

**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)	
)	
Compatibility Between Cable Systems and Consumer Electronics Equipment)	PP Docket No. 00-67
)	

**COMMENTS OF SONY ELECTRONICS INC.
THIRD FURTHER NOTICE OF PROPOSED RULEMAKING**

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Executive Summary

As the Commission makes historic strides to empower consumer choice over communications devices in other regulated mediums, such as wireless, its consideration of open access for cable consumers is perfectly timed to advance that important principle and to speed the digital television transition. In the *Third FNPRM*, the Commission seeks to adopt standards to ensure that consumers have available to them at retail, and not just from their cable operator, a variety of navigation devices that provide access to bidirectional cable services. Of course the need for this regulation is long overdue. Congress mandated “open access” eleven years ago by adopting Section 629 of the Telecommunications Act and requiring that consumers have the opportunity to purchase competitive cable navigation devices from sources other than their MVPD.

Sony Electronics Inc. has been one of the top consumer electronics companies for nearly 60 years, and its name is synonymous with innovation and quality. Consistent with the vision of Congress and the Commission, Sony hopes that the outcome of the *Third FNPRM* is the creation of a competitive retail market for interactive digital cable-ready products. Any truly competitive market must foster and reward innovation, and that is Sony’s goal in this proceeding: to finally bring innovation to the cable navigation device retail market.

In Sony’s view, of the two proposals the Commission is considering, only the CEA proposal can best achieve the Commission’s two important goals in this proceeding: (1) facilitation of the DTV transition by February 17, 2009; and (2) creation of a competitive market for navigation devices consistent with the requirements of Section 629. Unlike the proposal put forward by the NCTA, only the CEA Proposal offers a technology-neutral solution for access to basic two-way services that cable operators and consumer electronics manufacturers can implement in time for the DTV transition. Moreover, the CEA Proposal will better foster

innovation and competition in the development of navigation retail devices because it provides equivalent support to all competitors in the navigation device market, and would not favor either CE or cable industries, thus preventing either side from gaining a structural and competitive advantage over the other. All of this is consistent with the goals of Section 629.

By contrast, the OCAP solution advanced by NCTA is not a viable solution because it cannot be accomplished in time for the DTV transition. NCTA's proposal will require massive investments of time and money by cable operators and CE manufacturers, it is not readily implementable because CableLabs has not yet completed the standardization process for OCAP in a manner that permits deployment of the technology in integrated CE devices, and it requires further negotiation of marketplace agreements between the CE and cable industries, a process that to date has proven impossible to complete. In short, adopting the NCTA proposal would require a major and unjustified leap of faith by the Commission that the cable industry can complete all of these steps in time for manufacturers to have OCAP-enabled products on store shelves for the final holiday season before February 17, 2009.

In evaluating the CEA and NCTA proposals, the Commission's efforts should be led by the open access principles envisioned by Congress and the Commission that *always* have guided this proceeding and the five consumer-friendly principles initially set forth in the CEA Proposal (the "Five Freedoms") that are a mirror reflection of these principles.¹ In Sony's view the CEA proposal, and not the NCTA proposal, meets the promise of open access and delivers to consumers the Five Freedoms they want and deserve. The Five Freedoms guide Sony's views on navigation device solutions, and Sony hopes the Commission will embrace these Five Freedoms as it renders its decisions with respect to the *Third FNPRM*.

¹ See *infra* p.7.

In order to successfully and expeditiously conclude its consideration of the *Third FNPRM* and accomplish its goals in this proceeding, Sony believes the Commission should focus its efforts on addressing three fundamental issues: (1) adoption of a viable solution for two-way navigation devices for basic interactive services (i.e., EPG, PPV, VOD, and SDV) that CEs and the cable industry can implement in time for the DTV transition; (2) adoption of regulations that make navigation data and program content metadata available for consumer use with competitive navigation retail devices; and (3) adoption of a separate regulatory framework governing content output technologies that will enable consumers to access content through a robust and secure home network.

Although the Commission need not address downloadable conditional access at this time, because the technology is not ready and thus the regulatory issues are not ripe for consideration, there are two other issues the Commission could address at this time for the benefit of CEs and consumers: (1) adopting reasonable and workable testing and certification processes for two-way devices; and (2) requiring dedicated bandwidth on cable networks so that CE manufacturers can deliver software upgrades and bug fixes to cable-ready devices.

Sony applauds the Commission's efforts in this proceeding and, upon conclusion of the *Third FNPRM*, Sony is committed to bringing innovation to the cable navigation device retail market by delivering to consumers the benefits of higher quality technology, competitive prices and, most of all innovative and useful competitive two-way devices that have the features consumers want and demand.

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**COMMENTS OF SONY ELECTRONICS INC.
THIRD FURTHER NOTICE OF PROPOSED RULEMAKING**

Sony Electronics Inc. (“Sony”) hereby submits the following comments on the Federal Communications Commission’s (“FCC” or “Commission”) Third Further Notice of Proposed Rulemaking (“*Third FNPRM*”) in the above-captioned proceeding.² In the *Third FNPRM*, the Commission seeks to adopt standards to ensure that consumers have available to them at retail, and not just from their cable operators, a variety of navigation devices that provide access to bidirectional cable services.³ The Commission has perfectly timed its consideration of this issue, as it makes historic strides toward enabling “open access” and empowering consumer choice over communications devices in other regulated mediums, such as wireless.⁴ As Chairman

² *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, Third Further Notice of Proposed Rulemaking, 22 FCC Rcd 12024 (2007) (“*Third FNPRM*”).

³ *Third FNPRM*, ¶1.

⁴ See, e.g., *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No. 06-150; *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102; *Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones*, WT Docket No. 01-309; *Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27 and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services*, WT Docket No. 03-264; *Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules*, WT Docket No. 06-169; *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700*

Martin recently explained to Congress, “[a] network more open to devices . . . can help ensure that the fruits of innovation . . . swiftly pass into the hands of consumers. . . .”⁵

Congress recognized the need for “open access” for cable navigation devices eleven years ago, when it adopted Section 629 of the Telecommunications Act of 1996.⁶ In adopting Section 629, Congress mandated that consumers have the opportunity to purchase competitive navigation devices for cable television service from sources other than their MVPD, emphasizing that “[c]ompetition in the manufacturing and distribution of consumer devices has always led to innovation, lower prices and higher quality.”⁷ Consistent with Congress’ vision, and with the vision of the Commission in this proceeding, Sony is committed to delivering to consumers the benefits of higher quality technology for cable navigation devices, competitive prices and, most of all, innovative and useful features for consumers, by bringing competitive two-way devices to market.

I. OVERVIEW OF RULEMAKING.

In the *Third FNPRM*, the Commission asks for input on two proposals for bringing competitive two-way devices to market. The first was advanced by the Consumer Electronics

MHz Band, PS Docket No. 06-229; *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010*, WT Docket No. 96-86; *Declaratory Ruling on Reporting Requirement under Commission’s Part 1 Anti-Collusion Rule*, WT Docket No. 07-166, Second Report and Order, FCC 07-132, ¶¶ 189-230 (rel. August 10, 2007) (“*700 MHz Omnibus Order*”).

⁵ Written Statement Of The Honorable Kevin J. Martin, Chairman Of The Federal Communications Commission, before the Committee on Energy and Commerce, U.S. House Of Representatives, July 24, 2007, at 6 (“*Chairman Martin Statement*”).

⁶ The literal text of the statute requires the Commission to “adopt regulations to assure the commercial availability, to consumers of multichannel video programming and other services offered over multichannel video programming systems, of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors *not* affiliated with any multichannel video programming distributor.” 47 U.S.C. § 549(a) (*italics added*).

