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 THE
CONSUMER ELECTRONICS ASSOCIATION AND
THE CONSUMER ELECTRONICS RETAILERS COALITION
ON THE
FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING

June 14, 2010

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FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING

The Consumer Electronics Association ("CEA") and the Consumer Electronics Retailers Coalition ("CERC") submit these Comments jointly in support of the Fourth Further Notice of Proposed Rulemaking to implement Section 629 of the Telecommunications Act of 1996. CEA is the principal U.S. trade association of the consumer electronics and information technologies industries. CEA's approximately 2,000 member companies include the world's leading manufacturers of both broadband and home audiovisual products. CERC is a public policy organization that includes major specialist and general retailers of consumer electronics products. CERC's corporate members include Amazon, Best Buy, K-Mart, RadioShack, Sears, Target, and

Walmart. CERC's association members are the National Retail Federation and the Retail Industry Leaders Association.

CEA and CERC have long advocated effective implementation of Section 629.[1] They and their members actively supported the Commission's adoption, in 1998, of the CableCARD as a national conditional access standard for cable navigation devices.[2] CEA and its members worked with the cable industry in 2002 to negotiate the "Plug and Play" bargain and product license. The Commission, after receiving public comment, adopted regulations in support of this bargain in 2003. Both CEA and CERC have documented to the Commission the failures of cable operators to adhere to their obligations to support the installation and operation of CableCARD-reliant products. CEA and CERC filed jointly in support of the 2003 rulemaking,[3] as they do now in support of this one, in which the Commission acknowledges that more specific regulations are necessary to implement Section 629.

[1] 47 U.S.C. § 549.

[2] *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* CS Dkt. No. 97-80, Consumer Electronics Retailers Coalition Comments on Notice of Proposed Rule Making (May 16, 1997); Comments of Circuit City Stores, Inc. (May 16, 1997); Comments of the Consumer Electronics Manufacturers Association (May 16, 1997).

[3] *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Dkt. No. 97-80, PP Dkt. No. 00-67, Consumer Electronics Industry Comments (Mar. 28, 2003); Consumer Electronics Industry Reply Comments (Apr. 28, 2003).

I. Introduction And Summary

The failure of most cable operators to support CableCARD-reliant devices has been documented thoroughly, in filings of CEA, CERC, and their members;[4] by the U.S. Court of Appeals for the D.C. Circuit;[5] in a Commission Report & Order;[6] and in the Commission's National Broadband Plan.[7] The National Broadband Plan outlines a way forward, to address these failings in a practical and efficient manner. That these failings *can* be addressed is demonstrated by those cable operators who *do* support the installation and operation of CableCARD-reliant products efficiently and effectively. Six years' experience, however, has shown that compliance with the Commission's minimal and reasonable expectations has not been widespread.

Moreover, the availability of Internet-enabled TVs increases the likelihood that the implementation of a robust CableCARD regime will yield substantial benefits for consumers. The combination of subscription MVPD channels with on-demand content, ordered over the Internet, should be an attractive and economical choice for consumers.

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[4] *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* CS Dkt. No. 97-80, Comments of the CEA on NCTA Downloadable Security Report (Jan. 20, 2006); *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* CS Dkt. No. 97-80, letter from Julie M. Kearney, Sr. Dir. and Reg. Counsel, CEA to Marlene H. Dortch, Sec., FCC Re: Notice of Ex Parte Presentation (Mar. 23, 2006); *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* CS Dkt. No. 97-80, letter from Robert S. Schwartz, Constantine Cannon LLP, Counsel to CEA to Marlene H. Dortch, Sec., FCC Re: Notice of Ex Parte Presentation (Mar. 24, 2006); *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* CS Dkt. No. 97-80, letter from Julie M. Kearney, Sr. Dir. and Reg. Counsel, CEA to Marlene H. Dortch, Sec., FCC Re: Ex Parte Presentation (Aug. 7, 2006); *In the Matter of A National Broadband Plan,* GN Dkt. No. 09-47, 09-51, 09-137, and CS Dkt. No. 97-80, letter from Todd G. Hartman, Vice President, Associate General Counsel and Chief Compliance Officer, Best Buy Co., Inc. to Marlene H. Dortch, Sec., FCC Re: Ex Parte Presentation (Jan. 27, 2010).

[5] *Charter Communications v. FCC,* 440 F.3d 31, 40-44 & n.10 (D.C. Cir. 2006).

[6] *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* CS Dkt. No. 97-80, Second Report and Order ¶ 39 & n.162 (Mar. 17, 2005).

[7] "[C]onsumers who buy retail set-top boxes can encounter more installation and support costs and hassles than those who lease set-top boxes from their cable operators." Federal Communications Commission, Connecting America: The National Broadband Plan ("National Broadband Plan") § 4.2 at 52.

The availability of this combination should revive the CableCARD as a solution for consumers who don't want to rely only on the choices and devices offered by MVPDs. But consumers will have this choice *only* if the cable industry lives up to its commitment to support CableCARDs in general and the requirements set forth in the 2003 "Plug & Play" agreement in particular. This is what will offer consumers real choice, and opportunities to save money.[8]

To achieve this outcome, the Commission must adopt more specific and effective rules to address well-documented shortcomings in the existing regime. There are no technical obstacles to allowing CableCARD-reliant devices to work and receive cable programming as originally intended. Accordingly, CEA and CERC focus these joint Comments on rules that will be effective in accomplishing the Commission's goals. For each of the Commission's stated objectives, CEA and CERC discuss what effective compliance will actually entail, and what changes to the Commission's rules are necessary to achieve it.

CEA and CERC members believe that CableCARD-reliant products, if properly supported, can and should be more than an interim solution. These products, when well supported, will offer important competitive choices to subscribers:

- Consumers will choose among form factors and product features. CableCARD-reliant devices thus far have included HDTVs, cable boxes and DVRs. If properly supported and combined with Internet access, CableCARDs will support a full range of media adapter and server products. All these devices can and should compete based on convenience, ease of use, added features, and interface presentation.

- Consumers will be able to reduce the total number of devices connected to their television set, improve the appearance of their viewing space and reduce the energy consumed by multiple separately powered devices.

[8] Compliance with these requirements obviates the need for continued reporting on the status quo. Hence CEA agrees that further "two-way reports" should not be necessary.

- Consumers will enjoy improved video quality because CableCARD devices can rely on video processors specifically designed for the display.

- Consumers will be able to use the remote control designed for their TV rather than a separate cable remote with fewer or inapplicable features. (This was an objective stated two decades ago by Senator Leahy.[9])

- Consumers can use the closed caption decoder designed for their TV, rather than an external box.

Allowing consumers to choose a CableCARD-reliant device that is well-supported and has the capabilities that were supposed to be guaranteed in 2003 is in no way inconsistent with also developing a new generation of AllVid adapter choices. CEA and CERC will encourage the Commission to proceed expeditiously with the AllVid Notice of Inquiry, to make that proposal a reality as well. A vibrant market can and should include both choices.[10]

II. Commission Rules Must Assure Standard, Ordinary CableCARD Installation And Product Support, With Penalties For Noncompliance.

As has been well documented by the Commission and the courts, CableCARD-reliant devices have never been given even the minimal support that the FCC and the cable industry promised to consumers. Any new rulemaking addressing CableCARDs must address this failure aggressively and conclusively.

