital video without substantial and somewhat awkward motivations that are difficult to achieve. Revised CableCARD rules are therefore needed for the near term as the Commission moves to implement the gateway device proposal by the end of 2012.

Our witnesses today will speak to the barriers that we must overcome for TV viewers to realize the benefits of true set-top box plug-and-play capability. I want to thank each of them for joining us here this morning. We will turn to your testimony shortly. That concludes my opening statement. And I am pleased to recognize now the ranking Republican member of our subcommittee, the gentleman from Florida, Mr. Stearns.

[The prepared statement of Mr. Boucher follows:]

STATEMENT OF CONGRESSMAN RICK BOUCHER

**Subcommittee on Communications, Technology and the Internet Hearing
The National Broadband Plan: Competitive Availability of Navigation Devices**

April 29, 2010

Good morning.

Today the Subcommittee considers the steps that will be necessary to enable TV viewers to go to electronics stores and shop for set-top boxes much the same way people shop for TV sets today.

The set-top boxes would be made by a variety of manufacturers who would compete with each other in offering various features such as digital video recording, or Internet based functionality. Competition would also be based on the price of the box.

Some of the more capable devices could become the hubs for a home entertainment center, switching information of all kinds throughout the household.

The boxes, whether simple or sophisticated, would all have a key capability not present today, and that is the ability to receive the input of TV channels from any cable or satellite company and display those channels on TV sets.

If that capability is assured, set-top boxes will become competitively available, and a tremendous amount of innovation will occur in their design, manufacture and marketing.

TV viewers will be able to make a one-time purchase of a set-top box and keep it in service even if they switch cable providers.

We have long tried to achieve the goal of making what we call navigation devices competitively available.

In fact our effort dates from the Telecom Act of 1996 when we directed the FCC to adopt rules to assure plug and play capability between competitively available set-top boxes and all cable systems.

Almost 15 years later, that plug and play capability still does not exist.

This morning we consider the next steps that should be taken.

In the National Broadband Plan, the FCC appropriately highlighted the need for a direct to consumer market for navigation devices and the benefits that devices with both TV inputs and Internet access can bring to our effort to expand broadband adoption.

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In the shorter term, the Commission is proceeding with a Notice of Proposed Rule Making with the goal of addressing the shortcomings in the existing CableCARD program as an interim measure until gateway devices are widely deployed.

The CableCARD is used by TIVO, the major provider of digital video recorders available at retail for conditional access to cable programs. A workable CableCARD system could bring other providers into the market as well.

To date, the CableCARD regime has been riddled with complications. First, installation of a CableCARD typically involves several multi-hour visits by sometimes untrained technicians. Second, pricing of the CableCARD has been inconsistent and is often expensive. Third, some cable operators have been moving programming to switched digital platforms to make more efficient use of their bandwidth. But, a CableCARD-enabled device cannot access switched digital video without modifications.

Revised CableCARD rules are needed for the nearterm as the Commission moves to implement the gateway device proposal by the end of 2012.

Our witnesses today will speak to the barriers we must overcome for TV viewers to realize the benefits of true set-top box plug and play capability.

OPENING STATEMENT OF HON. CLIFF STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. STEARNS. Good morning and thank you, Mr. Chairman. And I welcome all of our witnesses this morning. The FCC issued their broadband plan, which is almost 400 pages. The font was about 8 points. Say you go to page 49, there is a little paragraph called 4.2 devices. So you read through that, get a little further along, you get to the recommendation, 4.12, 12. Now, you don't think too much about it, but you read through it and you realize it has huge implications. And that is why our witnesses are here and this is why this morning we are having this hearing.

The video marketplace is completely different today than it was when we passed the original set-top box provisions in 1992 and 1996. Back then, my colleagues, cable providers served between 90 and 100 percent of subscription TV households. Today there is a robust video competition as evidenced by the fact that satellite and phone companies now serve one-third of subscription TV households. And the video market is only getting more and more competitive.

Congress and the FCC need to be careful as it looks to impose the new regulations, and perhaps some of the recommendations are outlined in this recommendation 4.12. Being able to access the Internet from a television is certainly an appealing idea to many consumers. As such, the market already seems to be delivering this service without any government assistance. According to the Consumer Electronics Association, in the next couple of years, every TV will be able to connect to the Internet wirelessly. In addition, industry analysts predict that more than 70 million Internet-connected TVs will ship in 2012, up from 15 million in 2009. And the number of such TVs in the U.S. will reach 80 million by the year 2013.

Furthermore, we have seen that the reverse, people using their computers to watch TV shows and movies, is already a booming industry. Hulu.com, for example, had almost a million videos viewed just in February. Congress and the FCC need to tread very carefully, in my opinion, when attempting to impose technology mandates. Let the past be our guide.

The FCC has been unsuccessful trying to artificially create set-top box competition through technology mandates for almost 20 years. Despite all of their regulatory efforts, the FCC concedes that attempts to manufacture a third-party device market have failed. Cable operators have been required to foist approximately 20 million CableCARDS at a cost of more than \$1 million on subscribers that elect to use operator-provided devices. Subscribers, on the other hand, have chosen to use only 500,000 CableCARDS with third-party devices.

In response, most manufacturers have decided not to develop CableCARD devices. Part of the problem is that the subscription TV and device markets continue to develop rapidly. This has had two interrelated consequences.

First, technology has outpaced the rules, making the inflexible CableCARD regime less than useful. Second, rather than buy set-top boxes and risk obsolescence, most customers rent from the cable operator and simply upgrade when cable operators roll out

their new features, such as high definition, video on demand, and interactive services.

Trying to artificially create set-top box competition by forcing subscription TV providers to support one-size-fits-all gateway devices is unlikely to fare any better than similar attempts by the FCC through their technology mandates for the past 20 years.

What the FCC could not accomplish when subscription TV was an analog cable-centered linear video platform will only be harder for a digital, interactive, Internet-enabled video platform that is populated by diverse cable satellite and phone company architectures.

While the gateway device proposal stems from a national broadband plan recommendation, the question is how this mandate promotes broadband is not quite clear. Since most subscription TV households likely already have broadband.

Making the government a gateway between providers and the customer is unlikely, in my opinion, to be productive; at best, micromanaging the devices' providers will increase costs for consumers, hinder investment, and slow innovation. At worst, it is a veiled attempt to advance network neutrality and other regulations of that sort.

The lack of set-top box competition in the past was not caused by a market failure, but because there was no market. With the rise of alternative subscription TV providers in the Internet, consumer needs are evolving; the market for third-party video devices is following suit. The FCC would do better to avoid mandates and allow current innovation to simply continue and to flourish.

Thank you, Mr. Chairman, for this hearing. I look forward our witnesses.

Mr. BOUCHER. Thank you very much, Mr. Stearns.

The gentlelady from California, Ms. Eshoo, is recognized for 2 minutes.

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

Ms. ESHOO. Thank you, Mr. Chairman, for holding this hearing on another important recommendation contained in the FCC's National Broadband Plan. As you know, I represent the heart of Silicon Valley, and it is a place where many companies and industries live by the mantra "innovate or die."

The issues of innovation and competition in the plan reflect the legislative initiatives that I pursued on behalf of my district for many years. In 1996, when Congress passed the Telecommunications Act, I partnered with my great pal, Ed Markey, on including a provision, section 629, to encourage innovation through competition in the set-top box market. In the 14 years since, we have only seen minor steps forward in creating new technologies.

It is true that the cable industry did take it upon themselves to create CableCARD as a follow-up to the FCC's order to implement section 629. But as the FCC recognizes in its National Broadband Plan, quote, despite congressional and FCC intentions, CableCARDS have failed to stimulate a competitive retail market for set-top boxes.

The FCC's recommendation to address this assessment is to have all multichannel video programming distributors install a gateway device in subscribers' homes by December 31, 2012. In the interim, they also recommend that cable operators fix the problems associated with CableCARD no later than October of this year. And that is not that far away.

So I am encouraged by consumer principles recently released by the cable industry and their announced commitment to work with the FCC and the set-top boxes industry to create consumer choice and drive innovation.

I am interested to hear how the rest of the panel that is here today think these principles will be applied. We haven't discussed CableCARDS, set-top boxes in this committee for a number of years. I remember the issue well. I had just come on to the committee. So it is important to revisit it so that we can leapfrog into the future.

So I look forward to hearing from all of the witnesses. And, Mr. Chairman, again, thank you for these hearings on the FCC's National Broadband Plan. Thank you.

Mr. BOUCHER. Thank you very much, Ms. Eshoo.

The gentleman from Illinois, Mr. Shimkus, is recognized for 2 minutes.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SHIMKUS. Thank you, Mr. Chairman. I am still trying to figure out the problem. We have a National Broadband Plan. We need to map those areas that are unserved or that are underserved, and we need to use the market and our capabilities to make sure that everybody has at least a level of high-speed Internet access. And I don't get what the frustration or the misunderstanding of the capitalist market is all about.

It is the consumers who drive demand; business then fills to meet the demand. It is a system that works. Every time we intervene and try to push a service on the public through government, we fail. Listen, we have got video on watches, we have got videos in automobiles, we have got video on phones. We get video over copper, we get video over cable, we get video terrestrially, we get video over the satellite. We ought to be focusing on getting high-speed Internet access to unserved areas and underserved areas. That is where our focus should be, and let the competitive marketplace meet the demand that the public wants to be met and not use government to force a demand in an area where the public is not going.

Thank you, Mr. Chairman. I yield back.

Mr. BOUCHER. Thank you very much, Mr. Shimkus.

The gentleman from Pennsylvania, Mr. Doyle, is recognized for 2 minutes.

OPENING STATEMENT OF HON. MICHAEL F. DOYLE, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA

Mr. DOYLE. Thank you, Mr. Chairman. Well, I will give you a little known fact about myself. I like bands like Earth, Wind and

Fire. And I am going to tell you another secret. Kenneth likes to watch Soul Train reruns, complete with vintage Johnson Hair Care Products advertisements on demand. And much to our delight, our respective cable companies offer those services.

But the only way I can fill my house back in Pittsburgh with the hippest trip in America is with a cable box provided by the cable company, not from a box or a TV I can purchase at retail, even if I think that box gives me a better user experience and has features that I find useful, like maybe Internet connectivity.

Now, according to the Census Bureau, 30 percent of Americans have never used the Internet, but 99 percent of Americans have a television and over 85 percent of Americans have some form of pay TV service. Those numbers overlap. I agree with Chairman Boucher on this issue, and appreciate and respect his leadership, which is why I am glad that the FCC's National Broadband Plan identified this as an issue that could help drive demand for Internet access.

I look forward to a final rule fixing some issues with CableCARD technology, and I look forward to all of the witnesses today talking about the FCC's notice of inquiry about how all devices can work with all video providers in the future.

And with that, Mr. Chairman, I will yield back.

Mr. BOUCHER. Thank you very much, Mr. Doyle.

I haven't had to worry about hair care products in quite some time now, but I am glad that you are still concerned.

The gentleman from Michigan, Mr. Upton, is recognized for 2 minutes. Oh, he is no longer with us.

The gentleman from Indiana, Mr. Buyer, passes and will have 2 minutes added to his questioning time.

And the gentlelady from California, Mrs. Bono Mack, is recognized for 2 minutes.

OPENING STATEMENT OF HON. MARY BONO MACK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mrs. BONO MACK. Good morning, Chairman Boucher, Ranking Member Stearns and distinguished panel. The subject matter before us today is highly complex. We are confronting issues surrounding how video entertainment is delivered to the American consumer and an increased use of our television as a means of accessing the Internet. Both involve capital-intensive areas of our economy, and I think the FCC and Congress should proceed with extreme caution.

At the outset, I would like the record to express my support for policies that provide individuals and companies with the freedom to innovate. Such freedom allows bright minds to develop products like video on demand and DVR. Therefore, beyond the equal application of existing laws and regulations, I am wary of the government mandating technical standards beyond section 629 or the regulations surrounding the Commission's implementation of that law.

In addition to my concerns surrounding technical mandates, I also would like to remind the committee about the importance of content protections. Few people are investing in set-top boxes to watch hearings like this one on C-SPAN, no matter how exhilarating.

rating we might think this discussion ultimately is, especially with Mr. Doyle's admission of Earth, Wind and Fire. But consumers want a complete viewing experience that maximizes the capabilities of the technology they have purchased.

The viewing experiences of the consumer are the work of a large number of people who have to get paid. The only way they get paid is when their content is protected and sold, not stolen. As such, the manufacturers of set-top boxes play a vital role in the delivery and protection of content.

I believe that no matter how we ultimately move forward, the protection of content should remain a high priority. To further make this point, I would like to submit a letter from the Motion Picture Association of America.

Thank you, Mr. Chairman. I look forward to today's discussion and I yield back the balance of my time.

Mr. BOUCHER. Thank you very much, Mrs. Bono Mack. And without objection, the letter you have mentioned will be made a part of our record.

[The information appears at the conclusion of the hearing.]

Mr. BOUCHER. The gentleman from Massachusetts, Mr. Markey, is recognized for 2 minutes.

OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF MASSACHUSETTS

Mr. MARKEY. Thank you, Mr. Chairman, very much. And thank you for your leadership on this issue. Back in 1993 when I was chairman of the subcommittee, I worked with Jack Fields on the National Communications Competition and Information Infrastructure Act, H.R. 3636. And like the National Broadband Plan's recommendation on set-top boxes, our bill was designed to unleash competition and innovation in the retail marketplace, enabling consumers to buy the set-top box of their choice independent of their network provider.

The bill passed the House overwhelmingly in June of 1994, 423-to-4. But it wasn't until the next Congress that the set-top box language was included as a Bliley-Markey amendment incorporated into the 1996 Telecommunications Act, becoming section 629 of the statute.

In the age of the smart phone, we can think of these devices now as smart video boxes, the converter boxes, set-top boxes, modems consumers use daily, the devices that ideally would help them navigate to the video and information sources of their choice.

Fourteen years is an eternity in telecommunications policy. We might as well be talking about the Peloponnesian laws or the last time the Bruins won the Stanley Cup. But it is clear, however, that over the last 14 years, the promise of the smart-phone box provision has not been fulfilled.

While there have been tremendous innovations in two of the three main devices for connecting to broadband service, smart phones and personal computers, the set-top box has been the box that time forgot. It is simply not as smart or as available as it should be for consumers. And that is about to change with the April 21st issuance of the notice of inquiry and a further notice of

proposed rulemaking, as recommended by the National Broadband Plan.

The FCC is now beginning to seek ways to effectively implement section 629 from 14 years ago, to give greater choice to consumers and increase broadband adoption. So this is going to be a huge change; it will make the consumer king, which should be our goal. Just get out of the way, let them have a technology that lets them go anywhere they want to go, do anything they want to do.

Thank you, Mr. Chairman, for having this hearing. We are on the dawn of a brand new and I think best era we have ever had in telecommunications.

Mr. BOUCHER. Thank you very much, Mr. Markey.

The gentleman from Vermont, Mr. Welch, is recognized for 2 minutes.

Mr. WELCH. Thank you, Mr. Chairman. I will pass.

Mr. BOUCHER. Thank you very much, Mr. Welch. And we will add 2 minutes to your time for questioning our panel of witnesses today.

All members have been recognized for their statements. And we are now pleased to turn to our panel of witnesses and we thank each of you for your attendance here this morning.

Mr. Michael Williams is the Executive Vice President and General Counsel of Sony Electronics.

Mr. Kyle McSlarrow is the President and Chief Executive Officer of the National Cable and Telecommunications Association.

Mr. Matthew Zinn is the Senior Vice President, General Counsel and Chief Privacy Officer for TiVo.

Mr. Eric Shanks is the Executive Vice President of Entertainment at DirecTV.

Mr. Harold Feld is the Legal Director for Public Knowledge.

And Mr. David Young is the Vice President of Federal Regulatory Affairs at Verizon.

Each of these gentlemen is deeply knowledgeable about the matter we are discussing here this morning. And we want to thank all of you for coming and joining us and sharing your views with us.

Without objection, your full prepared written statements will be made a part of our record. We would welcome your oral presentations and ask that you try to keep those to approximately 5 minutes, and that will give us ample time to exchange ideas and ask questions of you.

STATEMENTS OF MICHAEL T. WILLIAMS, EXECUTIVE VICE PRESIDENT AND GENERAL COUNSEL, SONY ELECTRONICS, INC.; KYLE McSLARROW, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL CABLE AND TELECOMMUNICATIONS ASSOCIATION; MATTHEW ZINN, SENIOR VICE PRESIDENT, GENERAL COUNSEL AND CHIEF PRIVACY OFFICER, TIVO; ERIC SHANKS, EXECUTIVE VICE PRESIDENT, ENTERTAINMENT, DIRECTV; HAROLD FELD, LEGAL DIRECTOR, PUBLIC KNOWLEDGE; AND DAVID E. YOUNG, VICE PRESIDENT, FEDERAL REGULATORY AFFAIRS, VERIZON

Mr. BOUCHER. Mr. Williams, we will be happy to begin with you, and I would ask that you hold your microphone as close to you as

you can. I think even closer than that would be good. We can hear you much better. Be sure you have turned it on. Thank you.

STATEMENT OF MICHAEL T. WILLIAMS

Mr. WILLIAMS. Good morning, Chairman Boucher, Ranking Member Stearns, and distinguished members of the subcommittee. Thank you for allowing Sony Electronics this opportunity to testify on this very important issue. Sony is here today to lend its support to the FCC's National Broadband Plan and specifically to the gateway device proposal it describes. When implemented, it will bring consumers better value and a nearly infinite number of choices for news, information, and entertainment. The gateway device will allow true competition among content owners, service providers, and device manufacturers like Sony. And we all know where there is true robust competition, prices drop and services improve.

The concept of an MVPD gateway is not something new or revolutionary. In fact, this service model has been discussed among device manufacturers in the MVPD community for many years. The gateway concept is a natural evolutionary step in the progression of television viewing.

For the first 50 years, what we might call TV 1.0, consumers received video through one national standard that applied to all over-the-air broadcasters. It was easy to use, it worked well and it allowed for a host of innovation and competition in the television receiver market.

Starting in the 1970s, we entered into TV 2.0, the MVPD age, first through cable, then satellite and, most recently, telephone companies. TV 2.0 expanded consumer choice from a handful of channels to hundreds, and the technology has evolved from one to many, but it came with a price—the lack of interoperability.

Now we are at the dawn of TV 3.0, a confluence of the Internet and traditional MVPD services. TV 3.0 will leverage the power of the Internet to enable consumers to tailor their television viewing in ways we can only imagine. It will enable viewers to interact with the program they receive and with each other. More importantly, it will give consumers the tools they need to make their programming choices to get what they want, when they want it, and to decide where they will view it.

Now, you may ask, What does this new TV 3.0 world have to do with set-top boxes; why do Congress and the FCC need to be involved? The answer, we look back when we changed from TV 1.0 to 2.0. Over-the-air broadcasts relied on a single nationwide standard to transmit a television signal from the station to the viewer.

In the MVPD age, there is no single nationwide transmission standard. Every cable operator, every satellite operator uses something different. Consumers simply subscribe to one MVPD provider, and they don't want to spend the extra money to buy a device that can receive every one of these many different signals. The genius of this universal gateway device in this approach is that it combines the best of both worlds. It dramatically facilitates the integration of Internet-delivered video and data along with traditional MVPD services.

Simply put, the gateway device is a translator. It takes the transmission signal from the service provider and translates it into an output signal that all retail consumer devices can understand.

Now, there are other elements that are necessary for the gateway approach to work. First, consumer devices such as televisions need to operate on a level playing field against each other, which requires the use of a common national standard.

Second, in order to provide an innovative consumer experience, the device needs to be able to tell the consumer what content is available and to access it.

Third, the output from the gateway device must be simple and open, like the existing Wi-Fi or USB standards. This output standard should not come with extraneous licensing or technical obligations that would hinder innovation, impair widespread implementation and offer consumers little value. It is clear there are details that need to be filled in, but the committee should understand that the technologies necessary to implement this gateway device are in wide use today and they existed for many years.

Sony believes that the gateway device is a workable solution to implement the congressional mandate contained in section 629. All of us, this committee, the FCC, the service providers, content providers, manufacturers and consumers have a stake in bringing television into its third age. Sony is convinced that the Commission's gateway proposal can and will succeed for all stakeholders. And we look forward to joining these stakeholders to make TV 3.0 a reality. Thank you very much.

Mr. BOUCHER. Thank you, Mr. Williams.

[The prepared statement of Mr. Williams follows:]

Testimony of Michael T. Williams
Executive Vice President and General Counsel
Sony Electronics Inc.
Before the Subcommittee on Communications,
Technology and the Internet
Committee on Energy and Commerce
United States House of Representatives
2125 Rayburn House Office Building
April 29, 2010

Chairman Boucher, Ranking Member Stearns, and distinguished members of the Subcommittee, thank you for allowing Sony Electronics this opportunity to testify on this very important issue.

Sony is here today to lend its support to the National Broadband Plan proposed by the Federal Communications Commission and specifically the "gateway device" proposal. When implemented, it will bring consumers both better value and an infinite number of choices of news, information and entertainment. The gateway device will allow for true competition among content owners, service providers and device manufacturers like Sony, and we all know where there is true, robust competition, prices drop and service offerings improve.

The concept of an all-inclusive Multichannel Video Programming Distributor (MVPD) gateway is not something new or revolutionary. In fact, this service model has been discussed among CE and IT manufacturers and the MVPD community for many years. Indeed, the National Cable and Telecommunications Association (NCTA) advocated a version of a universal gateway device in its filings before the FCC in 2007.

A universal gateway device is a natural, evolutionary step in the progression of television viewing over time. For its first fifty or so years, TV 1.0, consumers received video through one technology – a national standard that applied to all over-the-air broadcasters. It was easy to use, it worked well, and allowed for a host of innovation and competition in the television receiver market.

But in the 1970's and early 1980's, we entered into TV 2.0, the MVPD age, first through cable operators, then through direct broadcast satellite services, and most recently through video services provided by telephone companies. TV 2.0 expanded consumer choice from a handful of channels to hundreds, and the technologies involved from one to many. But the proliferation of all those different MVPD services came with a price, namely the lack of interoperability between the different service providers.

Now, we are at the dawn of TV 3.0, a confluence of the Internet and traditional MVPD services. TV 3.0 will leverage the massive power of the Internet to enable consumers to tailor their television viewing in ways we can only imagine. It will give consumers a broader array of programming choices. It will enable viewers to interact with the programming they receive and with each other. Most importantly -- and a key task for companies like Sony -- it will give consumers the tools they need to manage their programming choices to get what they want, when they want it, and to decide where they will view it.

Now you may ask, what does this new TV 3.0 world have to do with set-top boxes? Why do Congress and the FCC need to be involved?

The answer requires us to look back at the change from TV 1.0 to TV 2.0. Over-the-air broadcast television relies on a single nationwide standard to transmit a digital television signal from the station to the viewer. Under the Communications Act and FCC regulations, every TV station in the country transmits using that standard, and every television in the country must be capable of receiving it. In that environment we had robust competition among device manufacturers and content providers.

In TV 2.0, there is no single nationwide transmission standard -- every cable operator, every satellite provider, uses something different. Since consumers typically subscribe to a single MVPD at a time, they do not want to spend the extra money to buy a television that can receive every one of these many different signals. And without consumer demand, no manufacturer is incentivized to make such a device. Instead, consumers are willing to rent a set-top box that only receives the specific signal that their provider uses -- but no others.

The genius of a universal gateway device approach is that it combines the best of both worlds and dramatically facilitates the integration of Internet-delivered video with traditional MVPD services. Simply put, the gateway is a translator. It takes the transmission signal from Time Warner, FiOS, Direct TV or any other competing MVPD service provider and translates it into a signal nationwide standard that retail consumer devices can understand.

There are other elements that are necessary to the success of a gateway approach. First, consumer devices need to operate on a level playing field against each other which requires the use of this common national standard.