⁷ *Third FNPRM*, ¶ 2 (*citing* H.R. REP. NO. 104-204, at 112 (1995)).

Association (“CEA”) on November 7, 2006,⁸ and the second was submitted by the National Cable and Telecommunications Association (“NCTA”) on November 30, 2005.⁹ Fundamentally, the Commission asks which proposal will best achieve two important goals: (1) facilitation of the over-the-air digital television (“DTV”) transition by February 17, 2009; and (2) creation of a competitive market for cable navigation devices consistent with the requirements of Section 629.

In the Commission’s view, the absence of a two-way plug-and-play standard for interoperability between cable television systems and consumer electronics equipment impedes these goals in two respects. First, the lack of two-way cable functionality for retail digital cable-ready devices has deterred consumers from purchasing digital televisions, and thereby impedes the DTV transition.¹⁰ The Commission hopes, therefore, that adopting two-way plug-and-play regulations will encourage consumers to purchase digital devices before the February 17, 2009 DTV transition.¹¹ In order to meet this deadline, Sony agrees with the Commission that two-way navigation devices must be available at retail during the final holiday buying season in the fourth calendar quarter of 2008.¹²

Second, the absence of a two-way plug-and-play standard has prevented realization of the goals set by Congress in Section 629 because, according to the Commission, consumers are not

⁸ *See id.*, Appendix B, Letter from Brian Markwalter, Vice President, Technology and Standards, Consumer Electronics Association, et al., to Marlene H. Dortch, Secretary, Federal Communications Commission (filed Nov. 7, 2006) (“CEA Proposal”).

⁹ *See id.*, Appendix C, Letter from Daniel L. Brenner, Senior Vice President, Law & Regulatory Policy, National Cable and Telecommunications Association, to Marlene H. Dortch, Secretary, Federal Communications Commission (Nov. 30, 2005) (“NCTA Proposal”).

¹⁰ *See Third FNPRM*, ¶ 7 and n.21.

¹¹ *See id.*, ¶ 14.

¹² *See id.*

interested in purchasing and using outdated one-way devices.¹³ To interest consumers in purchasing the next generation of navigation devices and digital televisions, the Commission suggests that devices must be able to access two-way features that are available on cable systems today, including:

- Electronic programming guides (“EPG”);
- Video-on-demand (“VOD”);
- Pay-per-view (“PPV”); and
- Other interactive television (“ITV”).¹⁴

Sony agrees with the Commission that this proceeding should ideally result in adoption of two-way plug-and-play standards that incorporate these features. At a minimum, it must include access to EPG, VOD, PPV and switched digital video (“SDV”) cable services.¹⁵

II. BACKGROUND ON SONY, ITS INTERESTS AND GOALS IN THIS PROCEEDING.

Consistent with the vision of Congress and the Commission, Sony hopes that this proceeding results in the creation of a competitive retail market for interactive digital cable-ready products. Any truly competitive market must foster and reward innovation, and that is Sony’s goal: to finally bring innovation to the cable navigation device retail market. Sony has been one of the top consumer electronics companies for nearly 60 years, and its name is synonymous with innovation and quality. Most recently, Sony has created such innovative products as the Bravia

¹³ *Id.*, ¶ 5 (“It is apparent that consumers have not shown significant interest in one-way devices, which cannot access features such as EPGs, VOD, PPV, and other ITV capabilities provided by cable operators.”) The Commission supports this statement by noting that “while over five million digital cable ready devices have been sold, cable operators have deployed fewer than 300,000 CableCARDS.” *Id.* n.12.

¹⁴ *Id.*, ¶¶ 1, 5.

¹⁵ Sony believes that EPG, VOD, PPV and SDV (and the navigation and metadata associated with such services) comprise the core interactive services that a retail navigation device must allow consumers to access in order to succeed in the marketplace. Mandating native device access to other, advanced interactive cable TV services, though desirable, could constrain the ability of cable operators to innovate, a result that no party to this proceeding, including Sony, wants to occur.

Television, PlayStation 3, PlayStation Portable, and the Blu-ray Disc, that collectively have delivered consumers high-definition (“HD”) audio/visual viewing, recording, and playback experiences as well as HD and portable gaming experiences, thought impossible just a couple of years ago. If afforded the opportunity through the proceeding, Sony commits to bringing the same ingenuity and consumer-centric focus to the retail navigation device market.

A. The Commission Should Be Guided By Open Access Principles And The Five Freedoms.

In evaluating the CEA and NCTA proposals, the Commission’s efforts should be guided by the open access principles that have *always* guided this proceeding, and the five consumer-friendly principles initially set forth in the CEA Proposal (the “Five Freedoms”)¹⁶ and subsequently reiterated to Chairman Martin by Congressman Boucher.¹⁷ The Five Freedoms, which guide Sony’s views on navigation device solutions, are a mirror reflection of the open access principles established by the Congress and the Commission.

Taking its cue from the Congressional mandate contained in Section 629, the Commission has repeatedly articulated the following open access principles as guideposts for this proceeding, starting with the *Navigation Devices Order*:

- Subscribers have the right to attach any compatible navigation device to an MVPD system;
- MVPDs must provide technical information concerning interface parameters that are needed to permit navigation devices to operate with their systems in a timely manner; and

¹⁶ Sony, together with the CEA and many consumer electronics (“CE”) and information technology (“IT”) companies, participated in the drafting of the CEA Proposal, and Sony reiterates its support for that proposal. The other signatories of the CEA Proposal were Hitachi Home Electronics, Inc., Intel Corporation, JVC Americas Cop., Microsoft Corporation, Mitsubishi Digital Electronics America, Inc., Phillips Electronics North America Corp., Pioneer North America, Inc., Sharp Laboratories of America, Toshiba America Consumer Products, LLC and TTE Corporation.

¹⁷ Letter from Rick Boucher, U.S. Representative, 9th Dist. Virginia, to Honorable Kevin J. Martin, Chairman, FCC, March 28, 2007.

- MVPDs can take actions necessary to protect their operations from technical harm and theft of service.¹⁸

These principles build not only upon Section 629, but also upon the same bedrock decisions, such as *Carterfone*,¹⁹ that underpin the Commission’s open access approaches for wireline, broadband Internet access²⁰ and, to some extent, wireless platforms.²¹ The Five Freedoms

¹⁸ See *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, Report and Order, 13 FCC Rcd 14775, ¶ 8 (1998) (“*Navigation Devices Order*”); *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, Order on Reconsideration, 14 FCC Rcd 7596, ¶ 4 (1999); *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, Further Notice of Proposed Rule Making And Declaratory Ruling, 15 FCC Rcd 18199, ¶ 4 (2000); *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, Second Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd 20885, ¶ 5 (2003) (“*Plug and Play Order*”).

¹⁹ *Use of the Carterfone Device in Message Toll Telephone Service*, Decision, 13 FCC 2d 420 (1968), *recon. denied*, Memorandum Opinion and Order, 14 FCC 2d 571 (1968) (“*Carterfone*”). In *Carterfone*, the Commission concluded that individuals must be permitted to interconnect any consumer premises equipment that does not harm the public switched telephone network. The Commission observed that “[n]o one entity need provide all interconnection equipment for our telephone system any more than a single source is needed to supply the parts for a space probe.” 13 FCC 2d 420, 424. In the *Navigation Devices Order*, the Commission cited *Carterfone* for the fundamental principle that “subscribers have the right to attach any compatible navigation device to a multichannel video programming system.” See *Navigation Devices Order*, ¶ 8 (“We conclude that the core requirement, to make possible the commercial availability of equipment to MVPD subscribers, is similar to the *Carterfone* principle adopted by the Commission in the telephone environment. The *Carterfone* ‘right to attach’ principle is that devices that do not adversely affect the network may be attached to the network.”). See also *id.*, ¶ 26 (“Just as the *Carterfone* decision resulted in the availability to the consumer of an expanding series of features and functions related to the use of the telephone, we believe that Section 629 is intended to result in the widest possible variety of navigation devices being commercially available to the consumer.”).