[9] "And why do you have to rent the converter box? Does it give you a better picture? Usually not. If anything, it usually degrades the picture. Why do you have to do it? If you do take this converter box that they tell you you need, then the TV remote control unit that you bought with your television becomes worthless." *Cable Television Legislation*, 102nd Cong., 137 Cong. Rec. S18336-02, 1991 WL 250487, (statement of Sen. Leahy); *cf.* Sec. 47 U.S.C. § 544a(c)(2)(E) and (F).

[10] The recently completed transition to digital broadcast television illustrates the beneficial effect of rules that establish consumer choice in set-top boxes. Part of the success of the DTV transition flowed from the National Telecommunications and Information Administration's commitment to a program that put consumers in charge of their set-top box selection and gave consumers the choice of dozens of products and features. Consumers, not their cable operators, should decide which cable set-top box they use in their homes.

A. All Operators Should Assure CableCARD Installation By Subscribers Or Retailers And Should Recognize Support Of Competitive Devices As A Core Obligation.

Among the deficiencies documented in prior proceedings, and identified in the National Broadband Plan, is the cable industry's inadequate support for CableCARD deployment. CableCARD installation was designed as a simple, two-step process of inserting a working card into the slot, then calling a number provided by the cable operator, and reading *two numbers* from the TV screen. Everything else should happen automatically through electronic cross-references in the operator's back-end support and billing operation, to authorize and charge for the service and programming to which the consumer has subscribed. But as the National Broadband Plan explained, "consumers who buy retail set-top boxes can encounter more installation and support costs and hassles than those who lease set-top boxes from their cable operators."[11] Regardless of whether the current unacceptable circumstances developed through economic disincentives, inertia, or disinterest on the part of the cable operators, a remedy is needed to put competitive and leased equipment at parity.

It is long overdue for the Commission to require in its regulations that cable operators make CableCARDs available to retailers and consumers for installation according to the original design, as described above. This would empower those with the greatest incentives for the success of the CableCARD alternative to distribute and install CableCARDs, requiring minimal support obligations from cable service personnel. Specifically, cable operators should be required to supply tested and working CableCARDs to retailers that sell CableCARD-reliant devices. Those retailers then can either install the cards in the devices for the consumer or provide printed or on-line

[11] National Broadband Plan, *supra,* n. 5.

guides to walk consumers through the installation and activation process. Similarly, cable operators should be required to provide a tested, working CableCARD upon request to any consumer, with basic instructions on whom to call to activate service. This would accommodate, for example, consumers who purchase navigation devices by Internet or mail order.

This installation approach would benefit all participants in the market. Consumers would be able to activate their cable service quickly through competitively-supplied boxes at *their* convenience. Manufacturers would have confidence that a working CableCARD could be timely installed for or by the consumer, thus making CableCARD a convenient and workable solution. Retailers would be able to make certain their customers leave the store with everything needed to obtain cable service promptly, which would minimize consumer surprise, disappointment, and product returns. Manufacturers and retailers, finally, should have the confidence to advertise CableCARD accessibility as a product *feature* rather than a cost. Cable operators would be spared the labor and fuel costs of a truck roll to perform what should always have been a trivial installation process, and would reduce their support obligations in the vast majority of cases to a single, short activation phone call.

FCC regulations must also require cable operators to provide levels of resources, service and support comparable to their support for their own leased equipment. CableCARDs, CableCARD-compatible devices, and the consumers who use them should not be treated as second-class priorities in the cable operator's business. Consumers should have the right to expect, and the Commission should require, that all facilities and personnel, including backend infrastructure, phone support, installation, accounting, and

billing departments, support CableCARD-compatible devices with the same level of training and service as are provided to consumers using equipment leased from the cable operator.

B. Enforcement Measures Should Be Taken Against Non-Compliant Systems.

There has been essentially no enforcement of existing rules despite many violations, including refusals to provide or support CableCARDs. The Commission should devote resources to soliciting and investigating complaints, and should issue forfeitures against operators who fail to provide the necessary information and support for CableCARD use and self-installation. The FCC should also make it clear that it will take action against any operator that does not comply with a navigation device rule yet does not seek a waiver. The Commission should also empower state and local franchising authorities to enforce the CableCARD rules. This will permit localities that assign a high priority to the promotion of device competition to allocate resources accordingly.

C. No Additional CableCARD Waivers Should Be Granted Unless and Until Full Compliance by Cable Is Achieved And Economic Discrimination Against Competitive Products Has Been Addressed.

Over the past four years, the Commission and the Media Bureau have granted numerous waivers of the rule requiring cable operators also to rely on CableCARDs in their leased set-top boxes. Many of these waivers have been granted on grounds other than competitive availability, including accelerating cable operators' transition to digital transmission.[12] The Bureau has granted many waivers to operators of IP-based or

[12] *See In the Matter of Consolidated Requests for Waiver of Section 76.1204(a)(1) of the Commission's Rules, Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Memorandum Opinion and Order (rel. June 29, 2007).

partially IP-based systems with no showing that common reliance on the CableCARD was impossible or prohibitive for those systems.[13] In many cases, waiver applicants tacitly admitted that they would not support CableCARDs even in retail-purchased devices on their systems – but they requested no waiver of their duty to allow subscribers, pursuant to Section 76.1201 of the Commission's rules, to connect navigational devices to multichannel video programming systems.[14] As a result, many operators were entirely and unnecessarily excused from the obligation to support competitive devices.

In 2009, the Bureau granted far-reaching waivers to *manufacturers* of "DTAs," ostensibly non-interactive, limited-functionality devices without imposing obligations on the operators that deploy these devices.[15] Recently, operators have demonstrated that DTAs can, in fact, support interactive services such as VOD through an Internet link to the operator – a service currently denied to competitive devices – in an apparent attempt to extend the "DTA" waiver to interactive devices.[16] The Bureau also granted a waiver for an HD-capable box.[17] Whatever the effect of these waivers on incentives for a digital transition, they have contributed to operators' continued poor support for CableCARD-reliant devices. On systems where many subscribers receive DTAs, the training,

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[13] *Id.*

[14] *See, e.g.*, *In the Matter of Gardonville Cooperative Telephone Association Request for Waiver of 47 C.F.R. § 76.1204(a)(1)*, Request for Waiver, CSR-7359-Z (filed July 9, 2007); *In the Matter of Lafayette City-Parish Consolidated Government of Lafayette, Louisiana, d/b/a Lafayette Utilities System, for Waiver of Section 76.1204(a) of the Commission's Rules*, Petition for Waiver, CS Docket No. 97-80, CSR-8152-Z (filed Mar. 27, 2009); *In the Matter of Electric Power Board of Chattanooga Petition for Clarification or Waiver of 47 C.F.R. § 76.1204*, Petition for Clarification or Waiver of 47 C.F.R. § 76.1204, CS Docket No. 97-80 (filed Aug. 26, 2009);

[15] *In the Matter of Evolution Broadband, LLC's Request for Waiver of Section 76.1204(a)(1) of the Commission's Rules, Commercial Availability of Navigation Devices*, CSR-7902-Z, CS Dkt. No. 97-80, Memorandum Opinion and Order (rel. June 1, 2009).

