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 THE MOTION PICTURE ASSOCIATION OF AMERICA, INC., PARAMOUNT PICTURES CORPORATION, SONY PICTURES ENTERTAINMENT INC., TWENTIETH CENTURY FOX FILM CORPORATION, UNIVERSAL CITY STUDIOS, LLLP, THE WALT DISNEY COMPANY AND WARNER BROS. ENTERTAINMENT, INC.

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Motion Picture Association of America, Inc. ("MPAA") and its member companies Paramount Pictures Corporation, Sony Pictures Entertainment Inc., Twentieth Century Fox Film Corporation, Universal City Studios LLLP, The Walt Disney Company and Warner Bros. Entertainment, Inc. hereby submit these comments in response to the Commission's Third Further Notice of Proposed Rulemaking in the above-captioned proceeding.[1]

[1] *See In re Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Docket No. 97-80, PP Docket No. 00-67, Third Further Notice of Proposed Rulemaking (rel. June 29, 2007) (the "*Third Notice*").

Introduction and Summary

As the Commission has recognized, MPAA and its member companies share with other content providers a critical interest in this proceeding.[2] MPAA's members create and distribute some of the most compelling and high quality audiovisual content available via multichannel video programming distribution platforms ("MVPDs") – content that must remain available to consumers to facilitate a successful transition to digital television. As the Commission is well aware, ensuring the delivery of high quality content is absolutely essential to spurring consumer acceptance of the transition from analog to digital devices.

To ensure that consumers who use bidirectional digital cable products continue to have access to existing and future high value content, that content must be protected at least as well as it is on competing platforms. Content owners simply cannot afford to make their valuable content available to consumers in formats that cannot ensure that the content is protected against misuse.

The advent of new business models could enable consumers to enjoy premium programming in innovative ways, such as obtaining access to recently-released motion pictures and other video programming in high quality formats and with added interactive convenience. Bidirectional navigational devices, in particular, hold the promise of granting consumers easier access to a rich array of advanced features, such as electronic program guides, video-on-demand, interactive pay-per-view programming and other interactive services. Consumer-friendly, cutting-edge business models will continue to develop, however, only if high value content is adequately protected from unauthorized copying and redistribution.

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[2] *See id.* at ¶¶ 9, 11.

In the *Third Notice*, the Commission calls for comment on the separate proposals submitted by the cable and consumer electronics ("CE") industries with respect to spurring the rollout of bidirectional digital devices.[3] The FCC expresses its concern that the lack of agreement on appropriate standards for bidirectional cable-ready devices "is deterring consumers from purchasing digital televisions, which are an essential part of an effective digital transition."[4] The Commission specifically asks for comment on how the two proposals would impact content providers.[5]

These comments provide the perspective of content owners and providers, who hold a keen interest in maintaining an appropriate balance between securing creative content and enabling the rapid and effective rollout of new digital consumer equipment, especially bidirectional navigation devices. MPAA urges the Commission to remain cognizant of the need to provide content creators with sufficient protection. No matter what types of devices may be deployed in the digital future, they must protect the ability of consumers to access high value content by providing for the legitimate needs of the content community to prevent misuse of its property.

In particular, a government mandate by the FCC would cut short the ability of content owners, MVPDs and the CE industry to negotiate market-based consensus solutions to securing high value programming. The cable and CE industries should have the opportunity

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[3] *See id.* (*citing* Proposal for Bi-Directional Digital Cable Compatibility and Related Issues, Consumer Electronics Association, CS Docket No. 97-80, dated November 7, 2006 (the "CE Proposal") *and* Report of the National Cable & Telecommunications Association on Two-Way (Interactive) Digital Cable Ready Televisions, dated November 30, 2005 (the "NCTA Proposal")).

[4] *See Third Notice*, at ¶ 7.

