

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Implementation of Section 304 of the Telecommunications Act of 1996)	CS Docket No. 97-80
)	
Commercial Availability of Navigation Devices)	
)	PP Docket No. 00-67
Compatibility Between Cable Systems and Consumer Electronics Equipment)	
)	

**COMMENTS OF
PANASONIC CORPORATION OF NORTH AMERICA
ON THE
FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING**

June 14, 2010

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Panasonic Corporation of North America is pleased to submit these Comments in support of the Fourth Further Notice of Proposed Rulemaking to implement Section 304 of the Telecommunications Act of 1996.¹

CORPORATE OVERVIEW:

Panasonic Corporation of North America is the principal North American subsidiary of Panasonic Corporation (Panasonic [NYSE: PC]), a world leader in consumer electronics, telecommunications and energy-related products. Based in Secaucus, NJ, Panasonic Corporation of North America (hereinafter "Panasonic") markets in the United States a broad line of digital and other electronics products for consumer, business and industrial use. On September 17, 2009, Panasonic celebrated its 50th anniversary in the US. Today, Panasonic has more than 5000 employees in the US, and also employs approximately 6500 in Canada and Mexico. Panasonic is the market leader today in performance-leading plasma televisions, including Full HD 3D

¹ *Fourth Further Notice of Proposed Rulemaking ("FNPRM"); Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment* Notice of Inquiry, CS Docket No. 97-80, PP Docket No. 00-67 (rel. April 21, 2010).

televisions and displays. Panasonic also designs and manufactures home theater systems, AV receivers and amplifiers, DVD recorders and players, high-definition Blu-ray disc players and Blu-ray disc drives, laptop computers, network routers, and wireless and wired home networking equipment.

Panasonic is one of 26 “promoter members” of the Digital Living Network Alliance (“DLNA”)², which has been developing “an interoperability framework of design guidelines based on open industry standards to complete the cross-industry digital convergence.” Panasonic has been working cooperatively with other DLNA members towards a shared vision of “a wired and wireless interoperable network of Personal Computers (PC), Consumer Electronics (CE) and mobile devices in the home enabling a seamless environment for sharing and growing new digital media and content services.”³

Panasonic is also one of five founding companies of the Digital Transmission Licensing Administrator (“DTLA”)⁴, which created the Digital Transmission Content Protection (“DTCP”), which is a “link protection” technology that protects audiovisual content, when transmitted between digital entertainment products over an home network, against unauthorized copying, interception and tampering within the home, while ensuring that content can be viewed and copied on home networked devices. DTCP is interoperable with a number of interface protocols including Internet Protocol, IEEE 1394, USB, and Wireless HD.

OVERVIEW OF CABLE-READY ACTIVITY

Panasonic has been a supporter and active contributor towards the Commission’s goal of providing consumers with choices in cable-ready products—including interactive, two-way products—at retail, independent of cable operators, to meet the diverse needs and interests of consumers who use cable service. In 2003, Panasonic was the first manufacturer to deploy a digital cable-ready HDTV (i.e., using CableCARD), and Panasonic was an early signer of the CHILA and OCAP license agreements offered by CableLabs that enable manufacturers to build interactive digital cable-ready products.⁵

Panasonic also deployed “tru2way” integrated HDTVs beginning in 2008 with Comcast customers in the Chicago and Denver areas, and expanded to include Atlanta in 2009. Consumer feedback from Panasonic’s controlled deployment of integrated tru2way HDTVs indicated very high satisfaction with tru2way and the access it can provide to cable system’s digital services using only the TV’s remote control to operate both TV and cable features. In response to consumers’ feedback also indicating their

² DLNA promoter members include Access, AT&T, AwoX, Broadcom, Cisco, Comcast, DIRECTV, Dolby, Ericsson, HP, Huawei, Intel, LG Electronics, Microsoft, Motorola, Nokia, Panasonic, Pioneer, Qualcomm, Rovi, Samsung, Sharp, Sony, Technicolor, Toshiba and Verizon. See: <http://www.dlna.org/industry/join/roster> (visited 6/7/10)

³ See: <http://www.dlna.org/industry/join/organization/> (visited 6/7/10).