Second, in order to provide the best possible consumer experience, the device needs to be able to tell the consumer what content is available on the MVPD service and how to access it.

Third, the national standard output from the gateway device must be simple and open -- like the existing HDMI, WiFi or USB interface standards, for example. It should not come with extraneous licensing or technical obligations that would deter widespread implementation and offer consumers little added value.

Sony believes the gateway device is a workable solution to implement the Congressional mandate contained in Section 629. We're here because we're excited to build the 3.0 version of TVs and other devices and to give consumers unparalleled access to news, information and entertainment. Looking at the gateway proposal in the National Broadband Plan, it's clear that there are details that need to be filled in. But the Committee should understand that the technologies necessary to implement a gateway model are in wide use today, and have existed for many years.

All of us -- this Subcommittee, the FCC, service providers, content providers, manufacturers and consumers -- have a stake in bringing television viewing into its third age. Sony is convinced that if we all work together, the Commission's gateway proposal can and will succeed.

Sony looks forward to joining these stakeholders to make Television 3.0 a reality.

Mr. BOUCHER. Mr. McSlarrow.

STATEMENT OF KYLE McSLARROW

Mr. McSLARROW. Thank you, Mr. Chairman, Ranking Member Stearns and distinguished members of the subcommittee. First let me just state at the outset that we are very supportive of the direction the FCC is going both with its notice of inquiry and the NPRM. We think what they presented is a very thoughtful case for innovation that ties together really 2 strands that I think it is worth taking just a moment to unpack. The first strand, as you have identified, Mr. Chairman, and others, goes back to section 629, which is how do you create a competitive retail market for devices. It is not just set-tops. It could be televisions or other navigation devices. That marketplace hasn't taken off. It hasn't taken off principally for two reasons: one, CableCARDS were functionally deployed in one-way devices at a time when the world was turning two-way. So you have one-way devices with CableCARDS and there really is no consumer demand for one-way devices. Really at this moment in time, TiVo is really the only remaining successful player in that field.

The second reason it didn't take off is pretty obvious. Right now CableCARDS, with the exception of Verizon, are only used by cable companies; and therefore if you buy a device that is a CableCARD device, you can't actually take it to another competitor. In today's world, in 2010, four out of ten consumers take a multichannel video service from somebody other than a cable company.

The second strand is what was really identified in the broadband plan, which is totally apart from whether or not there is a retail market: What do we do, what are the opportunities and challenges of integrating television and video on the Internet? And I think what we tried to do is put those two together in a way that we are actually very intrigued by.

Now, I think there are a lot of unanswered questions. And to be fair to the FCC, they have teed up most of those questions which is why they started with an NOY. But I think our role in terms of the cable industry is to think about not so much the past, but what the opportunities are for the future. And to that end, as Ms. Eshoo said, we actually submitted to the FCC and to this subcommittee a set of consumer principles. What are the goals here?

Now, we have identified a couple that we think everybody should be able to sign up to. One, we do think consumers ought to be able to connect devices to their multichannel video service without at least a set-top box. They ought to have a retail market. Number two, we think that consumers ought to be able to take those devices they do purchase at retail and move them from one provider to another, which promotes competition. Third, we think that consumers should have the option of being able to access Internet; in particular, to access Internet video. Fourth, we think, more than that, they ought to have the ability to search across all of the platforms so that they can identify video on whatever the multichannel service is providing, whether it is video on demand or a linear channel or YouTube or Netflix or some other service that is emerging on the Internet platform.

Now, the caution we have is that we are skeptics of government technology mandates. But that doesn't mean that we shouldn't be at the table doing the hard work necessary to try to achieve those goals. And we have committed to the FCC and we commit to you that we will do that.

There is still a host of issues that are unanswered. We actually conceptually talked about ideas like the gateway device that Mike was just talking about a moment ago. I am not sure a gateway device is fully fleshed out right now. At a conceptual level there should be some interface that we ought to be able to work toward that allows us to accomplish those goals. But there are still enormous issues related to content protection, a lot of the promotional, transactional, and advertising issues surrounding each of these platforms.

We have other providers here today. We have different technology platforms. How we make that seamless is still a challenge. But I think, as Mike said a moment ago, the technologies probably exist. And if there is a will for all of the providers, the CE manufacturers, the content providers to work together with the FCC, I think we can achieve them. Thank you, Mr. Chairman.

Mr. BOUCHER. Thank you very much, Mr. McSlarrow.

[The prepared statement of Mr. McSlarrow follows:]

**TESTIMONY OF KYLE McSLARROW
PRESIDENT AND CEO
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

on

The National Broadband Plan: Competitive Availability of Navigation Devices

before the

**Committee on Energy and Commerce
Subcommittee on Communications, Technology, and the Internet**

**UNITED STATES HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.**

April 29, 2010

TESTIMONY OF KYLE McSLARROW**PRESIDENT & CEO, NATIONAL CABLE & TELECOMMUNICATIONS
ASSOCIATION**

Good morning, Chairman Boucher, Ranking Member Stearns, and Members of the Subcommittee. My name is Kyle McSlarrow and I am the President and Chief Executive Officer of the National Cable & Telecommunications Association. Thank you for inviting me today to testify on the competitive availability of navigation devices.

As you know, the Federal Communications Commission (FCC) last week opened two proceedings seeking comment on video device issues and how best to implement Section 629, the navigation device provisions of the Communications Act. First, the FCC adopted a Notice of Inquiry (“NOI”) seeking comment on a “long-term” solution that will enable consumers to purchase “smart video” devices that will work with all multichannel video programming distributor’s (“MVPD’s”) systems. Second, the Commission adopted a shorter term Notice of Proposed Rulemaking (“NPRM”) seeking comment on proposals to improve the current cable-centric CableCARD regime while the longer term approach it proposed in the NOI is explored. The cable industry fully supports the Commission’s examination of these issues and its efforts to make the goals of Section 629 a reality.

As the FCC recognizes in the “Smart Device” NOI, the video landscape has grown dramatically more competitive since the navigation device requirement was enacted as part of the Telecommunications Act of 1996. Four of the ten largest MVPDs now are either direct broadcast satellite (DBS) or telephone companies who collectively serve almost 40 million customers and whose share continues to grow. There is also now a flourishing and rapidly-growing market for Internet-enabled devices that offer consumers an ever-widening array of

choices for information, entertainment, and communications applications – a development that is itself a testament, in part, to the massive investment by our industry to innovate and bring high-speed broadband Internet to more than 90 percent of American households.

The cable industry is committed to providing video content to consumers where and when they want it, on all possible consumer devices, and for those devices to be innovative platforms for new applications. We want consumers to be able to buy video devices at retail and to know that cable content can be among their video sources. Indeed, NCTA and its members have been in the forefront of promoting innovation in consumer video devices for over two decades. The original analog set-top box, in use for decades, gave way to the first generation of digital boxes in the 1990s, which have rapidly yielded to advanced set-top boxes that today deliver HD television, caller ID on the TV, video-on-demand, and DVR capability. Our tru2way agreement with major consumer electronics (CE) manufacturers enables CE manufacturers to build retail digital cable ready devices that can access all of cable's video services, including video-on-demand and other interactive services – without the need for a set-top box. And cable operators themselves are deploying a new generation of cable set-top boxes that use tru2way middleware capable of running applications which provide the opportunity to unleash innovation by third party applications developers on a new national platform.

The cable industry stands ready to explore new cross-industry approaches to develop a fully competitive and innovative retail video device marketplace. Indeed, we have called for a broad FCC proceeding on this set of issues for the last three years in order to accomplish this goal. That's why we applaud the FCC's adoption of the NOI, particularly its overarching recognition that all video providers must be part of the solution. In order to aid the FCC's and this Subcommittee's consideration of these issues, we proposed earlier this year a series of

consumer principles governing video devices that we think can and should serve as the foundation for new, consumer-driven approaches to addressing the future of retail navigation devices. We are pleased that the Commission, in its NOI, references our consumer principles and concludes that they are “largely supportive of [the Commission’s] objectives in launching this proceeding.”

Promoting Competition and Choice in Video Devices

The consumer principles NCTA submitted to the FCC outlined a foundation for Commission and inter-industry efforts to support innovation and consumer access to video services, from any source:

1. Consumers should have the option to purchase video devices at retail that can access their multichannel provider’s video services without a set-top box supplied by that provider.
2. Consumers should also have the option to purchase video devices at retail that can access any multichannel provider’s video services through an interface solution offered by that provider.
3. Consumers should have the option to access video content from the Internet through their multichannel provider’s video devices and retail video devices.
4. Consumers should have the option to purchase video devices at retail that can search for video content across multiple content sources, including content from their multichannel provider, the Internet, or other sources.
5. Consumers should have the option to easily and securely move video content between and among devices in their homes.
6. Consumers should be assured the benefits of continuous innovation and variety in video products, devices, and services provided by multichannel providers and at retail.
7. To maximize consumer benefits and to ensure competitive neutrality in a highly dynamic marketplace, these principles should be embraced by all video providers, implemented flexibly to accommodate different network architectures and diverse

equipment options, and, to the maximum extent possible, serve as the basis for private sector solutions, not government technology mandates.

We believe that these principles should be implemented in ways that facilitate the deployment of different video device options in response to dynamic and varying consumer demands, rather than requiring that all devices include the same features for all consumers. They should allow for the possibility of ever more innovative devices, such as set-back boxes, gateways, and network interface units, while preserving alternative possibilities such as innovation in the network or the cloud which may lead to fewer or simpler devices in the home. None of us can predict which is the better or more likely path to success and it is quite possible that multiple paths will emerge. The Commission's NOI explores these very issues. And, while asking a number of questions about one such device (which it calls "AllVid"), the NOI also seeks comment on "alternative proposals to the AllVid concept that could lead to the implementation of a competitive market solution for smart video devices." In particular, the NOI asks "whether the movement of functions away from navigation devices and into the cloud or network might represent a viable alternative." These are the right questions to ask.

It is clear that any new policy must apply to all MVPDs, across all technical platforms. We are very pleased that this principle was recognized not only by the FCC in its NOI, but also is a view shared by the consumer electronics (CE) industry, TiVo, and Public Knowledge, among others.

All MVPDs are covered by Section 629 and must play a part in a Section 629 solution, as traditional cable companies and Verizon have done with respect to the CableCARD regime. In a market where nearly 40% of pay television subscribers obtain services from DBS or the telephone companies, a cable-centric solution cannot succeed. Consumers are unlikely to pay a premium to own a retail navigation device that won't work with DBS providers and most telco

TV providers without a set-top box from the provider. If there is to be sufficient room for innovation and competition in networks and services, then there should be room for all MVPDs to innovate and compete.

Thus, if the government concludes that particular devices or particular rules are appropriate to promote competition or to serve other goals, then it only makes sense for those requirements to apply to all MVPDs – as the FCC’s NOI proposes. For instance, the objective of enabling consumers to take their devices with them when they move from one community to another is valid regardless of which video provider the customer uses. Likewise, portability is incomplete if a consumer who is not moving, but simply wants to change video service providers, can’t use his or her current video device on another provider’s network.

Second, rigid technology mandates are most likely to be inappropriate for an industry as dynamic as the video distribution business. By way of example, the FCC’s 2003 plug-and-play rules even specify the output connectors on the back of operator-supplied set-top boxes – including one port, the 1394 or “firewire” connection – which consumers use rarely, if ever. The FCC recognizes this issue in its just-released CableCARD NPRM, and proposes giving cable operators greater flexibility to choose appropriate outputs to include in their set-top boxes. Technology mandates run the very real risk of imposing solutions that are outdated the moment they go into effect and of undermining the very innovation we all seek to achieve. Even if technical mandates were imposed on all MVPDs, such an approach would also risk picking winners and losers in this marketplace since Xbox, Roku, Vudu, and other devices sold by non-MVPDs would presumably not be subject to any such regulations and thus would continue to be able to innovate and update their products without the need to seek government permission. In

this regard, as I noted above, we are pleased that the FCC has sought comment on alternative “market-driven” solutions and standards to achieve the goals of Section 629.

Third, one cannot “solve” this set of problems by visiting burdens and responsibilities on one part of the video ecosystem alone. This is why collaboration is so important. For example, it is clear that the creation of a robust market for new video devices requires some assurance that CE manufacturers will actually build and retailers will willingly stock such devices. That is more likely to be achieved through industry collaboration with appropriate government oversight rather than through government mandates. Otherwise, if there are to be government mandates imposed on MVPDs to help a retail market develop, complementary mandates on consumer electronics manufacturers and retailers would be necessary to assure that those devices are “commercially available.”

We strongly support technology innovation around the video distribution platform, including potentially using the television as a means of accessing the Internet and content available on the Internet. Indeed, there is no shortage of devices that can put Internet content on the TV today. Internet-enabled DTVs, laptops, Blu-Ray players, Xbox, PlayStation, Roku, Apple, TiVo, Boxee, Slingbox, and Vudu devices are just the tip of the iceberg. We have always invited retail devices to include not only the ability to access cable content, but also the ability to access the Internet. Along these lines, the consumer principles we propose suggest extending the capability to access the Internet to our own leased set-top boxes, giving consumers the option to access Internet video content through our set-top boxes as well as through video devices purchased at retail.

We also are very interested in exploring the concepts advanced by the Commission in its NOI with respect to making cable content more readily available to consumers who use retail

devices. FCC Chairman Genachowski described one such concept that I believe captures the goal very well: “Just as a shopping mall presents customers with numerous retail outlets, smart video devices would offer viewers a single window into pay TV content and Internet content – as well as content that a viewer has already bought or archived.” In this regard, we could envision a retail video device having access not only to a Netflix, Amazon.com or other video providers’ “store” in the video content shopping mall, but also to the local cable operator’s store, each of which could be included in a mall-like directory that would help customers navigate the different stores for video content. Customers could access each video “store” via icons, or through a similar process, in the retail device’s display. So, for example, if a customer clicked on the icon for content provided by the local cable operator, the cable content would be presented just as if the customer had accessed it using a set-top box supplied by the customer’s local cable operator.

We believe that industry and government collaboration in this area is necessary and we fully intend to work with the FCC and other stakeholders to shape technology solutions that benefit consumers. As Commissioner Copps said in his statement accompanying the NOI, in order for the Commission’s goals to be met, “the Commission and the private sector are going to need to roll up their sleeves, work together and reach consensus on what will spur innovation and competition and what will improve the consumer experience.” We believe the marketplace changes of just the last few years afford all stakeholders an opportunity to collaborate in new and innovative ways. But, in an era of such rapid technological change, the FCC’s consideration of video device issues should be governed by the principle of regulatory humility. We respectfully urge the FCC and Congress to consider the consumer principles we’ve proposed, which we believe offer an appropriate framework for policymakers as well as inter-industry efforts.

“Fixing” the CableCARD Regime

The FCC’s CableCARD NPRM correctly recognizes that the cable-centric CableCARD regime has not fulfilled the goals of section 629, despite the best efforts of the Commission, the CE industry and the cable industry, and that it may well be outdated. The NPRM identifies several issues with the CableCARD regime for which it proposes short-term “fixes” “until the successor solution [applicable to all MVPDs] becomes effective.” We think the NPRM’s targeted examination of certain CableCARD issues asks the right questions and we remain willing to continue working with our colleagues in the CE industry to resolve any lingering CableCARD implementation issues. We understand that we have an obligation to continue to work hard to refine and improve the consumer experience with the use of CableCARDS.

However, we firmly believe that imposing any additional significant or burdensome CableCARD-related requirements would be misdirected and would simply repeat the mistakes of the past at a time when we have an opportunity to shape a more innovative and collaborative future. The most useful path, as the NOI recognizes, is to focus our efforts on new solutions while correcting past mistakes as needed. Thus, we are particularly pleased that, as part of the CableCARD NPRM, the Commission proposes to increase our industry’s ability to deploy low-cost high-definition Digital Terminal Adapters (“DTAs”) by providing an exemption to the costly “integration ban” for such devices. Low-cost DTAs are a vital tool for all cable systems to recapture bandwidth that can be used to provide consumers with faster broadband speeds, more HD channels, and other digital services.

The reasons for the limited success of the CableCARD regime are easily identified. First, it was a requirement imposed only on cable operators, in an era when an increasing proportion of consumers bought their multichannel video services from a provider

other than a cable operator. Nonetheless, unlike our DBS competitors and most of our telco competitors, cable companies alone have worked to meet the challenges of Section 629 (including the CableCARD regime) throughout a period of tumultuous technological and market change. Cable operators and major CE manufacturers negotiated the landmark “plug and play” agreement for “unidirectional” devices (UDCPs), which was largely incorporated into the FCC’s rules. Then – without regulatory compulsion – the cable and CE industries created informal mechanisms to effectively handle the field issues that inevitably arose with the rollout of new and complex technology. The cable industry also developed MultiStream CableCARDs (“M-CARDS”) for use in retail products, enabling consumers to watch and record different channels simultaneously using the same CableCARD.

There were also the usual start-up issues that accompany the introduction of new technology, exacerbated in this instance because the cable and CE industries were *both* introducing products with new technologies that had to be married in the consumer’s home – the operator-provided card and the retail plug-and-play device.

Nonetheless, there are now almost 20 million operator-provided, CableCARD-equipped set-top boxes, which are supplied by a growing number of competitive consumer electronics manufacturers, including Pace, Motorola, Cisco, Evolution Broadband, Samsung, Panasonic, and TiVo. However, fewer than 490,000 CableCARDs have been deployed for use in retail CableCARD-enabled devices, despite the expenditure by cable operators of over a billion dollars in additional costs outfitting their own set-top boxes with CableCARDs. This amounts to more than \$30 of cable operator “common reliance” insurance for every \$1 of CableCARDs in retail devices – a cost no other MVPD (other than Verizon) was forced to bear under the FCC’s “integration ban.” These costs have been an unnecessary tax on cable consumers.

The fact that consumers have shown little interest in buying these retail devices may simply reflect the reality that the option of leasing devices is preferable to them. That's not surprising, since leased devices are available at government regulated "cost-plus" rates (or rates which are otherwise kept low in markets where effective competition exists) and can be upgraded when the next model is released rather than having to purchase a device at retail and assuming the risk of obsolescence.

Customers may also choose to lease their box rather than buy it because leasing makes it easier for consumers to switch from cable to satellite to telco video services and back again, especially since today's retail CableCARD devices are not supported by the DBS providers or many telephone-company MVPDs. A CableCARD-enabled digital cable ready DTV will work without an operator-supplied set-top box across all cable operators' footprints, but the consumer would need a different and unique set-top box to enable that DTV to work at all with DISH, DirecTV, or AT&T.

No less a source than *Consumer Reports* has recommended that consumers should lease rather than buy their DVR set-top boxes and the Commission itself seeks comment in its NOI on "whether consumers prefer to lease at government-regulated 'cost-plus' rates, whether consumers wish to avoid the risk [of] obsolescence of navigation devices, and whether the inability to 'port' a retail navigation device when he or she changes MVPDs limits the attractiveness of the retail option."

Finally, the FCC also correctly recognizes another reason why a retail market has not developed: "one-way" retail devices were brought to market just as consumer interest was growing in on-demand and other interactive cable services, which those devices did not provide. With respect to that issue, Mr. Chairman, with your personal encouragement, and that of other

policymakers, cable worked with major CE manufacturers and digital television makers to develop the Java-based tru2way solution as the national digital cable-ready “plug-and-play” standard. With this approach, consumers could go into a retail store, buy a flat screen tru2way high-definition television, take it home and access any cable service – including interactive services yet to be created – without having to use a set-top box and with just one remote control. Major cable operators reached agreement on this approach with consumer electronics manufacturers including Sony, Panasonic, Samsung, LG Electronics, Funai (known in the United States under the brand names Philips, Magnavox, Sylvania, and Emerson); set-top makers ADB and Digeo, and chip manufacturer Intel. Numerous other CE and IT companies have signed agreements to develop and produce tru2way devices and applications even though they are not parties to the tru2way MOU. In addition, CableLabs has held a number of productive tru2way Developers’ Conferences which provide a forum where cable operators, consumer electronics equipment manufacturers, content providers, application developers, and other stakeholders can learn about and exchange information on the tru2way initiative.

While tru2way will address consumer concerns about service limitations of “one-way” CableCARD-enabled devices, the only real “fix” to the CableCARD regime is to explore how best to ensure that consumers can be provided the option of purchasing devices at retail that access and work with all multichannel video platforms. That is the subject of the FCC’s NOI, and it has our strong support.

Thank you again for the opportunity to appear. We look forward to working with you on these challenging issues. I would be pleased to answer any questions you may have.

Mr. BOUCHER. Mr. Zinn. And please pull that microphone very close.

STATEMENT OF MATTHEW ZINN

Mr. ZINN. As far as it can go. Chairman Boucher and Ranking Member Stearns, thank you for inviting TiVo to discuss device competition and the National Broadband Plan. Consumers love TiVo products because they combine the ability to find, record, and play cable programming with the ability to find, record, and play broadband programming, Netflix, Amazon, Blockbuster, YouTube all in one easy-to-use user interface.

TiVo puts the consumer in charge of its own viewing schedule while respecting the rights and concerns of copyright holders. TiVo's ideas have been copied, though never equaled, by video service providers in their own lease boxes, yet TiVo boxes have never been placed on an equal footing with leased boxes in terms of access to programming, pricing, installation and support.

The CableCARD was designed by the cable industry itself so that the consumer need only turn on the product, read two sets of numbers on the screen, and call them into his local cable operator. These are being supported this way in a few systems around the country. But by and large, installation and support have been woefully inadequate. And even when CableCARD-reliant devices have been supported, cable operators have been making channels unavailable to consumers who rely on these devices.

Let me show you what I am talking about in terms of access to cable programming. Here is a Web site showing a channel lineup for a cable operator system in Utica, New York.

[next slide]

You can clear the Web site and then you can search by programming package.

So the next slide shows that we have searched by the programming package entitled "Not Available on CableCARD." Funny title for a programming package that contains over 200 channels that are not available on CableCARD according to this Web site.

[Slide shown.]

The next slide shows what is in that package. Well, there are a lot of movie channels that consumers are being told are not available on CableCARD.

[Slide shown.]

No hablo espanol on CableCARD.

[Slide shown.]

HD movies. If you buy an HD box or you have an HDTV, you kind of want HD movies. Not available on CableCARD.

[Slide shown.]

Anybody like sports? Not available on CableCARD.

[Slide shown.]

Twenty-one of the top 25 top-rated channels in HD are not available on CableCARD according to the Web site.

My point is not to pick on a particular cable operator cable system only to graphically show the unequal competitive situation for retail set-top boxes. The fact is most of these channels may be accessed by TiVo boxes using a tuning adapter. Yet there is no mention of that here, no mention of digital, no mention of tuning

adapter. All the consumer sees is “not available on CableCARD,” and most consumers would look at that and say, I am not going to buy a retail box.

Is it any wonder why more people lease boxes than buy retail boxes when confronted with this situation?

And even if you get past the programming issue, then you have pricing issues: How much is a CableCARD, do I have to pay for a lease box and a CableCARD? And then there are installation issues which are now legendary. Faulty cards; untrained installers; installers who fail to bring CableCARDS who are not familiar with them; multiple truckloads to do a signal install, and so on.

Fortunately, Congress anticipated the video service providers might foreclose device competition and innovation. The Consumer Electronics Availability Act of 1995 directed the FCC to assure in its regulations the commercial availability of competitive devices for multichannel video programming providers. This subcommittee’s bill became section 629; in 1996, the Telecommunications Act.

After many years of intermittent and inconsistent efforts to foster video device competition, Chairman Genachowski proposes to really advance the ball here in two proceedings. First is a rule-making to allow products such as TiVos, which rely on CableCARDS, to work on cable systems free of technical handicap. And the second is notice of inquiry to consider a gateway for competitive and innovative products to operate on cable, satellite, telephone video systems as much as personal computers and portable products, operable Wi-Fi connections today.