²⁰ See *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986, ¶ 4 (2005) (“To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to connect their choice of legal devices that do not harm the network ... To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to competition among network providers, application and service providers, and content providers.” (*internal citations omitted; emphasis in original*)). In formulating these pro-consumer positions, the Commission harkened back to *Hush-A-Phone Corp. v. U.S.*, 238 F.2d 266, 267-69 (D.C. Cir. 1956) (holding that a tariff prohibition of a customer supplied “foreign attachment” was “in unwarranted interference with the telephone subscriber’s right reasonably to use his telephone in ways which are privately beneficial without being publicly detrimental.”).

²¹ As indicated, the Commission recently adopted open access requirements for 22 MHz of spectrum in the Upper 700 MHz Band. See *700 MHz Omnibus Order*, ¶¶ 189-230. The Commission also is considering broad application of open access requirements to wireless services. *Petition of Skype Communications S.A.R.L. to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks*, RM-11361 (filed Feb. 20, 2007).

reflect these open access principles for cable navigation devices, and seek to ensure the following benefits for cable consumers:²²

1. Safeguarding Consumer Choice and Competition. Consumers should be able to view, move, store, and access cable content that they legally obtain without restriction, other than as necessary to protect content effectively from unlawful use, prevent theft of service, and prevent electronic or physical harm to the network.
2. Protecting Consumer Investment. Consumers have a right to expect that the digital cable ready products that they purchase will continue to operate as expected for the life cycle of the product.
3. Establishing Fair and Open Technical Standards. Bi-directional digital cable compatibility and related specifications should be developed and approved by a mutually agreeable standards-setting body, with oversight by the Commission.²³
4. Requiring a Level Playing Field. Common reliance on the same services, applications, and support infrastructure is needed to create an economic incentive for cable operators to support the technology necessary for CE products.
5. Removing Barriers to Innovation. Manufacturers should be allowed after an initial certification to self-certify that their products are compliant with the applicable standards.

Although Sony believes that both the CEA Proposal and the NCTA Proposal (with significant modifications) can enable two-way functionality, there should be no question that the DCR+ solution advanced in the CEA Proposal best fulfills the Commission's goals in this proceeding (i.e., facilitation of the DTV transition and creation of a competitive retail market)

²² See CEA Proposal, at 3-4.

²³ A regime to facilitate consumer choice in the market for navigation devices will have little practical effect if the cable industry can unreasonably delay or deny market access to competitive devices through its unfettered control of the relevant technical standards and device certification regime. The Commission, for example, acknowledged the importance of maintaining a fair and transparent standards management process for the open access regime adopted for the Upper 700 MHz C Block license, stating that “[w]e believe that standards transparency should greatly reduce the potential for manipulative ‘white-listing,’ i.e., providers creating complex and vague qualification and approval processes for third parties before approval to attach devices or run applications on the network [P]roviders must establish a reasonable process for expeditiously reviewing requests from manufacturers, application developers and consumers to employ devices and applications on their networks.” *700 MHz Omnibus Order* at ¶ 224. The Commission must ensure that the same principles of fairness, transparency and open and meaningful input by all affected parties are fully implemented in the development and administration of standards, testing and certification requirements that will apply to two-way navigation devices.

and best advances the promise of open access and the Five Freedoms for consumers.²⁴ Only the CEA Proposal offers a technology-neutral solution for access to basic two-way services that cable operators and CE manufacturers can implement in time for the DTV transition. Moreover, the CEA Proposal would better foster innovation in the development of navigation retail devices and related features and applications. By contrast, and as explained below, cable operators themselves have indicated that they cannot implement the NCTA Proposal in time for the DTV transition. Further, the NCTA proposal would harm consumers by undermining the public interest objectives of open access and the Five Freedoms.

B. The Commission Must Address Three Fundamental Issues In This Rulemaking.

Sony believes that the Commission must address three fundamental issues to further its goals in this proceeding: (1) adoption of a viable solution for two-way navigation devices for basic interactive services (i.e., EPG, PPV, VOD, and SDV) that all affected parties can implement in time for the DTV transition;²⁵ (2) adoption of regulations that make navigation data and program content metadata available for consumer use with competitive navigation retail devices; and (3) adoption of a separate regulatory framework governing content output technologies that will enable consumers to access content through secure and robust home networks.²⁶

²⁴ As explained in greater detail in the comments filed concurrently by the CEA on the *Third FNPRM*, the DCR+ proposal builds on the architecture developed for the current CableCARD. It maintains the role of the CableCARD as a demarcation point and translator between the network-specific technologies of cable providers and the host-specific technologies of end-user devices. Moreover, today's CableCARDS already include two-way communications capability, but use of this functionality has been prohibited in the current generation of unidirectional cable ready products ("uDCPs"). The "+" in DCR+ represents the enabling of the CableCARD's inherent bi-directional capability.

²⁵ *Third FNPRM*, ¶ 1.

²⁶ The Commission should address other important issues raised in the *Third FNPRM*, including the regulatory treatment of software-based conditional access (i.e., downloadable security), at a later time, given that the

III. THE CEA PROPOSAL BEST MEETS THE COMMISSION'S GOALS.

The DCR+ solution advanced in the CEA Proposal represents the best approach for bringing consumers retail navigation devices with basic interactive features in time for the DTV transition. Further, because DCR+ offers a technology-neutral solution, it best advances a competitive retail market for navigation devices that encourages innovation, lowers prices for consumers and fosters higher quality.

A. DCR+ Represents the Best Approach for Delivering Two-Way Navigation Devices to Consumers In Time For The DTV Transition.

1. DCR+.

DCR+ is a superior solution to NCTA's OpenCable Application Platform ("OCAP") approach because the relevant parties can implement it with relative ease and can do so in time for the DTV transition. Moreover, CE manufacturers that support the DCR+ solution have an established track record of bringing devices using new technologies to market in a timely manner.

First, the DCR+ solution represents the best opportunity for bringing basic two-way interactive services to consumers within the required timeframe. DCR+ can be implemented by the fourth quarter of 2008 because, unlike OCAP, DCR+ does not require retrofitting thousands of cable headends throughout the nation to enable its support. Further, DCR+ would not require changes to the hardware interface of today's CableCARD. Rather, it demands only the addition of certain extensions to the standards already implemented in the current CableCARD, as well as minor hardware and firmware modifications to the host device, to enable EPG, PPV, VOD, and SDV two-way functionality. Thus, the DCR+ solution minimizes the burden on both cable

technologies necessary to implement these features are far from being sufficiently developed to permit full and fair consideration. *See* Section VI, *infra*.

operators and device manufacturers, and therefore limits the development and implementation times, as required to meet the deployment timetable envisioned by the Commission.