[5] *See id.* at ¶¶ 9, 11.

to reach an agreement with input from content providers. The FCC should, as part of this proceeding, ensure that industry parties have the flexibility to enter into marketplace agreements, such as launching new services with high value content that would not otherwise be available to MVPD customers without the use of selectable output control or image constraint tools. Likewise, the Commission should refrain from inhibiting the development of expanded content usage models that broaden consumer choice, or system renewability messaging to enable protection systems to heal in the event of attack. Finally, in order to ensure that consumers can access the most compelling content, MPAA supports CableLabs continuing in its role overseeing the approval process for digital outputs and security technologies, as well as CableLabs – or an independent and objective third party – serving as the testing organization for the certification of new digital equipment.

I. MULTI-INDUSTRY AGREEMENTS, RATHER THAN GOVERNMENT MANDATES, OFFER THE BEST APPROACH TO ENSURING THE AVAILABILITY OF BIDIRECTIONAL NAVIGATION DEVICES WHILE ENCOURAGING ACCESS TO HIGH VALUE CONTENT

In order to ensure an orderly digital television transition, MVPD equipment, including bidirectional navigation devices, must continue to account for content creators' reasonable concerns regarding content protection, presentation and interactivity. High value copyrighted content must not be exposed to unauthorized copying or redistribution. MPAA has a long history of working collaboratively with the cable, consumer electronics and other industries to set market-driven standards to facilitate interoperability among consumer electronic devices while protecting the rights of content owners. MPAA remains hopeful that continued negotiations will lead all interested stakeholders to reach an agreement that

facilitates the wide adoption of bidirectional MVPD equipment by the fourth quarter of 2008, consistent with the FCC's goals.[6]

MPAA firmly believes that the marketplace – without government intervention – can ensure that bidirectional digital equipment is available to consumers while also best accounting for the needs and interests of consumers and the various industry parties. Although MPAA has in the past questioned the Commission's jurisdiction to impose government regulations in this area, the FCC concluded in 2003 that it had the authority to mandate the use of encoding rules for content delivered to unidirectional cable devices and that such encoding rules were necessary and appropriate.[7] MPAA continues to disagree with the FCC's previous decision and strongly urges the Commission not to extend that decision further by imposing unnecessary and inappropriate encoding rules for the delivery of content to bidirectional digital devices.[8]

Government-imposed encoding rules, such as those set forth in Subpart W of the Commission's cable television rules (Section 76.1901 *et seq.*), unnecessarily restrict innovation and hamper the development of market-based solutions to constantly evolving

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6 *See id.* at ¶ 14 ("we would like consumers to be able to purchase two-way digital cable ready devices at retail by Q4 2008, in time for the final holiday season before the February 17, 2009 over-the-air digital television transition").

7 *See In re Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Docket No. 97-80, PP Docket No. 00-67, Second Report and Order and Second Further Notice of Proposed Rulemaking, FCC 03-225 (rel. October 9, 2003) (the "*Second Order*") (encoding rules known as "Subpart W" set forth in Appendix B); *see also* 47 C.F.R. § 76.1901, *et seq.*

8 MPAA continues to believe that the Commission lacks jurisdiction to adopt encoding rules. Among other things, encoding rules "jeopardize security of [MVPD] programming . . . [and] impede the legal rights of a provider of [MVPD] services to prevent theft of service" – in direct contravention of Section 549 of the Communications Act of 1934. *See* 47 U.S.C. § 549(b).

business needs and technological challenges. The Subpart W rules subject the development of new business models to potentially burdensome regulatory approval and review processes. Consumers and industry parties alike would benefit far more from compromises and agreements born of marketplace negotiations. Decisions on whether, for example, to employ selectable output controls, or technical limitations on copying and redistribution, should be left to commercial negotiations, which are far more capable of calibrating consumer demands and interests. Otherwise, the FCC could inadvertently hobble the growth of the emerging digital market and impede the MVPD, CE and content industries' ability to react swiftly to consumer demand.