⁴ See: <http://www.dtcp.com/> (visited 6/7/10)

⁵ See: <http://www.opencable.com/documents/> (visited 6/7/10).

desire for a greater variety of screen sizes, and to accommodate now-slimmer chassis designs, Panasonic also has indicated it plans to provide tru2way functionality in the future using a separate “set-back box” that would attach to any Panasonic VIERA™ HDTV (from model year 2009 forward) using the HDMI interface.⁶ All of these retail deployments were made possible by the Commission’s rules regarding cable operator support of CableCARD in retail products and which have encouraged the cooperative cross-industry activities which have led to these first interactive cable-ready products.

CABLECARD HAS NOT ACHIEVED SUCCESS

As noted in the NPRM, for a variety of reasons the “Commission’s efforts to date have not developed a competitive retail market for retail navigation devices that connect to subscription video services”,⁷ and the Commission seeks “comment on whether technical developments over the last decade have overtaken the CableCARD model.”⁸ While Panasonic agrees with the Commission’s tentative conclusion that the CableCARD regime has not achieved success, we also agree that CableCARD should not be abandoned in the near-term until a fully-interactive bi-directional solution is deployed. Therefore, Panasonic supports the five steps the Commission has outlined to improve the current CableCARD regime.⁹ Our support for the Commission’s plan stems from our experience in deploying retail cable-ready products, which indicates that:

1. Consumers who are likely to purchase cable-ready retail products are also more likely to demand access to the full range of interactive programming provided by cable operators, e.g. video on demand, pay-per view, switched digital video (“SDV”) channels, and electronic program guides (“EPGs”) – all of which are fundamentals of today’s valuable cable television services. Current FCC rules require cable operators to provide support only for unidirectional digital cable products (“UDCPs”) on digital cable systems.¹⁰
2. A nation-wide market is an essential element in gaining acceptance of retailers to carry inventory. Panasonic found retailers to be reluctant to support tru2way HDTVs when they would only be supported locally or regionally by some, but not all, cable operators.
3. Retailers were reluctant to accept products that consumers cannot easily self-install or that retailers cannot provision in the store at the time of sale. It proved both complicated and time-consuming for consumers first, to buy and

⁶ *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80 and PP Docket No. 00-67, letter from Peter M. Fannon & Paul G. Schomburg to Marlene H. Dortch, Sec. FCC. (Dec. 2, 2009) Re: Notice of Ex Parte Presentation,

⁷ FNPRM at 8

⁸ FNPRM at 12

⁹ FNPRM at 13

¹⁰ 47 C.F.R. § 76.640

have delivered their digital cable-ready TV, and then to arrange for their cable provider to visit their home and install the CableCARD.

4. After-sale support for cable-ready products can be a significant burden on manufacturers. Panasonic found that changes to operator applications periodically require firmware updates to maintain compatibility. The lack of an all-industry agreement to provide a path on a cable systems for firmware updates for retail products greatly complicates after-sale support.

RECOMMENDATIONS:

1. Switched Digital Video:

- a. Panasonic supports the goal of providing access to Switched Digital Video ("SDV") channels, but believes that this is better handled by supporting the deployment of fully-interactive digital cable-ready products ("IDCPs") using tru2way. While Panasonic does not oppose or wish to discourage the development of more limited UDCPs, we are reluctant to rely on an approach that has received no cable operator support and has not been robustly tested or proven in the field in actual products. By comparison, tru2way has been thoroughly tested and is now being widely deployed in their systems by key cable operators in their systems and in their own leased devices, and is therefore a much better solution at this time for achieving "common reliance".
- b. If the Commission proceeds with a new requirement to support the use of an IP-return path for access to SDV, then this protocol first must be standardized across all cable operators in order to provide a nationwide system for retail products, as noted above.