[16] Todd Spangler, *Cable Show 2010: Comcast Wants To Bring 'Xfinity Remote' To DTAs*, Multichannel News (May 13, 2010), http://www.multichannel.com/article/print/452616-Cable_Show_2010_Comcast_Wants_To_Bring_Xfinity_Remote_To_DTAs.php

[17] *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Cable One, Inc.'s Request for Waiver of Section 76.1204(a)(1) of the Commission's Rules*. CS Dkt. No. 97-80, CSR-8080-Z, Memorandum Opinion and Order (rel. May 28, 2009) ("Cable One Order").

inventories, processes, and logistics for installing and servicing CableCARD-reliant products continue to be neglected without FCC sanction.

Instead of continuing to undermine support for CableCARDs and for competitive devices by granting waivers in service of other goals, the Commission should use its waiver authority to *promote* cable operator compliance with existing and enhanced CableCARD and home networking rules, by refusing any further CableCARD waivers or waiver extensions until the cable industry complies fully with Part 76. In this way, the Commission can encourage cable's digital transition while also fulfilling the mandate for a competitive navigation device market.

III. Economic Discrimination Against Competitive Products Should Be Addressed By FCC Regulations.

CEA and CERC agree with the National Broadband Plan conclusion that additional regulations are needed to eliminate price discrimination and lack of transparency that has deterred development of the competitive marketplace for navigation devices.[18] However, transparent pricing alone will not assure meaningful competition as required by Section 629. Commission regulations must address four basic principles.

First, prices for monthly leasing of CableCARDs should be reasonably based on the actual cost of the CableCARD to the cable operator. Without such a requirement, cable operators might price CableCARDs or services to CableCARD-reliant products at levels that discourage consumers from using competitive devices.

[18] National Broadband Plan §4.2 at 52 ("[C]onsumers perceive retail set-top boxes to be more expensive than set-top boxes leased at regulated rates from the cable operator. This perception is partially driven by a lack of transparency in CableCARD pricing for operator-leased boxes and by the bundling of leased boxes into package prices by operators."

Second, prices should be the same for leasing of CableCARDs regardless of whether the card is to be installed in a device the subscriber owns or in one that she leases from the cable operator.

Third, all prices for devices and services should (as Section 629 explicitly requires) be separately and conspicuously disclosed to consumers in readily available literature, web pages, and monthly bills in which the cable operator allocates pricing for services and devices, in a form that is clear, transparent, and readily understandable to the subscriber. Unless potential customers can sensibly compare charges, consumers will lack adequate information to compare the leased and purchased device alternatives, and will be unable to assess the total short-and long-term cost of each alternative.

Fourth, and by far the most important, to truly enable fair choice and competition between retail and leased navigation devices, regulations should require cable operators to break out their charges for services and devices so as to transparently and conclusively avoid discrimination against consumer-owned devices. In arriving at these prices, they must make available to subscribers with competitive devices any subsidy or discount, as to service, CableCARD, or navigation device, that is offered to subscribers who lease boxes, and conversely, must avoid any additional charge that would penalize use of competitive devices. For example, any subscriber who purchases his or her own navigation equipment should be entitled to the same bundled deal as is afforded a neighbor who rents a navigation device – *minus* a discount representing the rental price of the box that the consumer-owned product replaces. Cable operators also should not be able to impose, for example, a "digital" or "HD" connection charge for use of a competitive product if the same charge is not imposed for use of a leased product. Nor

should they be able to impose a charge for use of a CableCARD in a competitive device if no such charge is made for its use in a leased device.

Subscribers who are offered a cable service package (either by itself or combined with other services such as voice or Internet access) typically are presented with a single price quote encompassing both services and equipment leasing. Yet it is manifestly unfair for subscribers who buy the equipment they want to be forced to pay also for equipment they don't want. Nor should subscribers be charged punitive fees for using the competitive devices to which law and FCC regulation entitle them. Unless equipment pricing bears a direct rational relationship to the equipment's actual costs, is stated separately, *and* is subtracted from bundled fees charged to owners of competitive navigation devices, cable operators will continue to penalize the use of competitive products and will use service fees to subsidize set-top box costs whenever they are faced with competition, and thus will be able to forestall competitive entry.

IV. Discretionary License Control Over The Availability And Capacities Of Competitive Products Should Be Limited To Protection Of The Network From Harm and Protection Of Signals Against Theft.

Despite previous Commission efforts to address unduly restrictive licensing,[19] the cable industry continues to license the essential intellectual property needed for CableCARD-compatible devices under terms that limit innovation and serve no legitimate purpose. These restrictions deny manufacturers access to the information necessary to develop innovative new navigational devices for the retail market. Accordingly, we propose to strengthen the existing rules against restrictive licensing.

[19] *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Dkt. No. 97-80, PP Dkt. No. 00-67, Third Further Notice of Proposed Rulemaking at ¶ 8 (rel. June 29, 2007).

Section 76.1201 of the Commission's rules, the fundamental "right to attach" provision, requires operators to allow the "connection or use" of competitive navigation devices.[20] This requirement is absolute except where a device would cause "electronic or physical harm" or permit "unauthorized receipt of service." In addition, the separable security rule (Sec. 76.1204) prohibits any contract or use of IP rights to prevent "the addition of features or functions" to a CableCARD-compatible navigation device unless unauthorized access would result.

Despite these rules, CableLabs, the research and development facility owned and directed by cable operators, continues to license the essential intellectual property for the CableCARD interface under unduly restrictive terms, reserving to itself the discretion to determine whether and how competitive manufacturers will be permitted to innovate. For example, the CableCARD-Host Interface (CHILA) license, which every manufacturer of a CableCARD-compatible device must sign, still permits CableLabs to impose new certification requirements whenever it deems them "critical" to preventing "harm to the network," not limited to electronic or physical harm.[21]

In addition, CableLabs continues to grant competitive manufacturers access to two-way functionality only through agreeing to its tru2way license agreement. That agreement allows competitive devices to operate in two modes: a "CE Mode" in which only linear video programming is available but programming from the Internet and other sources can be integrated, and a "Cable Mode" in which two-way services such as video-on-demand are available but integration with other content sources is prohibited and the

[20] 47 U.S.C. § 76.1201.
[21] Amended and Restated Nonexclusive CableCARD-Host Interface License Agreement 9-10, http://www.cablelabs.com/opencable/downloads/CHILA.pdf.

cable operator is in full control of the user interface.[22] The tru2way license also specifies that cable operators will not make program guide data available to competitive devices,[23] although subscribers pay for access to this data as part of their cable subscription and there is no proprietary interest to protect with respect to the guide data.[24]

The restrictions imposed by these licenses are not directed at preventing electronic or physical harm to cable systems, or theft of service. They simply preclude functionality that competitive manufacturers could use to distinguish their products from leased devices. Moreover, the discretion to decide whether a given feature will lead to harm to the network or theft of service lies entirely with CableLabs, and except with respect to the approval of new digital outputs, there is no appeal from CableLabs' decisions.

The capacity to meld Internet access with subscription cable channels offers new promise for retail products, once CableCARDs are convenient to install and their intended operation is supported in ways comparable to leased boxes. The Commission should enforce its existing rules by demanding that CableLabs issue a new version of CHILA that does not restrict the design and functionality of CableCARD-compliant devices beyond what is demonstrably necessary to prevent electronic or physical harm, unauthorized access, or theft of service.