My earlier slides show that cable operators have recently made ordinary subscription channels unavailable to competitive products, even though our customers must continue to pay for them. Cable operators do this with a switch digital technique in which certain of these channels must now be electronically requested from the head end. TiVo devices have the capability to send the necessary requests to the head end using broadband.

But TiVo’s license from cable labs does not allow our products to be configured to make these simple requests, and cable systems currently are not set up to receive them. A regime in which a cable subscriber is required to use an operator-provided set-top box to receive a significant amount of programming is the very antithesis of what a competitive set-top box policy is designed to achieve.

We are encouraged that the NCTA has recognized this in its statement of principles to Chairman Genachowski, and we look forward to working with cable to address this critical issue. We applaud Chairman Genachowski for proposing these solutions.

In summary, Mr. Chairman, CableCARD is not hard to fix and we are not asking for much. We are asking for installation support, which is in the law. We are asking for pricing transparency and nondiscrimination, and we are asking for upstream signaling so that retail boxes have regular cable programming without an operator-provided set-top box. All of these are what was supposed to be provided by the plug-and-play agreement that was signed into law in 2003. Thank you.

Mr. BOUCHER. Thank you, Mr. Zinn.

[The prepared statement of Mr. Zinn follows:]

Statement of
Matthew Zinn
Senior Vice President, General Counsel
Secretary & Chief Privacy Officer
TiVo Inc.

Before the
Subcommittee on Communications, Technology, and the Internet
House Energy and Commerce Committee

The National Broadband Plan:
Competitive Availability Of Navigation Devices

April 29, 2010

Chairman Boucher and Ranking Member Stearns, thank you for inviting TiVo to discuss device competition and the National Broadband Plan. TiVo became a leading innovator in digital devices by combining advanced digital storage technology with an interactive electronic program guide. TiVo's customers love our products and consistently rank our user interface and software above that of any and all competitors. Unfortunately, our customers have been unable to reap the full benefit and use of our products, and the benefits of further innovation by us or by competitors. This is why an important element of the FCC's National Broadband Plan focuses on *devices*.

As the FCC has concluded, the dearth of competition in the products that tune and store video programming is bad for device innovation, bad for service innovation, and is harmful to continued growth in broadband services. TiVo's experience is just one example of how our regulatory system has shielded service operators from device competition and is short-changing consumers.

TiVo Digital Video Recorders combine a consumer-friendly user interface with the ability to store, index, and recall video programming. To a far greater extent than the

analog VCRs that preceded it, a TiVo product can put a consumer in charge of his or her own viewing schedule, while respecting the rights and concerns of copyright owners and programming distributors. TiVo's concept and execution have been copied, though never equaled, in the video service providers' leased DVRs. Yet TiVo boxes have never had a fair chance to compete with leased boxes in terms of access to programming, pricing, installation or support. As a result, leased set-top boxes have thrived, while independent competitors have fallen by the wayside. The leased set-box remains the product that consumers love to hate.

Set-top boxes get in the way of consumer enjoyment of video content because multichannel video programming is sold under electronic lock and key – far beyond what is required to protect intellectual property rights. On the Internet, it is simple to buy a program, or to transfer funds securely, through standard communication protocols and encryption techniques. Multichannel video programming services, however, use unique and non-standard systems of encryption and user authentication that reside in their “headend.” These vary from system to system. They also have non-standard protocols for requesting interactive services, such as Video On Demand. So if a consumer were to purchase a TiVo product designed to work specifically and directly on the Arlington, VA, Comcast system, and were then to move across the street to a Fairfax County neighborhood served by Cox, her TiVo product would not display or record most Cox programming. Even if she leased a Cox set-top box just to deliver the signal to her TiVo box, the Cox set-top would not provide a high definition program through an interface that permits and supports recording, or supports the display of our own guide.

The Congress wisely anticipated this problem almost two decades ago and took steps to try to avoid it. In 1994, Congressman Markey chaired a hearing in which he, and you, Mr. Chairman, expressed concern that in the digital era the service operator's set-top box would operate as a "gatekeeper" rather than a "gateway" for the "information superhighway."¹ The next year, the Republican Chairman of this Committee and the Ranking Member of this Subcommittee introduced the Bliley-Markey bill, the Consumer Electronics Availability Act of 1995. This measure directed the FCC to *assure*, in its regulations, the commercial availability of competitive devices, for multichannel video programming networks, from vendors not affiliated with the service provider. With your help, Mr. Chairman, this bill became Section 304 of the Telecommunications Act of 1996. As Section 629 of the Communications Act, this Committee's bipartisan initiative now underpins a key element of the National Broadband Plan.

In implementing Section 629, the FCC focused first on the cable industry, whose 1100 local franchises used diverse means of securing their networks. A joint engineering committee of the Consumer Electronics Association and the cable industry proposed to solve the problem of secure system access by putting *only* the decryption and authentication circuitry on a separate card – ultimately known as a CableCARD. These cards would be made available by the local cable operator, and would plug into competitive devices through a nationally standard interface. (So, if our TiVo customer moved from Arlington to Fairfax, she would simply return her Comcast card and get one from Cox.)

¹ National Communications Infrastructure (Part 2): Hearing on H.R. 3626 and H.R. 3636 Before the Subcomm. on Telecommunications and Finance of the H. Comm. on Energy and Commerce, 103rd Cong. at 386 (Feb. 1, 1994).

As the CableCARD specifications were being finalized, however, the motion picture industry pointed out that the interface to devices would be “in the clear,” hence vulnerable to copying. So the industries added an additional layer of encryption and authentication, between the card and the device, using a technology called “DFAST” that was acquired by CableLabs. This meant that every competitive device would have to be licensed by CableLabs, the consortium owned by the operators who lease the set-top boxes with which these products would compete.

In 1998, the FCC, wary from its experience with deregulation of consumer devices in the telephone industry, said that the only purposes for which operators could impose restrictions on licensees would be to avoid “harm to the network” or “theft of service.” Not surprisingly, CableLabs took a much broader view of what restrictions and requirements this allowed them to impose than did the prospective competitors. For five years there was no competitive entry. Finally, under pressure from the Senate Judiciary antitrust subcommittee and members of this Committee, the FCC encouraged the cable and consumer electronics industries to work out a compromise “DFAST” license and a new set of proposed “Plug & Play” regulations. Finally, CableCARD-capable products came to market in 2004.

The essentials of the “Plug & Play regime were as follows:

- Cable operators with systems of a certain capacity became obligated to offer and give specific technical support to CableCARDS
- Products that relied on CableCARDS would be allowed to record and share content in the home with other devices, subject to DFAST license “compliance and robustness” technical requirements that protected content from unauthorized redistribution.
- To avoid abuse of these technical restrictions, home recording and viewing could not be limited unreasonably by the content owner or distributor.

- These Plug & Play products would receive *all linear cable channels* (e.g., HBO) to which a consumer subscribed, but could not order *services* (such as Video On Demand) interactively with the cable headend. This capacity would be addressed in further industry negotiations.² The idea of the Plug & Play agreement was to provide *certainty* to manufacturers and consumers that they could purchase retail products that received all of the linear cable channels provided by the cable operator.³

Cable Industry Failures To Support CableCARD-Reliant Products

With the exception of TiVo, the Plug & Play products introduced in 2004 are no longer available to consumers. Despite significant investments by many consumer electronics manufacturers, the cable industry has no enthusiasm for these products because they could not be used to buy on-demand services. Installation of a CableCARD took several multi-hour visits by untrained field people, and headends were not set up to support consistent operation of CableCARD products.⁴ Rather than a *feature* that could be promoted by manufacturers and retailers, the CableCARD interface became an added expense and a consumer headache. One by one – except for TiVo’s and one or two small DVR competitors – competitive products dependent on CableCARDs disappeared. A

² These negotiations failed to produce any further inter-industry agreement.

³ See *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Dkt. No. 97-80, Letter from Carl E. Vogel, President and CEO, Charter Communications, et al., to Michael K. Powell, Chairman, FCC (Dec. 19, 2002) (“Cable/CE Letter”), Memorandum of Understanding Among Cable MSOs and Consumer Electronics Manufacturers (“MOU”) (signed by Charter Communications, Inc., Comcast Cable Communications, Inc., Cox Communications, Inc., Time Warner Cable, CSC Holdings, Inc., Insight Communications Company, L.P., Cable One, Inc., Advance/Newhouse Communications, Hitachi America, Ltd., JVC Americas Corp., Mitsubishi Digital Electronics America, Inc., Matsushita Electric Corp. of America Panasonic), Philips Consumer Electronics North America, Pioneer North America, Inc., Runco International, Inc., Samsung Electronics Corporation, Sharp Electronics Corporation, Sony Electronics, Inc., Thomson, Toshiba America Consumer Electronics, Inc., Yamaha Electronics Corporation, USA, and Zenith Electronics Corporation), at Section 3.4 (Cable Services Accessed).

⁴ CableCARD non-support has been extensively documented in the FCC record and has been cited by both the FCC and the courts. See, e.g., *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Dkt. No. 97-80, Second Report and Order ¶ 39 & n.162 (Mar. 17, 2005); *Charter Communications v. FCC*, 440 F.3d 31, 40 – 44 & n.10 (D.C. Cir. 2006).

TiVo customer must have a working CableCARD to receive HD programs; if not, the TiVo box will be returned.

In the last few years we have faced a new obstacle. Cable operators have begun to move *programming* away from Plug & Play reception despite the promise that Plug & Play devices would receive all linear cable channels. To save bandwidth, they use a “switched digital video” (“SDV”) technique in which a growing number of channels must be requested from the headend in order to be available on a local node.⁵ Not surprisingly, lack of access to the same popular channels as are available on a free leased box can make it extremely difficult, if not impossible, to convince consumers to purchase a retail CableCARD set-top box.

What TiVo Has Done

Despite these roadblocks, TiVo has done it’s best to innovate, but only in the areas that CableLabs and the cable operators have allowed. For example, since TiVo products are denied access to cable Video On Demand services, TiVo has incorporated a broadband connection to enable the delivery of “On Demand” broadband programming services, such as Netflix, Amazon, Blockbuster, YouTube, and many others that are not available on operator-supplied set-top boxes. Last month, TiVo introduced its *Premiere* series of products with enhanced search, interactive and consumer control features. However, TiVo is unable to innovate around the lack of access to linear cable channels (such as A&E in HD or Fox News Network in HD) delivered using SDV that subscribers receive on leased boxes.

What The FCC Now Proposes

⁵ Once the channel is available on the local node, other homes on the same node that are authorized to see it can also view it, providing that their device can detect that it is being transmitted on a particular frequency. So this is strictly a bandwidth conservation measure for existing channels – *not* a new or interactive service.

Last week, the FCC acted to promote video innovation and consumer choice in two areas as recommended in the National Broadband Plan:

Notice of Inquiry. The Commission issued a notice of inquiry to explore the potential for allowing any consumer electronics manufacturer to offer smart set top video boxes at retail that can be used with the services of any multichannel video programming distributor (MVPD) by using a special purpose adapter (the “AllVid” solution)

Notice of Proposed Rulemaking. The Commission issued a notice of proposed rulemaking with rules designed to improve the operation of the CableCARD regime until the AllVid solution becomes a reality.

The Notice of Proposed Rulemaking, which is directed only to cable systems, would attempt to eliminate some of the more egregious regulatory and license obstacles to consumers taking full advantage of the capabilities of TiVo’s present CableCARD-reliant products. We endorse this initiative as essential to a competitive market and the objectives of Section 629.

The Notice of Inquiry, directed to all MVPD systems, is aimed at establishing a true “level playing field” by extending the Plug & Play model to true interactive *communication* with the network rather than mere *connection* to the network. It would do this by requiring each system operator to make available to subscribing homes an adapter whose *sole function* would be to act as a demarcation point between the operator’s proprietary network elements and the home network. The adapter would communicate with the MVPD service, performing the tuning and security decryption functions that may be specific to a particular MVPD, while the smart video device would perform navigation functions, including presentation of programming guides and search functionality.

How The “CableCARD” Rulemaking Will Remedy Failures In Cable Industry Support

CableCARD issues are the number one driver of customer service calls for new TiVo retail boxes. In connection with the launch of TiVo's new CableCARD product last month, the most common issues include cable operators not supporting multi-stream CableCARDS and operators being unable to activate CableCARDS properly. These problems ought not continue to exist six years after the introduction of CableCARDS and several years after common reliance required cable operators to use CableCARDS in their own leased boxes.

According to the Notice of Proposed Rulemaking, the Commission will address these failures:

- (1) **Switched digital video.** What Commission action is needed to ensure consumers of Plug & Play devices have access to linear channels delivered using "switched video" technology that otherwise are becoming unavailable to subscribers owning Plug & Play devices *without use of a cable set-top box*.
- (2) **Transparent pricing.** Operators will have to charge equivalent and transparent prices for provision and support of CableCARDS and reliant devices.⁶
- (3) **Standardized CableCARD installation** policies and procedures. Cable operators would need to allow subscribers to install CableCARDS in retail devices if the cable operator allows its subscribers to self-install leased boxes and technicians would be required to arrive with at least the number of CableCARDS requested by the customer.
- (4) **Multi-stream CableCARDS.** Cable operators would be required to offer multi-stream CableCARDS to their subscribers using retail set-top boxes.
- (5) **Product certification and licensing by CableLabs.** CableLabs, which is owned by the cable operators who lease devices, remains in charge of licensing and certifying competing products. The certification process for retail CableCARD devices would be streamlined and accelerated.

⁶ As is stated in the National Broadband Plan at 52 ("the bundling of leased boxes into package prices by operators"), the core issue is whether device discounts, subsidies, and incentives, as offered to subscribers who lease devices, will continue to be offered when that subscriber obtains a retail device instead. TiVo interprets this NPRM provision as addressing this issue as well as the relative pricing of the CableCARDS themselves.

TiVo strongly supports these rule changes and will submit our detailed comments and suggestions to the Commission.

Consumer Choice Cannot Wait

While TiVo supports the exploration of new concepts to better effectuate the intent of Congress in creating true consumer choice of video devices, arriving at a new solution applicable to all MVPDs may well take longer than anticipated. Meanwhile, CableCARD remains the only mechanism providing consumers a choice in set-top boxes. It is absolutely critical that the Commission not prematurely abandon CableCARDS in favor of undefined potential future solutions which have not yet attracted the necessary support from the service providers that would be responsible for their implementation.

There are hundreds of thousands of consumers using CableCARDS today and many more who we expect will purchase retail video devices once the Commission addresses some of the issues that have plagued CableCARDS to date. The tools and technology exist today to provide those consumers with real choice – provided they can get access to core cable programming services delivered via switched digital and other IP-based technologies without the use of an operator-supplied set-top box.⁷ We are pleased that the NCTA recently has expressed support for a retail market in which a customer would not have to rely on equipment from the operator to access the operator's video programming services and seeking to facilitate private sector solutions with limited

⁷ TiVo DVRs access video content such as Netflix, Amazon.com, Blockbuster, and YouTube today delivered over an IP connection using IP upstream signaling to request the programming. There is no technical limitation on TiVo DVRs using broadband for upstream signaling to request programming delivered via switched digital technology.

government mandates to the extent possible.⁸ We look forward to working with the cable industry in quickly making this vision a reality for our mutual customers.

In closing, Mr. Chairman, I want to express my appreciation for your efforts and those of your colleagues. You were right in 1995 to endorse Section 629, and you were right last month when you urged Chairman Genachowski to move ahead with his plans to enforce this provision. I look forward to working with this Committee, with the FCC, and with our private sector and public interest colleagues to achieve ultimate success for your initiative and for your tireless efforts.

⁸ See Letter from Kyle McSarrow, NCTA, to Chairman Julius Genachowski, FCC, dated March 12, 2010.

Mr. BOUCHER. Mr. Shanks.

STATEMENT OF ERIC SHANKS

Mr. SHANKS. Good morning. I am Eric Shanks, Executive Vice President of Entertainment at DirecTV. And thank you for allowing me to testify today.

To foster innovation and increase broadband adoption, the FCC is considering a plan to stimulate a retail market for smart video devices. While DirecTV supports the goal of innovation and broadband adoption, we have concerns with this proposal. Specifically the FCC may require cable, satellite, and other video providers to develop an all-video adapter whose sole function is to connect its service with third-party devices. The manufacturers of these devices could strip out our service and replace it with their own.

This government intervention is both unnecessary and harmful. Innovation and the convergence of broadband in TV are prevalent in the market today and growing. DirecTV is driving this effort by including Ethernet ports on all of our HD boxes and access to some of the most popular Internet sites like Flickr, Facebook and Twitter. By ignoring what is occurring in the market today, the proposal will have the opposite effect of what it intends. It could give cable a clear competitive advantage. It would place our innovative services at risk and result in increased costs and inferior customer service.

We built our business nearly 20 years ago through innovation. And it is imperative that we do even more today to remain competitive. In the last 15 months alone, we have downloaded 76 new features to our set-top box. We do more than simply transmit plain vanilla programming. The features and services you are about to see create the video experience that is unique to DirecTV.

Please roll the video. Should I go on and come back to the video later? There we go. I assure you we do give our customers audio.

Ms. ESHOO. Just not Congress, huh?

[Video played.]

Mr. SHANKS. So everything you just saw resides in our set-top box. Under the proposal, however, we cannot ensure that these features or any future innovations would work with third-party boxes. Thus consumers are left with three choices: one, pay for a new box from DirecTV; two, settle for an incomplete service that they expect to get; or three, switch to a provider whose technology is more suited to an all-video device. Although we don't advocate an all-video adapter mandate for any service provider, cable's two-way architecture allows it to place its intelligence in the head end rather than the home. This means its services will still work with third-party devices. This, however, is not an option for satellite. Thus the proposal would skew the competitive landscape towards cable, undermining the government's longstanding efforts to stimulate competition.

In addition, allowing third parties to strip out our services that you just saw and develop their own user interface will diminish the industry-leading customer service they expect from DirecTV.

When DirecTV first launched, there were hundreds of models of set-top boxes, each with their own controls and features. And

frankly, we struggled to help subscribers handle even the most basic functions when they called us, such as setting parental controls or turning on closed captioning.

This proposal would turn back the clock, leaving no clear lines of responsibility for customer service. We receive 140 million customer phone calls a year, including a great number regarding the set-top box. Who will take these calls and, more importantly, who will solve the customers' problems?

We believe there are better ways for the FCC to achieve its goals without the potential harm to innovation, competition and customer service.

And, fortunately, the FCC is willing to consider alternatives. DirecTV is already implementing one such solution. The RVU Alliance is a consortium of over two dozen distributors and manufacturers that have developed an open standard for in-home networking capabilities that allow subscribers to watch content anywhere in the home on any device, whether from any paid TV provider or the Internet. With RVU, everyone is free to innovate and provide unique services which accomplishes our shared goals. It fosters innovations, integrates broadband and video, eliminates the need for multiple set-top boxes, and creates devices that can work with different video providers.

DirecTV is eager to work with the FCC and with Congress to achieve the shared goals of innovation and broadband adoption. Thank you, and I look forward to your questions.

Mr. BOUCHER. Thank you very much, Mr. Shanks.

[The prepared statement of Mr. Shanks follows:]

**Written Testimony of
Eric Shanks
Executive Vice President, Entertainment, DIRECTV, Inc.
Before the
House Committee on Energy and Commerce
Subcommittee on Communications, Technology, and the Internet
April 29, 2010**

My name is Eric Shanks. I am Executive Vice President, Entertainment at DIRECTV. Thank you for allowing me to testify this morning. For the last several months, the FCC has been hard at work on a plan aimed at expanding the deployment of broadband technology and increasing innovation in the marketplace. In particular, we applaud the FCC for recognizing the role that video providers like DIRECTV are playing and will play in the effort. While DIRECTV supports the FCC's goals of increased innovation and access to broadband, we have serious concerns with the way it proposes to achieve those goals.

As part of its efforts, the FCC may require cable, satellite, and other providers of video services to develop an "All Video Adapter" that would connect the provider's service with third parties' "smart video devices." The FCC envisions the adapter to be small, inexpensive and with limited functionality. In addition, the proposal would allow third parties to disaggregate our service and replace it with their own.

This one-size-fits all approach ignores the unique technologies that distinguish satellite from cable and would adversely impact consumers, stifle innovation and undermine longstanding efforts to stimulate competition. More importantly, we do not believe government intervention is necessary. Innovation and the convergence of broadband and television are prevalent in the market today and growing. DIRECTV is helping to drive this effort, consistent with its history of providing new, innovative

features, including remote DVR technology, Common Sense Media ratings, and NFL Super Fan. In addition to the Boxees and the PlayStation 3s that allow consumers to access content on the Internet today, DIRECTV consumers can access Internet radio, Flickr and YouTube through our system directly; and will soon have available to them a media center that allows content to be moved around their home, and broadband and video content to be integrated on their televisions.

The FCC proposal, as drafted, fails to recognize what is occurring in the market today and will have the opposite effect of what is intended. First, it would place DIRECTV's innovative services at risk; second, it would skew the competitive landscape in favor of cable; and third, it would result in increased costs and inferior service for the consumer.

While we have serious concerns about the current proposal, we applaud the FCC for its willingness to explore alternatives that would achieve its policy goals. We believe the RVU Alliance is one such alternative underway that encourages innovation from both the CE manufacturers and the video distributors. This consortium of over two dozen distributors and manufacturers is developing an open standard technology that will enable consumer electronics manufacturers to integrate broadband and video content on televisions *and* to move all of that content throughout the home using a single media center, thus eliminating the need for multiple set-top boxes, let alone a government designed set top box.

I. THE ALL VIDEO ADAPTER PROCEEDING RISKS HARMING INNOVATION, COMPETITION, AND CONSUMERS

A. The FCC Proposal Places DIRECTV's Innovative Services at Risk

At DIRECTV, we have built our business through innovation. When we started almost twenty years ago, we had to compete by offering a better television experience—better picture quality, more channels, and better customer service. We were the first to deliver all-digital channels, the first to use MPEG-4 compression, and the first to introduce a substantial slate of HD programming. We have won eight Emmys for our technology, including our interactive NFL Sunday Ticket and other sports features. Simply put, DIRECTV is where it is today because it recognized that the market would reward better and more innovative service.

It is imperative we do even more today to remain competitive. DIRECTV launched a remote DVR application on computers and smart phones and introduced TV apps; we're incorporating Common Sense Media ratings in our guide, introducing 3-D television, and allowing consumers to access sites on the Internet, such as YouTube and Flickr. In the last fifteen months alone, we have downloaded 76 new features to our set-top boxes. We do more than simply transmit "plain vanilla" programming; these features and services create the video experience that is unique to DIRECTV. This is how we compete. The video we will show at the hearing provides just a glimpse of what our subscribers have come to expect from their DIRECTV service.

All of our intelligence and the features I have just described reside in the set top box. The box is the brains of our operation. Unlike cable, there is no headend in the ground that can store all the "smarts" needed to ensure these services work. Our headend

is essentially in the set-top box in the home. The FCC's proposal, however, would limit our ability to put intelligence and storage capacity into an All Video Adapter. By doing so, it substantially harms our ability to innovate. Even if we could continue to place our intelligent boxes behind the adapter, those consumers who purchased third party "smart devices" would not have access to the same advanced features or functionality they expected when they chose DIRECTV.

Under the FCC's proposal, moreover, innovation would be stalled if we had to wait to offer features until enough third-party box manufacturers chose to upgrade their boxes. For example, DIRECTV is currently able to roll out 3D television in a matter of months by downloading software to nearly all of our set-top boxes. Under the FCC's proposal, we would have to wait until third-party manufacturers decided to upgrade their devices—or try to justify the expense of 3D rollout to a fraction of our subscriber base while leaving the others behind.

