



**NCTA**

NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

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April 30, 2002

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street S.W.  
Washington, D.C. 20554

**Re: Compatibility Between Cable Systems And Consumer Electronics  
Equipment PP Docket No. 00-67**

Pursuant to the Commission's Report and Order ("R&O") in the above captioned proceeding, and on behalf of the National Cable & Telecommunications Association ("NCTA"), I am submitting the third progress report called for in the R&O.

On September 15, 2000, the Commission released its Report and Order in this proceeding addressing issues regarding the compatibility between cable television systems, digital television ("DTV") receivers and other consumer electronics equipment.<sup>1</sup> In the R&O, the Commission requested that the cable and consumer electronics industries report by October 31, 2000, and every six months thereafter until October 2002, on progress in implementing the February 22, 2000 agreements between the two industries.<sup>2</sup> Those agreements dealt with the technical requirements for direct connection of DTV receivers to digital cable systems and for the provision of tuning and program scheduling information to support the navigation functions of DTV receivers. The Commission also asked for information on efforts to develop standards for an "integrated bi-directional receiver." NCTA filed our last report on October 31, 2001, and is pleased to provide the following update on our efforts in these matters.

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<sup>1</sup> In the Matter of Compatibility Between Cable Systems and Consumer Electronics Equipment, Report and Order, PP Docket No. 00-67, FCC 00-342, released September 15, 2000.

<sup>2</sup> The Commission subsequently changed the date for filing the first progress report to November 30, 2000; Erratum, PP Docket No. 00-67, released October 25, 2000.

## Bi-directional DTV Specification

In the R&O, the Commission established labels for three types of DTV receivers: (1) a unidirectional receiver capable of direct connection to a cable system; (2) a unidirectional receiver capable of direct connection to a cable system but that also includes a IEEE 1394 interface for the receipt of advanced and interactive services; and (3) an integrated bi-directional receiver capable of direct connection to a cable system and of accessing interactive services using that direct connection. However, because specifications for an integrated bi-directional DTV receiver had not yet been finalized, the Commission ordered that the docket remain open and that the cable and consumer electronics industries provide periodic reports on the development of such specifications.

As we have reported in our last two status reports, on December 31, 2000, CableLabs released the *OpenCable Terminal Device CORE Functional Requirements for Bi-directional Cable* specification, which established the functional requirements for a DTV receiver capable of direct connection to, and operation on, a bi-directional cable system. Consequently, manufacturers have a hardware specification with which to build a bi-directional DTV receiver product that will be compatible with OpenCable architecture.<sup>3</sup> Since our last report, CableLabs has incorporated the requirements contained in this, and all OpenCable Host specifications, into a single document -- the *OpenCable Host Device Core Functional Requirements*.<sup>4</sup> This new document describes all the requirements for all of the OpenCable Host devices. The public release of this document occurred on December 28, 2001.

## NCTA/CEA Agreements

On February 22, 2000, NCTA and the Consumer Electronics Association ("CEA") reached a set of voluntary agreements which will allow consumer DTV sets to be connected directly to digital cable systems to provide certain features and functions. In particular, the features and functions negotiated and agreed to by CEA and NCTA that will be provided by these types of DTV models, and spelled out in the agreements, are:

- Analog television programs that are transmitted in the clear.
- Digital television programs that are transmitted in the clear.
- Using a Point of Deployment ("POD") replaceable security module supplied by a cable TV system operator, those scrambled digital television programs that can be authorized by one-way downstream data transmission to the POD module. These include subscription television programs and pay-per-view programs that are separately ordered by telephone.

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<sup>3</sup> Although not called for by the Commission's "Digital Cable Ready 3" DTV set requirements, this specification includes a requirement for a 1394/5C digital interface. Digital interfaces will play a significant role in resolving interoperability and copy protection issues. The cable industry endorses the adoption of digital interfaces and associated copy protection in all digital television equipment.

<sup>4</sup> OC-SP-HOST-CFR-I08-020331, OpenCable™ Host Device Core Functional Requirements. It can be downloaded from <http://www.opencable.com/specifications.html>

- The carriage of data, when available, to support the navigation function in the receiver as defined in a separate "PSIP" agreement.

## 1. The Technical Agreement

The first agreement reached in February 2000 addressed network interface specifications. On November 27, 2001, the Engineering Committee of the Society of Cable Telecommunications Engineers ("SCTE") unanimously approved the *Digital Cable Network Interface Standard* which implements the technical agreement reached by NCTA and CEA on February 22, 2000. That standard defines the characteristics and normative specifications for the network interface between a cable television system and commercially-available consumer equipment that is used to access multichannel video programming. The interface is also compatible with existing set-top terminal equipment deployed by cable operators and with terminal equipment developed using the OpenCable specifications. This standard, formerly DVS/313, is now denominated SCTE 40 2001 and is available on the SCTE website ([www.scte.org](http://www.scte.org)).

At the same time, SCTE's Engineering Committee also unanimously approved two standards previously referred to by CEA as being "substantially related to implementation of the February 22 agreements"<sup>5</sup>: (1) ANSI-SCTE 28 2001 (formerly DVS/295), the Host-POD Interface Standard, which defines the characteristics and normative specifications for the interface between the POD separate security modules owned and distributed by cable operators and the consumer electronics devices ("host devices") that are used to access multichannel video programming carried on cable systems; and (2) ANSI-SCTE 41 2001 (formerly DVS/301), the POD Copy Protection Standard, which defines the characteristics and normative specifications for the system that prevents the unrestricted copying of high value content as it crosses the POD-Host interface.