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[22] <tru2way> Host Device License Agreement at 1, 5, http://www.cablelabs.com/opencable/downloads/tru2way_agreement.pdf (incorporating technical specifications that define the two modes).
[23] *Id.* at 5.
[24] *Feist Publications, Inc. v. Rural Telephone Svc. Co.*, 499 U.S. 340 (1991).

V. If Cable MSOs Are To Maintain Switched Digital Channels They Must Also Support IP Signaling So That UDCPs Can Receive The Channels To Which Their Owners Subscribe.

The National Broadband Plan concluded that "retail CableCARD devices cannot access all linear channels in cable systems with Switched Digital Video (SDV) unless cable operators voluntarily give customers a separate set-top box as an SDV tuning adapter."[25] Consumers pay for a package of channels and are entitled to receive every channel they have paid for. Consumers' access to any of those channels should be limited only by their own viewing interest, and not by the bandwidth constraints or commercial preferences of the cable operator. It therefore is incumbent upon cable operators that have deployed SDV to give consumers a workable and effective method of channel selection, regardless of whether they use a leased cable box, a CableCARD-enabled television, or a competitive navigation device.

To date, that has not occurred. As one example of the consumer problems created by SDV, and the ways in which some cable operators exploit SDV to not-so-subtly persuade customers not to use CableCARDs, attached to these Comments as Appendix B is a letter, dated May 7, 2010, from a cable operator to its "Dear Valued Customer," explaining the anticipated impact of switched digital video services, scheduled to be launched June 15, 2010, on subscribers who use UDCPs. Among those impacts:

- Switched digital video would apply to "a number of our existing, lesser-viewed channels." That "number" is *approximately 240 channels*. It includes such popular "lesser-viewed" channels as the HD versions of ABC Family, CNBC, Comedy Central, Disney Channel, ESPN News, Fox Business Channel, HBO Comedy and HBO Family, as well as dozens of HD movie and sports channels such as the NBA, NHL, and Major League Baseball.

- The current generation of CableCARD compatible devices sold are at retail were "not designed to be compatible with" switched digital video. What is not

[25] National Broadband Plan at 52.

explained, of course, is that *this incompatibility had nothing to do with UDCP designs, but rather solely with constraints involuntarily imposed on all competitive entrants by the cable industry*.

- Even with a tuning adapter, consumers cannot receive "our other interactive features (such as the Electronic Programming Guide, Video on Demand, and other two-way services that, by design, your DVR cannot access)." This is no more than gratuitous upselling of services.

- While customers that own navigation devices currently can receive a tuning adapter "at no charge*", the asterisked footnote reserves the operator's right to assess a charge for the adapter, stating: "Terms and conditions subject to change."

- To "take advantage of this unique opportunity" to obtain a tuning adapter, consumers must go to a cable customer service office.

- All this is being undertaken to "launch all the new services our customers want" – *none of which services is promised to be available to consumers that rely on CableCARD*.

At a May 13, 2010 hearing of the Subcommittee on Communications, Technology, and the Internet of the House Committee on Energy and Commerce, Subcommittee Chairman Rick Boucher and representatives of both the cable and consumer electronics industries concurred that the "tuning adapter" for SDV channels, currently offered to some competitive navigation device owners, is an unsatisfactory solution to a serious consumer problem.[26] The solution discussed in the FNPRM at ¶ 14 – selecting SDV channels by out-of-band IP communication – is a more practical and consumer-friendly solution.

[26] Chairman Boucher aptly described the tuning adapter as "awkward," "bulky," "difficult to connect and use," and "as big as a set top box," to which NCTA President Kyle McSlarrow jokingly responded that he would prefer to characterize the adapter as "large and elegant." *The National Broadband Plan: Competitive Availability of Navigation Devices: Hearing Before Subcommittee on Communications, Technology, and the Internet of the House Committee on Energy and Commerce*, 111th Cong. (Preliminary Transcript of Hearing) (May 13, 2010), http://energycommerce.house.gov/Press_111/20100429/transcript.04.29.2010.cti.pdf at 46-47.

Use of a common standard IP backchannel signaling protocol should be acceptable to the cable industry.[27] Major cable operators that use SDV already have developed tuning protocols for their respective systems, and are working on IP-based video delivery (which by necessity must tune channels using IP) through their "TV Everywhere" project. Similarly, device manufacturers use IP-based upstream signaling and selection for a variety of applications, such as ordering on-demand movies using BD Live or TiVo. The expertise of both cable operators and manufacturers can be brought to bear by the Commission to enable open standard IP signaling for SDV.

CEA and CERC urge the Commission to adopt a standard solution, with certain requirements described below:

First, the IP backchannel should signal channel selection to the headend using a common, open standard protocol plus interface parameters that will be made available without charge to all competitive device manufacturers.[28] Responsibility to develop this "SDV Protocol" must ultimately rest with the cable industry. Our members remain committed to working with the cable industry to develop an SDV Protocol that is fair and feasible for both industries, and we will continue to devote our technical resources to meet the needs of our customers. However, cable operators have moved to "switched digital" techniques for their own operational and financial benefit. Hence, it is up to them to remediate the harm such techniques cause to the ability of subscribers to continue

[27] *See* statement of NCTA President McSlarrow: "[W]e are open to exploring IP back channel so you could signal upstream to the headend that is an open standard, that would be available to any consumer electronics manufacturer who wants to avail it. . . ." Preliminary Hearing Transcript, http://energycommerce.house.gov/Press_111/20100429/transcript.04.29.2010.cti.pdf at 47, http://energycommerce.edgeboss.net/wmedia/energycommerce/2010.04.29.cti.wvx at 1:13:20.

[28] CEA and CERC believe it is appropriate that any such standard be available for royalty-free use, inasmuch as cable operators derive benefits from SDV but competitive navigation device manufacturers do not.

to receive subscribed channels using CableCARD-reliant devices. The Commission should finalize the protocol on a tight timetable, allowing a short period for comment by interested parties.

Second, all cable operators that deploy switched digital video service must actually implement a functional, nationwide, uniform system using the SDV Protocol. The proposed implementation date would apply to operators providing switched digital services on that date. Switched digital video services beginning operation thereafter would be required to implement the SDV Protocol upon service introduction. Without both a uniform standard and a requirement that all cable operators in fact use the standard on all SDV systems, manufacturers of competitive navigation devices will be unfairly burdened with additional costs and compatibility and portability issues; consumers would bear the brunt of the resulting inconvenience and the diminution of services. A national deployment requirement further ensures that the developed protocol will work effectively and efficiently.

Third, discrimination against subscribers that use competitive navigation devices to obtain switched digital video is prohibited as to channel availability, signal quality, customer service, or pricing. Consumers who purchase competitive navigation devices should have confidence that they will not encounter the sort of obstacles that thus far have deterred subscribers from receiving the linear channels for which they pay.

Fourth, any costs of the IP backchannel solution should be borne by the cable operators, as a cost of obtaining additional bandwidth at the expense of subscribers who use competitive devices. Discrimination should not be tolerated where the problem was created by a system unilaterally adopted by a cable operator for its own convenience.