Second, as the Commission observed in the *Third FNPRM*, CE manufacturers have delivered CableCARD-based navigation devices to the market in a timely fashion in the past: “The Commission adopted an interface standard in the 2003 Plug and Play Order, and consumer electronics manufacturers brought CableCARD-compatible devices to market less than a year later.”²⁷ This observation implies two important conclusions: 1) that the CE industry is highly incentivized and motivated to bring competitive navigation devices to market; and 2) that the existing CableCARD technology permits relatively expedient development and deployment. Sony believes that both of these conclusions hold true today: Sony and other CE manufacturers remain dedicated to bringing consumers the benefits of competitive devices. In addition, developing the extensions to the current CableCARD architecture required to make DCR+ a reality would impose limited burdens upon the cable industry.

In stark contrast to the CE industry’s speedy response in bringing CableCARD devices to market, the cable industry has exhibited a continued reluctance to effectuate Congress’s mandate in Section 629 of the Act. Congress, in its wisdom, legislated for, and the Commission attempted to promulgate regulations effectuating, a competitive market for cable navigation devices. Cable has responded by continuously seeking extensions and waivers, and has otherwise slow-walked the effort to create such a market.²⁸ The cable industry introduced OCAP

²⁷ *Third FNPRM*, ¶ 4.

²⁸ See, e.g., Consumer Electronics Appendix to Joint Status Report to FCC (filed on Nov. 30, 2005) (describing deadlocked negotiations with the cable industry in developing a suitable two-way regime). The cable industry also fought the Commission’s two seminal navigation device decisions, the initial *Navigation Device Order* and the *Plug and Play Order*, in the courts, losing both times. See *General Instrument Corporation v. FCC*, 213 F.3d 724 (D.C. Cir. 2000) and *Charter Communications Inc. v. FCC*, 460 F.3d 31 (D.C. Cir. 2006), respectively.

in 2001, started testing it in the lab in 2005, and has not committed to a nationwide deployment of OCAP any earlier than the middle of 2009 – a full eight years after its introduction.²⁹ In addition, the NCTA Proposal’s commitment to deploy OCAP is limited to only the largest cable companies – smaller cable companies may not be able to deploy OCAP at all due to the costs of retrofitting their headend facilities in order to implement OCAP.³⁰

2. OCAP.

By contrast, the OCAP solution advanced by NCTA cannot be implemented in time for the DTV transition because: (a) it requires massive investments of time and money by cable operators and CE manufacturers; (b) CableLabs has not yet completed the entire standardization process for OCAP in a way that permits deployment of the technology in integrated CE devices; and (c) it requires further negotiation of marketplace agreements between the CE and cable industries, a process that to date has proven impossible to complete. The NCTA Proposal requires a major and unjustified leap of faith by the Commission to assume that the cable industry can complete all of these steps in time for manufacturers to have OCAP-enabled products on store shelves for the final holiday buying season before February 17, 2009.

At the outset, the Commission should note that the cable industry itself has conceded that it cannot deploy OCAP in its own systems before the February 17, 2009, digital transition. According to *ex parte* comments filed by the NCTA on November 5, 2005, the cable industry can only commit to deploying OCAP by a limited number of cable operators on a limited portion

²⁹ NCTA proposed a two-way compliance deadline for OCAP-enabled systems of July 1, 2009. *See* NCTA Proposal, Exhibit B: Proposed Regulations, at 7.

³⁰ NCTA’s proposed regulations to require digital cable systems to support two-way products by July 1, 2009, applies only to those systems (i) with an “activated” channel capacity of at least 750 MHz that (ii) serve at least 5,000 subscribers. *See id.*

of their networks by July 2008.³¹ The balance of cable subscribers not covered in the initial deployment of OCAP would be forced to wait until July 2009.³² Thus, the record in this proceeding reflects that the cable industry has pledged not to meet one of the Commission's fundamental goals in this proceeding – enabling deployment of two-way devices before the DTV transition.

More importantly, as noted above, deployment of a whole new architecture for cable service delivery, which OCAP represents, will involve substantial investments of time and money by both cable operators and CE manufacturers, and it is unlikely that the parties can accomplish this effort in the time frame set by the Commission. To deploy OCAP, cable operators must implement (and test) substantial hardware and software retrofits to thousands of cable headend facilities across the nation. Assuming, conservatively, that cable operators will ultimately deploy OCAP on 4,000 headends, cable operators would need to be performing these upgrades and retrofits on approximately twelve headends per day to complete their task by July 1, 2008, approximately seven headends per day to finish by February 17, 2009, and approximately six headends per day to finish by July 1, 2009. Given that not a *single* headend in the United States today commercially provides OCAP-enabled services to subscribers, it seems unlikely that cable operators can meet the deployment deadlines they have set for themselves.

In addition, notwithstanding the cable industry's claims to the contrary, OCAP is a work in progress and is not yet a fully functional technology solution. The two most current versions

³¹ Specifically, cable operators serving more than 2,000,000 subscribers would ensure that 50 percent of their subscribers now served by individual cable systems with an activated channel capacity of at least 750 MHz and that serve at least 5,000 subscribers would be served by OCAP-compliant systems by July 2008. *See* NCTA Proposal, Exhibit B: Proposed Regulations, at 7.

³² *See id.*

of OCAP,³³ OC-SP-OCAP1.1-I01-061229 and OC-SP-OCAP1.0.0-070814, are self-designated as “Issued”, a status that the specifications themselves define as “[a] stable document, which has undergone rigorous member and vendor review and is suitable for product design and development, cross-vendor interoperability, and for certification testing.”³⁴ Neither specification however, despite years of apparent effort and revision, has reached the final stage – “closed” – which, according to their own specifications, means “[a] static document, reviewed, tested, validated, and closed to further engineering change requests to the specification through CableLabs.”³⁵ Setting aside the unsettling fact that CableLabs has apparently created two different, and reportedly incompatible,³⁶ versions of OCAP, neither version has reached a point in development when it is no longer subject to further revision. This fact raises an obvious concern for manufacturers that want to build OCAP-enabled devices. When building a device to meet a non-static specification, the manufacturer carries the risk that future revisions to the specification render that device obsolete, or even non-functional. At the same time, manufacturers cannot know, and certainly cannot control, when an OCAP specification will reach “closed” status, thereby providing some guarantee against subsequent changes that could lead to device incompatibilities. Given that the DTV transition will occur in less than seventeen months, the lack of a final (or even single) OCAP standard makes it nearly impossible for

³³ See specifications listed under “OpenCable Application Platform (OCAP™) Specification Summary,” located at <http://www.opencable.com/specifications/ocap.html> (last checked August 22, 2007).

³⁴ OC-SP-OCAP1.1-I01-061229 at ii, OC-SP-OCAP1.0.0-070814 at ii, available at <http://www.opencable.com/specifications/ocap.html> (last checked August 22, 2007).