The bottom line is that the FCC proposal would ultimately weaken the performance incentives created by the market, unraveling the lynchpin of DIRECTV's success while, as discussed below, inadvertently rewarding the cable industry.

B. The FCC Proposal Would Skew the Competitive Landscape in Favor of Cable

The proposal would harm satellite and skew the competitive playing field in favor of the incumbent cable industry. The FCC's plan intends to treat cable, satellite, and telco providers equitably, thus encouraging competition. But because different video providers use different technologies, a one-size-fits-all mandate would actually harm competition. To be clear, we are not advocating an All Video Adapter mandate for cable

or satellite or any other provider. All distributors should be free to optimize their network and services as they see fit. Because of our one-way architecture, however, the FCC's approach would be more damaging to satellite.

Unlike satellite, cable has a two-way architecture, in which information flows back and forth from the headend to the set-top box. This means a cable operator can place its functionality (DVR, Video on Demand, programming guide, etc.) either in its set-top boxes or at the headend, depending upon what it believes best optimizes its service. Thus, if the FCC were to mandate the All Video Adaptor, cable operators could respond by placing features in the headend, passing all of the functionality through the adaptor to its own boxes and downstream "smart devices." This is not an option for satellite. As explained above, our headend is in the home, residing in the DIRECTV set-top box. This means that third-party devices would have access to all cable features, but not all satellite features. If someone invests hundreds of dollars in equipment to find out later that it doesn't work with DIRECTV, but does work with cable, she would have a significant incentive to switch to cable.

In the absence of allowing for the flexibility required to maintain competitive parity, the FCC proposal would set back the federal government's longstanding efforts to stimulate competition between cable and satellite industries. In so doing, it will revive old problems (competition) even as it tries to solve new ones (broadband access).

C. The FCC Proposal Would Harm Consumers Through Increased Costs and Inferior Service

The FCC believes that an All Video Adapter mandate would foster innovation and lead to a better television experience. While we laud this goal, we think the proposal, instead, runs the risk of leading to higher prices and inferior service.

As mentioned above, unless we can put our intelligence in the adaptor/set-top box, there is no guarantee that DIRECTV subscribers would be able to receive all the innovative features they expected when they chose DIRECTV. The subscriber is left with three choices: One, he pays more for another set-top box from DIRECTV to get the services he expected; two, he settles for an inferior service; or three, he switches providers.

Furthermore, there is no way to ensure that consumers can make a truly informed decision when purchasing third-party equipment. Even if the smart device manufacturer disclosed which services a subscriber can or cannot receive today, there is no way to adequately advise consumers that their devices may not work with future innovations. For example, a consumer who purchased a smart device last year would not have known that, this year, she wouldn't receive 3D television, Common Sense Media ratings, or be able to access YouTube videos through our system.

In addition, allowing third party devices to disaggregate our service and develop their own user experience will diminish the industry leading customer service they expect from DIRECTV. For example, our history has shown us that DIRECTV cannot adequately help our subscribers navigate through multiple third-party television interfaces. When we first launched service, there were hundreds of models of set-top

boxes, each with its own controls and features. We struggled to help subscribers handle even the most basic functions, such as setting their parental controls or turning on closed captioning. Today, even though six manufacturers make our boxes, all of them offer a consistent experience. Our customer service is indisputably better.

Under the FCC's proposal, we also would lose clear lines of responsibility for customer service. We receive 140 million phone calls per year on a wide range of issues, including set-top box functionality and features. Who will take these calls when customers have problems with the smart device?

Today, a customer with a problem knows to call us. Indeed, sometimes the subscriber doesn't even have to call us. Our boxes can now perform self-diagnostic testing to determine the nature of a problem. Very soon, they will automatically relay that information to DIRECTV, telling customer service representatives what is wrong so that subscribers don't have to do so. By contrast, customers with third-party smart devices would not know who to call. The customer would be left to figure out whether a particular problem concerned DIRECTV's network, the All Video Adapter, the "smart" device, or the television. If the problem turned out to be anything other than our network, we could no longer help. And the smart-device and television manufacturers would not likely help. Unlike us, they have no ongoing relationship with their customers.

II. THE FCC'S GOALS CAN BE ACHIEVED THROUGH INNOVATIVE ADVANCEMENTS CURRENTLY HAPPENING IN THE MARKETPLACE

The FCC has expressed a willingness to look at alternative proposals that would achieve their goals, and we believe that one look at what is happening in the industry would show that their vision is coming to fruition. In initiating this proceeding, the FCC

seeks to (i) foster innovation, (ii) allow viewers to access Internet content on their televisions; (iii) eliminate the need for a set-top box for every television set; and (iv) allow consumers to access different video providers from the same device. These developments are occurring in the marketplace today, without government intervention. DIRECTV has already deployed millions of set-top boxes with Ethernet ports that accept Internet connections, and is beginning to deploy in-home networking capabilities that will allow its subscribers to seamlessly move content, whether from its video provider or from the Internet, around the home.

To accomplish this, DIRECTV is working with the RVU Alliance to make this technology available to its subscribers by the end of this year. The RVU Alliance is a consortium of over two dozen distributors and manufacturers, including Samsung, Cisco, DIRECTV, and Verizon that is developing an open standard technology that will enable consumer electronics manufacturers both to integrate broadband and video content on televisions and to move all of that content throughout the home using a single media center, thus eliminating the need for multiple set-top boxes. This technology also will allow television and consumer electronics manufacturers to innovate in their own offerings, without disrupting the services offered by companies like ours.

With RVU, when you turn on your television, you can be presented with a menu of video choices from various sources—for example, Netflix, Hulu, Google, and DIRECTV (or Comcast, or Verizon, *etc.*)—presented in a manner of the manufacturer's choosing. If you click on Netflix, you will get the Netflix's experience. If you click on DIRECTV, you will get the DIRECTV experience. If you click on Verizon, you will get the Verizon experience.

Chairman Genachowski made an apt comparison in his statement: “Just as a shopping mall presents customers with numerous retail outlets, smart video devices would offer viewers a single window into pay TV content and Internet content – as well as content that a viewer has already bought or archived.” RVU is that vision realized. The smart device manufacturer can determine what services are available in their “shopping mall,” but once you enter the DIRECTV store, DIRECTV can continue to provide its subscribers with the award-winning innovative services and customer service that they have come to expect from DIRECTV.

* * *

DIRECTV is eager to work with the FCC and Congress to achieve the shared goals of innovation and broadband adoption. Thank you once again for allowing me to testify. I would be happy to take any of your questions.

Mr. BOUCHER. Mr. Feld.

STATEMENT OF HAROLD FELD

Mr. FELD. Thank you, Mr. Chairman, Ranking Member Stearns, and members of the subcommittee. My name is Harold Feld and I am Legal Director for Public Knowledge. My organization, joined by other consumer and public interest groups as the FCC is part of the National Broadband Plan to adopt a universal gateway for set-top boxes and video devices. Two of those organizations, Consumers Union and Media Access Project, joined us in the written testimony submitted today, describing how a universal video gateway referred to in the FCC proceeding initiated last week is a set-back box, or AllVid device, will benefit consumers and further our National Broadband Plan. We believe that such a device applied across all MVPD platforms would promote innovation in the device and service market, enhance competition among MVPDs and help spur adoption of broadband by increasing the value proposition of broadband to consumers.

We also believe that the circumstances in today's market, as MVPDs are increasingly offering triple-play packages of video and voice and data, cable is undergoing a digital convergence and the ferment of VC interest in making online video available on every screen creates a perfect opportunity for the FCC to reboot its implementation of section 629.

As the FCC recognized in the recent notice of inquiry, the proposed AllVid approach could do for this generation of devices what the FCC's historic Carterfone decision and subsequent rulemaking did for the phone network, saving consumers monthly rental fees, opening up a new universe of equipment choices and, finally, creating the opportunity for unforeseen innovations such as the modem and the dial-up Internet.

I want to make three points. Choice and competition in video devices is good policy. As everyone knows, you can attach any device and run any application on your broadband connection at home. Whether it is an Apple, a Dell, an HP or an energy-saving device that lets me adjust my home thermostat remotely, I can attach it to my home broadband connection. My mother and my mother-in-law can have video calls with what I believe is their favorite grandson, and it doesn't matter that I have FiOS; my folks have RCN and my in-laws use Comcast. The equipment all functions the same.

This didn't happen by accident or because providers wisely arrived at this result through self-regulation. It happened because more than 40 years ago, the FCC announced a decision called Carterfone, that customers had a right to attach devices to the phone network. By setting a few simple ground rules, the FCC created the world of today in which consumers enjoy devices and services impossible to have imagined when it decided Carterfone.

With this experience in mind, Congress first in 1992 and then in 1996 required the FCC to create such ground rules for video devices. Nearly 15 years later, consumers are still waiting.

My second point. The FCC's attempt to implement the law through CableCARD has not worked. CableCARD has not lived up to its promise. Others here can speak more directly to why

CableCARD failed in that promise. In general, we believe, as the name CableCARD implies, the FCC simply delegated too much to the cable industry. CableCARD works for cable. It does not plug-and-play for consumers. It does not work with U-Verse or other IPTV. It is not required on DBS. And it does not play well with FiOS.

The FCC further undercut CableCARD adoption by granting countless waivers, including waivers for so-called low-cost, low-functionality boxes that undercut adoption.

As a first step, the FCC needs to fix CableCARD. Many consumers and competitive devices rely on it, but we need a fresh approach that is easy to use for consumers and promotes competition and innovation.

My third point. The video gateway is the best solution to implement the law, promote consumer choice, and promote broadband. All MVPD should provide consumers with a simple device that communicates with the MVPD network and makes MVPD services available to third-party devices. This will bridge the gap between closed MVPD networks and open home media ecosystems. It will open up all subscription TV networks to device competition. It is a win for consumers, for consumer electronics and retail industries, and ultimately for the MVPD industry as well.

As we saw with Carterfone, opening up the phone network for new devices created new opportunities for the telephone network providers to sell new services that they would never have developed without device entrepreneurs stimulating demand.

Only the video gateway model will help fulfill the goals of the National Broadband Plan in promoting adoption as well as just deployment. As Mr. Doyle observed earlier, between 85 percent and 90 percent of Americans rely on some form of MVPD, and almost all Americans have a television set, but only 60 percent of Americans have broadband in their homes.

By approaching broadband adoption through the media device most familiar to all Americans, their television set, we can help bridge the digital divide and make broadband for all Americans a reality. Thank you.

Mr. BOUCHER. Thank you very much, Mr. Feld.

[The prepared statement of Mr. Feld follows.]



**Testimony of Harold Feld
Legal Director, Public Knowledge**

**Before the
U.S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Communications, Technology, and the
Internet**

Hearing On:

**“The National Broadband Plan: Competitive Availability Of
Navigation Devices”**

**Washington, DC
April 29, 2010**

Testimony of Harold Feld*
Legal Director, Public Knowledge

On behalf of
Public Knowledge
Media Access Project
Consumers Union

Before the
U.S. House of Representatives Committee on Energy and Commerce
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Introduction

Mr. Chairman, Ranking Member Stearns, and members of the subcommittee, thank you for inviting me to speak today. My name is Harold Feld. I am the Legal Director of Public Knowledge, a nonprofit organization that seeks to promote consumer choice in broadband, video programming, and other communications services. I am also testifying on behalf of Media Access Project and Consumers Union. Media Access Project is a non-profit law firm and advocacy organization that works to advance freedom of expression, independent media, and universal access to communications platforms, and Consumers Union is an expert, independent, nonprofit organization whose mission is to work for a fair, just, and safe marketplace for all consumers and to empower consumers to protect themselves.

We are here to discuss how the FCC should implement a law Congress passed nearly 15 years ago to promote competition in the market for set-top boxes.

* I would like to thank Public Knowledge Staff Attorney John Bergmayer for his assistance in the preparation of this testimony.

Congress showed prescience and vision when it passed this law—codified at Section 629 of the Communications Act—as part of the 1996 Telecommunications Act.¹ Congress correctly predicted that the old analog cable box would grow into a sophisticated two-way “navigation device” allowing consumers on multiple platforms to choose among competing video services and new services emerging broadband communications would make possible. Section 629 therefore instructed the FCC in no uncertain terms to create rules that would make it possible for a consumer to purchase devices for these new services in a competitive consumer electronics market.

Unfortunately, despite many proceedings, rulemakings, and false starts, the FCC failed to create the competitive market in video devices Congress directed. Poorly constructed rules, undercut by numerous exceptions and waivers, left consumers with no easily implemented solution for video devices. As a result, the vast majority of subscribers to MVPDs continue to lease set-top boxes from their provider and cannot easily take advantage of competitive choices for such services as digital video recorders (DVRs). Often, consumers lease underwhelming set-top boxes for years on at rates that more than cover the cost of the equipment, and are charged a fee if they fail to return the devices when moving or changing providers—devices that, when returned, are thrown in a recycling bin. This poor consumer experience indicates a lack of a properly functioning market.

To its credit, the FCC recently recognized that despite Congress’ express directive in Section 629 and the FCC’s efforts, competition and innovation have

¹ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. § 549 (Section 629 of the Communications Act).

failed to emerge in the set-top box market, and this has deprived consumers of the lower prices and superior service that comes with a genuinely competitive market.² In the National Broadband Plan, the FCC determined that promoting competition in video devices would spur the adoption and use of broadband by making it easy for innovators to break down the wall between television and the Internet. Fulfilling the mandate of Congress to promote competition in video devices will help America achieve the goal of universal broadband, which has become the general-purpose communications technology of our time.

As part of the National Broadband Plan proceeding, Public Knowledge asked the FCC to adopt a “video gateway” approach. Under this proposal, all subscription TV providers would provide their consumers with a simple device that allows competitive devices to use subscription TV services. This approach is the best way to implement the law and help fulfill the goals of the National Broadband Plan.

Choice in Video Devices Is Good for Consumers—and It’s the Law

Choice in video devices is a long-standing Congressional policy. As cable television became more complex, subscribers increasingly needed specialized equipment, rented from the cable company, to access certain features. This not only required consumers to pay regular monthly fees they could avoid were equipment available for purchase, it also increasingly interfered with the market for VCRs and other consumer devices. In response to this, in 1992, Congress found that:

if these problems are allowed to persist, consumers will be less likely to purchase, and electronics equipment manufacturers will be less likely to

² *National Broadband Plan* § 4.2.

develop, manufacture, or offer for sale, television receivers and video cassette recorders with new and innovative features and functions....³

The 1992 law directed the FCC to start working on a standard to promote compatibility between cable systems and analog consumer electronics. The FCC quickly implemented a set of standards that proved remarkably successful. In less than two years after passage of the 1992 Act, consumers began to see the emergence of “cable ready” televisions and devices like VCRs. Manufacturers, able to use stable technical standards, began to create combined versions of devices. Consumers benefitted twice over. They saved themselves monthly rental fees and enjoyed the convenience of integrated televisions and devices. Related industries, such as the movie industry, likewise benefited from the broader availability of VCRs and DVD players.

Building on this success, Congress directed the FCC to create the same competitive market for the next generation of consumer devices. In a provision garnering bipartisan support, Congress ordered the FCC to:

adopt regulations to assure the commercial availability, to consumers of multichannel video programming and other services offered over multichannel video programming systems, of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems....⁴

The shift from “cable” to “multichannel video programming distributors” (MVPDs) reflected another success of the 1992 Cable Act—the emergence of competitors to

³ Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 544a (Section 624A of the Communications Act).

⁴ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. § 549 (Section 629 of the Communications Act).

cable such as Direct Broadcast Satellite (DBS). Congress therefore directed the FCC not only to adopt the technical standards needed to assure a robust video device ecosystem, but to follow through and make sure that the standards had the desired effect of promoting competition and choice in video devices and the future world of two-way digital services.

CableCARD, the FCC's Attempt to Implement the Law, Has Fallen Short

Unfortunately, the FCC was not nearly as successful in implementing Section 629 as it had been implementing the rules for analog devices. Years of rulemaking produced only a temporary solution called "CableCARD," a small card that plugs in to any compatible television, DVR, or PC that allows these devices to access one-way cable services. The FCC did not settle on final rules for CableCARD until 2005, and did not require cable operators to include CableCARD with all new set-top boxes until 2007.⁵ The FCC further undercut the value of CableCARD by exempting cable's primary competitor, DBS, from application of the rules.

Because CableCARD was only intended to be a temporary solution, it is incapable of sending signals upstream back to the cable company—the kind of signaling necessary to allow it to access video-on-demand, other two-way services, and increasing numbers of "switched digital" channels. The "solutions" that have been presented to allow CableCARD devices to access these abilities have been unsatisfactory. In particular, "solutions" that require a consumer installing a CableCARD-compliant device to continue to use a cable-supplied set-top box simply worsens the problem Congress intended Section 629 to solve.

⁵ See *Commercial Availability of Navigation Devices*, 20 F.C.C.R. 6794 (2005)

CableCARD Is Too Cable-centric To Succeed

Plans to replace CableCARD with a more modern solution that uses downloaded software, rather than a physical card, have gone nowhere—in part because the cable industry has dominated the process. The FCC permitted CableLabs, the standard setting body for the cable industry, to set standards without regard to the requirements of other technologies. Tru2way, the two-way system promoted by the cable industry and blessed by the FCC, has proven extremely difficult for providers using alternate technologies such as FiOS or IPTV. Worse, the licensing terms for tru2way require that a developer of compatible consumer electronic devices or services must abide by numerous restrictions set by incumbents to prevent the development of competing services and impose needless expense these developers must pass on to consumers.

With initiatives like tru2way, the cable industry gave up limited control of the hardware in a subscriber's living room, but maintained control of the software subscribers need to access the services they pay for. We have seen that mobile devices with operating systems and software controlled by companies like Apple, Palm, and Google offer a superior experience to locked-down handsets where all software and updates have to be carrier-approved. Similarly, innovative, feature-rich, easy-to-use video devices are far more likely to be supplied by outsiders than by cable companies, whose devices and interfaces are widely-used but little-loved.

CableCARD has not even lived up to the limited goal of promoting competition in devices that only access one-way services. Only CableLabs can certify a device as compatible with CableCARD, and the lack of competition for certification

has made the process time consuming and expensive. Consequently, few compatible devices are available at retail.

Rather than fix the problem by developing new standards and opening the standards process, the FCC attempted to bolster CableCARD by requiring that cable companies use it for their own equipment. The FCC then undermined this effort by granting frequent waivers. Manufacturers of compliant devices cannot achieve the economies of scale needed to make them competitive on price. Nor do they have a dependable platform on which to innovate, discouraging investment. Where developers have tried to develop devices that comply with the rules, the ability to obtain cheaper non-compliant devices by waiver has effectively destroyed the market for compliant devices.⁶

But even when a manufacturer makes it through the obstacle course, overcomes the cost, and brings a CableCARD compliant product to market, problems have not ended. CableCARD customers often cannot access the full range of services for which they pay for a variety of reasons. Customers have reported difficulty obtaining CableCARDS from their cable companies if they have boxes that came without CableCARD included. Even customers with CableCARDS included with the cable box must install the cards themselves, and those that do often find getting them to work difficult. The difficulties are not only logistical or technical. Anticompetitive price arrangements—such as charging all customers for rented set-

⁶ See Letter of Harold Feld, Legal Director, Public Knowledge, to Marlene Dortch, December 8, 2009, CSR-7902-Z; CS Docket No. 97-80, available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020351973>, and attached declaration of James D. Gee, Jr., Managing Member of IPCO, LLC, available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020351975>.

top boxes, whether or not they use them—are unfair to CableCARD users and discourage adoption. While cable operators have made efforts to address these complaints, problems persist; further thwarting Congress' intent to develop an independent consumer market in video devices to the detriment of consumers and the economy as a whole.

Finally, even if the current system worked well, it is limited because it only applies to cable systems. This, at least, is one area where Public Knowledge and the cable industry agree. Consumer fairness and regulatory parity both demand an all-MVPD solution. Today, satellite TV is more popular than ever, but is exempt from the CableCARD rules, and Verizon and AT&T offer subscription TV services that are incompatible with CableCARD. A system that only applies to cable does not meet the law's requirements, singles out cable on the basis of outdated market analyses, and does not make switching MVPDs much easier. Consumers should be able to use the same equipment with any MVPD—not just with any cable company—and should be able to easily switch from cable to satellite or another MVPD, and vice versa. From a consumer perspective, being locked into “cable” is the same as being locked into Comcast, Cox, or whatever the local cable company is.

These problems continue, five years after the FCC adopted the CableCARD rules, because the FCC has not been successful in its responsibility to implement the law as required by Congress. Too often in this process the FCC has viewed the cable industry as a “client” and “stakeholder” to be serviced, rather than putting the interests of consumers first. For the FCC to implement the law properly, and create

the innovative and competitive market Congress intended consumers to enjoy, the FCC must take a new approach focusing on the interests of MVPD subscribers.

The Video Gateway Is the Fresh Approach That Is Needed to Promote Competition and Implement the Law

The FCC should take quick action to fix the CableCARD system, which many consumers and competitive devices still rely on. At the same time, a fresh approach that applies to all MVPDs, as the law requires, is needed. That's why Public Knowledge, Media Access Project, Consumers Union and others submitted a petition to the FCC last December asking it to adopt a "video gateway" model, which will finally open up all subscription TV networks. You can use a Mac or a PC on your broadband connection without having to ask your ISP for permission, and you don't have to buy a different computer depending on whether you have cable, DSL, or fiber broadband. This is exactly the model that should be replicated with subscription TV: you should be able to buy devices at retail that "just work," whatever kind of service you have.

Under the gateway proposal, the FCC would require that all MVPDs provide consumers with a simple device that communicates with the MVPD network and makes MVPD services available in a standard way to third-party devices—bridging the gap between closed and proprietary MVPD networks and the open and competitive home media ecosystem.

The gateway approach will provide a single, nationwide, technology-neutral standard that allows competitive devices to work with any MVPD. Without this, the market will continue to be segmented into different technology islands, and new entrants will find it difficult to achieve economies of scale and market their

products. A standard needs to be a standard. There can be no exceptions or waivers and proposals that call for a “gateway functionality” to be built into set-top boxes create an opportunity for the same kind of discriminatory pricing that has suppressed the competitive marketplace in video devices for many years. All of the services an MVPD offers need to be available through the gateway. Consumers should not have to care about how their video gets to them, and services they pay for shouldn’t only be available to people who buy equipment from preferred suppliers.

As the history of Section 629 shows, technology alone will not promote competition. Our petition asks the FCC to rethink its non-technical regulations as well. For years, cable companies have mixed equipment and service charges in a way that makes it hard for outsiders to compete. The FCC must not allow this practice to continue, as a competitive market can only exist where consumers have the information they need to make informed choices and where MVPDs cannot take unfair advantage of their position in the consumer’s home. In addition, the FCC must commit itself to developing a speedy complaint process and swift enforcement of the rules it adopts. Without these additional rule changes and institutional changes, the proposed gateway will simply become the next CableCARD, undermined by second-class service and third-class support.

The video gateway is the best and lowest cost way to achieve standardization. It only requires that there be a single standard for accessing services on the different kinds of MVPD networks—the networks themselves will not require significant upgrades to support it. Satellite, wireless, DSL, cable, and

fiber-to-the-home broadband networks are as different as can be. Different broadband providers can deploy different technologies and differentiate themselves through pricing, speed, bandwidth, and reliability. But because home broadband networking technologies are standardized, people can walk into Best Buy and purchase compatible equipment without having to know the technical details of their equipment, and when they move they do not have to throw it all away.