Regulations addressing these requirements are proposed below. These regulations are necessary to assure that switched digital services cannot be leveraged to further tilt the playing field against consumers that choose third-party navigation devices. They are, indeed, required by Section 629.

VI. CEA And CERC Support Broadening The Existing Requirement For Operators' Leased Products To Support Home Networking And Competitive Products.

While CEA and CERC look forward to the AllVid proceeding, there is urgent interest, as indicated by pending waiver applications, in updating the home networking provisions that, as per existing rules, apply to all operator-provided navigation devices. CEA and CERC agree that this needs to be done in this NPRM, and propose draft regulations that would accomplish this in a pro-competitive way.

A. The 1394 Mandate Should Be Replaced With A Requirement To Use One Or More Interfaces And Protocols Accepted In Today's Market.

CEA and CERC support the proposal to broaden the current FCC regulation, 47 C.F.R. § 76.640(b)(4), so as to require any high definition set-top box provided by a cable operator to include a functional interface using one or more network-capable technologies. The intent of this regulation is to facilitate interconnection of operator-supplied navigation devices to other customer premises equipment, including digital video recorders. Ensuring consumers' right to record and digitally network video programming was a fundamental motivation behind consumer electronics manufacturers' support for adoption of Section 7.640(b)(4) in the December 2002 "Plug and Play" Memorandum of Understanding between representatives of the Cable television industry

and Consumer Electronics manufacturers.[29] While, regrettably, that purpose remains unfulfilled today, it is not because the goal was misguided. Rather, recording and digital networking have not been achieved because the market has favored other interfaces and protocols, while the implementation of IEEE 1394 ("1394") by MSOs has been inadequate.

Over the last year, several companies have sought waivers from the Commission to permit use of Internet Protocol on cable-supplied boxes. In each instance, CEA and CERC did not object to the waiver request. However, CEA observed that grant of the waivers should not substitute for a proceeding to address those deficiencies in the underlying regulation illustrated by the waiver requests.[30]

The technologies identified by the Commission in paragraph 20 should be more than adequate to meet current marketplace needs for a network-capable physical interface. In particular, hundreds of consumer electronics products today rely on the Ethernet interface for home networking and broadband connections to Internet services. CEA and CERC therefore believe that these specified physical interfaces should suffice. However, we recommend that the Commission also make clear that additional interfaces may be added to the list by petition, in a streamlined process, so that companies will not experience in the future the kind of delays that have frustrated consumer movement

[29] The Commission recently acknowledged this as the purpose for Rule 76.640(b)(4): "We recognize that the inclusion of an IEEE 1394 output would provide additional functionality for home-networking and recording capability." *See also* Cable One Order.

[30] *In the Matter of Request of Motorola Inc. for Waiver of 47 C.F.R. §76.640(b)(4), Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CSR-8251-Z, CS Dkt. No. 97-80, Comments of the Consumer Electronics Association (Feb. 22, 2010); *In the Matter of Intel Corporation Petition. for Waiver of 47 C.F.R. §76.640(b)(4), Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CSR-8229-Z, CS Dkt. No. 97-80, Comments of the Consumer Electronics Association (Dec. 10, 2009); *In the Matter of TiVo Inc.'s Petition for Waiver of 47 C.F.R. §76.640(b)(4), Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, CSR-8252-Z, CS Dkt. No. 97-80, Comments of the Consumer Electronics Association (Feb. 22, 2010).

toward home networks that integrate cable-delivered content with content acquired from other sources.

Nevertheless, merely identifying permissible physical interfaces provides no guarantee that cable content will flow to an operational home network. Just as the 1394 interface languished from lack of functionality, these specified physical interfaces alone will not promote home networking unless the Commission also requires the use of commonly-used communications protocols to convey video data interoperably to consumers' purchased equipment. CEA and CERC therefore urge the Commission also to require support for one or more common communications protocols over each of these interfaces. Internet Protocol (IP) should be required for both the Ethernet and Wi-Fi interfaces. For 1394 and USB 3.0, the Commission should require the use of either their respective native interface protocols or IP.

Moreover, the Commission should promote network interoperability through use of voluntary inter-industry standards. For Ethernet and Wi-Fi implementations, the Commission should require the use of DLNA and UPnP AV protocols so as to maximize compatibility among cable-supplied devices and products that consumers currently are purchasing for home and home networking. Moreover, the Commission should prohibit the use by cable operators of deviations from those standards that might denigrate from full interoperability with competitively-supplied equipment.

CEA and CERC support adoption of these requirements as soon as possible. Various of these interfaces and protocols have been readily available in the market for several years, and a number of devices currently on the market support these interfaces as optional. Cable-supplied devices already should have included a "functional" 1394 port,

and so the requirement to support the underlying communications protocol should have been followed since the effective date of the regulation. Thus, there is no reason why these interface and protocol requirements cannot be adopted and implemented promptly.

B. The Commission Should Prescribe Video Standards.

CEA and CERC further concur with the Commission recommendation to adopt and require the use of widely accepted video standards in cable-supplied navigation devices.[31] The most common standards, MPEG-2 and MPEG-4/H.264 should be required. However, nothing should preclude any manufacturer from including additional video codecs and formats in addition to the mandated standards.

C. Bi-Directional Communications Should Be Supported Over These Interfaces.

The Commission's suggestion in paragraph 21 of the FNPRM to require bidirectional communication of commands also is eminently sensible. All of the suggested network-capable physical interfaces and protocols enable bidirectional communication of data among devices across the home network. Absent the ability to convey commands from connected devices to the cable-supplied set-top box, the leased equipment will be a limited source of content to the network. Voluntary standards like DLNA prescribe protocols to make such bidirectional communications possible, and help to define standard commands that, for example, can facilitate the transfer of video content between the DVR functions of operator-supplied equipment and home servers and other devices connected to the network. Similarly, bidirectional communication could enable channel selection on equipment connected to the network, but physically located beyond the room in which the cable-supplied equipment resides. The capacity to communicate

[31] FNPRM at 9 ¶ 21 & n.51.

and respond to such remote commands will greatly enhance the functionality of all equipment on the network, and promote innovation and competition in the market for all network-capable audiovisual devices.[32]

Conclusion

The Commission should not abandon the CableCARD as a means for fulfilling the mandate of Section 629. Effective rules and effective enforcement will justify the investment that manufacturers and cable operators have made in this technology and the Commission's efforts in promoting its use. Support for the CableCARD remains the most direct and immediate means for the Commission to promote vibrant competition, innovation, and consumer choice. To that end, CEA and CERC request that the Commission adopt the regulatory changes we propose.

Respectfully submitted,

Christopher McLean

Christopher A. McLean
Executive Director
Consumer Electronics Retailers Coalition
317 Massachusetts Avenue, NE, Suite 200
Washington, D.C. 20002
(202) 292-4600

Julie M. Kearney

Julie M. Kearney
Vice President, Regulatory Affairs
Consumer Electronics Association
1919 S. Eads St.
Arlington, VA 22202
(703) 907-7644

Of Counsel:
Robert S. Schwartz
Seth D. Greenstein
Mitchell L. Stoltz
Constantine Cannon LLP
1301 K Street, N.W.
Suite 1050 East
Washington, D.C. 20005
(202) 204-3508
Date: June 14, 2010

[32] In that regard, while Commission regulations should support such basic networking and communications functionality, the Commission also should not preclude the ability of manufacturers to enter into private agreements with MVPD operators to enable richer functionality.