ANSI-SCTE 28 2001 and ANSI-SCTE 41 2001 are based on the CableLabs' OpenCable specifications for the Host-POD Interface and Host-POD Copy Protection that had been submitted to SCTE for standardization. Beginning in October 1999, OpenCable had publicly released these and other complete specifications for interactive and non-interactive host devices that can operate on bi-directional and unidirectional cable systems, respectively.<sup>6</sup> With the release of these specifications, manufacturers were able to build first generation OpenCable-compliant digital set-top boxes and DTV sets that will work with cable-operator supplied OpenCable-compliant POD modules.<sup>7</sup>

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<sup>5</sup> See Letter from Michael Petricone, Vice President, Technology Policy, Consumer Electronics Association, to Magalie Roman Salas, Secretary, FCC, PP Docket No. 00-67, May 3, 2001, at 1.

<sup>6</sup> The OpenCable process through which these specifications were developed, reviewed, and refined has been an open and inclusive process, with participation by a broad spectrum of interests. The list encompasses a wide range of almost 500 organizations, including cable operators, traditional cable equipment manufacturers, consumer electronics manufacturers, retailers, content providers, computer manufacturers, software developers, satellite service providers, telecommunications equipment manufacturers and service providers, research institutes, and trade associations. The only requirement for participation in this process is the signing of a non-disclosure agreement.

<sup>7</sup> Consistent with FCC requirements, by July 1, 2000, Motorola and Scientific-Atlanta had built and manufactured POD modules that were delivered to cable operators. In addition, several consumer electronics manufacturers,

now in American homes.<sup>11</sup> Similar allegations were made by CEA in its November 2001 status report. Consistent with the cable industry's commitment to the February 2000 agreements, the OpenCable process, and the OpenCable specifications for an integrated DTV set in particular, cable operators have committed that they will support CableLabs-certified, integrated DTV sets built to CableLabs specifications (now embodied in the above SCTE standards) so that those DTV sets can provide services operators make available to their customers using their leased set-tops.<sup>8</sup>

In short, there are no technical barriers to a manufacturer building an "integrated DTV" model with the features described in the CEA/NCTA technical agreement. These specifications have been available to manufacturers for a significant period of time, and the SCTE standards, which were based on these OpenCable specifications, have now been adopted and approved and operators have agreed to support devices built to these specifications. In fact, a Panasonic prototype integrated DTV set with a POD interface was displayed and successfully demonstrated with a connection to the local Las Vegas cable system at the 2001 Consumer Electronics Show.

In its status reports filed in November 2001 and in May, 2002, CEA complained about the terms of a license that manufacturers must sign to gain access to patented technology in order that the functions of the POD may be implemented in retail devices, including in integrated DTV sets.<sup>9</sup> Specifically, the POD Copy Protection standard, ANSI-SCTE 41 2001, requires the use of patented Dynamic Feedback Algorithm Scrambling Technology ("DFAST") which is available to all manufacturers on a reasonable and non-discriminatory basis under license from CableLabs. The licensing agreement for the DFAST technology is known as the POD-Host Interface Licensing Agreement ("PHILA"). The Commission has previously ruled that some measure of copy protection is permitted to be included among the terms in a license for DFAST technology.<sup>10</sup>

In its May, 2001 Status Report, CEA contended -- without further explanation -- that the PHILA "would roll-back home recording rights, control market entry of new consumer electronics equipment and functionalities, compromise manufacturers' intellectual property rights, and threaten the continued interoperability of the embedded base of television equipment

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including Panasonic, Philips, and Samsung, have built devices based on the host interface specifications, and have supplied set-top boxes with such interfaces to CableLabs for OpenCable interoperability testing.

<sup>8</sup> See Letter from William Check, Vice President, Science and Technology, National Cable & Telecommunications Association, to Rick Chessen, Associate Bureau Chief, Mass Media Bureau, PP Docket No. 00-67, February 28, 2002.

<sup>9</sup> See Letters from Michael Petricone, Vice President, Technology Policy, CEA to Magalie Roman Salas, Secretary, FCC, May 3, 2001 at 2 and November 6, 2001 at 2-3.

<sup>10</sup> Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices, CS Docket No. 97-80, Further Notice of Proposed Rulemaking and Declaratory Ruling, at ¶¶29-32 (released, September 18, 2000).

equipment to ensure the cable industry is prepared to support the carriage of PSIP information, when available, in accordance with the agreement. To date, each of the implementation scenarios outlined in the PSIP agreement have been evaluated through testing now completed at CableLabs. In addition, cable operators have continued to work individually with manufacturers to analyze their specific product needs.

The most fundamental obligation of the cable operator is to ensure that if PSIP is received from an off-air broadcaster, it can be carried on the cable plant consistent with the NCTA-CEA agreement. As we have stated in previous status reports, none of the requirements or implementation scenarios stated in the PSIP agreement requires the development of additional technical specifications or standards; however, they may require upgrade or replacement of existing equipment by individual cable operators or additional product development by product vendors. Cable operators will continue to work with CableLabs and leading manufacturers of PSIP-related products to ensure the cable industry is prepared to support the carriage of PSIP information in accordance with the agreement.

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As the above report indicates, significant progress has been made and is continuing to be made in the three areas about which the Commission asked NCTA and CEA to report -- implementation of the February 2002 NCTA-CEA technical and PSIP agreements and the development of standards for an "integrated bi-directional DTV receiver." As the Commission is aware, other efforts to promote cable compatibility with consumer electronics equipment continue outside of these three areas. We intend to apprise the Commission of developments in these areas as events warrant.

Respectfully submitted,



William A. Check, Ph.D.

Vice President, Science and Technology

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