Implications For The Broader Digital Future

Competition in Internet-delivered, or over-the-top, video is a model for what could happen with MVPD video if the barriers to entry are broken down. Dozens of companies offer services and create devices that work over broadband, offering innovative video products with easy-to-use interfaces. But relative to MVPDs, over-the-top video is still a niche product that is not a full substitute for MVPD programming. There are substantial differences between facilities-based MVPDs, which run wires into the home or have access to exclusive spectrum, and over-the-top services that compete on a level playing field with other over-the-top services. The existence of over-the-top video does not mean that the gateway is not needed, and over-the-top services should not need to support the gateway. At the same time, by allowing devices to mix over-the-top and MVPD services, the video gateway may help over-the-top services gain even more popularity, and this in turn might help some consumers who don't need, or don't want to pay for, the full lineup of MVPD programming to "cut the cord" and get all their video from the Internet.

There is a historical analogy, too. In 1968, the FCC issued its *Carterfone* ruling,⁷ making it clear that consumers have the right to use any non-harmful device on the telephone network. It followed this up with rules that established a standard interface that competitive devices could use to communicate with the telephone network. If it weren't for the FCC's *Carterfone* decision, it would have been impossible for consumers to use their telephone lines with modems to connect to the Internet without asking for special permission, and the digital revolution might have been delayed.

Some people have said that the market is moving in this direction already. Respectfully, it is not. There are a lot of market initiatives going on right now, but there is no reason to think that any of them will give us what the video gateway will: A nationwide, all-MVPD solution that allows third-party device competition to thrive. That's the kind of solution that's needed to satisfy the law. No one is saying that MVPDs have to become "dumb pipes." In a video gateway system, they will continue to differentiate themselves with various pricing plans, bundles of channels, and video-on-demand and other enhanced services, just as they do today.

Conclusion

The gateway is the best way to allow competition to bring the same innovation to video devices that we've seen in other areas. It is the best way to bring the benefits of broadband to the living room, which will help close the digital divide. Though I welcome debate on how the FCC can best make sure that consumers benefit from video device innovation, I reject the suggestion that years of

⁷ *Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d 420 (1968).

incumbent opposition and false starts mean that the FCC should disregard the law, forget competition, and hope that things will just work out in the end. I ask that all members of this subcommittee support the FCC as it takes necessary steps to promote consumer choice.

Thank you.

Mr. BOUCHER. Mr. Young.

STATEMENT OF DAVID E. YOUNG

Mr. YOUNG. Chairman Boucher, Ranking Member Stearns and members of the subcommittee, thank you very much for the opportunity to speak with you on what is obviously a very important issue to the chairman and this subcommittee, and has been for a long time. And the reason I believe it has been important is because this is an issue that you believe will drive competition, innovation, and consumer choice, which was certainly desperately required when first visited in 1992 and even again in 1996.

But a lot has changed since then. It has been less than 5 years that Verizon first began offering FiOS TV service to the residents of Keller, Texas. And our 3 million subscriber base is small compared to our cable and satellite competitors, but we are playing big. And our innovations in the marketplace are forcing our larger competitors to respond to us.

We have spent \$23 billion building an all-fiber-to-the-home network that is capable of delivering the fastest broadband speed, and we have integrated the best of digital cable technology with Internet protocol to provide the best video experience possible.

We have also introduced a number of service innovations. We were the first multiroom DVR. We were the first to provide a media manager service that allowed content from your PC, pictures, and music to be played through your television set. And we brought something to the market called widgets. And these widgets are applications that run on our set-top boxes.

The first ones that we brought were traffic and weather. These are still very popular ones. But we were the first to bring Twitter and Facebook to the TV. And these turn television watching into a true social media experience.

We have brought other ones like the NFL Red Zone that allows you to have an interactive multimedia sports experience rather than just watching programming on the TV. And just this week, we announced our YouTube and iheartradio apps, so that you can access all of the YouTube content or tune into hundreds of radio stations from across the country. And all of this is through the leased set-top boxes that our customers have today.

But we are not the only ones doing this. You walk into any Best Buy or other big box store, you will find lots of innovative, smart video devices available. These are devices like the Xbox or the Wii or the PlayStation. There are smart TVs. There are Blue Ray players. There are specialized boxes. Some call them Internet media adapters or net-top boxes like Apple PD or Roku and, of course, PCs, laptops, netbooks and tablet computers. All of these are able to access video content over the Internet and bring that experience to a customer's television set. And so from these devices you can access Netflix, you can access YouTube, Amazon, Major League Baseball and more.

So there is actually a robust retail navigation device market. The problem is that these same devices can't be used to access your subscription TV program, and that is what we are all trying to figure out. That, of course, was the vision behind section 629. It is the vision behind the FCC's notice of inquiry, and it is the reason that

we have been reaching out to our CE partners and trying to demonstrate proof-of-concept prototypes that demonstrate that their CE devices could work with our service without the need for a leased set-top box. It is also why Verizon has taken a leadership position in a number of standard setting bodies to help develop the standards to make all of this possible.

We believe that this is achievable, but we have concerns about the specific proposal. We think that a gateway model imposed on all technologies is not necessarily the best way to go. It is certainly not the only way to go. And we think that it risks repeating some of the mistakes that were made in the past in the implementation of CableCARD.

Mr. YOUNG. So what is the right way to achieve success? Any policy framework needs to recognize consumer choice. Some consumers prefer to lease a box and let somebody else buy it and maintain it and take care of it. Others would prefer to buy the box and own it themselves. And so, any solution should ensure both of those things.

Any solution should encourage collaboration. Collaboration between the device makers and the service providers is important because it can improve the experience for the customer. It can help avoid problems by making sure that every detail is taken care of in advance. And if things do break, as they often do, it ensures that there is a way of getting that problem resolved without leaving the customer stuck in the middle with two parties pointing fingers at each other.

We have to ensure that the MVPD experience is delivered to the customer the way the customer expects it to be delivered and that they are getting everything that they pay for.

And then, finally, I think all of this goes to creating the right framework that will promote continued innovation, competition, and consumer choice without repeating the mistakes of the past.

Thank you.

[The prepared statement of Mr. Young follows:]

**Prepared Testimony of David E. Young,
Vice President – Federal Regulatory Affairs, Verizon
U.S. House of Representatives Committee on Energy and Commerce,
Subcommittee on Communications, Technology, and the Internet
“The National Broadband Plan:
Competitive Availability of Navigation Devices”
Thursday, April 29, 2010**

Thank you Chairman Boucher, Ranking Member Stearns, and Members of the Subcommittee for the opportunity to testify today on the future of video navigation devices.

I understand this Subcommittee has a long-standing interest in this topic. And I am pleased to testify today that competitive and technological developments have created an innovative and dynamic marketplace that is bringing forth new and exciting choices for consumers. For example, just this week Verizon launched our latest developments that bring Internet video content and hundreds of Internet radio stations to the FiOS TV experience. FiOS TV customers can now simply use their remote controls to search for and enjoy any YouTube video or iHeart Radio station - right on their TV screens. This is in addition to other online video-sharing sites such as blip.tv, Dailymotion and Veoh that were already available to FiOS TV customers. The addition of YouTube, the world's most popular online video community, will add thousands more daily videos to our service, and Verizon continues to work with other partners to increase and simplify consumers' access to content, including online content.

In addition to Verizon's offering, consumers are able to purchase many different devices today to bring content from the Internet to their TVs. In the near future,

they will be able to use devices like these to seamlessly navigate both Internet content and pay TV content regardless of who their video service provider is. This is the vision behind Section 629 of the Communications Act and the motivation for the FCC's recent notice of inquiry. While we look forward to participating in the FCC's notice of inquiry on how best to achieve this vision, we would ask the Commission and other policymakers not to impose a one-size-fits-all technology mandate. Although it represents one possible solution, the approach recently suggested by the FCC is not necessarily the only or best way to achieve the goal of a competitive market for video navigation devices. Differences in video services and in the capabilities of consumer electronics devices will call for a variety of approaches to allow for interoperability and continued innovation in the competitive video market.

As you know, Verizon is a new entrant in the video marketplace. In fact, it's been less than 5 years since we first started offering FiOS TV to the residents of Keller, Texas. Since then, we have expanded the reach of FiOS TV to 14 states with service available to more than 12 million homes. While our customer base of about 3 million subscribers is small relative to our cable and satellite competitors, the innovations we are bringing to the market are forcing our competitors to respond.

FiOS is unique in that we bring fiber all the way to the home. Over the fiber, we currently deliver FiOS Internet services with upstream speeds up to 25 megabits

per second and downstream speeds as fast as 50 megabits per second, and our network will let us increase those speeds well into the future to meet consumer demand. We install a wireless router in the home, creating an instant wi-fi local area network that allows customers to easily connect wi-fi enabled laptops, printers, game consoles, smartphones, iPads, television sets and any other wi-fi enabled consumer electronics device.

When we created FiOS TV, we combined the best of digital cable technology with the emerging capabilities of Internet Protocol TV. On our fiber-to-the-home platform, we have one laser carrying the capacity of an 860 MHz cable system dedicated only to linear programming delivery, and two other lasers delivering upstream and downstream voice, Internet access and FiOS-TV interactive services (such as video-on-demand, the Interactive Media Guide, widgets, as well as search and other capabilities) using a high-speed, high capacity Internet Protocol data infrastructure. The result is an all-digital, crystal-clear TV service with over 130 high definition channels and hundreds of standard definition channels in each market with robust, two-way interactive capability. As a result, our set-top boxes are unique in that they combine traditional one-way cable technology with interactive IP capabilities making them powerful platforms that enable Verizon to innovate and increase the choices available to our customers.

One innovation directly relevant to the topic at hand is widgets. At Verizon, widgets are applications that run on the set-top box. The first widgets that we

created were simple weather and traffic apps, and these are still extremely popular. Last year, we were the first video service provider to bring Facebook and Twitter to the TV. The Twitter widget allows you to see what other people are saying about the same program that you are all watching, turning TV viewing into a social media experience. The Facebook widget allows you to check on your friends' status, update your own, and view Facebook pictures on your big screen TV. And as noted above, Verizon continues to increase and simplify consumers' access to online content, including most recently from YouTube and iHeart Radio.

As we continue to develop widgets with partners like these, we are also working on a software development kit that would allow a wide range of independent developers to create FiOS TV widgets that could be brought to consumers through our TV app store that we call the Widgets Bazaar.

We are not alone in doing this. In fact many consumer electronic devices today – laptops, netbooks, tablet computers, TVs, Blu-Ray players, DVRs and game consoles – have wi-fi connectivity which allows them to access Internet delivered content directly, completely by-passing the video provider's service. Our customers have these devices in their homes today and they are continuing to buy more. They are using them to access YouTube, Amazon Video, Netflix and other video content over the Internet. For example, my teenage son's XBOX 360 is connected to the TV in our living room and we have started using it to watch

Netflix videos over the Internet. We can also watch Netflix on our PC, on my laptop, even on my new iPad.

My family and many consumers would also like to be able to use these same devices to access subscription TV services. This is why Verizon has been actively working directly with a number of leading consumer electronics makers to demonstrate the feasibility of having their devices work as a FiOS TV navigation device and through various, open, standards-setting bodies to establish a suite of standards to make this possible. Of course, many consumers are likely to prefer more traditional methods of accessing video services – such as devices offered by their video providers – and providers should be able to meet that demand as well introducing innovative devices and offerings.

As we move forward with the FCC's notice of inquiry, there are a few key points worth remembering:

First, technology is moving quickly and is being driven by customers' desire to consume media and access information and social networking services on a wide variety of devices. None of us, no matter how smart, knows exactly how all of this will evolve. But what we do know – and the CableCARD experience is a cautionary tale for this point – is that prescriptive technology mandates and one-size-fits-all solutions will not serve consumers well.

Second, traditional multichannel video providers are competing today not only with each other but also with online video service providers, and that head-to-head competition is only going to increase. Walk in any big-box electronics store today and you will find a wide selection of IP-enabled devices – ranging from TVs, to game consoles, to “net-top” boxes – that allow consumers to access video and other content from the Web on a wide range of devices. Therefore, although providers should be able to offer consumers video services using the more traditional devices that many consumers are comfortable with, in order to remain competitive and keep pace with technology, video providers also have every incentive to ensure that their services are available on these devices that consumers clearly want to use.

Third, the advanced FiOS TV services we are offering today aren't the cable services of 1996, or even 2006. The video services that consumers purchase today are no longer limited to a relatively simple package of linear video programming – the common experience until relatively recently. Instead, thanks to advances in technology and increased competition, consumers have access to an increasingly rich multimedia experience when they access their video providers' services. Whether it's selecting a movie from a vast library of offerings, choosing a camera angle for a sporting event, gaining real-time access to an Olympic medal count, or making a home-shopping purchase directly from the TV, consumers are empowered to do many things beyond passively watching prescheduled programming. These advances are also important from the

provider's perspective. Consumers are now able to select and purchase many offerings directly from their devices – rather than calling a customer-service representative and waiting on truck rolls. Similarly, customers are able to use these more advanced services to identify and address many technical or other concerns more conveniently, without time-consuming calls or visits.

Fourth, while these new services are great for consumers, they are also far more complex than cable services of old. This complexity may be incompatible with the vision of a simple gateway device that enables all of a consumer's services. As consumers move from device to device to access their services, all of the key functionality and usability of our service must be maintained. When I go into my FiOS TV service, it should work the same with all of the functionality that I expect to find there regardless of what device I am using.

But making this happen is no simple task. For example, today's digital subscription video content offerings include more than 100 software interfaces between the customer's navigation device and the provider's servers, for handling things like channel changing, requesting interactivity, launching and controlling video on demand streams, requesting metadata about the content to display on the screen, buying and provisioning access to content, or receiving electronic support. It is not feasible that all of these interfaces could be standardized across all types of video providers – something that would be required under the simple, common gateway model.

This is not to say there is no role for open standards, in fact, just the opposite. Having a set of standards to use makes it easier to achieve compatibility. Fortunately, we already have the true, underlying core standard that is necessary to make this happen and that is the Internet Protocol. If you look at all of the Internet based video services out there today, the only open standards that they all have in common are IP and XML – just about every other aspect is unique to each service. And yet devices are easily able to access all of these online video services today.

Finally, even though it has increased complexity, service innovation and differentiation are absolutely critical in the competitive video market and must be encouraged, not stifled. Let's avoid repeating the mistakes of CableCARD and instead look to the Internet approaches that are working. Rather than dictating new technological approaches that would drive everything to the least common denominator or dramatically increase the costs to device makers, policymakers should encourage an approach that allows the capabilities of the new devices to be used to their fullest while at the same time ensuring that the subscriber's services are delivered in full as expected.

These are exciting times. Convergence, broadband adoption and consumer electronics breakthroughs are empowering consumers in ways that few could have imagined only a few short years ago. Verizon stands ready to work with this

subcommittee and the FCC to realize that vision. We are actively engaged in the industry standard-setting bodies working on these issues and we are actively engaged with consumer electronics makers to bring this vision to the market sooner rather than later.

Mr. BOUCHER. Thank you very much, Mr. Young.

And thanks to all of our witnesses for your thoughtful and informed comments this morning. We have benefited in our understanding of the issue from the information you have provided.

Mr. Shanks, let me begin my question with you. You represent DirecTV this morning. And I hear two basic concerns being expressed by you. Let me see if there is a way to address these consistent with the FCC's proposals.

The first thing that I have heard you say is that you are concerned that you are in a very different situation from cable; that cable can place a lot of the functionality interfaces in the local cable headend. You have to build those into your box because, given the constraints of a satellite, you can't place those interfaces in the satellite, so you have to do that in the box itself. And you are concerned that, if it is not exactly your box that your consumer is using, some of that functionality could be lost.

Would it serve your purpose and satisfy that concern if you were able, under the FCC's eventual order, to be able to build the essential functionality that you have to have into your gateway device?

You could still keep it simple. The primary goal of the device would be the standardized output signal that could be received by and processed by competitively available navigation devices. But you could enhance it to the extent necessary in order to include that vital functionality that you have to provide for your consumer experience.

Is that a possible solution?

Mr. SHANKS. As we understood it today, no, in the sense that the third-party devices at the handoff point of a gateway can pick and choose what to do with the content. So—

Mr. BOUCHER. Well, I think you are going to the second part of your concern. Let's stick with the first part. I am going to address the second part in just a moment.

So the first part is simply this. If you put that functionality that you have to build into your boxes today into the gateway device itself, why doesn't that solve the problem?

Mr. SHANKS. That gateway device would be our set-top box.

Mr. BOUCHER. Well, it wouldn't necessarily have to go that far. I mean, it wouldn't have to do all the various things that your set-top box does at the moment. It would just be the essential things that the cable company builds into its headend that you, by necessity today, have to put into the set-top box.

Mr. SHANKS. I believe that the service that is sold from DirecTV—which is a service which is comprised of all of the things that, you know, we displayed in the video. The only way that satellite can actually get that service is by a completely seamless and disaggregated chain of satellite, set-top box, remote control to the television set.

So that gateway would have to include—I mean, we actually don't build unnecessary things into our set-top box because we don't want to increase cost. So it is as simple as we can make it today.

Mr. BOUCHER. Well, all right. I hear what you are saying.

Let me ask that you give serious consideration to this possibility. Because the Commission is on track, and I think properly, and

many of the witnesses here have said properly, to develop the gateway box as the bridge, as the way to make sure that you really can have this competitive market for set-top boxes. And it seems to me that if you enhance that set-top box with whatever is absolutely essential for you to have in it, comparable to what the cable company puts in its local cable headend, and leave all the other functionality for the competitive set-top box itself, that the problem potentially is solved. And I would just ask that you give careful thought to it, going forward.

Mr. SHANKS. Yes, sir.

Mr. BOUCHER. The second part of your concern was this. You said that you are concerned that some of the unique functionality that you offer that makes DirecTV special could be stripped out by that competitive provider of a navigation device and, therefore, deprive your customer of that unique experience.

Would it not be a simple answer to that concern if the FCC, as part of its rule, basically says that all of the services provided by the multichannel video distributor would have to be passed through and processed by and made available to the consumer from these competitively available navigation devices?

Mr. SHANKS. There are two concerns with that.

Number one, that innovation is clearly happening today. Sony Bravia television, we hand off our signal. The complete DirecTV service is included in the Sony Bravia television—

Mr. BOUCHER. Well, let me just see if I can get a direct answer to the question, because my time is limited.

Mr. SHANKS. OK.

Mr. BOUCHER. Would that not be a satisfactory way to handle it?

The Commission would require that the very concern you are expressing here, in fact, not become a reality, because that box would have to process and make available all of your functionality.

Mr. SHANKS. So that would just get to my second point, which is—

Mr. BOUCHER. Well, that is the second point.

Mr. SHANKS [continuing]. Customer service. Exactly. Which is, you know, the ability to be able to troubleshoot, and who is going to call DirecTV if the interface is completely hijacked from DirecTV. And that is a problem that we have had in the past.

Mr. BOUCHER. OK. Thank you.

Mr. McSlarrow, let me turn to you. Thank you very much for cable's very constructive statement of principles. Those have been presented very well by you this morning. And I want to just make reference to the first one for purposes of the question to you.

That first principle says that consumers should have the option to purchase set-top boxes at retail that can access their cable company's video services without having to have a set-top box that is supplied by that cable provider. And that certainly speaks directly to the goal that we are here trying to achieve this morning.

Can I read that statement as suggesting that the cable industry would also support taking the steps that are necessary to make sure that the switched video services, the digital switched video services that many cable companies are now beginning to offer—with, as Mr. Zinn suggested, hundreds of channels now being provided and switched digital video that cannot at the present time be

accessed through cable cards—would you support the steps, consistent with this first principle, that would enable those switched digital video services to be accessed through cable cards so that companies like TiVo would be in a position to record those programs as well as others?

Mr. MCSLAW. Yes. And, in fact, in 2007, Tom Rogers, the CEO of TiVo, called me and asked me to help him address this issue. And, in fact, at the end of 2007, Tom and I made an announcement where the cable company made a commitment to supply tuning adapters to any TiVo customer so they could access switched channels. Now, it is not a perfect system, but we have already shown our willingness and our commitment to meet that obligation.

Mr. BOUCHER. I appreciate that statement.

Let me just suggest that the way that I think it is being done today is somewhat awkward. And it involves using a bulky tuning adapter, which is, itself, as large as a set-top box, and it is difficult to connect and utilize.

What Mr. Zinn is proposing is that the cable company allow a request to be sent upstream by way of the broadband network. And it would seem to be a fairly simple matter for the cable company to accept that request and have it acted upon electronically. Would you agree that that is an appropriate request, and would your companies honor it?

Mr. MCSLAW. So I would have described the tuning adapter as “miniscule and elegant.” But—

Mr. BOUCHER. I have actually seen one, and it is as big as a set-top box. At least the one I saw was.

Mr. MCSLAW. OK, large and elegant.

Mr. BOUCHER. Yes. I think Mr. Zinn has one here, by the way. He can show us just how large it is.

I am sorry. Go ahead.

Mr. MCSLAW. All right, go ahead. Have your field day.

See, it is actually smaller than a set-top.

The IP back channel is a legitimate issue. The problem we have right now, at the moment, is that what TiVo has asked for is a proprietary IP back channel solution, where they are working with SeaChange.

We are actually open to and have told the FCC we are open to exploring IP back channel so you could signal upstream to the headend that is an open standard, that would be available to any consumer electronics manufacturer who wants to avail it, not just one company.

Mr. BOUCHER. All right. My time has long expired. And the chair will be generous with other Members as they propound their questions.

Thank you very much to all of you for those answers.

The gentleman from Florida, Mr. Stearns.

Mr. STEARNS. Thank you, Mr. Chairman.

Let me just ask each of you a question. Just give me a “yes” or “no” answer.

Should the FCC adopt a current gateway mandate as currently proposed?

Mr. Williams, yes or no?

Mr. WILLIAMS. Yes.

Mr. STEARNS. Mr. McSlarrow?

Mr. MCSLARROW. I don't know.

Mr. STEARNS. Just "yes" or "no."

Mr. MCSLARROW. There is no gateway proposal. It is a concept. I don't know.

Mr. STEARNS. Well, do you support the FCC's commission? Do you think they are on the right track?

Mr. MCSLARROW. I think they are on the right track. But they are exploring it. It is just an NOI.

Mr. STEARNS. So you think they are on the right track.

Mr. ZINN? The first question is, should the FCC adopt the current gateway mandate as currently proposed, yes or no?

Mr. ZINN. I agree that they are on the right track. I also agree with Kyle that it is an NOI and there is no concrete proposal at the current time.

Mr. STEARNS. So you think, when they talk about the recommendation of 4.12, that is not a proposal?

Mr. ZINN. It is a concept, and I agree with the concept. So my answer is yes.

Mr. STEARNS. So you don't see it as a mandate at all?

Mr. ZINN. Actually, I don't see it as a tech mandate. I see it as a request for standardization. So it is a definitional question: Is a standard a tech mandate, or is a standard a standard?

Mr. STEARNS. So you don't see the FCC's recommendation as any mandate at all. It is just talking about apple pie and cherry pie, apple pie and goodness, huh? That is how you see it?

Mr. ZINN. Yes.

Mr. STEARNS. OK.

Mr. Shanks?

Mr. SHANKS. No, sir.

Mr. STEARNS. OK.

Mr. Feld?

Mr. FELD. Well, to the extent that they ask whether—

Mr. STEARNS. Just a "yes" or "no."

Mr. FELD. We filed a petition asking for a rulemaking on this, and they put that out as part of the NOI comments. So we support that.

Mr. STEARNS. So you are a yes.

Mr. Young?

Mr. YOUNG. No, I don't think the gateway proposal as it stands is—

Mr. STEARNS. OK. I think it is important, just first of all, to find out where you are on this basic question here. I noticed that two of you here wouldn't give me an answer, and it seems a little more political, your answer, frankly. I would think, if you back to your association members, I think they are going to give you an answer to this and not quite as equivocal as the two of you just gave.

Mr. Young, the National Broadband Plan calls for a gateway mandate to kick in on December 31, 2012.

Mr. Zinn and Mr. McSlarrow, it is 2012, so that is a mandate, in my opinion.

But, anyway, Mr. Young, so the question to you is, when do you think your companies will be accessible on third-party devices?