³⁵ *Id.*

³⁶ Though apparently based on a single predecessor version, OC-SP-OCAP1.1-I01-061229 and OC-SP-OCAP1.0.0-070814 reportedly include modifications and revisions specific to each, such that an application designed to function with one would not function, or at least would not function properly, on the other.

manufacturers to complete development and manufacturing of OCAP-enabled devices in time to meet the Commission's goals.³⁷

Finally, the NCTA Proposal requires CE manufacturers to enter into a variety of voluntary commitments and "marketplace agreements," like the CableCARD-Host Interface License Agreement ("CHILA"). Such requirements are obviously not viable.³⁸ Although in a perfect world all parties would prefer marketplace solutions rather than regulatory mandates, it simply is not possible in the current case to leave important decisions about two-way navigation devices solely to the cable industry and voluntary negotiations. As Commissioner Copps observed:

[T]he world is not only going digital, it's becoming increasingly interactive . . . We need a two-way solution. When the one-way rules were adopted the hope was that they would provide a springboard for a consensus two-way proposal. Unfortunately, though the parties have spent countless hours in discussions over the past four years, there is no indication that they are close to reaching an agreement. Given our statutory obligation to assure the retail availability of navigation devices, we must act, and act quickly.³⁹

Moreover, these so-called "marketplace agreements" will do little more than perpetuate the cable industry's one-sided control over the navigation device market, and extend such control over downstream products that will further limit innovation in the open retail market. Sony believes

³⁷ Some may argue that the DCR+ solution suffers from the same flaw, in that it relies on as yet unwritten specifications to enable access to EPG, VOD, PPV and SDV services. This argument fails to account, however, for the fact that the DCR+ proposal requires only minor modifications to an existing, well-tested and well-understood CableCARD architecture. By contrast, OCAP represents an entirely new, untested, and largely unknown architecture, and a paradigm with no predecessor in the history of cable services or CE devices. Sony believes that the former can be implemented in a much more timely fashion than the latter.

³⁸ *Third FNPRM*, ¶ 10. As the Commission noted: "The cable and consumer electronics industries have attempted to negotiate an agreement on how to achieve bidirectional compatibility, and since 2003 the Commission has required [NCTA] and [CEA] to file status reports regarding the status of those negotiations. In March 2005, the Commission described the progress of these negotiations as 'disappointing.' Shortly before the Commission made that statement, senior executives from Microsoft, Time Warner, and Comcast committed to 'personally' work together 'to supervise the efforts to reach an agreement amongst the cable, CE, IT, and other industries to ensure the availability of two-way cable products during calendar year 2006.' Despite this commitment the industries appear to have made little progress and it does not appear that an agreement is imminent." *Id.*, ¶ 5.

³⁹ *Third FNPRM*, Commissioner Copps Statement.

that the “market” created by this one-size-fits-all license and related documents frustrates the very spirit of Section 629. First, mandating a costly, yet-to-be proven technology with strict licensing terms *per se* limits the ability of manufacturers to innovate. The CHILA license, for example, makes CableLabs the take-it-or-leave-it gatekeeper for, among other things: (a) what a licensee can and cannot do with regard to changes or additions to many features and functions in its products;⁴⁰ (b) what changes can and will be made to the license or underlying technical specification;⁴¹ and (c) what content protection and home networking technologies will be allowed.⁴² These and other restrictions specified in CHILA and the additional licenses required to build an OCAP-enabled device do not further the reasonable interests of preventing harm to

⁴⁰ For example, CHILA states that licensees can incorporate non-OCAP features and functionalities, but not those that “impair the delivery of any services offered over the cable system.” CHILA, § 5.2. As we all know from the NCTA Proposal, however, that means no features that would allow the presentation of basic services in any form other than “as offered by the cable operator.” NCTA Proposal, at 16. The OCAP Implementer License Agreement (“O-ILA”) repeats the same limitation, indicating that licensees can incorporate into their host devices additional features or functionalities not specified in the OpenCable Specifications, but only to the extent such features or functionalities do not, among other things, amount to delivering any cable service in a manner different than delivered by the cable operator. *See* O-ILA, § 2.7 (referencing § 3.1(c)).

⁴¹ For example, O-ILA indicates that “[a]ll Licensees shall have the right to participate in the OpenCable Change Process identified in Exhibit E of the CableCARD Host License Agreement,” and that all changes to the OCAP Specification shall be made through such process. O-ILA, § 10 (“Changes In OCAP Specification”), available at http://www.opencable.com/downloads/OCAP_Agreement.pdf. The OCAP change process itself, however, ensures that the cable industry maintains a veto control over any proposed changes it doesn't like. Specifically, under the June 2007 version of the CHILA license, new OCAP specifications can be subsequently amended through the adoption of an Engineering Change Request (“ECR”). To get an ECR adopted first requires a approval of ECR Working Groups, which are made up of MSO representatives, selected vendors and CableLabs staff. Final disposition of ECRs “is at the sole discretion of the OpenCable MSO Technical Review Team,” the composition and governing procedures of which do not appear to be available on the CableLabs or OCAP web sites, but which presumably either does not include representation by any non-MSOs or otherwise requires a consensus vote (thus ensuring a veto right to any MSO). *See* Amended And Restated Nonexclusive CableCARD-Host Interface License Agreement (June 4, 2007), Exhibit E, available at <http://www.opencable.com/downloads/CHILA.pdf>). And note that licensees have no recourse to reverse CableLabs’ decisions that licensees deem harmful to their interests. CHILA’s lone “dispute resolution” provision merely requires that CableLabs and licensees attempt to resolve licensee objections in good faith – nothing more. *See* CHILA, § 4.4 (“Dispute Resolution”).

⁴² *See, e.g.*, CHILA, Exhibit C (“Compliance Rules”). *See also* CHILA, Exhibit B (“Robustness Rules”), § 2 (“Controlled Content Paths”).

the cable network or theft of cable services. Rather, these restrictions place arbitrary limits on CE device design and have the ultimate effect of stifling innovation.

B. Only The CEA Proposal Offers A Technology-Neutral Solution That Advances A Competitive Market for Navigation Devices.

In addition to facilitating the DTV transition, the Commission also intends that this proceeding advance the development of a competitive market for navigation devices that encourages innovation, decreases prices and offers more consumer choice.⁴³ Section 629 directed the Commission to enable a competitive market for navigation devices over a decade ago, and a conclusion to the process of carrying out this directive is long overdue. The vexing question in this proceeding has always been how best to effectuate Section 629; that is, how should the Commission analyze a proposed technology and/or architectural solution to determine whether it will, if implemented, best further the relevant statutory goals? Chairman Martin recently addressed this subject in his statement before the House Energy and Commerce Committee, where he argued that effective pro-competition policies must be competitively-neutral and support all competitors, and not favor one technology or one industry over another.⁴⁴ Of the two approaches under consideration in this proceeding, only the DCR+ proposal offers the public interest benefits of technological neutrality.

⁴³ As the Commission observed, Congress emphasized the importance of a competitive navigation device market, stating that “[c]ompetition in the manufacturing and distribution of consumer devices has always led to innovation, lower prices and higher quality.” *Third NPRM*, ¶ 2 (citing H.R. REP. NO. 104-204, at 112 (1995)).

⁴⁴ See *Chairman Martin Statement*, at 2 (indicating, in the context of bringing competition to the delivery of voice and video services to people living in apartment buildings, that the Commission has furthered “pro-competition policies that . . . are designed to ensure that consumers benefit from innovation and technological advancements,” and that the Commission’s approach is “competitively neutral” in that “the Commission [has] sought to support all new competitors, not one technology or one industry over another, and [has] demonstrated its commitment to ensure that all consumers [] benefit from competition in the voice and video markets.”).