2. CableCARD Pricing and Billing:

- a. Panasonic supports the Commission's proposal that "cable operators... charge equivalent and transparent pricing for CableCARDS for customers who purchase a navigation device."¹¹ In implementing this proposal, Panasonic recommends:
 - i. FCC should maintain common reliance on CableCARD for cable operators until an all-MVPD solution is deployed and available for independent, retail-product manufacturers to build-to at the same time it is available to manufacturers of devices which will be sold to cable operators.
 - ii. Any changes to CableCARD or to the host-device interface should be backward compatible with the installed base of products. If the Commission finds that backward compatibility cannot be achieved, cable

¹¹ FNPRM at 15

operators should be required to maintain an adequate supply of CableCARDS necessary to support the installed base of retail products.

- b. Panasonic agrees that the Commission should “require Cable operators to separate the lease cost of CableCARDS to consumers for leased set-top boxes on subscribers bills separate from their host devices.”¹² In implementing this proposal, we recommend:
 - i. The Commission should ensure that the leased charge a consumer pays for a CableCARD is based on the actual cost of acquiring the CableCARDS by the cable operator..

3. CableCARD Installations: Panasonic agrees with the Commission’s concern that “CableCARD installation costs for retail devices and installation costs for leased boxes may be disparate”¹³ and needs to be addressed. We believe that common reliance on CableCARD in devices also requires parity in provisioning and installation of CableCARDS in both leased and retail products. Panasonic further agrees that the Commission’s proposal to allow subscribers to install CableCARD in retail devices would “bolster CableCARD support significantly and remove obstacles that discourage customers from purchasing navigation devices at retail.”¹⁴ In implementing this proposal, we recommend that:

- a. The Commission should also ensure that cable operators permit retailers or equipment installers to provision and install CableCARDS at the point of purchase or on delivery to the consumer’s home. Panasonic’s experience of working through installation issues with retailers has shown that CableCARD installation can be effectively supported by using web-based tools to walk consumers or retailer technicians through the simple installation process.

4. Interface Requirements: Panasonic supports the Commission’s tentative conclusion that “allowing manufacturers greater choice in the specific interface they include in their set-top boxes will serve the public interest by enabling connectivity with the multitude of IP devices in consumers’ homes.”¹⁵ In implementing this proposal, Panasonic recommends:

- a. The Commission should require cable operators to provide an Ethernet jack on all leased high definition (“HD”) set-top boxes as a replacement to IEEE 1394 by July 1, 2012. Other interfaces are not as ubiquitous as Ethernet, and thus their use should be optional.

¹² FNPRM at 15

¹³ FNPRM at 16

¹⁴ Id

¹⁵ FNPRM at 20

- b. The Commission should rely on and approve the specifications adopted by the Digital Living Network Alliance (“DLNA”) for IP communications and content formats. Panasonic has contributed to and supports the cross-industry collaborative efforts of DLNA.
 - i. This interface should, at a minimum, support access to all linear and switched-digital video content using the protocols and formats already specified by the Digital Living Network Alliance for a Digital Media Server (DMS).¹⁶ Further work is underway to specify Interoperability Guidelines and content profiles to enable playback of MVPD content (e.g., from set-top boxes) on DLNA certified devices.¹⁷
 - ii. In addition to the mandatory DLNA video formats already specified, support for H.264 formats should be mandatory. These video formats are widely used in delivering multichannel video content because of their bandwidth efficiencies and multiple vendors already provide chip sets for processing these formats.
 - iii. Consistent with the existing FCC rules for the IEEE 1394 interface,¹⁸ the Commission should also require DTCP be used as link protection for Internet Protocol interfaces. This would also be consistent with DLNA where DTCP-IP is a mandatory part of the DLNA specification.
- c. Panasonic agrees that the Commission should “require cable operators to enable bi-directional communication over these interfaces”¹⁹, but we believe it would be premature for the Commission to require this interface to support bi-directional content (e.g. video on demand, pay per view) or applications (e.g. EPG). Panasonic recommends that the Commission monitor and actively encourage progress on the necessary bi-directional standards, and allow additional private agreements between CE device manufacturers and MVPDs that would support:
 - i. A remote user interface for ordering on-demand content (e.g. RVU, Ajax-CE, or tru2way);
 - ii. Access to program guide data or support for an EPG application;