Appendix A
Proposed Regulations

Amend § 76.1205 to read as follows:

§ 76.1205 CableCARD Support.

(a) Technical information concerning interface parameters that are needed to permit navigation devices to operate with multichannel video programming systems shall be provided by the system operator upon request in a timely manner.

(b) A multichannel video programming provider that is subject to the requirements of Section 76.1204(a)(1) must comply with the following requirements:

(1) Such provider shall not discriminate against any subscriber who attaches a navigation device obtained from a retailer, manufacturer, or other vendor that is unaffiliated with such multichannel video programming distributor by providing installation, technical support, or other customer service that is inferior in scope or quality to the service provided to subscribers who use a navigation device supplied by the provider.

(2) Such provider shall provide the means to allow subscribers to self-install and activate CableCARDs.

(3) Such provider shall supply CableCARDs:

(A) to a customer on request, in quantities sufficient to operate the customer's equipment; and

(B) to any retailer that sells navigation devices which accept a CableCARD, in a commercially reasonable manner, in quantities sufficient to fulfill the need for CableCARDs in navigation devices sold by the retailer;

(4) CableCARDs supplied pursuant to subsection (b)(3) shall be multistream, unless the customer or retailer requests single-stream CableCARDs.

(5) With respect to professional installations, such provider shall:

(A) ensure that the technician arrives with no fewer than the number of CableCARDs requested by the customer; and

(B) ensure that each such CableCARD is capable of functioning on the multichannel video distribution system to which it is to be connected.

(6) Such provider shall separately disclose to consumers in a conspicuous manner in advertisements, web sites, and billing –

(A) any assessed fees for rental of single and additional CableCARDs; and,

(B) where such provider includes equipment in the price of a bundled offer of one or more services, the fees reasonably allocable to

(i) the rental of single and additional CableCARDs and

(ii) the rental of operator supplied navigation devices.

(7) CableCARD rental fees shall be priced uniformly by such provider without regard to the intended use in operator-supplied or consumer-owned equipment.

(8) For any bundled offer combining service and equipment into a single fee, including any bundled offer providing a discount for the purchase of multiple services, such provider shall make such offer available without discrimination to any customer that owns a navigation device, and shall further offer such customer a discount from such offer equal to an amount not less than the monthly rental fee reasonably allocable to the lease of the operator-supplied navigation device included with that offer.

(c) For purposes of this section, "reasonably allocable" shall mean a price reasonably based on the actual cost of the equipment amortized over a period of no less than 60 months.

Add new § 76.1212 as follows:

§ 76.1212 Compatibility for Switched Digital Video Systems.

(a) By no later than September 30, 2010, and upon request thereafter, switched digital video operators shall make available in a timely manner to manufacturers of unidirectional digital cable products a standard protocol and interface parameters that permit cable subscribers with unidirectional digital cable products to access switched digital channels ("SDV Protocol"). The SDV Protocol shall be based on out-of-band communication between the unidirectional digital cable product and the switched digital video operator using Internet Protocol, and shall utilize to the extent possible voluntary industry standards and technologies subject to reasonable and nondiscriminatory licensing.

(b) By no later than January 1, 2011, a switched digital video operator shall implement a functional system using the SDV Protocol that enables subscribers with unidirectional digital cable products to request and receive all switched digital video channels to which they have subscribed.

(c) A switched digital video operator shall not discriminate in terms and conditions, including with respect to channel availability, quality, customer service, and pricing, between subscribers with unidirectional digital cable products using the SDV Protocol and subscribers with operator-supplied or bidirectional digital cable products.

Appendix B

TIME WARNER CABLE 1 1 00000001 705400
THE POWER OF YOU™
46 A East 23rd St.
New York , NY 10010

May 7, 2010

Dear Valued Customer,

Time Warner Cable would like to thank you for choosing us to be your video provider. We are writing to you as a valued CableCARD customer in order to provide advance notice of important upcoming changes that may affect your ability to access certain channels on your one-way CableCARD-equipped retail device (also known as a "UDCP").

Time Warner Cable is rolling out a new interactive technology in your area known as Switched Digital Video ("SDV"). SDV is a particularly exciting bandwidth-management breakthrough that makes it possible for us to offer many additional services, including new HD channels and HD versions of popular existing channels, to our customers. SDV allows us to provide these additional services, while at the same time continuing to offer existing services, because channels delivered using SDV are transmitted over the cable system only on an as-needed basis. As a result, SDV uses system capacity more efficiently than the traditional, always-on method. In order to launch all the new services our customers want, we must also deliver some existing channels using SDV to make additional bandwidth available.

Starting on June 15, 2010, Time Warner Cable will begin providing a number of our existing, lesser-viewed channels via SDV. The list can be found on the following pages.

The current generation of CableCARD-compatible devices sold at retail is only capable of accessing our one-way services. Such devices were not designed to be compatible with SDV, which is a two-way service. As a result, once the channels listed above are delivered using SDV technology, they will not be accessible via UDCPs. However, to ensure that you can view programming delivered via SDV, we are pleased to make the following special offers.

HD TiVo and Moxi HD DVRs: For customers with CableCARD-equipped HD TiVo digital video recorders ("DVRs") (specifically, TiVo Series3, TiVo HD, and TiVo HD XL DVRs) and Moxi HD DVRs, Time Warner Cable has worked with the rest of the cable industry and TiVo Inc. to develop an external device called the Tuning Adapter. The Tuning Adapter is designed to work in conjunction with your HD TiVo or Moxi HD DVR, and it will allow you to receive programming delivered using SDV technology, but not our other interactive features (such as the Electronic Programming Guide, Video On Demand, and other two-way services that, by design, your DVR cannot access) while you continue to enjoy all the features of your DVR. For more information, please visit http://www.timewarnercable.com/tuningadapter.

HD TiVo and Moxi HD DVR users who would like to receive programming delivered using SDV are eligible to receive a Tuning Adapter for each CableCARD-equipped DVR, which we will provide at no charge.* You will continue to pay the standard lease rate for your CableCARD(s). Customers with Tuning Adapter-compatible Media Center PCs who would like to receive programming delivered using SDV are eligible to receive a Tuning Adapter for each CableCARD-equipped Digital Cable Tuner, which we will provide at no charge.

Windows 7 Media Center PCs: Certain Media Center PCs connected to CableCARD-equipped Digital Cable Tuners (also known as OCURs) and running the Microsoft Windows 7 operating system may be compatible with a Tuning Adapter to receive programming delivered using SDV technology. For more information on Media Center PC Tuning Adapter compatibility, please visit http://www.timewarnercable.com/tuningadapter.

Customers with Tuning Adapter-compatible Media Center PCs who would like to receive programming delivered using SDV are eligible to receive a Tuning Adapter for each CableCARD-equipped Digital Cable Tuner, which we will provide at no charge.† You will continue to pay the standard lease rate for your CableCARD(s).