1. DCR+.

The DCR+ solution meets the standard suggested by Chairman Martin by providing equivalent support to all competitors in the navigation device market and not favoring either CE or cable industries, thus preventing either side from gaining a structural and competitive advantage over the other, consistent with the goals of Section 629. First, the DCR+ approach uses, as a basis, the same technical specifications that underlie today's CableCARD. These specifications,⁴⁵ have been promulgated by the ANSI-accredited Society of Cable Telecommunications Engineers through an open standards process that ANSI-accreditation demands.⁴⁶ These standards are openly available for use because they come with no licensing restrictions or costs for implementation. By reference in Part 15 of the Commission's Rules, the Commission has fixed these standards, thereby precluding further development that could provide an advantage to one competitor over the other. Other than the patent for the DFAST scrambling algorithm and certain secondary patents,⁴⁷ manufacturers need not license proprietary technologies to build a unidirectional DCR device. The DCR+ proposal follows this regime closely, in that it requires modest modifications to existing specifications, consisting almost exclusively of additions to SCTE 28:2003 and SCTE 65:2003. Perhaps more importantly, although DCR+ devices would need to comply with these amended specifications, the proposal does not mandate a specific method of *implementing* the specifications. Thus, manufacturers may apply engineering innovation to create the best possible implementation, and make their device function better than those of their competitors. For whatever faults it may have, the

⁴⁵ Primarily, SCTE 28 2003: "Host-POD Interface Standard," 2003; SCTE 41 2003: "POD Copy Protection System," 2003; and SCTE 65 2002: "Service Information Delivered Out-of-Band for Digital Cable Television," 2002.

⁴⁶ See 47 C.F.R. § 15.123(b) for a complete list of the relevant standards.

⁴⁷ E.g., the patent for MPEG-2 video encoding and decoding.

uDCR specifications process enabled a multitude of CE companies to bring CableCARD-enabled devices to market quickly and at a relatively low cost. The DCR+ proposal advanced by CEA seeks to repeat this success.

2. OCAP

The NCTA Proposal takes precisely the opposite approach, by mandating the implementation of a specific technology (OCAP) that is controlled by a single industry (cable). This is not the kind of competitively neutral approach the Commission seeks to advance. The OCAP technology at the heart of the NCTA's proposal is, through CableLabs, subject to unilateral control by the cable industry. This approach gives CableLabs, and therefore the cable industry, the unfettered power and right to, among other things:

- Make unilateral revisions to the OCAP standard, with no meaningful input from CE manufacturers, consumers or other parties whose rights, duties and interests are directly impacted by such actions;⁴⁸
- Control the navigation device certification process, using test procedures that the CE industry had no voice in developing, such that it could subjectively deny or unreasonably delay certifications;⁴⁹ and
- Limit the manufacturer choice of device outputs, such that only those outputs that meet the cable industry's subjective requirements may deliver content to, for example, a digital video recorder or a home network.⁵⁰

⁴⁸ See CHILA § 4.2 (“[I]f Licensee disagrees with a decision to either issue [a change to the OCAP spec] or to dismiss [a change to the OCAP spec], Licensee shall have the opportunity to *discuss the matter with a senior member of CableLabs management*, and CableLabs shall give due consideration to Licensee’s concerns with regard to the proposed [change].” The CHILA license affords licensees no additional recourse over change management.

⁴⁹ The DFAST license and 47 C.F.R. § 15.123(1), (3), which govern certification and testing of uDCR devices, require only that a manufacturer submit its first uDCR product to CableLabs for approval. The manufacturer may test and certify subsequent products in house. By contrast, the CHILA license only promises manufacturers an opportunity to “discuss” development of a self-certification process at CableLabs’ discretion. See CHILA, Appendix A (“CableLabs’ Certification Criteria for Host Devices”), § 2.

⁵⁰ See CHILA Appendix C (“Compliance Rules”).

More importantly, the NCTA proposal would limit innovation in a more fundamental and troubling way in that it demands that cable operators maintain exclusive control, at a pixel-for-pixel level, over the manner in which consumers view cable services. As the NCTA Proposal puts it, “[u]nder OCAP and Host 2.0 ... [t]he cable service need not be the only service provided by the display, but when it is presented, it must be presented as offered by the cable operator to consumers.”⁵¹ In practice, this requirement precludes manufacturers from implementing new user interfaces to facilitate consumer use of cable services, and new functionality like a cross-service search function that could, for example, search for all of the Clint Eastwood movies available from cable, the Internet, other MVPDs, and the consumer’s own DVD collection. In this regard, NCTA’s position is akin to arguing that CD players should not be permitted to incorporate a program shuffle, skip track, forward/rewind, or track programming features, because the consumer should not be permitted to experience the music on the CD in any other order than as burned into the CD. Such reasoning has no relation to preventing “harm to the network” or “protection against theft of service”, but instead represents how the NCTA Proposal and the licenses and technologies set forth in it would favor the cable industry to the detriment of device manufacturers and, ultimately, consumers.

Indeed, there is nothing “neutral” about the technological and licensing obligations in NCTA’s proposal. Rather, this proposal not only would effectively maintain the cable industry’s market power and dominance over the navigation device market, but it actually would *extend* its market power to downstream devices that connect to navigation devices through a home network. Indeed, this effort to stifle innovation would stop pro-consumer innovations like home networking in their tracks. Such a result would not achieve the Congressional goals of

⁵¹ NCTA Proposal, at 12. *See also*, “The [CHILA and OCAP] license also require that cable customers receive the cable service as it is intended to be offered by the cable operator ...” NCTA Proposal, at 16.

maximizing consumer choice, providing a competitive alternative to cable-leased navigation devices, and fostering innovation in the development of navigation devices and related features and applications that consumers demand.

IV. TO ENABLE THE FULL FUNCTIONALITY OF COMPETITIVE NAVIGATION DEVICES, THE COMMISSION MUST ADOPT REGULATIONS THAT REQUIRE CABLE COMPANIES TO MAKE NAVIGATION DATA AND METADATA AVAILABLE TO CONSUMERS.

In addition to choosing a viable, near-term, and technology-neutral solution for two-way navigation devices for basic interactive services, Sony believes the Commission should require cable operators to make available to consumers the navigation data and metadata necessary for a device to present a full and feature-rich consumer experience. Sony and other CE and information technology (“IT”) manufacturers hope to use this data to develop navigation devices with user interfaces that greatly enhance the ability of consumers to search, access and display video content, including cable-delivered content.⁵² Sony, for example, hopes to enable consumers to search all available content sources – cable, the Internet, other MVPDs, and the consumers own fixed media – through a simple, television-based interface. In addition, manufacturers could use this data to develop built-in digital-video recording features, and to make available more robust and useful parental control and closed-captioning functionality.

By way of example, Sony has recently received an Emmy Award by the National Academy of Television Arts and Sciences for its Xross Media Bar (“XMB”), a next-generation navigation tool that that the company currently includes in its Blu-ray Disc, PlayStation Portable,

⁵² As CEA stated, conditional access technology must be “modified to allow the translation of program event and access data, for each content stream, from the proprietary and service-specific format in which it is delivered into a standardized and mutually agreeable format that a host device could recognize. This data would enable consumers to navigate through the available programming, and should allow the competitive device to identify program scheduling to the consumer over a period that is at least equivalent to that provided to leased devices. In addition, other metadata could be included to define the cable experience on the competitive device. This navigation data should be available to cable subscribers, for access through retail devices, without restrictions on use and at no additional charge.” CEA Proposal, at 7.

and PlayStation 3 devices. XMB will soon be available on Sony televisions. Access to cable-provided metadata will determine the extent to which Sony can add functionality to the television-based version of XMB. Without such metadata, consumers will have to settle for a much less functional and useful version of this interface.

