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ONE HUNDRED ELEVENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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MEMORANDUM

April 26, 2010

To: Members of the Subcommittee on Communications, Technology, and the Internet

Fr: Democratic Committee Staff

Re: Hearing on the National Broadband Plan and Competitive Availability of Navigation Devices

The Subcommittee on Communications, Technology, and the Internet will hold a hearing entitled, "The National Broadband Plan: Competitive Availability of Navigation Devices" on Thursday, April 29, 2010, at 10 a.m. in 2123 of the Rayburn House Office Building. The hearing will examine recommendations contained in the National Broadband Plan to stimulate competition and innovation in set-top boxes and other video navigation devices.

I. BACKGROUND

As part of the American Recovery and Reinvestment Act (ARRA), Congress required the Federal Communications Commission (FCC) to submit to Congress a National Broadband Plan (NBP) to ensure every American has "access to broadband capability."[1] On March 16, 2010, the agency released the plan, which made numerous recommendations for action by the FCC, the executive branch, Congress, and state and local governments.[2] On March 25, 2010, the Subcommittee on Communications, Technology, and the Internet held its first oversight hearing to explore the NBP.

This follow-up hearing will explore the recommendations contained in Chapter 4 of the NBP concerning how innovative set-top boxes and other video navigation devices can change the way consumers utilize video programming services and broadband.[3] The NBP points out

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[1] The American Recovery and Reinvestment Act, Pub. L. No. 111-5 §6001(k) (2009).

[2] Federal Communications Commission, *National Broadband Plan*, (2010).

[3] *Id*., at 49.

that while consumers have access to hundreds of mobile and computing devices, there is not a similarly diverse retail market for set-top boxes and other video navigation devices. The NBP states that further innovation in set-top boxes could lead to higher broadband utilization as video encourages more broadband usage.[4]

Section 629 of the Telecommunications Act of 1996 directs the FCC to ensure the commercial availability of "converter boxes, interactive communications equipment, and other equipment" to consumers of multichannel video programming distribution (MVPD) services.[5] Since 1998, the FCC has attempted to implement this provision through a series of orders that led to the development of the CableCARD, a credit-card sized device that separates cable programming access and user authentication (known as "conditional access element") from video navigation devices. Although the CableCARD has been in development for years, the first CableCARD-enabled retail devices were not available to the public until 2004, and cable operators were not required to use CableCARDs for set-top boxes leased to consumers until July 2007.[6]

Furthermore, the current generation of CableCARDs mandated by the FCC only enable retail video navigation devices to receive downstream, or "one-way," video signals from cable operators. At present, these CableCARD enabled devices do not offer upstream, or "two-way," signaling capabilities necessary for interactive programming such as video on demand (VOD) and Pay-Per-View. In 2008, CableLabs announced a "tru2way" agreement between cable companies and leading consumer electronics companies. Tru2way is a common software platform to enable interactive applications.[7] Consumer electronics companies participating in the tru2way agreement can build devices incorporating the tru2way platform and enable interactive video programming without a set-top box.

Despite these efforts, a competitive retail market for set-top boxes and other video navigation devices has yet to emerge. The NBP notes that two set-top box manufacturers – Motorola and Cisco – captured a 95% share of unit shipments through the first three quarters of

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[4] *Id*., at 50.

[5] 47 U.S.C. § 549 (codifying section 629 of the Telecommunications Act of 1996).

[6] *See* Federal Communications Commission, *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CS Docket No. 07-80, Second Report and Order, 20 FCC Rcd 6974 (2005).

[7] CableLabs, *Tru2way Brand to Succeed 'OpenCable Platform' in Consumer and Retail Settings* (Jan. 7, 2008) (online at www.cablelabs.com/news/pr/2008/08_pr_tru2way_010708.html).

2009, and that these companies "control both the hardware and the security on the cable set-top box through their proprietary conditional access systems." With these advantages, the NBP concludes that potential competitors to these two companies "have been competing on an uneven playing field." [8] To spur further competition and to provide consumers with more choices, the NBP makes a series of recommendations that would apply to all MVPD providers, including satellite TV operators and phone companies offering video services.

II. NATIONAL BROADBAND PLAN POLICY RECOMMENDATIONS

A. Gateway Devices

Recommendation 4.12 of the NBP states that the FCC should initiate a proceeding to ensure that a "gateway device" is installed by MVPD providers in all new subscriber homes and in all homes requiring replacement set-top boxes starting on or before the end of 2012. The NBP recommends a simple gateway device whose sole function is to "bridge the proprietary or unique elements of the MVPD network... to widely-used and accessible, open networking and communications standards."[9] Such a gateway device would become the standard interface between MVPD providers and consumer devices such as televisions, set-top boxes and other in-home electronic devices. The NPB suggests that with the emergence of such a gateway device, MVPD providers will continue to invest in and develop their video delivery technology, while consumer electronics manufacturers will be able to design their devices to a common, open interface that would lead to new classes of devices with integrated video and broadband services. The NBP outlines the following key principles to be applied to the gateway devices:

- *Simplicity.* A gateway device should be simple, inexpensive and equipped with only those components required to translate network-specific functionalities into open, standard protocols.