Mr. YOUNG. We are working very aggressively to make that happen well in advance of the 2012 deadline. And we believe that it can be done without the gateway as proposed by the FCC. So we are encouraged that the NOI looks for alternative approaches because we believe we have one.

Mr. STEARNS. Do you think there could possibly be a risk that the 2012 mandate will slow down your existing work?

Mr. YOUNG. That is certainly a possibility. If the gateway approach must be adopted in a particular way by all providers regardless of whether it is necessary, that would certainly slow down our work.

Mr. STEARNS. OK.

Mr. Shanks, the same question to you is, when do you think your company is going to be accessible on third-party devices? And is there a risk, possibly, that this government mandate of 2012 will slow down your existing work?

Mr. SHANKS. First of all, the DirecTV service is available through open standards called DLNA today. So you can watch DirecTV on a PC or on a phone or any DLNA-enabled devices.

Mr. STEARNS. You can do it on a PlayStation? XBox?

Mr. SHANKS. If they are a DLNA-compliant, open standard—

Mr. STEARNS. Handheld wireless devices, too?

Mr. SHANKS. Yes, sir.

Mr. STEARNS. Digital recorders?

Mr. SHANKS. Yes, sir.

Mr. STEARNS. OK. iPad?

Mr. SHANKS. The iPad I don't think is DLNA. But our Sunday Ticket application will work on an iPad, yes.

Mr. STEARNS. OK.

And then I guess, Mr. McSlarrow, just the same question to you, possibly.

Mr. MC SLARROW. So I could probably meet your needs here. We are not for a mandate. We are willing to explore these concepts. So—

Mr. STEARNS. But the 2012—your company will be accessible on third-party devices by 2012?

Mr. MC SLARROW. We are already accessible to third-party devices. I think the question is whether or not there is going to be a marketplace that it is a two-way marketplace.

Mr. STEARNS. OK.

Mr. Shanks, can you explain why you believe the gateway device mandate will hurt your ability to innovate and compete?

Mr. SHANKS. You know, DirecTV as a service includes everything that you just saw. And we set customer expectations, and I think that that has been a big part of our success.

The issue we have with this is, number one, obviously, it does give a clear advantage to cable because of their two-way pipes, and we only have a very large one-way pipe.

Secondly, you know, would in the proposal any third-party device have to have, kind of, a litany of exceptions of things that they don't get when they are buying the DirecTV brand? Because, you know, that box is obsolete the day that you buy it, and we continue to upgrade, like I said, 76 features in the last 15 months.

And, you know, as Sony and other CE manufacturers know, 3-D is the next big thing, apparently. We have given a free upgrade to all of our HD customers that will allow them to watch the World Cup in 3-D starting June 11th. And a third-party device, we have no assurance whether that customer who thinks they are getting DirecTV would actually be able to see 3-D. And who would they call? It would be just confusion on a customer service level.

Mr. STEARNS. Mr. Young, let's take a hypothetical. What happens if someone wants to introduce some sort of functionality that the FCC has failed to consider, for example, or doesn't work with the gateway mandate? Do you perceive that you will need FCC permission to change? I mean, how would that work?

Mr. YOUNG. That is actually what I think is one of the significant flaws with the proposal as it was written. And it is basically that all of the intricate functionality involved in providing our services would have to be standardized so that they could be made available through this gateway.

That means that us and DirecTV and the cable companies would all have to do all of our services exactly the same way, and that would be locked in. And then there would be no ability to innovate or bring new capabilities to our products because there would be no way of introducing new functionality outside of that standard that had been mandated.

Mr. STEARNS. Mr. Shanks, do you agree? Or would you like to comment?

Mr. SHANKS. No, I think we actually agree on most of those points.

Mr. STEARNS. Mr. McSlarrow?

Mr. MCSLARROW. I agree.

Mr. STEARNS. OK.

Mr. Chairman, thank you very much.

Mr. BOUCHER. Thank you very much, Mr. Stearns.

The gentlelady from California, Ms. Eshoo, is recognized for 5 minutes.

Ms. ESHOO. Thank you again, Mr. Chairman.

And I want to thank all the witnesses. This has been an instructive panel, in terms of your testimony and your answers to the questions that Members have already posed.

I just want to make an observation, and that is that I have read what the FCC is trying to do is simply establishing a standard protocol and that that is not a mandate. And it seems to me that there is consensus on this panel, with the exception, I think, of Mr. Shanks. I hope I am characterizing it correctly. But I think that is important to be stated.

I don't think anyone here has been directly or indirectly involved—members, that is, of the committee—in mandating technologies. But standards are very important. And I think that when that is clear, that serves people of the country well. And so I just want to start out with that.

I apologize that in my opening statement I didn't make a special fuss in welcoming Matt Zinn, who is my constituent. And I am proud that he is here and testifying and value his service.

So let me start with you, Mr. Zinn. You have worked hard to make your technology compatible with what the cable companies

have developed. Can you tell us about either your positive views of what you have heard Kyle McSlarrow talk about today? Or are there still some lingering issues relative to TiVo and, you know, the plans for improving the cable card? Because I heard that that is where you have had problems.

Mr. ZINN. Right. I think the biggest issue is, as I showed in the slides, access to switched digital programming directly. You know, I showed the tuning adapter. It is a set-top box. It was supposed to be a little dongle, but it turned out to be a set-top box. And a competitive box policy that requires a consumer to get a large number of channels by using a cable set-top box is the antithesis of a competitive set-top box policy.

Ms. ESHOO. But in terms of what you have heard today in the discussion, does that clear away some of the weeds relative to what you just said?

Mr. ZINN. If there is follow-through from the cable industry on creating an IP back channel solution that is not proprietary, that would help greatly.

And then if there is follow-through on clearing away some of the installation support issues—self-installation goes a long way. In California, in your district, Comcast actually does a pretty good job of allowing consumers to self-install cable cards. And it is not that complicated.

Ms. ESHOO. Right.

Mr. ZINN. I think there are ways to address this—

Ms. ESHOO. I have even done it myself.

Mr. ZINN. There you go.

And then pricing. Most cable programming is sold in packages, and in the packages a set-top box is included. Now, if you bring your own set-top box, there is no discount from bringing your set-top box.

So I think that, like cable modem service, a cable company either lets you lease a cable modem or, if you buy a cable modem, they don't charge you for the cable modem.

Ms. ESHOO. Right. I am running out of time.

To Mr. McSlarrow, do you want to respond to that?

I want to take this opportunity to thank you for what you are doing, because you recognize that there are problems with the cable card. You are committed to changing that.

Do you want to respond to some of Mr. Zinn's comments?

Mr. McSLARROW. First, thank you. But just to play off of that—

Ms. ESHOO. And I think the principles that you have come up with, as the chairman said, is really helpful.

Mr. McSLARROW. Well, thank you.

I think, as Matt was just talking about, we live in a cable card world today. There are issues that we need to address. We are committed to addressing them.

But I think what is important in the take-away of this hearing is, what is the future like? How do we get out of that world? There is going to be a natural transition. It is going to be a two-way interactive world. It is going to integrate television and the Internet.

So we are committed to doing both, addressing the near-term fixes that need to be addressed while we work on the future.

Ms. ESHOO. Good.

Let me just make another observation, since I have 19 seconds left. And that is that I have no doubt that the October 2010 date and what has to take place between now and then will happen. It is what comes around the corner from that. And I think that is where most of the work lies and the cooperation has to take place.

So, Mr. Chairman, thank you.

And, again, to all the witnesses, thank you for what you are doing. And I couldn't agree more with Mr. Markey, that this is one of the most exciting times for us. And I look forward to people all over the country being part of that excitement and the services. Thank you.

Mr. BOUCHER. Thank you very much, Ms. Eshoo.

The gentleman from Illinois, Mr. Shimkus, is recognized for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman.

And I don't know any Member of Congress who has more guests announced in a telecommunications high-tech committee than Anna Eshoo.

It seems like every time we have a high-tech hearing, Anna, you have a constituent here. It must speak to your district, I would say.

Ms. ESHOO. It does. Thank you. Good guess.

Mr. SHIMKUS. So, welcome.

And I think what I just keyed on—and I am not going to spend a long time—the two-way interactive world. And the basic question is, who drives that the quickest? Government mandates—not a mandate, but government standards, which then moves to a mandate, versus the market. That is all.

Now, we believe the market. I think when you look at handsets, the telecom bill that was passed that kind of released innovation, that is why we all have a multitude of things on our hips that can do a gazillion things that no one ever dreamed of. If we had stayed controlled, we would have stayed rotary. So that is kind of the same thing.

Now, I have teenagers, so I am experienced in how these kids are way advanced. And I don't understand how any of this stuff works, and I have been on the committee 14 years. But I do know, we have an XBox 360, and we know that gaming has pushed new technology. And then the market placed a demand for interactive gaming online worldwide. So when one of my sons is playing Modern Warfare 2 or whatever these great games are, they are amazing, but when they team up, they could be playing with kids in Japan or South Korea.

Now, Mr. McSlarrow, this is over our coaxial cable. Does the cable industry get any revenue other than the basic service fee for the cable connection?

Mr. MCSLARROW. In most cases—

Mr. SHIMKUS. No. I don't see it.

Mr. MCSLARROW. I mean, I can't think of one.

Mr. SHIMKUS. You buy the XBox 360, you hook it up, and you can interact worldwide in a gaming situation.

Now, the FCC didn't intervene, didn't tell the online game world and the high-tech community from Anna Eshoo's district, "Make this happen." It was the consumer demand of gaming worldwide.

And I would just end on that. I think it is a compelling argument to remember that, if we want to innovate, we let the market push us. And when we start dictating, we slow up the process, we don't speed up the process.

And thank you, Mr. Chairman. I will yield back.

Mr. BOUCHER. Thank you very much, Mr. Shimkus.

The gentleman from Pennsylvania, Mr. Doyle, is recognized for 5 minutes.

Mr. DOYLE. Thank you, Mr. Chairman.

You know, there is a difference between a tech mandate and tech standards. A tech mandate is seen as onerous, as you hear from several of my friends over there. A tech standard is a set of rules that lets others play on a common playground. So a tech standard is like the plain telephone jack that allowed my young daughter to want a Mickey Mouse phone.

So, Mr. Zinn and Mr. Williams, are you looking for a standard similar to that? Or are you looking for a mandate?

Mr. ZINN. If I could just chime in on that, what I would have liked to say to Mr. Shimkus before he took off was: The reason that his children can do that is because of the Internet Protocol standard. And that is the same standard that the FCC is talking about for set-top boxes.

Mr. WILLIAMS. And, Congressman Doyle, absolutely, it is the standard. And you have hit the nail right on the head here. Because, as we know from the past, if we study the past, we know from the national standard—it was the National Television Standard Committee, when we had an over-the-air broadcasting, didn't mandate the technology of how the signal was processed. That was up to an individual station or broadcaster. What it allowed is everyone had the same standard to transmit. We had CBS, ABC, NBC compete with each other on the nightly news. And now we are going to have the same thing in TV 3.0, the national standard.

But, again, how Sony is going to render the video content on the Internet or allow you to take the Internet and that data and interact with the services that you are buying from DirecTV or AT&T or Verizon, that is the brand-new world that we want to see developed through this standard, not a technology mandate. We are not here for that.

Mr. DOYLE. Very good.

Mr. Feld, I am curious about something that Mr. Young from Verizon raised in his testimony, that we can achieve compatibility through open standards with a set of protocols that will allow retail devices to access video services from, you know, either a cable or satellite company. How do you react to that?

Mr. FELD. What we have seen historically is that we have the greatest potential to achieve that when the FCC plays the role of an honest broker, able to bring the industry together, avoid hold-outs, push people, nudge, and stand above the financial interests that every vendor and every provider has.

The Internet Protocol and the success we have had with that goes back to the dial-up modem, which goes back to the original Carter phone decision and the rulemakings that set that very basic standard. We have seen the same thing in television, digital television.

The wireless devices that Mr. Shimkus spoke of are all certified by the FCC. When the FCC does its job right and acts as an honest broker among the industry and makes it clear that there is no value in holding out for a proprietary or industry-specific solution, we are able to have these sort of protocols, and the industry is then able to build on that so that, having established the cooperation, the next generation comes much more easily to the industry.

But it is getting over that hump to get the parties together, to push them to rise above their different interests and create a standard that really serves the consumers and industry both and allows the market to develop where the FCC plays such an important role.

Mr. DOYLE. Thank you.

Mr. Chairman, I don't have any other questions. I will yield back.

Mr. BOUCHER. Thank you, Mr. Doyle.

The gentleman from Ohio, Mr. Latta, is recognized for 5 minutes.

Mr. LATTI. Well, thank you very much, Mr. Chairman. I appreciate you holding these hearings.

You know, it is one of those things, I think, that Mr. Shimkus brought up. When in doubt, I have a 16-year-old and an 18-year-old I call my kids, because they are a lot more tech-savvy than us. And it is hard to explain to them the years of growing up in north-west Ohio when we had two channels and some days you got them and some days you didn't. And with all the different things that are out there today, it is absolutely phenomenal what is out there.

And I guess one of the things that I would just like to ask: You know, right now we have a lot of the consumers out there that look forward to purchasing and then installing the different video navigation devices. But what about the consumers that, again, aren't as technically savvy and just want the cable/telephone/satellite company to provide and install the navigation device?

And, as you know, when we completed the DTV transition, we spent millions making sure that people could install and set up and use their converter boxes. You know, I still go in a lot of houses today that the microwave light is blinking and that the VCR is still blinking. So there are a lot of folks out there, again, that aren't quite as tech-savvy as some of the kids out there.

And so I guess, if I could ask Mr. Young, is the FCC's AllVid proposal too focused on the technical elite at the risk of the rest of the population, especially some of our older Americans who are not as proficient in adapting to the new technology that is provided to them?

Mr. YOUNG. I think that there is certainly a risk of that, if it goes a certain direction. I am hopeful that the FCC will not go in that direction in the NOI. But the mandates that come along with the FCC's AllVid adapter proposal—and it does go beyond just the standard. There are mandates there that say the vid adapter must do this, must not do that. And so, if that was adopted like that, it would have a very negative consequence for that group of people.

Mr. LATTI. Well, let me follow up with that, then. If something like this would be adopted, how do we get it out there for those individuals that need help? Because, again, as we watched what happened with the transition not too long ago, we were sending out all this information on TV about when things were being changed over

with signal and letting folks know they would have to have a converter box just, you know, if you want to get your regular antennas to work.

But how would you foresee that we could actually get out there and do something?

Mr. YOUNG. I think the best way to do that is to not disrupt what they are already buying and enjoying. I think that we can add support for these new devices without having to disrupt the lease model that many people prefer.

And so any solution, I think, should allow the customer to choose which they prefer. And some customers will have a mixture of both, and that is a good thing.

Mr. LATTA. Thank you.

Mr. Chairman, I yield back.

Mr. BOUCHER. Thank you very much, Mr. Latta.

The gentleman from Massachusetts, Mr. Markey, is recognized for 5 minutes.

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

And, yes, this really does go back to the Carter phone era and our attempts to make sure that consumers are not denied the opportunity to go out and buy their own phone. I remember when the CEO of AT&T sat down here in 1979 and told us that if someone could go out and buy their own phone that wasn't a black rotary dial phone and plug it into that phone jack, it could bring down the whole phone system of Massachusetts. And I actually did, I turned to Al Gore and I said, "We've got to break these people up. This is ridiculous."

"How long will it take, Mr. Chairman, for you to be able to figure that out?" "Well, about 10 years. Maybe in 10 years we will be able to have other phone companies able to have phones that plug into our phone jacks."

So that was, like, a frightening thing to me, because we were all renting that black rotary dial phone for \$3 a month. Our mothers had done it for, like, 40 years. Three bucks times 12, 36 times 40 years. That is like \$1,400 to rent that black rotary dial phone, with no new device you can plug in yourself that you control.

So we come to this point now where we have this great opportunity that make it work. Right? That consumers can plug their own devices in and make it work.

So what do you think, Mr. Shanks? What are the chances here that you are going to be able to work this out so that people can buy a device that plugs into your device and still allows you to provide first-class quality service for DirecTV customers?

Mr. SHANKS. Mr. Markey, maybe I am the only one in the room that sees at least one big elephant, and it is the fact that, no matter what television you buy today, you can plug it in to make sure it works, whether it is with Verizon or Comcast or Adelphia. There is a standard there. And the televisions now made by Panasonic, LG, Vizio, I looked up on Amazon today, 300 of them, they are all touting millions of Web sites that you can go to while you are watching DirecTV. With Panasonic even, you can Skype with your grandma while you are watching DirecTV.

Mr. MARKEY. You know what, though? Here is my point. I am kind of a technological agnostic. I have no idea. OK? Congressional

experts are only experts compared to other congressmen, but not real experts, OK? That is just an oxymoron, “congressional expert,” you know, like “jumbo shrimp” or “Chevy Chase nightlife.” OK? There is just no such thing.

So we need to make sure that, you know, we just have the most imaginative 17-year-old out there coming up with new ideas. Which might not be Mr. Panasonic, it might not be Mr. anybody else. That is the beauty of this incredibly short road that we have traveled in the last 15 years.

And as the author of Section 629, I have been waiting for the day where we are all liberated totally and we can just go down and buy the box of our choice and just plug it in there and make it work.

So are you going to work here with the FCC to make this possible for people to be able to have more control so it is just not, you know, kind of an impossible technical difficulty for you to be able to overcome?

Mr. SHANKS. Yes, sir. I mean, we obviously are embracing open standards, broadband connectivity to our boxes, to televisions, so that anywhere in the chain you can absolutely insert what television manufacturers are doing.

I actually was in Silicon Valley the other day. I saw an amazing set-top box from a very large Silicon Valley company which was taking the DirecTV signal in via standard HDMI port. They put a complete browser over the top of it. And the cool thing with that was, when the browser crashed, right—which browsers we all know do, and you get that waiting for an hourglass—

Mr. MARKEY. But you will work it out, though?

Mr. SHANKS. That is exactly—

Mr. MARKEY. Yes. As I said, there are going to be a lot of technical difficulties.

Let me just move on quickly here. We are coming up to the 20th anniversary of the Americans with Disabilities Act. And there were some other impossible things that we just built into that law out of this subcommittee, including closed captioning for all television sets, back in 1990.

You should have heard the consumer electronics industry on that one. My God, that was going to add \$25 or \$30 to every television set. “Just very, very difficult. You have no idea, Congressman, how hard it will be to build that little thing in.” And now, you know, in bars across America, how could guys, you know, talk to women and watch the game if they didn’t have closed captioning today? I mean, it is an essential part of our society. And who would ever think of having a TV set without it in?

So, as we are moving forward—I actually, you know, introduced the Video Accessibility Act, kind of, on this 20th anniversary to, kind of, totally modernize the access the disabled community would have to all this video/voice data.

So what do you think about that? You guys are familiar with the bill as I have introduced it. Mr. Young, can we incorporate that as part of this process that we are looking at right now?

Mr. YOUNG. You raise a very important point. Because, as video service providers, we have responsibilities, and we have to ensure that those responsibilities are met regardless of the device that is

used to access our service. And so, yes, that is something that definitely needs to be considered.

Mr. MARKEY. Great.

Do you agree with that, Mr. McSlarrow?

Mr. MCSLARROW. I do.

Mr. MARKEY. And can we do that as part of this process?

Mr. MCSLARROW. I think so.

Mr. MARKEY. Do you agree with that, Mr. Shanks?

Mr. SHANKS. Yes, sir.

Mr. MARKEY. Mr. Williams, could you get that done?

Mr. WILLIAMS. Yes.

Mr. MARKEY. OK. That is beautiful.

And Mr. Zinn?

Mr. ZINN. I have no objection to that.

Mr. MARKEY. No objection. Beautiful.

And Mr. Feld?

Mr. FELD. I would just like to add that bringing the inventiveness of the thousands of potential entrepreneurs and developers who could come up with solutions in this through a gateway so that we have all sorts of solutions, whatever works best for the disabilities community I think is an important part of opening up the set-top box, as well, to make things like this happen.

Mr. MARKEY. So you are saying the more open the set-top box, is the more likelihood that thousands of people maybe with disabilities will start to think about how they can use that device to help millions of people across the country better access all of this information.

Mr. FELD. The more people working on a problem and the easier it is for people to adopt the solution that other people develop, the more likely that problem is to be solved.

Mr. MARKEY. With the exception of the United States Senate, OK? And I agree with that. All general rules have exceptions.

So I do think that we are really at the dawn of a tremendous era here.

And especially you, Mr. Shanks, I would appreciate it if you could bring flexibility here to this process. It has been a long, long time. And I think it would be great if consumers could just go down to their store and buy the device that they want.

And just to make sure—and, obviously, we want to have service and maintenance issues dealt with by the service companies. But, at the same time, the consumer is king and queen, and the more that they are allowed to do more that, I think the better off the whole industry is. I just think the more of these devices that will get sold and the more programming that will get watched, and the more revenue that each of your companies will be able to garner.

So thank you so much.

Mr. BOUCHER. Thank you very much, Mr. Markey.

The gentleman from California, Mr. McNerney, is recognized for 5 minutes.

Mr. MCNERNEY. Thank you, Mr. Chairman.

And thank you, Mr. Markey, for some interesting remarks there.

Mr. MARKEY. I will take that as a compliment, I hope.

Mr. MCNERNEY. Mr. Williams, I was wondering, what is the state of affairs with regard to a universal gateway device? I mean,

Sony must be developing something like that. Are the challenges mostly technical or regulatory? Where do we stand on that?

Mr. WILLIAMS. The challenges are, in the sense, the current operating environment from the past where not all MVPD providers were required to address the solution.

The elegance and the beauty of this proposal that the notice of inquiry embraces is that it is an all-MVPD solution. Telecoms, satellite, cable are all at the table with the CE manufacturers and other groups. And the Internet, because it is open standards, it is well-received, you know, everyone understands the concept of common standards that allows the innovation to take place, it is moving along.

But we need the framework to ensure that everyone has to play on the same field by the same rules. And that will allow innovation for all those people to figure out how is the best or the coolest way for you to interact with the TV programming that you are purchasing, be it from AT&T, Verizon, DirecTV, or Comcast.

Mr. MCNERNEY. Well, this reminds me a little bit of football. I mean, you want a level playing field and you want rules that everybody understands so that people don't get hurt, so that the game can be played fairly. I mean, I think that is where we need to go. And what you are telling me is that, once we get those sorts of rules in place, then the technology ought to take off.

Mr. WILLIAMS. Absolutely. And we just have to look to—when I was a child, we had three stations in Boston, Massachusetts, but they all broadcast on the same standard. They competed on content.

On the television side, we all had to receive the same signal, but we went from tube TVs to transistorized TVs. One company decided to go with RCA color mask for color TVs. We at Sony went a different way; we went Trinitron. So no one mandated, you have to use this technology to render color video. We developed it, innovated, and competed. And what happened? The price of televisions went down over time, and they are still going down.

Mr. MCNERNEY. OK. Thank you.

Mr. McSlarrow, you gave a list of four goals. They seem pretty laudable. Are those widely shared, in your opinion, the four goals that you mentioned? There ought to be retail devices; the devices should be transferable; they should have access to Internet videos; and there should be search capabilities. Are those, in your opinion, universally shared goals?

Mr. MCSLARROW. It depends which industry. I mean, I think the goals—it is are probably hard to disagree with them. I think the proof of the pudding is going to be in what requirements are placed on different actors in the system to accomplish those goals. You know, we have been basically debating that point this morning.

But I think the one great opportunity that we have that is new today that wasn't present when the original 629 was enacted is that we live in a broadband age. And the convergence is taking place. And there are—as others have made this point—you can go to Best Buy today, and you can see devices today that do a lot of these things.

So, to some extent, we are accomplishing these goals today. It is probably also true that working together—and, again, it doesn't

necessarily require a mandate—but working together as providers, manufacturers, content creators, we might be able to come up with some kind of interface that makes this even easier and deploys even more quickly.