¹⁶ **Digital Media Server (DMS)** devices provide media acquisition, recording, storage, and sourcing capabilities, as well as content protection enforcement as required. See: Digital Living Network Alliance Scope & Strategy at: http://www.dlna.org/industry/why_dlna/scope/

¹⁷ **Press Release**, Digital Living Network Alliance, *DLNA Enables Premium Commercial Content Across Home Networks* (Jan. 7, 2010), See: http://www.dlna.org/news/pr/view?item_key=e2c163bfab8076edc2b33eba8293e82cd2f11e3e (visited 6/10/10)

¹⁸ **§76.640**. “Cable operator-provided high definition set-top boxes shall comply with ANSI/SCTE 26 2001 (formerly DVS 194): “Home Digital Network Interface Specification with Copy Protection” (incorporated by reference, see § 76.602).”

¹⁹ FNPRM at 21

- d. With regard to remote control commands, Panasonic agrees with the Commission's proposal "that, at a minimum, these interfaces should be able to receive remote-control commands from a connected device."²⁰
 - i. Remote-control commands are today supported over HDMI by the OpenCable Host Thin Chassis Device Core Functional Requirements.²¹ Similar requirements should be supported over the IP interface.

5. Promote Cable Digital Transition: Panasonic supports the Commission's proposal to permit cable operators to "place into service new, one-way navigation devices (including devices capable of processing a high-definition signal) that perform both conditional access and other functions in a single integrated device but do not perform recording functions." Panasonic supports the Commission's goal to transition cable systems to all-digital in order to free up bandwidth currently used for analog video so this bandwidth can be used for new digital video or broadband services. Panasonic agrees that operators should "still be required to offer CableCARDS to any subscribers that request them and to commonly rely on CableCARDS in any digital video recorder and bidirectional devices that they offer for lease or sale." In implementing this proposal, Panasonic recommends:

- a. The Commission should require cable operators to adopt a standardized DTA functionality that is also be licensed for use in retail devices nationwide, with common reliance in leased all leased HD-DTAs, by July 1, 2011.

6. Downloadable Conditional Access: The NPRM reported that "the NCTA suggests that the Commission seek comment on whether the CableCARD has become outdated."²² Panasonic agrees that the CableCARD will become a dated technology and can and should be replaced in the near future by a downloadable conditional access solution. In his statement on the NPRM, Commissioner McDowell also asks "whatever happened to downloadable security?"²³ Panasonic, too, was surprised that the NPRM is silent on downloadable security as a replacement to CableCARD, in that downloadable security has been an important element in the Commission's navigation device proceedings:

²⁰ Id

²¹ See: **Table 16.2-1 - Keys to be Passed Through in the OpenCable Host Thin Chassis Device Core Functional Requirements Specification** at: <http://www.cablelabs.com/specifications/OC-SP-HOSTTC-CFR-I02-100507.pdf>

²² FNPRM at 12

²³ Statement of Commissioner Robert M. McDowell, Re: *Video Device Competition, MB Docket No. 10-91; Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices, CS Docket No. 97-80, Compatibility Between Cable Systems and Consumer Electronics Equipment, PP Docket No. 00-67.*