Perhaps more importantly, consumers already pay the cost of this navigation and metadata in their monthly cable bills. Proprietary set-top boxes use this data to accentuate their own functionality, but cable operators have, to date, denied this ability to competitive devices.⁵³ Accordingly, Sony seeks, consistent with meaning of Section 629, nothing more than parity in access to the data for competitive devices. Absent such parity, consumers who purchase competitive navigation devices end up paying the cost of the data in their monthly cable bill, but have no ability to enjoy the use of it. This result clearly contradicts the meaning of Section 629, and the goals of the Commission in this proceeding.⁵⁴

V. THE COMMISSION MUST ADOPT A NEW FRAMEWORK FOR THE APPROVAL OF OUTPUT AND CONTENT PROTECTION TECHNOLOGIES.

Sony believes that, consistent with the open access principles adopted years ago for this proceeding and the complementary Five Freedoms laid out in the CEA Proposal, consumers should be able to view, move, store, and access cable content that they legally obtain without restriction, other than to effectively and robustly protect content from unlawful copying and as

⁵³ Indeed, OCAP establishes a “closed” system whereby the navigation device becomes a mere client of the cable network. Navigation and metadata is not passed separately because the only applications that can run on the OCAP-enabled navigation device are those downloaded directly off the cable system.

⁵⁴ To be clear, Sony does not seek to burden cable operators by requesting the inclusion of navigation data and metadata that is not already available to proprietary devices. Thus, Sony does not propose that cable operators add or carry additional data solely for the use of competitive devices, only that cable make the data that it already delivers to proprietary products available to competitive products. Moreover, to the extent that cable providers lease the data from a third-party source and do not, in fact, “own” the data and/or the right to grant access to it to third parties, Sony is willing to enter into reasonable licensing agreements with the ultimate data owner, provided that such agreements impose no additional costs on Sony devices.

necessary to prevent theft of service and prevent electronic or physical harm to the cable network.

In the *Third FNPRM*, the Commission inquired about whether the FCC should require CableLabs to approve, under the CHILA and DFAST licenses, all output technologies and content protection technologies that the Digital Lifestyle Network Alliance (“DLNA”) has approved.⁵⁵ A more fundamental question is whether the Commission should continue to permit CableLabs, a cable industry body, the exclusive right to approve the inclusion of new content protection and output technologies for unidirectional and bi-directional devices. From Sony’s perspective, this approach has failed because it has inhibited the introduction of new technologies and competition counter to the goals of Section 629.⁵⁶

The Commission of course already recognized this problem in the one-way CableCARD context:

[W]e are concerned that CableLabs’s proposed role [under the DFAST license] as the sole initial arbiter of outputs and associated content protection technologies to be used in unidirectional digital cable products could affect innovation and interoperability in a number of areas, including the development of personal digital networks in consumers’ homes. These concerns stem from the convergence of digital technologies occurring in the marketplace ...⁵⁷

Indeed, concerned about CableLabs’ inherent conflict of interest in making such decisions, the Commission sought comment in the *Second FNPRM* (but did not issue a decision) on whether “CableLabs is the appropriate entity to make initial approval determinations, or whether another

⁵⁵ See *Third FNPRM*, ¶¶ 8 and 9.

⁵⁶ CableLabs recent eleventh-hour decision to approve the DTCP-IP as a content protection technology under the CHILA and DFAST license proves, rather than undercuts, this argument. After nearly eighteen months of consideration, CableLabs suddenly and only recently agreed to grant this approval in the face of a looming regulatory deadline. Absent such a deadline, Sony believes that CableLabs would have avoided approving DTCP indefinitely.

⁵⁷ *Plug and Play Order*, ¶ 78.

entity should have decision-making authority [such as] the Commission, a qualified third party, or an independent entity representing various industry and consumer interests should make approval determinations.”⁵⁸

Consistent with open access principles advanced by the Commission and the Congress, and the Five Freedoms, Sony believes that the development, approval and administration activities associated with establishing output technologies for competitive navigation devices must be a fair, reasonable and open process that allows meaningful input from all parties whose interests are directly impacted by such decisions – i.e., all MVPDs (and not just cable operators), content providers, interested consumer groups, and consumer electronic product manufacturers. As the CEA Proposal notes, output technologies should be approved or not approved “on the basis of their ability to protect against physical harm to the cable network and the theft of cable service.”⁵⁹

Sony suggests that at least two alternative output and content protection approval models could provide fair and open participation for all impacted parties and will yield technology-neutral results that will be best for consumers:⁶⁰

- **New Forum:** The Commission could delegate a new forum to manage the approval of output and content protection technologies that provides open and fair participation by all

⁵⁸ *Id.*, ¶ 85.

⁵⁹ CEA Proposal, at 9.

⁶⁰ Although the CEA Proposal suggests that the Commission should direct CableLabs to approve any output technology approved by DLNA, CEA Proposal, at 8-9, it is not clear whether DLNA in fact allows for open, fair and meaningful participation by all parties with interests in the approval of outputs and content protection technologies. To the extent DLNA does not permit such meaningful participation, Sony does not support granting DLNA this power. Regardless of the procedure for making such approvals, there remains the issue of administering the standards and licenses governing how such “approved” output technologies are incorporated into certified navigation devices. For example, if a given output technology received approval from a third-party forum,, CableLabs could thwart that decision by imposing otherwise unrelated certification , testing or performance obligations in OCAP, DFAST or CHILA. Accordingly, Sony asks that the Commission mandate not just a fair and equitable means for approving outputs and content protection technologies, but also maintain oversight over the administration of the process as a whole.

interested parties. An ANSI-accredited standards body could, perhaps, meet this requirement.

- **Modified OCAP.** The Commission could permit CableLabs to continue as a forum for approval of output technologies, but require open and fair participation by all interested parties, as discussed above.

Of course, the designation of a fair and open mechanism for approval of output technologies solves only half the problem. The Commission must also ensure that all related licensing, standards setting, testing, and certification obligations also permit fair, reasonable, open and meaningful input from all parties.

VI. THE COMMISSION CAN ADDRESS STANDARDS FOR DOWNLOADABLE SOFTWARE SOLUTIONS AT A LATER TIME.

The downloadable conditional access solutions, which are discussed in both the CEA Proposal and NCTA Proposal, are not ripe for implementation.⁶¹ Sony agrees that, properly implemented, downloadable conditional access will result in greater ease of use for consumers, greater ease of implementation and support for manufacturers and cable operators, and cost savings for all. Sony also believes, however, that the technologies for implementing downloadable conditional access are not yet ripe for regulatory consideration, and thus the Commission should proceed with its decisions on the other issues raised in the *Third FNPRM*. Nonetheless, Sony herein suggests a handful of basic considerations that should guide the Commission's consideration of downloadable conditional access.

First, Sony believes that, like the OCAP development process, the development process for downloadable conditional access must be conducted in a fair and open manner, so that the interests of all parties that would be subject to such solutions have a meaningful voice in the final specifications, licenses, and testing and certification requirements involved in bringing devices

⁶¹ See, e.g., CEA Proposal, at 4; NCTA Proposal, at 5.

that employ downloadable conditional access to market. In the same vein, the Commission should ensure that any technology chosen for implementing downloadable conditional access does not require the concurrent implementation of additional technologies that do not directly affect the conditional access functionality. By way of example, the Downloadable Conditional Access System (“DCAS”) proposal for software conditional access offered by the cable industry requires that devices implementing DCAS also include a complete OCAP implementation in order to operate.⁶² This OCAP implementation in no way enhances or even relates to the security or reliability of DCAS, but does impose substantial technical and legal burdens associated with implementing OCAP on device manufacturers. Thus, any downloadable security standards ultimately approved by the Commission should prohibit the tying of unrelated technologies or licensing obligations.