Other CableCARD-Equipped Devices: For customers currently renting CableCARDs for use in UDCPs that are not compatible with the Tuning Adapter, Time Warner Cable will provide one basic HD converter per UDCP in exchange for the CableCARD(s) used in that device. This basic HD converter will allow you to receive programming delivered using SDV, but not our other interactive features (such as the Electronic Programming Guide, Video On Demand, and other two-way services that, by design, UDCPs cannot access). For at least one year, you will pay the same monthly price for each basic HD converter that you are currently paying to rent a CableCARD. (Additional charges may apply after the initial one-year period if you wish to continue to use the basic HD converter(s) at that time.)

In order to take advantage of this unique opportunity, please stop by your nearest customer service office. If you have a UDCP that is not compatible with the Tuning Adapter, you will need to present the CableCARD(s) from each UDCP for which you would like a basic HD converter, at your Time Warner Cable Store. (Please see below for locations and hours)

For more information, visit: http:www.timewarnercable.com/tuningadapter.

We thank you again for choosing Time Warner Cable.

Time Warner Cable New York City Region

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* Terms and conditions subject to change.

† Terms and conditions subject to change.

Time Warner Cable Store Locations

Manhattan

46A East 23rd St.
Mon, Tues, Fri 8am-7pm
Wed & Thurs 8am-8pm
Sat 9am-5pm

5120 Broadway
Mon-Fri 8a-7pm
Sat 9am-5pm

Queens

Queens Center Mall,
Queens and Woodhaven Blvd.
at L.I.E., Elmhurst
Mon-Sat 10am-9:30pm
Sun 11am-6pm

133-19 Atlantic Ave., Jamaica
Mon-Fri 8am-7pm
Sat 9am-5pm

Brooklyn

769 5th Ave.
Mon.-Fri 8am-7pm
Sat 9am-5pm

Staten Island

2865 Richmond Ave.
in the Kmart Shopping Center
Mon-Fri 8am-7pm
Sat 9am-5pm
(Extended hour on Thurs 9am-8pm)

2655 Richmond Ave.
Staten Island Mall, Center Court
Mon-Thurs 10am-9:30pm
Fri & Sat 10am-10pm
Sun 11am-7pm

Mount Vernon

701 North MacQuesten Pkwy.
Mon-Fri 8am-5pm
Sat 8am-4pm

New Jersey

200 Roosevelt Pl, Palisades Park
Mon-Fri 8:30am-5pm
Sat 9am-4pm
(Extended hour on Wed 8:30am-6pm)

SERVICE NAME	Channel Position MAN.	B/Q	SI	MV	NJ
@ Max HD	663	663	663	663	663
@ Max	216/916	216/916	216/916	216/916	216/916
AAJ	572	572	572	572	572
ABC Family HD	738	738	738	740	751
Action Max	213/913	213/913	213/913	213/913	213/913
Action Max HD	660	660	660	660	660
AMC HD	754	754	754	777	772
American Life	153	153	153	153	153
Antena 3	803	803	803	803	803
Antenna	546	546	546	546	546
BBC America HD	685	685	685	685	685
BET HD	737	737	737	725	769
Big Ten 2 (Overflow 1)	473	473	473	473	473
Big Ten 3 (Overflow 2)	474	474	474	474	474
Big Ten 4 (Overflow 3)	475	475	475	475	475
Big Ten 5 (Overflow 4)	476	476	476	476	476
Biography HD	763	763	763	769	781
Boomerang	109/1900	109/1900	109/1900	109/1900	109/1900
Boomerang (SAP)	844	844	844	844	844
Bravo HD	718	718	718	746	758
C1R Worldwide	522	522	522	522	522
Canal 24	853	853	853	853	853
Canal Sur	805	805	805	805	805
Caracol	815	815	815	815	815
Cartoon HD	761	761	761	776	749
CBS College Sports HD	467	467	467	467	467
CBS College Sports TV	457	457	457	457	457
CCTV-9	134	134	134	134	134
Centric	89/893	89/893	89/893	89/893	89/893
Chinese Cinema	583	583	583	583	583
Chinese Prime	582	67 / 582	582	582	582
Cine Latino	895	895	895	895	895
Cine Mexicano	896	896	896	896	896
Cinemax HD	658	658	658	658	658
Club Jenna	341	341	341	341	341
CNBC HD	715	715	715	733	759
CNBC Worldwide	139/849	139/849	139/849	139/849	139/849
CNN International	133/851	133/851	133/851	133/851	133/851
Comedy Central HD	745	745	745	748	741
Crime & Investigation HD	686	686	686	686	686
Deutshe Welle TV	553	553	553	553	553
Discovery Familia	829	829	829	829	829
Discovery Kids	22/842/1904	22/842/1904	22/842/1904	110/842/1904	110/842/1904
Disney HD	749	749	749	737	738
Disney XD	60/1913	60/1913	60/1913	62/1913	28/1913
Disney XD HD	760	760	760	762	728
E! HD	724	724	724	741	724
Ecuavisa	814	814	814	814	814
Encore Action	252	252	252	252	252
Encore Drama	255	255	255	255	255
Encore HD	682	682	682	682	682
Encore Love	253	253	253	253	253
Encore Mystery	254	254	254	254	254
Encore Westerns	256	256	256	256	256
ESPN Gameplan 1	421	421	421	421	421
ESPN Gameplan 2	422	422	422	422	422
ESPN Gameplan 3	423	423	423	423	423
ESPN Gameplan 4	424	424	424	424	424
ESPN Gameplan 5	425	425	425	425	425
ESPN Gameplan 6	426	426	426	426	426
ESPNews HD	792	792	792	792	792
ESPNU HD	793	793	793	793	793
ET NY Chinese	585	585	585	585	585
ETTV News	587	587	587	587	587
EWTN	146/867	146/867	146/867	71/867	52/867
EWTN Español	868	868	868	868	868
Filmy	562	562	562	562	562
Fit TV	116/863/1908	116/863/1908	116/863/1908	116/863/1908	116/863/1908
Five Star Max HD	664	664	664	664	664
Flix			259		
Fox Business Network HD	743	743	743	728	737
Fox College Sports Atlantic	452	452	452	452	452
Fox College Sports Central	453	453	453	453	453
Fox College Sports Pacific	454	454	454	454	454
Fox Soccer Channel	124/824	124/824	124/824	124/824	124/824
Fuel	456	456	456	456	456
FUSE HD	691	691	691	691	691
FX HD	710	710	710	738	756
G4 HD	692	692	692	692	692
GAC	141/892	141/892	141/892	141/892	141/892
Game 2 HD	446	446	446	446	446
Game HD	445	445	445	445	445
Gol TV	459/820	459/820	459/820	459/820	459/820
gmc	152	152	152	152	152
HBO 2	202/902	202/902	202/902	202/902	202/902
HBO 2 HD	652	652	652	652	652
HBO Comedy	205/905	205/905	205/905	205/905	205/905
HBO Comedy HD	655	655	655	655	655
HBO Family	204/904	204/904	204/904	204/904	204/904
HBO Family HD	654	654	654	654	654
HBO Latino	207/907	207/907	207/907	207/907	207/907
HBO Latino HD	657	657	657	657	657
HBO Signature	203/903	203/903	203/903	203/903	203/903
HBO Signature HD	653	653	653	653	653
HBO Zone	206/906	206/906	206/906	206/906	206/906
HBO Zone HD	656	656	656	656	656
HD PPV	350	350	350	350	350
HD Theater	767	767	767	767	719
Headline News HD	758	758	758	732	761
Here!	326	326	326	326	326
History en Español	838	838	838	838	838
HITV (HITN)	831	831	831	831	831
HSN	39/875	39/875	39/875	72/875	36/875
HSN HD	739	739	739	772	736
HTV	886	886	886	886	886
IFC HD	781	781	781	781	754
ImaginAsian	560	560	560	560	560
IN Demand 2	302	302	302	302	302
IN Demand 3	303	303	303	303	303
Infinito	817	817	817	817	817
Investigation Discovery HD	723	723	723	771	732
ITV Gold	563	77/563	563	563	563
Jewelry TV	151/876	151/876	151/876	151/876	151/876
Jus Punjabi	573	573	573	573	573
LaFamilia	830/1910	830/1910	830/1910	830/1910	830/1910
LaTele Novela	861	861	861	861	861
Lifetime Real Women	127/859	127/859	127/859	127/859	127/859
MAV TV HD	787	787	787	787	787
Media Korea	532	532	532	532	532