- The Commission's March 17, 2005, Second Report & Order²⁴, based largely on comments and recommendations from the cable industry, provided a "limited extension of the integration ban to determine whether it is possible to develop and deploy a downloadable security function that will permit them [cable operators] to comply with our rules without incurring the costs associated with the physical separation approach."
- In its November 30, 2005, report on downloadable security²⁵, NCTA found that that "downloadable security is a feasible Conditional Access ("CA") approach, that it is preferable to the existing separate security configuration, and that the cable industry will commit to its implementation for its own devices and those purchased at retail. We expect a national rollout of a downloadable security system by July 1, 2008."
- And, on January 16, 2009, the Commission provided Cablevision with a "temporary extension of its waiver of Section 76.1204(a)(1) of the Commission's rules to allow Cablevision to use its SmartCard solution until December 31, 2010, subject to its commitment to deploy an open downloadable security solution by December 31, 2010."²⁶

Panasonic recommends that:

- a. The Commission should seek additional comment from cable operators on plans to standardize and support downloadable security for their own and retail products. The use by Cablevision of downloadable security should be specifically reviewed by the Commission for whether it is suitable for deployment nationwide in retail products.
 - i. Cablevision or its technology provider should be required to provide sufficient details in the public record so that interested parties in the CE industry and the public to effectively review its downloadable security solution and provide comments on whether this solution is suitable for nationwide use in retail products.
- b. The Commission should require Cable operators to replace CableCARD with a downloadable conditional access ("D-CA") software stack and have common reliance in leased STBs by July 1, 2013.

²⁴ Second Report & Order, March 17, 2005, *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, CS Docket No. 97-80.

²⁵ Report of the National Cable & Telecommunications Association on Downloadable Security, November 30, 2005, CS Docket No. 97-80:

²⁶ Memorandum Opinion and Order, January 16, 2009, Cablevision Systems Corporation's Request for Waiver of Section 76.1204(a)(1) of the Commission's Rules, CSR-7078-Z, *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Device*, CS Docket No. 97-80.

- i. The D-CA stack should provide access to linear and SDV content without requiring tru2way or other middleware.
 - ii. The D-CA stack should enable the optional use of tru2way or other middleware to access to PPV, VOD or other bi-directional content.
 - iii. Licensing of the D-CA stack should allow CE manufacturers to provide network gateway functionality in CE products. CE makers should protect content downstream from the gateway but not prohibit recording or redistribution within the home network, except as specified in Subpart W of the Commission's rules.²⁷
- c. The Commission should ensure that the licensing cost to include D-CA in navigation devices to be very small. This would compare very favorably to the cost of CableCARD, which is substantial. A D-CA software interface will also provide power consumption savings of approximately 5 watts per unit.

SUMMARY:

Panasonic appreciates and supports the Commission's efforts to develop a retail market for navigation devices. We agree with the Commission that these "new rules will improve the CableCARD regime and will further the goals of Section 629 by providing potential consumers of retail cable navigation devices with more information about those options and eliminating barriers that companies face in developing such devices while the Commission takes action to establish a new solution to ensure the commercial availability of video navigation devices as proposed in the accompanying Notice of Inquiry."

Panasonic Corporation has since its founding made "contributing to society through our business activities" an unchanging management philosophy and the basis for all its operations.²⁸ We believe these changes will benefit consumers and society by:

- Allowing consumers to select their product of choice in a competitive market;
- Provide access to better video quality by using video processor designed for the display;
- Improve the ease of operation by using only the TV's remote control;
- Support for consumers with disabilities by allowing them to use the closed caption decoder in their TV; and
- Eliminate the need for duplicative external electronics and associated energy use.

²⁷ § 76.1901-1909

²⁸ See: "Our Unchanging Management Philosophy and CSR" at: <http://panasonic.net/csr/one/phi/>

In conclusion, Panasonic encourages the Commission to quickly promulgate the rules proposed in the NPRM, and in so doing to:

- Maintain common reliance on CableCARD for cable operators until an all-MVPD solution is deployed.
- Allow subscribers to self-install and allow retailers to provision and install CableCARDS at the point of purchase.
- Replace the IEEE 1394 interface with a requirement to provide Ethernet with DLNA protocols and video formats.
- Require cable operators to support downloadable conditional access by a date certain.

Respectfully submitted,

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