Further, in order to effectuate properly the directives of Section 629, the Commission should consider any proposed downloadable security technology with the following principles in mind:

- 1) A Single Standard Nationwide. The only economically feasible way to build downloadable conditional access into retail devices, and to ensure that such devices are portable nationwide, is to require that all cable operators implement a single, national downloadable security standard. Allowing deployment of a patchwork of incompatible downloadable security standards will effectively preclude the use of this technology in retail devices, and thus will frustrate the goals of Section 629. Further, as noted in other contexts, this standard must be developed and administered by a fair and neutral body that allows equal participation by all interested parties.
- 2) A Common Framework. As indicated earlier, any downloadable software-based solution requires a standardized interface between the embedded chip and related circuitry for the navigation devices that will function with all cable headends. Absent a common framework, consumer navigation device manufacturers would be forced to choose between the impractical and unnecessarily costly option of

⁶² See generally, Downloadable Conditional Access System (DCAS™) Host Agreement, available at <http://www.opencable.com/documents/> (last visited August 24, 2007).

building into its products each cable service provider's non-standardized architecture or cherry-picking among those available. In that case, consumers will either be forced to pay for superfluous and redundant hardware and software, or be stuck with devices that are not portable from one cable system to another.

- 3) A Mandated Deadline. In order to assure manufacturers and consumers that devices containing downloadable security will function as advertised on the date of purchase, the Commission must set a single deadline nationwide for cable operators to implement support for this security solution.

VII. OTHER ISSUES.

A. Testing and Certification Processes For Two-Way Devices.

The Commission inquired about testing requirements for two-way navigation devices in the *Third FNPRM*.⁶³ Sony believes that in order to succeed, any regulatory framework governing interactive cable-ready devices must include reasonable and workable device certification and testing requirements. As noted above, the regulations governing unidirectional devices requires a manufacturer to send its first device to CableLabs for certification and testing, and permits in-house testing and certification for all subsequent devices.⁶⁴ By contrast, the current revision of CHILA requires that CableLabs test and certify all devices, and only promises to “discuss” in-house testing and certification at some undefined point in the future.⁶⁵ To avoid unnecessary time-to-market delays, and to prevent the possibility of anticompetitive conduct, the Commission must define a clear path for manufacturers to begin in-house testing and certification of two-way devices. Given that CE manufacturers have an equal or greater interest than cable operators in ensuring that two-way devices function properly at the time of sale, Sony believes that CE manufacturers will take great care to ensure proper implementation of all two-

⁶³ See *Third FNPRM*, at ¶¶ 8 and 9.

⁶⁴ See 47 C.F.R. § 15.123(c).

⁶⁵ See CHILA, Exhibit A.

way standards and specifications. Accordingly, Sony believes that the DFAST certification and testing model – e.g., self-certification and testing after the first model has been tested by CableLabs – represents the best approach for bringing two-way devices to market.

This issue involves more, however, than simply where and by whom a device will be tested. The composition of the test itself, which ultimately determines whether a device will pass or fail, also deserves the Commission’s attention. In the uni-directional context, representatives of both the cable and CE industries spent substantial time negotiating the precise details of the test suite. This effort was difficult but necessary to ensure that neither the cable nor the CE industry manipulated the test plan to its advantage. In the bi-directional context, no test suite yet exists for DCR+ devices, and the test suite for OCAP-enabled devices has been created by, and is under the sole control of, CableLabs. Sony believes that, as was the case in the unidirectional context, the CE industry must have an equal role in the creation of the test suites for DCR+ and OCAP-enabled products. To allow otherwise would place inordinate power and control over the deployment of retail navigation devices in the hands of the cable industry, a direct competitor to CE manufacturers with regard to such products.

Finally, at an even more granular level, it is important for the Commission to understand the need for measurable and objective testing specifications. Objective pass/fail outcomes provide manufacturers a clear picture of why a particular device performed the way it did in the certification and testing process. By contrast, subjective testing measurements – e.g., “material degradation to a reasonable and average viewer” – undermine the fairness and usefulness of the testing process, by leaving the pass/fail decision in the hands of an individual or individuals who may have an interest in the outcome. Thus, to ensure the fairness of the process, the Commission

must require that any testing and certification plan devised by the parties contains only objective pass/fail obligations.

B. Dedicated Bandwidth For Upgrades.

The FCC also inquired in the *Third FNPRM* about whether cable operators should permit manufacturers the use of a dedicated path on the cable network to deliver software upgrades and bug fixes to cable-ready devices. Sony believes that such a requirement would offer a tremendous benefit to consumers. Unfortunately, notwithstanding the care taken by manufacturers in the product design and manufacturing process, and the extensive testing that all CE devices undergo, mistakes are sometimes made and problems can occur, particularly in the case of new technologies. Today, manufacturers must correct these problems by sending firmware upgrades through the mail to individual purchasers, assuming that the manufacturer can identify such purchasers in the first place.⁶⁶ Allowing manufacturers to deliver bug fixes and upgrades via the cable network would automate this process and ensure that many more consumers actually receive necessary upgrades. Further, as the Commission is well aware, cable operators frequently deliver equivalent upgrades and bug fixes to proprietary set-top boxes using this same method. Sony contends that Section 629 mandates equivalent treatment for competitive devices.

VIII. CONCLUSION.

In Sony's view, to successfully and expeditiously conclude its consideration of the *Third FNPRM* and accomplish its goals in this proceeding, the Commission should adopt the DCR+ solution set forth in the November 7, 2006 CEA Proposal. This approach offers the best means

⁶⁶ Most CE devices are sold by manufacturers to retail outlet, which then sell them directly to consumers. Thus, manufacturers typically cannot individually identify the vast majority of consumers who purchase their products.

for enabling access to basic interactive services by retail navigation devices. The Commission should also adopt regulations that make navigation data and program content metadata available for consumer use with competitive navigation devices, and adopt a regulatory framework governing content output technologies that enables consumers to access content through secure and robust home networks. Moreover, the Commission should adopt workable testing and certification processes for two-way devices, and require cable networks to allocate dedicated bandwidth to the delivery of cable-ready device software upgrades and bug fixes. Setting the right rules and policies on all of these issues will ensure that consumers benefit from higher quality cable navigation devices, competitive prices and, most of all, innovative devices that have the useful features consumers demand.

During his recent appearance before the House Committee on Energy and Commerce, Chairman Martin contemplated broader goals for the communications industry and advocated the benefits of competition and consumer choice in a digital world:

These are exciting and challenging times for consumers. We are in the middle of a digital revolution. . . . The government must set the right rules and policies in place to encourage the deployment of the next generation of infrastructure and the introduction of new and innovative services over this infrastructure . . . The Commission must keep working to ensure that through the . . . digital transition, consumers are able to experience the best that technology has to offer . . . By doing so, we can ensure that consumers can reap the vast rewards the digital revolution offers.⁶⁷

Sony applauds the Chairman's consumer focus and the significant strides taken by the Commission to encourage open access and enhance competition and consumer choice with respect to all communications devices and services. Sony also agrees with the Chairman that the government must set the right rules and policies in order to encourage the deployment of next generation services and products in a digital world. In this proceeding, Sony believes that if the

⁶⁷ *Chairman Martin Statement*, at 12.

Commission is guided by the open access principles that have always governed this proceeding, and the Five Freedoms that are based on these principles, then the Commission will conclude, as Sony has, that the OCAP solution advanced by NCTA is simply not a viable solution at this time, and that the CEA proposal based on DCR+ will achieve the best result for cable consumers and will accomplish the Commission's two important goals in this proceeding (i.e., facilitation of the DTV transition by February 17, 2009 and creation of a competitive market for navigation devices).

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I, Peter Andros, certify on this 24th day of August, 2007, a copy of the foregoing Comments of Sony Electronics Inc. has been served via electronic mail or first class mail, postage pre-paid, to the following:

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