Mr. MCNERNEY. Thank you.

Mr. Zinn, what specific proposals would you offer to benefit customers to have an early implementation in a short time frame?

Mr. ZINN. I am not sure I understood the question.

Mr. MCNERNEY. Well, let's see here. Well, you expressed concern that it would take too long to arrive at solutions that will be amenable to independent providers. I was wondering what specific proposals you might have to offer that would benefit customers.

Mr. ZINN. Well, my view is—and I think it is borne out by this panel—is, there is not a broad consensus on the gateway approach. Right? Mr. Shanks is going to need a lot of convincing. Mr. Young is going to need some convincing. The cable industry is more on board than the rest. Sony is on board. But, you know, my experience in this industry over 20 years is that things take a lot longer than we think they are going to take. And the FCC may say 2012, but I don't believe it.

And, in the interim, cable card is what we rely on. The TiVo box does not work if a cable card does not work, end of story. And we are the only people who depend on it. So we need to make it work today, this year. And we are glad that the FCC is determined to make that happen.

So, you know, we need access to programming, installation has to work, and we have to end this pricing discrimination. That is what we need today.

Mr. MCNERNEY. So you are saying that the best thing to do, then, is to go after cable cards, make them work, as soon as possible.

Mr. ZINN. Yes.

Mr. MCNERNEY. OK.

Mr. Chairman, if you will allow me, one more question?

Mr. BOUCHER. One more question, Mr. McNerney.

Mr. MCNERNEY. OK, thank you.

Mr. Shanks, you certainly seemed to voice concern about the bias in the current program. Do you think a universal gateway device can be developed that would be unbiased, that would allow you to offer services that can be available by the universal gateway device?

Mr. SHANKS. I do believe that there are major concerns on our part when it comes down to the economics of a gateway and the advantage that cable would have over satellite and, therefore, you know, what that would do to the marketplace of a gateway and third-party devices.

Mr. MCNERNEY. OK. Thank you.

Mr. BOUCHER. Thank you very much, Mr. McNerney.

And thanks to all of our witnesses for your outstanding testimony here and what has been a very interesting conversation back and forth with you today.

We are going to keep the record of this hearing open for 3 weeks. And, during that period of time, Members may well be propounding in writing some additional questions to you. When you receive

those, please respond as promptly as you can and help illuminate our record of this hearing with your answers.

Our thanks to each of you for taking time with us today.

And this hearing stands adjourned.

[Whereupon, at 11:47 a.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

Statement for the Record
Hearing Entitled “The National Broadband Plan: Competitive Availability of Navigation Devices”
Subcommittee on Communications, Technology, and the Internet
Committee on Energy and Commerce
April 29, 2010

Congressman Robert E. Latta

MR. CHAIRMAN; RANKING MEMBER STEARNS: Thank you for holding this subcommittee hearing on the National Broadband Plan and navigational devices. It is my understanding that the Plan makes recommendations concerning how set-top boxes and other video navigation devices can change the way consumers utilize video programming services and broadband.

When reviewing the history of the FCC regulations relating to CableCARDs, I have some concerns with the National Broadband Plan’s suggestion for the FCC to ensure that all multi-channel video programming distributors (MVPDs) install a gateway device or equivalent in all new subscriber homes and in all homes requiring replacement set-top boxes, starting on or before December 31, 2012. In addition, there is a requirement for cable operators to fix certain CableCARD issues while development of the gateway device functionality progresses. It appears that the FCC has been trying to regulate in this area for the past 20 years and has been unsuccessful. The industry has been forced to spend more than \$1 billion imposing this product on consumers. Now the FCC is proposing to impose new regulations on a system which is not working. These new regulations will inevitably force additional costs on to the operators, who will then pass the cost on to the consumers. I believe that the issue of gateway devices should be left to the stakeholders in the industry and market negotiation. Any additional government regulation will stifle competition and slow innovation.

While I realize this hearing is to discuss further mandates related to set-top boxes, it is unclear to me how this recommendation from the FCC promotes broadband deployment. My number one concern is jobs, and representing one of the most rural areas of Ohio, I am keenly aware of the importance broadband deployment plays in economic development and the nexus this access has to job creation. At a time when the unemployment rate is 11.0% in Ohio, and over 12% in many parts of my District, we need to work towards creating new, high paying jobs. Broadband expansion can help the economy by creating new jobs related to the deployment of the necessary infrastructure, as well as by giving unemployed workers access to tools that will help them find and prepare for new jobs. Congress' number one priority should be job creation.

Broadband deployment will literally get shovels in the ground and people back to work. It appears to me that these new regulations regarding this set-top box issue will make it easier for individuals to download content off the Internet; however many people in my District do not even have access to the Internet. Under this proposal, more people who already have high speed broadband connections will download more movies from Amazon or Netflix and watch them on their big screen TVs. However, I do not understand how this will increase broadband deployment to the unserved. I am concerned that these new government mandates will further perpetuate the disparities that currently exist.

Mr. Chairman, thank you, and I look forward to hearing the testimony from the witnesses on the panel today.



MOTION PICTURE ASSOCIATION OF AMERICA, INC.

April 28, 2010

U.S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Communications, Technology and the Internet
2125 Rayburn House Office Building
Washington, D.C. 20515

RE: Hearing on "The National Broadband Plan: Competitive Availability of Navigation Devices"

Dear Chairman Boucher, Rep. Stearns and Members of the Committee:

I am writing on behalf of the Motion Picture Association of America, Inc. ("MPAA") and its member studios with respect to the above-referenced hearing scheduled for April 29, 2010, and request that this letter be made part of the record of this proceeding. MPAA appreciates the Committee's interest in the competitive availability of navigation devices and shares the Committee's goal of ensuring that American consumers have choice in innovative consumer electronics equipment to receive and view high-quality, compelling multichannel video content. MPAA would like to emphasize, however, that the Committee should remain cognizant of the critical role of content in this ecosystem as it considers these important matters.

While a discussion about set top boxes may appear on the surface to be primarily focused on technology and electronics equipment, the reality is that these devices play a vital role in content protection, presentation, and innovation. In particular, as technology evolves these devices will have an increasingly important responsibility in protecting content against unlawful distribution. Given that unlawful distribution is an acute and growing threat to all creative industries, which takes an incredible toll on the American economy and on U.S. jobs, it is essential that any dialog on this subject include content protection and security as key elements. Likewise, innovation in the creation and presentation of content are important factors which affect consumers' use and adoption of video services, and should also be taken into consideration.

Therefore, as Congress and this Committee take steps to promote the retail availability of more innovative set top boxes, including a potential new "gateway" device capable of accessing both television- and Internet-delivered video, MPAA urges that any inquiry into these matters keep content protection, presentation, and innovation at the forefront of the conversation.

Should you have any questions about this submission, please do not hesitate to contact me.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "A. Robert Pisano".

A. Robert Pisano
President and Interim Chief Executive Officer

SONY

Sony Electronics Inc.
1667 K Street, NW, Suite 200, Washington, DC 20006 Telephone: (202) 429-3650

June 3, 2010

VIA EMAIL (EARLEY.GREENE@MAIL.HOUSE.GOV)

The Honorable Parker Griffith
417 Cannon House Office Bldg.
Washington, D.C. 20515

Re: Written Question Follow up to April 29, 2010 Hearing Entitled "The National Broadband Plan: Competitive Availability of Navigation Devices" before House Subcommittee on Communications, Technology & the Internet

Dear Congressman Griffith:

In response to the written question you submitted following the above-referenced hearing, Sony Electronics Inc. ("Sony") responds that it provides its television customers in the United States the following customer service options at no charge managed from Sony's Ft. Myers, Florida customer service center:

Telephone support:	available 8:00am to midnight Eastern on weekdays and 9:00am to 10:00pm Eastern on weekends
Online chat support:	available 24 hours
Email support:	available 24 hours
Website support:	available 24 hours

Approximately twenty-two percent (22%) of phone calls received by Sony from its television customers involve issues relating to cable, satellite, or other set-top boxes.

Sincerely yours,

/s/

Michael T. Williams
Executive Vice President & General Counsel

cc: Earley Greene (via email)

HENRY A. WAXMAN, CALIFORNIA
CHAIRMAN

JOE BARTON, TEXAS
RANKING MEMBER

ONE HUNDRED ELEVENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2827
Minority (202) 225-3641

May 18, 2010

Kyle McSlarrow
President and CEO
National Cable & Telecommunications Association
25 Massachusetts Ave, NW
Washington, DC 20001

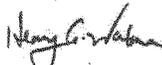
Dear Mr. McSlarrow:

Thank you for appearing before the Subcommittee on Communications, Technology, and the Internet on April 29, 2010, at the hearing entitled "The National Broadband Plan: Competitive Availability of Navigation Devices."

Pursuant to the Committee's Rules, attached are written questions for the record directed to you from certain Members of the Committee. In preparing your answers, please address your response to the Member who submitted the questions.

Please provide your responses by June 3, 2010, to Earley Green, Chief Clerk, via e-mail to Earley.Green@mail.house.gov. Please contact Earley Green or Jennifer Berenholz at (202) 225-2927 if you have any questions.

Sincerely,



Henry A. Waxman
Chairman

Attachment

Response to:

The Honorable Cliff Stearns

1. Please respond to the following statements:

a. One-size-fits-all technology mandates usually succeed.

I don't believe that is generally true. And it is not obvious that such mandate is necessary or would work in the competitive video marketplace. Direct broadcast satellite, U-Verse, FiOS, digital cable, broadband cable modems and broadband telephone modems all use different technologies and interact differently with set-top boxes and other customer premises equipment to offer consumers exciting new services. Cable operators have digitized, switched, and repurposed their spectrum for more HD, more services, and faster broadband, and in tandem, cable set-top boxes have grown from devices that merely extended the tuning range of consumers' televisions into high-definition devices and DVRs, offering on-demand content, switched digital video, interactive program guides, t-commerce, voting, polling, two-way network services like StartOver, cross-platform services like caller ID on the TV, Internet-fed widgets, and Java-based tools as a platform for future innovation. All of these innovations occurred outside of prescriptive government mandates. Imposing a one-size-fits-all model onto these architectures and services therefore runs a high risk of frustrating innovation and competition.

b. What the FCC could not accomplish when subscription-TV was an analog, cable-centric, linear video platform will be easier now that it is a digital, interactive, Internet-enabled video platform populated by diverse cable, satellite, and phone company architectures.

In a one-way analog world, cable channels could be "broadcast" downstream within fixed frequencies and be received by a "cable ready" TV following the same channel plan. The diverse, interactive, and rapidly evolving services now offered by MVPDs do not fit easily into any one architecture. The cable industry is committed to providing video content to consumers where and when they want it, on all possible consumer devices, and for those devices to be innovative platforms for new applications. We want consumers to be able to buy video devices at retail and to know that cable content can be among their video sources. But we think that the best approach is through cross-industry efforts to meet consumer-driven needs, rather than regulatory mandates.

c. Government predictions of what technologies and business models will succeed and where markets are going are usually accurate.

In the pertinent examples below, the FCC's predictions in this area were all rapidly outpaced by technology.

- In 2005, the Commission predicted that requiring CableCARDs to be included in leased set-top boxes would bring down the cost of CableCARDs and increase competition, but

five years later the Commission's integration ban has cost consumers approximately a billion dollars and counting, in the name of supporting fewer than a mere 500,000 retail devices.

- In 2003, the IEEE1394 interface appeared to be a promising connector, and the Commission mandated the inclusion of a 1394 output in HD set top boxes. Almost no one uses it today, because 1394 was rapidly overtaken by Ethernet, USB and wi-fi – all of which flourished without any government mandate.
- In 1998, the Commission predicted that it was unnecessary to impose any regulation on DBS set-top devices in order to assure that they would offer support for a retail market, but instead DBS has moved almost entirely away from retail to operator-owned, leased devices.

Predictions that consumers will demand new means of accessing video content likely are accurate. In fact, our industry is anticipating and addressing the demand right now. However, predictions of which technologies or parties will be best able to meet that demand are at best educated guesses. Rigid technology mandates are not well suited for an industry as dynamic as the video distribution business, and can undermine the very innovation we all seek to achieve.

d. The government usually responds to changes in technology and market conditions faster than industry.

One of the great costs of current technology mandates is their inflexibility in accommodating a dynamic change in the market.

- The cable industry's new interactive switched digital video (SDV) technology allows cable spectrum to be repurposed for faster broadband, more HD, and more channels and services. SDV deployment was stalled for over a year as the FCC questioned whether it met the rules adopted for one-way CableCARD devices.
- A pioneering manufacturer, Evolution Broadband, created a low-cost digital-to-analog box that could be used to turn cable systems all digital with minimum disruption to subscribers. It waited more than a year for an FCC "navigation device" waiver that allowed cable operators to use these boxes to speed cable's transition to all digital.
- Hollywood studios have been trying to bring new theatrical window movies securely to consumers in their homes. They had to wait nearly two years for a "selectable output" waiver from the FCC.

To its credit, the current FCC has recognized the failure of the current approach, and is proposing more flexible approaches to past mandates.

2. **In 1992 and 1996, when the set-top box provisions were created, cable providers served the lion's share of subscription-TV households. Isn't there even less justification for government intervention now? Satellite operators and the phone companies serve one-third of subscription-TV households, and all providers are experimenting with third-party devices to remain competitive.**

Four of the ten largest MVPDs today are direct broadcast satellite and telephone companies who already collectively serve more than 37 million customers and whose share continues to grow while cable's share continues to decline. There is also now a flourishing and rapidly-growing market for Internet-enabled devices that offers consumers an ever-widening array of choices for information, entertainment, and communications applications – a testament to the billions of dollars invested by the cable industry to innovate and bring high-speed broadband Internet to more than 90 percent of American households. Set-top boxes are now supplied by a growing number of competitive consumer electronics manufacturers, including Pace, Motorola, Cisco, Evolution Broadband, Samsung, Panasonic, and TiVo. Comcast CEO Brian Roberts has demonstrated the use of an Apple iPad to view content and interact with and control a home television remotely.

The proliferation of such consumer choice removes any justification for applying set-top box rules only on the cable industry: no retail market is likely to form around a "digital cable ready" device that will not work with DISH, DirecTV, AT&T, and Verizon, as the Commission has recently recognized in its set-top box Notices. In addition, while there may be a constructive role for government, the competitive forces at work are creating ever more choices in services and devices to consumers—which is the essential purpose of both the 1992 and 1996 Acts.

3. The gateway device proposal came from the national broadband plan, but don't most subscription-TV customers already have broadband? How will this mandate promote deployment or adoption?

The cable industry is a strong proponent of creative broadband adoption programs. Cable has invested billions to make high-speed broadband Internet available to more than 90 percent of American households. As detailed below in Answer 8, consumers today can select from among a wide variety of Internet-enabled devices to get the device and price point for the functionalities they want, and we believe that ever more Internet content will be provided to television viewers. At this point, we do not know what effect a technology mandate would have on deployment or adoption, but in our experience a technology mandate would end up imposing unnecessary expense on subscribers as market demand and technologies continue to change.

4. Aren't technology mandates, by their nature, almost always inflexible and one-size-fits-all? Can they ever really account for, let alone foster, diversity in technologies and business models? Don't they usually end up just raising consumer costs and hindering innovation?

As detailed above in answer 1c and 1d, technology mandates adopted by the Commission for set-top boxes have cost consumers over a billion dollars in waste and proved how poorly technology mandates can predict the direction of the technology market. The Commission's most recent Inquiry specifically invites proposals for alternatives to an inflexible gateway, including movement away from navigation devices and into the cloud.

We believe that whatever role the government plays, it should facilitate the deployment of different video device options in response to dynamic and varying consumer demands, rather than requiring that all devices include the same features for all consumers. It is also critical to accommodate the flexible use of different architectures – now existing or developed in the future

– for accessing multichannel video provider services. These could include, for instance, set-back boxes, gateways, network interface units, or delivery from the “cloud” without the need for any dedicated receiving device.

We should allow for the possibility of ever more innovative devices while preserving alternative possibilities such as innovation in the network or the cloud, which may lead to fewer or simpler devices in the home. None of us can predict with any certainty which is the better or more likely path, and it is quite possible that multiple paths will emerge. A mandatory gateway would presumably be aimed to feed the home network, but there is no one home networking “solution” for the Commission to choose. The market has already spoken, and, as is common in technology, it is allowing multiple solutions to compete. Congress and the Commission have repeatedly counseled against having the government try to pick winners or losers, which can lead to dead-ends or impede innovation.

It is clear that the creation of a robust market for new video devices requires some assurance that CE manufacturers will actually build and retailers will willingly stock such devices. That is more likely to be achieved through industry collaboration with appropriate government oversight rather than through government mandates. Otherwise, if there are to be government mandates imposed on MVPDs to help a retail market develop, complementary mandates on consumer electronics manufacturers and retailers would be necessary to assure that those devices are “commercially available.”

Congress warned the Commission that in implementing Section 629, the Commission must “avoid actions which could have the effect of freezing or chilling the development of new technologies and services.” H.R. Rep. No. 104-458, at 181 (1996) (Conf. Rep.), reprinted in 1996 U.S.C.C.A.N. 124, 194.

- 5. If operators must pass all content through to third-party devices while providing no additional functionality in the gateway adapter, and if device manufacturers are allowed to disaggregate all the content and combine it with anyone else’s content from any other source, haven’t we turned the networks into dumb pipes? Wasn’t the goal of the broadband plan to encourage deployment? What incentive is there for providers to invest in broadband under this regime?**

I think the record is quite clear that maintaining investment incentives for facilities-based competition has been a very successful means for delivering innovation and value to consumers, in both video and broadband. Converting MVPDs into dumb pipes is antithetical to the national goals of extending and enhancing financially viable broadband networks.

- 6. Aren’t subscription-TV providers already experimenting with third-party devices? Aren’t these efforts more likely to succeed than one-size-fits-all rules that micromanage what devices you must offer and support? Isn’t it better to have all sorts of approaches compete in the market so we find out which ones work? In fact, isn’t it likely that different approaches will work better for different needs?**

Direct broadcast satellite, U-Verse, FiOS, digital cable, broadband cable modems and broadband telephone modems all use different technologies to engage in fierce competition to

the benefit of consumers. Set-top boxes are now supplied by a growing number of competitive consumer electronics manufacturers, including Pace, Motorola, Cisco, Evolution Broadband, Samsung, Panasonic, and TiVo. At our recent Cable Show held in Los Angeles, for example, Comcast CEO Brian Roberts demonstrated the use of an Apple iPad to view content and interact with and control a home television remotely. Consumers in turn may select from among a wide variety of offerings to get the device and price point for the services they want. Rigid technology mandates are not well suited for an industry as dynamic as the video distribution business, and can undermine the very innovation we all seek to achieve.

7. What happens if someone wants to introduce some sort of functionality that the FCC has failed to consider, or that doesn't work with the gateway mandate? Will they now need FCC permission to innovate?

As detailed above, one of the great costs of current technology mandates is their inflexibility in accommodating a dynamic change in the market. Any similar mandate—such as a specific form of gateway—risks becoming out of date and serving as a bottleneck for innovations (such as 3D) which have either not been anticipated or have not settled on any industry standard.

8. The gateway mandate is premised on the idea that government regulation is needed to drive the convergence of the Internet and TV. But that convergence is already taking place in the marketplace, as shown by the widespread availability of Internet-connected TVs, DVRs, and other devices. Won't the marketplace do a better job of driving continued innovation in this area than government regulations?

Internet video is being brought to TVs today with products from Apple, Boxee, Blu-Ray, DivX, PlayStation, Roku, TiVo, Vudu and Xbox, all without cable set-top boxes. Microsoft, Sony, and Nintendo have already sold over 45 million game consoles that can be used to watch Internet-delivered video. PCs, laptops, and netbooks stream video through HDMI or other connections. (An HDMI card can be added to a PC for as little as \$50.) Over 50 Internet-enabled TV models from Samsung, Sony, Panasonic, Vizio, and other top manufacturers are on sale now, equipped with Ethernet ports that can plug into a home network or a networked PC, and Google has announced new televisions that will provide video through Google's Android platform and Chrome browser. The marketplace is bringing Internet to TV faster than government regulations are even being proposed.

9. The goal of the gateway mandate is to drive innovation in the device marketplace, but the proposed rules would force every subscription-TV provider to supply its customers with a "dumb" gateway device. How does this promote innovation?

MVPDs have delivered innovative new services to consumers by making devices smarter and more interactive, not dumber. For example, it is through advanced set-tops that cable operators are delivering high-definition DVRs, on-demand content, switched digital video, interactive program guides, t-commerce, voting, polling, two-way network services like

StartOver, cross-platform services like caller ID on the TV, and Internet-fed widgets. Dumbing down video devices is antithetical to innovation.

10. If we force gateway devices on consumers who are happy to use operator-provided set-top boxes, haven't we imposed costs on them without providing any additional functionality?

Many customers only want their television to be simple to set-up and understand. In marking the moment when Apple overtook Microsoft as number 1 in technology, astute observers noted that "Steve [Jobs] saw way early on, and way before Microsoft, that hardware and software needed to be married into something that did not require effort from the user ... Apple's products are shrink-wrapped and ready to go."¹ Many consumers do not want complicated pairing of gateways with new devices or home networks. It is critical to accommodate different consumer needs by allowing different architectures – now existing or developed in the future – for accessing multichannel video provider services. These could include, for instance, set-back boxes, gateways, network interface units, or delivery from the "cloud" without the need for any dedicated receiving device. It will impose unnecessary cost and complexity to make every customer access MVPD services through a gateway defined by government mandates.

11. If the gateway mandate requires you to allow device manufacturers to disaggregate all the content you carry and combine it with anyone else's content from any other source, don't we have copyright and interface issues?

Content creators rely on license agreements to fund the creation of content. Programmers negotiate carriage agreements with distributors that typically include detailed terms surrounding channel position, tier placement, advertising and presentation of the programmer's content, and picture quality. For their part, MVPDs design channel lineups, tier structures, marketing messages, service look-and-feel, quality of service, and actual delivery of content, in order to maximize their effectiveness as video retailers. All of these arrangements are protected by the Constitution's guarantee to respect works of authorship brought to the public; by hundreds of patents around which current implementations have been developed; and by state laws against misappropriation. Some have asked the FCC to disaggregate the MVPD retail business and convert MVPDs into wholesalers of programming for reuse by retail equipment providers, without license obligation to MVPDs or to content providers. This approach would raise a host of copyright and patent issues. Disaggregation would also prevent consumers from seeing and using MVPD services in the way they were purchased, and create consumer confusion over who is responsible for problems with access to content and basic device operation.

¹ Apple Passes Microsoft as No. 1 in Tech, New York Times, B1, May 27, 2010.



June 3, 2010

Honorable Parker Griffin
417 Cannon House Office Building
Washington, DC 20515

Dear Congressman Parker:

The Chairman of the Committee on Energy and Commerce, Henry Waxman, has forwarded to me your question submitted as part of the Subcommittee on Communications, Technology and the Internet's April 29th hearing on "The National Broadband Plan: Competitive Availability of Navigation Devices." Thank you for giving me the opportunity to tell you about TiVo's customer service operations. We are proud that the Better Business Bureau has given us one of their highest ratings for service. (<http://sanjose.bbb.org/Business-Report/Tivo-Inc-210334>)

The short answer to your question "does TiVo offer its 24/7 customer service?" is yes. TiVo offers its subscribers access to online support 24 hours a day, 7 days a week. Through TiVo's online support, customers can:

- Access answers to the most frequently asked questions.
- Troubleshoot issues with step-by-step articles written to walk customers through a particular issue.
- Watch videos that guide them through set up challenges or "how to's" on how to use specific features of the service. See <http://support.tivo.com>.
- Log on to their account and make changes to their billing options, update contact information, change credit card information, and change account privacy settings.
- Contact TiVo's support team through email by logging on to their account to submit a question or seek support for an issue. The current service level response for e-mail is 24 hours, although typically customers receive a response within a few hours during normal call center hours (6:00 am to 9:00 pm PST, 7 days a week).
- Contact TiVo support personnel via Chat from the TiVo website at <http://support.tivo.com/app/home> during normal call center hours. Chat inquiries are responded to within minutes during normal call center hours.
- Seek help from other customers and TiVo's "All Star forum team" at <http://forums.tivo.com/pe/index.jsp> 24 hours a day, 7 days a week.