- *Neutral User-Interface.* Consumer electronics manufacturers should be able to develop, sell, and support devices independent from MVPD providers or any other third parties.

- *Openness.* The gateway device should use open, published standards.

To ensure compliance with any new FCC requirements, the NBP recommends that the FCC establish transparent enforcement mechanisms, including issuing fines against non-compliant operators or working with operators to provide set-top boxes free to new customers until a gateway device is deployed.

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[8] Federal Communications Commission, *National Broadband Plan*, at 50-51.

[9] *Id.,* at 51.

B. CableCARD

Recommendation 4.13 of the NBP states that the FCC should adopt a set of rules to address certain CableCARD issues while the development of a gateway device is ongoing.

The NBP identifies four factors hindering the demand for, and the availability of, CableCARD devices: (1) retail CableCARD devices cannot access all linear channels[10] in cable systems with Switched Digital Video (SDV) without a SDV tuning adaptor provided by the cable operator;[11] (2) consumers perceive retail set-top boxes to be more expensive than boxes leased from the cable operator; (3) consumers experience more installation and support costs and inconvenience when purchasing retail set-top boxes compared to leasing boxes from their cable operators, and (4) the current retail CableCARD device certification process, run through CableLabs, is costly and is prone to uncertainty and delay.[12] To address these problems, the NBP recommends the following solutions:

- Ensure access to linear channels for retail CableCARD equipment by requiring cable operators to install certain network equipment that would eliminate the need for a separate SDV tuning adaptor.

- Establish transparent pricing for CableCARD and operator-leased set-top boxes. Consumers should be able to see appropriate CableCARD charges for either a retail device or a leased device.

- Standardize installation policies for retail and operator-leased CableCARD devices.

- Streamline and accelerate the certification process for CableCARD devices.

III. CURRENT STATUS

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[10] Linear channels are utilized when video content is delivered in a scheduled mode, such as through broadcast or cable network channels. In contrast, Internet video and other platforms such as Video on Demand are delivered upon request and often with pause/rewind/fast-forward capabilities.

[11] Many cable operators began deploying SDV in 2007 using two-way technology in which a channel is not available to subscribers unless a subscriber sends an upstream signal requesting such channel. Since CableCARD is a one-way device capable of only receiving downstream signals from cable operators, a CableCARD-equipped retail set-top box such as those manufactured by TiVo was not able to receive SDV programming without additional equipment. In November 2007, the five largest cable providers agreed to deploy "tuning adapters" that would enable TiVo CableCARD devices to receive SDV channels.

[12] *Id.*, at 52.

On April 8, 2010, the FCC announced its agenda for implementing key recommendations of the NBP.[13] In addition to the Notice of Inquiry on gateway devices, which was adopted on April 21, 2010, the schedule also contemplates a NPRM on the same topic to be released in the last quarter of 2010.

On April 21, the FCC met in an Open Meeting and adopted by unanimous vote an NOI for gateway devices and an NPRM on CableCARD rules. The NOI further refines the gateway devices proposal outlined in the NBP and seeks comments on an "all video" (AllVid) device to be supplied by all MVPDs with a common interface for connection to televisions, DVRs, and other smart video devices.[14] In the CableCARD NPRM, the FCC tentatively concludes that the CableCARD is not a viable long-term solution due to technical advancements outstripping the CableCARD model. The NPRM also seeks comments on a number of proposed rules to update the current system as an interim solution.[15]

IV. WITNESSES

Harold Feld
Legal Director
Public Knowledge

Kyle McSlarrow
President and CEO
National Cable and Telecommunications Association

Eric Shanks
Executive Vice President, Entertainment
DirecTV

Michael T. Williams
Executive Vice President and General Counsel
Sony Electronics Inc.

David E. Young

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[13] Federal Communications Commission, *FCC Announces Broadband Action Agenda* (April 8, 2010).

[14] Federal Communications Commission, *Notice of Inquiry, Video Device Competition*, MB Docket No. 10-91 (April 21, 2010).

[15] Federal Communications Commission, *Fourth Further Notice of Proposed Rulemaking, Implementation of Section 304 of the Telecommunications Act of 1996*, CS Docket No. 97-80 (April 21, 2010).

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