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DCMN NORMAN

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, D.C.

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.

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 information follows:]

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

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 information follows:]

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

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 information follows:]

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

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 information follows:]

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

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

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.

[The information follows:]

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Mr. Boucher. 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.

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 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 follows:]

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

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 information follows:]

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Mr. Boucher. 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, DirectTV; 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 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, 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 television 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 3.07 a reality. Thank you very much.

Mr. Boucher. Thank you, Mr. Williams.

[The prepared statement of Mr. Williams follows:]

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

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. McSlarow.

[The prepared statement of Mr. McSlarow follows:]

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

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]

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]

No hablo espanol on CableCARD.

[Slide]

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

[Slide]

Anybody like sports? Not available on CableCARD.

[Slide]

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 rulemaking 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:]

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

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:]

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

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 on-line 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:]

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

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.

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DCMN HOFSTAD

[10:56 a.m.]

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:]

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

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. Okay.

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. -- 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. Okay. 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. McSlarrow. 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. McSlarrow. 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. McSlarrow. Okay, large and elegant.

Mr. Boucher. Yeah. 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. McSlarrow. 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. McSllarrow?

Mr. McSllarrow. I don't know.

Mr. Stearns. Just "yes" or "no."

Mr. McSllarrow. 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. McSllarrow. 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. Okay.

Mr. Shanks?

Mr. Shanks. No, sir.

Mr. Stearns. Okay.

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. Okay. 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. Okay.

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. Okay. iPad?

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

Mr. Stearns. Okay.

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

Mr. McSlarrow. 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. McSlarrow. 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. Okay.

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. Okay.

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 holdouts, 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. Latta. 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 northwest 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. Latta. 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, yeah, 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. Okay? Congressional experts are only experts compared to other congressmen, but not real experts, okay? That is just an oxymoron, "congressional expert," you know, like "jumbo shrimp" or "Chevy Chase nightlife." Okay? 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. Yeah. 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. McSllarrow?

Mr. McSllarrow. I do.

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

Mr. McSllarrow. 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. Okay. 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, okay? 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. Telecos, 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. Okay. Thank you.

Mr. McSparrow, 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. Okay.

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

Mr. Boucher. One more question, Mr. McNerney.

Mr. McNerney. Okay, 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. Okay. 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.]