TiVo Inc. • 2160 Gold Street • Aliso, CA 95002

Tel 408.519.9100 Fax 408.519.5333 • www.tivo.com

Honorable Parker Griffin
June 3, 2010
Page 2

TiVo employees range between 300-400 agents and typically average 150-180 agents on the phones and online conducting real-time chats as well as returning e-mails during normal hours of operation.

I hope this responds to your question. If you need further information or have any additional questions, please don't hesitate to contact me.

Sincerely,


Matthew Zinn
Senior Vice President, General Counsel, Secretary & Chief Privacy Officer

HENRY A. WAXMAN, CALIFORNIA
CHAIRMAN

JOE BARTON, TEXAS
RANKING MEMBER

ONE HUNDRED ELEVENTH CONGRESS
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May 18, 2010

Eric Shanks
Executive Vice President, DIRECTV Entertainment
DIRECTV
2230 E. Imperial Highway
El Segundo, CA 90245

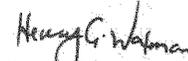
Dear Mr. Shanks:

Thank you for appearing before the Subcommittee on Communications, Technology, and the Internet on April 29, 2010, at the hearing entitled "The National Broadband Plan: Competitive Availability of Navigation Devices."

Pursuant to the Committee's Rules, attached are written questions for the record directed to you from certain Members of the Committee. In preparing your answers, please address your response to the Member who submitted the questions.

Please provide your responses by June 3, 2010, to Earley Green, Chief Clerk, via e-mail to Earley.Green@mail.house.gov. Please contact Earley Green or Jennifer Berenholz at (202) 225-2927 if you have any questions.

Sincerely,



Henry A. Waxman
Chairman

Attachment

DIRECTV Responses to Questions from Ranking Member Stearns**June 4, 2010***(DIRECTV responses in italics)*

1. Please respond to the following statements:

- a. One-size-fits-all technology mandates usually succeed.

The most recent example of such a mandate in the video distribution industry is the CableCARD regime. The FCC has exempted satellite carriers from its CableCARD mandate because they offer set-top boxes from numerous manufacturers nationally and at retail. But, as an outside observer, DIRECTV fails to see substantial public interest benefits from that particular technology mandate. The cable industry claims to have spent more than a billion dollars implementing this mandate. A similar burden would significantly diminish DIRECTV's ability to compete with cable.

- b. What the FCC could not accomplish when subscription-TV was an analog, cable-centric, linear video platform will be easier now that it is a digital, interactive, Internet-enabled video platform populated by diverse cable, satellite, and phone company architectures.

Even if a mandate were otherwise desirable (and we believe it is not), developing a mandate that would work across MVPD architectures would be extraordinarily difficult. We hope that, as it considers the issue, the FCC fully considers the technological differences between cable and satellite. Satellite carriers place much of their functionality in the set-top box, while cable operators can place this functionality in their network headends. Satellite set-top boxes function by responding to network data passed to them over the satellite, and using that data to interact with content stored on the boxes. Cable devices, by contrast, can communicate with the network in real time and do not necessarily need storage capability. The Commission has yet to address how third-party devices could work with such different network architectures. Coming up with protocols and specifications for cable systems alone took most of a decade; doing the same for cable and satellite and telco systems would likely take just as long or longer.

- c. Government predictions of what technologies and business models will succeed and where markets are going are usually accurate.

Again, we think the FCC's experience with CableCARDS is instructive. Although one can point to many reasons for the apparent failure of the CableCARD regime, it seems clear to us that consumers simply did not want the technology. This is always a risk with mandates of this sort. Likewise, the Commission mandated that HD cable boxes all be equipped with IEEE 1394 "firewire" connections; a physical port that many consumer electronics designers no longer favor.

We are very close to deploying RVU technology today, which will allow both the display of linear with online video and the diffusion of that video throughout the home. Indeed, RVU will allow the television to become the “shopping mall” experience cited by Chairman Genachowski—in which users could choose among different “stores” (NetFlix, YouTube, DIRECTV or another MVPD), but the “stores” themselves would have their own look and feel. We fear that an FCC “all-vid” mandate could disrupt this rollout in favor of a technology that—assuming it can be developed—is at best years away.

- d. The government usually responds to changes in technology and market conditions faster than industry.

Please see answer 1.c, above.

2. In 1992 and 1996, when the set-top box provisions were created, cable providers served the lion's share of subscription-TV households. Isn't there even less justification for government intervention now? Satellite operators and the phone companies serve one-third of subscription-TV households, and all providers are experimenting with third-party devices to remain competitive.

In 1992 and 1996, video competition existed only in an embryonic state. Today, DIRECTV competes against entrenched cable operators across the country. One of the primary ways we can do so is to offer better, more innovative, more functional set-top boxes and other devices. DIRECTV was the first MVPD to deploy MPEG-4 compression and to introduce a substantial slate of HD programming—enabled by technology in our set-top boxes. We have won eight Emmys for our technology, including our interactive NFL Sunday Ticket and other sports features, all of which are powered by features in the set-top boxes. Our newer features—ranging from our DVR Scheduler on computers and smart phones to DIRECTV TV Apps to Common Sense Media ratings in our programming guide to 3D television—all rely on technology residing in the set-top box. Moreover, we regularly upgrade our set-top boxes to keep up with technological advances. And, as discussed above, we are about to introduce RVU-enabled devices that will enable a whole new level of functionality and connectivity. This, in turn, should encourage cable operators to improve their own devices.

3. The gateway device proposal came from the national broadband plan, but don't most subscription-TV customers already have broadband? How will this mandate promote deployment or adoption?

Many, if not most, of our customers already have broadband. We believe the same is true for cable and telco subscribers as well, since those systems typically offer broadband along with video. We have seen no evidence to suggest that a set-top box mandate would promote broadband adoption.

4. Aren't technology mandates, by their nature, almost always inflexible and one-size-fits-all? Can they ever really account for, let alone foster, diversity in technologies and business models? Don't they usually end up just raising consumer costs and hindering innovation?

Such a risk is often, if not always, associated with government technology mandates. Here, we see a very real risk that this particular mandate would disrupt deployment of a technology ready today (RVU) for a more expensive, less functional, longer-term, and (for us) competitively harmful government alternative.

5. If operators must pass all content through to third-party devices while providing no additional functionality in the gateway adapter, and if device manufacturers are allowed to disaggregate all the content and combine it with anyone else's content from any other source, haven't we turned the networks into dumb pipes? Wasn't the goal of the broadband plan to encourage deployment? What incentive is there for providers to invest in broadband under this regime?

To us, this is one of the biggest potential problems with the proposed mandate. We do not offer a "dumb pipe" for video. Rather, we have invested billions upon billions to offer an integrated service with our own look and feel, our own unique features, and industry-standard customer service. This is why millions have switched from cable to DIRECTV. We do not know how, or in what form, we could exist as a "dumb pipe."

6. Aren't subscription-TV providers already experimenting with third-party devices? Aren't these efforts more likely to succeed than one-size-fits-all rules that micromanage what devices you must offer and support? Isn't it better to have all sorts of approaches compete in the market so we find out which ones work? In fact, isn't it likely that different approaches will work better for different needs?

Today, we offer set-top boxes from six different manufacturers. We are developing a variety of strategies—including home-gateways and wireless technologies—to offer our service without boxes at all. Third-party televisions and other devices will be able to integrate this service with other content, such as Internet-delivered content. The RVU Alliance standard is key to those efforts. We are investing in these innovative technologies precisely because we feel it is what consumers want, and thus what we must do so to compete. We strongly feel that this approach is preferable to a government mandate.

7. What happens if someone wants to introduce some sort of functionality that the FCC has failed to consider, or that doesn't work with the gateway mandate? Will they now need FCC permission to innovate?

One of our fears from an "all vid" mandate is that we would not be able to offer innovations without first consulting the FCC and/or manufacturers of devices connected to the all vid adapter. To take just one example, we have recently been able to download software to our boxes that enable them to process a 3D signal. We did not need to consult the FCC, and we did not need to consult third parties, whose own equipment may or may not have had the capability to function with this software. We fear that the "all vid" mandate would preclude or substantially delay such innovation in the future.

8. The gateway mandate is premised on the idea that government regulation is needed to drive the convergence of the Internet and TV. But that convergence is already taking place in the marketplace, as shown by the widespread availability of Internet-connected TVs, DVRs, and other devices. Won't the marketplace do a better job of driving continued innovation in this area than government regulations?

We think there is no shortage of such devices. And, again, the RVU Alliance standard will allow us to integrate our own service with such devices—without the need for FCC intervention.

9. The goal of the gateway mandate is to drive innovation in the device marketplace, but the proposed rules would force every subscription-TV provider to supply its customers with a "dumb" gateway device. How does this promote innovation?

We view such a mandate as slowing innovation, by (among other things) derailing deployment of devices compliant with the RVU Alliance standard. Moreover, as we described above, such a mandate would preclude DIRECTV from offering new features without first consulting with third-party device makers, who might or might not decide to support such features. This, in turn, greatly diminishes DIRECTV's "first mover" incentives to offer such features.

10. If we force gateway devices on consumers who are happy to use operator-provided set-top boxes, haven't we imposed costs on them without providing any additional functionality?

Yes. A requirement to provide such devices to each of our customers—regardless of whether they want them—would represent a significant burden on consumers.

11. If the gateway mandate requires you to allow device manufacturers to disaggregate all the content you carry and combine it with anyone else's content from any other source, don't we have copyright and interface issues?

Yes. For example, programmers grant us limited copyright licenses with numerous and

specific limitations on how we transmit and display their copyrighted works. Each of those licenses is different, and the result of intense negotiations. In general, however, these licenses are quite particular about placement, and do not allow us to disaggregate content. For example:

- *A manufacturer (e.g., Sony) could make a smart device that gave more favorable placement to VOD content offered by a particular content provider (e.g., Sony Pictures). Certain DIRECTV contracts prohibit such discriminatory treatment, yet under an "all-vid" mandate, DIRECTV would have no way to prevent this.*
- *A third party device could replace or delete commercials included with the programming, or otherwise alter the content of the programming, in violation of certain carriage agreements.*
- *A third party manufacturer could design its device to list adult content next to a family channel's content in VOD and programming guide screens. Certain DIRECTV contracts prohibit this, yet DIRECTV would have no way of prohibiting smart devices from doing so.*
- *A third party device could change the channel placement or the "neighborhood" in which a particular channel is placed, contrary to certain contractual (and perhaps regulatory) obligations.*
- *A third party device could seek to increase capacity by more heavily compressing certain channels, contrary to certain contractual (and perhaps regulatory) obligations.*
- *A third party device could make unauthorized copies of the programming.*

HENRY A. WAXMAN, CALIFORNIA
CHAIRMAN

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May 18, 2010

David E. Young
Vice President-Federal Regulatory Affairs
Verizon
1300 I Street, NW
Suite 400 West
Washington, DC 20005

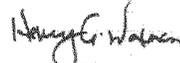
Dear Mr. Young:

Thank you for appearing before the Subcommittee on Communications, Technology, and the Internet on April 29, 2010, at the hearing entitled "The National Broadband Plan: Competitive Availability of Navigation Devices."

Pursuant to the Committee's Rules, attached are written questions for the record directed to you from certain Members of the Committee. In preparing your answers, please address your response to the Member who submitted the questions.

Please provide your responses by June 3, 2010, to Earley Green, Chief Clerk, via e-mail to Earley.Green@mail.house.gov. Please contact Earley Green or Jennifer Berenholz at (202) 225-2927 if you have any questions.

Sincerely,



Henry A. Waxman
Chairman

Attachment

The Honorable Cliff Stearns

1. Please respond to the following statements:

- a. **One-size-fits-all technology mandates usually succeed.**
- b. **What the FCC could not accomplish when subscription-TV was an analog, cable-centric, linear video platform will be easier now that it is a digital, interactive, Internet-enabled video platform populated by diverse cable, satellite, and phone company architectures.**
- c. **Government predictions of what technologies and business models will succeed and where markets are going are usually accurate.**
- d. **The government usually responds to changes in technology and market conditions faster than industry.**

On the one hand, flexible, industry-led standards developed through appropriate standards-setting bodies can be significant in promoting innovation and competition, and the Federal Communications Commission (FCC) and other policymakers can serve an important role in encouraging appropriate standards-setting groups to develop such standards. On the other hand, prescriptive technology mandates that require all providers to following a particular approach – notwithstanding differences or changes in consumer demand or technology – invariably inhibit innovation and harm consumers. Moreover, by failing to adequately account for the wide variety of ways that different providers serve consumers today – much less the wide and unpredictable range of services and technological approaches that will be available in the future – technology mandates create a substantial risk of distorting competition and delaying, denying, or increasing the costs of innovative services and approaches that may otherwise be available to consumers. These risks are particularly high in the context of competitive and technologically dynamic services.

Today's video marketplace reveals the important differences between technology mandates and pro-consumer industry standards. Consumer demand and technological advances creates enormous pressure on video providers (particularly new entrants in the video marketplace) to work together with consumer electronics manufacturers and content providers to develop standards that increase consumers' ability to view content on more devices and to integrate content from a variety of sources, including the Internet. As a result, work is well underway on a variety of standards, such as DLNA and RVU, to improve the consumer experience in accessing content from a variety of sources and viewing it over a variety of devices connected to their home networks. As a result of work such as this – and following the proven model used to develop other standards such as MPEG, the foundation of most digital video today – the options available to consumers are rapidly increasing and will only continue to do so in the absence of new technology mandates.

In contrast, the CableCard experience shows the ineffectiveness of prescriptive technological mandates by regulators. In order to comply with the detailed, technological requirements only applied to a subset of competitors, providers – and ultimately consumers – bore tremendous costs, with little benefit to show from it. Even though Verizon was a new entrant with a relatively low number of customers and a novel technological approach, we were

forced modify our services and network infrastructure in order to support the legacy technological mandate and divert resources and attention away from continued innovation in our video service, notwithstanding the fact that compliance with this cable-centric mandate was of little benefit to consumers more interested in obtaining the full benefits of Verizon's capabilities.

Rather than repeating the failed CableCard experiment involving technological mandates – as the detailed FCC gateway proposal risks doing if it were to become a prescriptive rule – policymakers should encourage the pro-consumer developments already leading to industry standards which will better serve consumers, encourage innovation, and fulfill the objective of Section 629 of the Communications Act.

2. **In 1992 and 1996, when the set-top box provisions were created, cable providers served the lion's share of subscription-TV households. Isn't there even less justification for government intervention now? Satellite operators and the phone companies serve one-third of subscription-TV households, and all providers are experimenting with third-party devices to remain competitive.**

The increased range of video competitors and the variety of differentiated service offerings and technological approaches removes any need for government intervention with respect to video navigation devices and other video services technology. Today, video providers are responding to competitive pressures and consumer demand by working actively with CE manufacturers and other stakeholders to increase consumers' options for accessing video content from a variety of sources and using a variety of devices. Government mandates intended to spur innovation are not necessary and more likely would slow progress. Providers must discover new ways to attract and retain customers and meet their demands, by differentiating their services, introducing new technological and/or service innovations, and enabling consumers to access their services on consumers' choice of devices. Providers are already working with manufacturers to bring to market new and compelling devices for accessing content. Government imposition of an inflexible technology mandate in the midst of this highly collaborative and productive environment will force companies to curtail current efforts to develop innovative, new products and redirect their efforts to simply meeting the mandate, thereby derailing the progress that has already been made.

3. **The gateway device proposal came from the national broadband plan, but don't most subscription-TV customers already have broadband? How will this mandate promote deployment or adoption?**

It is unclear how requiring providers to provide a limited functionality "AllVid" adapter that would connect a video provider's service to consumer electronics products purchased at retail would promote broadband deployment or adoption in any meaningful way. All of our FiOS customers already have access to our cutting-edge broadband Internet access services, and the vast majority FiOS TV subscribers have elected to receive bundled packages of services that include broadband. Moreover, consumers already have access to a wide and growing range of devices – such as the PlayStation 3, Roku, Apple TV or even Wi-Fi enabled TV sets

or blu-ray players – that enable consumers to access Internet content for display on their televisions. Under these circumstances, a mandate to provide a particular piece of equipment with prescribed technological capabilities – as the gateway device would do – is not likely to move the needle on broadband deployment or adoption.

- 4. Aren't technology mandates, by their nature, almost always inflexible and one-size-fits-all? Can they ever really account for, let alone foster, diversity in technologies and business models? Don't they usually end up just raising consumer costs and hindering innovation?**

As explained above, technology mandates almost invariably inhibit innovation and harm consumers. In the case of dynamic services and technologies – as is the case with today's video and broadband – prescriptive rules are unlikely to keep pace with changes in consumer demand and technology. Given the positive, consumer-driven developments that are already well underway in this area – and that promise fulfillment of Congress's vision in adopting Section 629 and an ever-increasing array of device and service choices for consumers – the adoption of new technology rules dictating a one-size-fits-all approach would be counterproductive. Regulators would be shooting behind the duck as they seek to predict how technology will evolve and be implemented, and by doing so they would jeopardize or delay the positive developments already bringing increased choice and innovation to consumers.

- 5. If operators must pass all content through to third-party devices while providing no additional functionality in the gateway adapter, and if device manufacturers are allowed to disaggregate all the content and combine it with anyone else's content from any other source, haven't we turned the networks into dumb pipes? Wasn't the goal of the broadband plan to encourage deployment? What incentive is there for providers to invest in broadband under this regime?**

Yes, if new rules were to require the disaggregation of video services in the way described – essentially turning video providers into the wholesale providers of video programming to other device manufacturers or service providers – then that would (among other things) undermine providers' ability to offer differentiated and innovative services to consumers and diminish incentives to invest in the broadband networks over which those services are delivered.

Today, video providers compete not just on content offerings and price, but also on additional differentiated service features. For example, Verizon has been the first to market numerous innovations to its video customers, including the multi-room DVR – which allows customers to record a video program in one room and watch it on televisions in any other room of the house – and Widgets – which enable FiOS customers to view Internet content on their televisions, such as YouTube, Facebook and Twitter. These and other innovations which have increased the service and viewing options for consumers would be threatened by an approach which limits providers' ability to introduce innovative new approaches or force-fit their services into a single, dumb-pipe model. Forced disaggregation of a video provider's service would also distort video competition if other increasingly popular providers of video

programming – including online video providers such as Netflix, YouTube and Hulu – were not subject to the same requirements. Today, these online providers offer their services in ways that allow them to maintain the integrity of their services and ensure a consistent look and feel for their customers. It would make no sense – and would lead to customer frustration and confusion – if other video providers were denied this same ability. In addition, any such rules that inhibit providers' ability to offer high quality, differentiated services that will attract consumers would also directly undermine national broadband goals by decreasing the provider's expected return on investment created by the full range of services offered over its broadband network. Moreover, in our experience, many consumers continue to prefer the simplicity and affordability of leasing a set-top box directly from a provider, and business/service models such as these should continue to have a place in future video service evolution paths.

- 6. Aren't subscription-TV providers already experimenting with third-party devices? Aren't these efforts more likely to succeed than one-size-fits-all rules that micromanage what devices you must offer and support? Isn't it better to have all sorts of approaches compete in the market so we find out which ones work? In fact, isn't it likely that different approaches will work better for different needs?**

Yes, as noted above, considerable work is already underway that is increasing the consumers' ability to use their choice of devices to watch video programming. In addition to the important standards-setting work that is facilitating those developments – including work on DLNA standards that will facilitate wider access to video programming over a customer's home network and work on RVU standards that will enable more powerful video services to operate on many devices more economically – providers are also working directly with consumer electronics manufacturers to increase the choices available to consumers. Verizon, for example, has already completed proof of concept trials with several manufacturers that would allow FiOS TV service to work through game consoles and other networked devices without the need for set-top boxes. Any new technology mandates would only frustrate the progress being made along these lines by diverting attention and resources to regulatory compliance instead of collaboration and innovation in industry bodies and directly among industry players.

- 7. What happens if someone wants to introduce some sort of functionality that the FCC has failed to consider, or that doesn't work with the gateway mandate? Will they now need FCC permission to innovate?**

Prescriptive technological mandates inevitably pose risks to innovation. To the extent any new FCC rules require a particular technological approach, there would be a substantial risk that such a rule would interfere with a provider's ability to introduce new or differentiated features or functionalities that were not contemplated by, or that are inconsistent with, the rule. Providers need flexibility to offer new innovations – such as Verizon's multi-room DVR capability or FiOS Widgets – and there is a substantial risk that prescriptive technology mandates would get in the way. As services continue to become more advanced and interactive in response to changes in technology and consumer demand, the likelihood of technology mandates keeping pace becomes all the more remote.

8. **The gateway mandate is premised on the idea that government regulation is needed to drive the convergence of the Internet and TV. But that convergence is already taking place in the marketplace, as shown by the widespread availability of Internet-connected TVs, DVRs, and other devices. Won't the marketplace do a better job of driving continued innovation in this area than government regulations?**

Yes, as explained above, consumer demand and advances in technology – including the continued development of industry standards that facilitate home and wide area networking over a variety of devices and services – is already increasing the choices available to consumers and furthering the convergence between traditional video services and Internet content. A wide range of networked devices already on store shelves today allow consumers to easily access and view content from the Internet, and this convergence will continue. Indeed, as explained above, Verizon's services and platforms have furthered these developments, through the introduction of innovations such as FiOS Widgets that allow customers to access on their TVs content from Internet sites such as Facebook and Twitter. For example, Verizon recently launched a new application that brings Internet video content and hundreds of Internet radio stations to our FiOS TV experience. FiOS TV customers can now enjoy any YouTube video or iHeart Radio station right on their TV screens. Other online video-sharing sites are already available to our FiOS customers -- such as blip.tv, Dailymotion and Veoh. These pro-consumer developments are happening in the absence of new regulatory mandates, and will continue in response to consumer demand.

9. **The goal of the gateway mandate is to drive innovation in the device marketplace, but the proposed rules would force every subscription-TV provider to supply its customers with a "dumb" gateway device. How does this promote innovation?**

As explained above, new technology mandates – including prescriptive rules requiring a specific gateway devices – are unlikely to benefit consumers or promote innovation. Rather than taking that approach, the FCC and policymakers should encourage the work already well underway in appropriate standards-setting bodies and in the marketplace to increase the choices available to consumers. A one-size-fits-all approach would ignore the different technologies and service features among different providers, and would inhibit continued innovation to better serve consumers.

10. **If we force gateway devices on consumers who are happy to use operator-provided set-top boxes, haven't we imposed costs on them without providing any additional functionality?**

Any requirement to use a new device – in addition to the operator-provided device needed to get all of a provider's service – has the potential to impose costs on these subscribers without any offsetting benefits. In our experience, many consumers continue to prefer the simplicity and affordability of leasing a set-top box directly from a provider, and business/service models such as these should have a place in the future video service evolution paths.

11. If the gateway mandate requires you to allow device manufacturers to disaggregate all the content you carry and combine it with anyone else's content from any other source, don't we have copyright and interface issues?

Protecting copyright and addressing interface issues to ensure a high quality consumer experience are both important issues, and each could be undermined by inappropriate new obligations to disaggregate a service or by new technology mandates that provide access to programming without appropriate safeguards. By maintaining the integrity of their services, video providers are able to ensure that the interests of content partners and of consumers are protected.