All information is effective as of April, 2010

SDVNY
TWSDV.WFD
705400

SERVICE NAME	Channel Position MAN.	B/Q	SI	MV	NJ
MGM HD	796	796	796	796	796
MLB HD	783	783	783	783	783
More Max	212/912	212/912	212/912	212/912	212/912
More Max HD	659	659	659	659	659
MSNBC HD	714	714	714	729	760
MTV HD	720	720	720	727	770
National Geographic Channel HD	765	765	765	766	743
NBA League Pass 1	401	401	401	401	401
NBA League Pass 2	402	402	402	402	402
NBA League Pass 3	403	403	403	403	403
NBA League Pass 4	404	404	404	404	404
NBA League Pass 5	405	405	405	405	405
NBA League Pass 6	406	406	406	406	406
NBA League Pass 7	407	407	407	407	407
NBA League Pass 8	408	408	408	408	408
NBA League Pass 9	409	409	409	409	409
NBA League Pass 10	410	410	410	410	410
NBA TV	175	175	175	175	175
NGTV	545	545	545	545	545
NHL / MLB 1	431	431	431	431	431
NHL / MLB 2	432	432	432	432	432
NHL / MLB 3	433	433	433	433	433
NHL / MLB 4	434	434	434	434	434
NHL / MLB 5	435	435	435	435	435
NHL / MLB 6	436	436	436	436	436
NHL / MLB 7	437	437	437	437	437
NHL / MLB 8	438	438	438	438	438
NHL / MLB 9	439	439	439	439	439
NHL / MLB 10	440	440	440	440	440
NHL / MLB 11	441	441	441	441	441
NHL / MLB 12	442	442	442	442	442
NHL / MLB 13	443	443	443	443	443
NHL / MLB 14	444	444	444	444	444
NHL Network HD	468	468	468	468	468
Nick Jr	129/847/1911	129/847/1911	129/847/1911	129/847/1911	129/847/1911
Nicktoons	138/846	138/846	138/846	138/846	138/846
NTV America	523	523	523	523	523
NY1 Noticias	95/801	95/801	95/801	95/801	95/801
Outdoor Channel	not carried	not carried	not carried	not carried	not carried
Outdoor Channel HD	480	480	480	480	480
Outer Max HD	665	665	665	665	665
Palladia HD	791	791	791	791	791
PFC Internacional	513	513	513	513	513
Phoenix TV	584	584	584	584	584
Planet Green	114/834	114/834	114/834	114/834	114/834
Planet Green HD	698	698	698	698	731
Playboy	336	336	336	336	336
Playboy en Español	337	337	337	337	337
QVC	33/874	33/874	33/874	24/874	35/874
QVC HD	733	733	733	724	735
RAI Italia	554	554	554	554	554
Real	333	333	333	333	333
Reelz Channel	131	131	131	131	131
RT	135/525	135/525	135/525	135/525	135/525
RTN (RTVN)	524	524	524	524	524
RTPI	511	511	511	511	511
RTVI	521	521	521	521	521
Science Channel	111/836/1905	111/836/1905	111/836/1905	111/836/1905	111/836/1905
Science Channel HD	775	775	775	770	733
SET Asia	561	561	561	561	561
Sho 2 HD	667	667	667	667	667
Sho Extreme HD	669	669	669	669	669
ShopNBC	32/873	32/873	32/873		25/873
Showcase HD	668	668	668	668	668
Showtime Beyond	225/925	225/925	225/925	225/925	225/925
Showtime Extreme	224/924	224/924	224/924	224/924	224/924
Showtime Showcase	223/923	223/923	223/923	223/923	223/923
Showtime Too	222/922	222/922	222/922	222/922	222/922
SiTV	154/880	154/880	154/880	154/880	154/880
Smithsonian HD	795	795	795	795	795
Sorpresa	843	843	843	843	843
Speed HD	774	774	774	779	773
Spice Xcess	339	339	339	339	339
Spike TV HD	736	736	736	734	778
Sports Extra 1	197	197	197	197	197
Sports Extra 2	198	198	198	198	198
Starz Comedy HD	681	681	681	681	681
Starz Edge HD	677	677	677	677	677
Starz HD	676	676	676	676	676
Starz Kids & Family HD	678	678	678	678	678
Style HD	689	689	689	689	689
SyFy HD	717	717			
TCM HD	674	674	674	674	674
Team HD	411	411	411	411	411
TeenNick	137/883	137/883	137/883	137/883	137/883
Telemicro	810	810	810	810	810
Ten	334	334	334	334	334
Tennis Channel	455	455	455	455	455
Tennis Channel HD	465	465	465	465	465
The Africa Channel	87	87	87	87	87
The Arabic Channel	507	507	507	507	507
The Bangladesh Channel	575	575	575	575	575
The Filipino Channel	594	594	594	594	594
The Golf Channel HD	482	482	482	778	482
The Korean Channel	531	531	531	531	531
The Movie Channel Xtra	232/932	232/932	232/932	232/932	232/932
The Word Network	142/870	142/870	142/870	142/870	142/870
Thriller Max	214/914	214/914	214/914	214/914	214/914
Thriller Max HD	661	661	661	661	661
TLC HD	752	752	752	751	777
TMC HD	674	674	674	674	674
TMC Xtra HD	675	675	675	675	675
TV 1000 Russian Kino	526	526	526	526	526
TV 5	555	555	555	555	555
TV Asia	569	569	569	569	569
TV Colombia	816	816	816	816	816
TV Globo	512	512	512	512	512
TV Japan	541	541	541	541	541
TV One HD	790	790	790	790	790
TV Polonia	556	556	556	556	556
TVB1	581	581	581	581	581
TVE Internacional	802	802	802	802	802
TVE Cultural.es	828	828	828	828	828
Universal HD	734	734	734	763	734
USA HD	716	716	716	742	767
Utilisima Satelital	860	860	860	860	860
Versus	122	122	122	122	122
Versus HD	481	481	481	481	481
WE HD	759	759	759	773	755
WMAX	215/915	215/915	215/915	215/915	215/915
WMAX HD	662	662	662	662	662
Zee TV	564	564	564	564	564