Consumers clearly would benefit from a content distribution model that, relying upon bidirectional digital MVPD devices, enables a home viewer to "rent" high quality content directly from an MVPD. Consumers could access movies and other content from the comfort of their homes, with the content stored for a limited period of time on a digital video recorder ("DVR") embedded in a bidirectional device. Similarly, bidirectional devices with proper security features could allow consumers to redistribute content within a home (so that viewers could watch content on any screen) or to a remote location (such as a vacation home). And, as noted above, a two-way receiver that appropriately protects content could permit a viewer to watch a newly-released motion picture and other premium video programming in high quality and with added interactive convenience.

As the Commission is well aware, the Subpart W rules are largely based on encoding rules in the Digital Transmission Content Protection ("DTCP" or "5C") license, which established baseline rules to ensure minimum functionality for devices that would implement the 5C content protection technology. The 5C rules never were intended to lock either

content providers or CE manufacturers into a one-size-fits all regime for distributing content. Rather, participants and adopters of 5C always expected that, to the extent that more sophisticated tools for content management developed to permit new consumer offerings to flourish (*e.g.*, the redistribution control trigger discussed in Section II.B.1, *infra*), those tools would be permissible as long as they did not impinge on or roll back the basic functionalities expressed in the rules. Simply put, the 5C encoding rules were intended to be a starting point, not rigid constraints on the development of new business models.

Thus, the Commission should make clear that the existing Subpart W encoding rules do not apply to controlled content that passes through bidirectional digital MVPD devices. Further, the Commission should refrain from enacting any new regulations that would prohibit or discourage new and innovative models of content distribution.

II. CONSUMERS WILL ONLY REAP THE FULL BENEFITS OF TWO-WAY INTERACTIVE DIGITAL DEVICES IF COPYRIGHTED PROGRAMMING IS SUFFICIENTLY SECURED

While MPAA much prefers a market-based solution, it recognizes that marketplace negotiations may prove to be incapable of generating an industry consensus in a timely manner, and the FCC may find it necessary to intervene. If the Commission feels compelled to act, it should take into consideration the concerns that MPAA and its members have in protecting the security of high value copyrighted content. In particular, the FCC should modify the Subpart W encoding rules to allow for the capabilities set forth in these Comments. In addition, the Commission should take care not to promulgate regulations that preclude the implementation of compromises that may be reached through marketplace negotiations.

A. Selectable Output Control Capability Should Be Supported in All Bidirectional Devices and Should Be Permissible for Use in Them

As part of the *Second Order* relating to unidirectional digital cable ready devices, the Commission adopted rules restricting MVPDs from using selectable output control ("SOC") technology when data or information is associated with commercial audiovisual content.[9] Thus, content providers and MVPDs are unable to ensure that audiovisual content is transmitted over secure outputs, a fact which has necessarily inhibited content providers from making certain types of high-value content available through MVPD platforms. In the *Second Order*, however, the Commission recognized that "selectable output control functionality might have future applications that could potentially be advantageous to consumers, such as facilitating new business models, and [we] will consider waivers, petitions or other proposals to use selectable output control in this regard."[10] The FCC, moreover, permitted the inclusion in devices of the "*capability* to exercise selectable output control," and only adopted rules governing the current *use* of such capability by MVPDs when data or information is attached or otherwise associated with the audiovisual content.[11]

In the four years since the Commission issued the *Second Order*, there has been no legislative solution to fix the problem of the so-called "analog hole" (*i.e.*, the redigitization of protected digital signals that pass through analog outputs in a manner such that any copy restrictions and redistribution controls that were present in the original digital signal are not carried forth and honored in the resulting digital signal), and no new content protection

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9 *See* 47 C.F.R. § 76.1903. MPAA believes that the most reasonable interpretation of the Commission's rationale for limiting MVPDs' use of SOC is that the prohibition extends only to use of SOC on a program-by-program basis.

10 *Second Order*, at ¶ 61.

11 *Id.* (emphasis in original).

technology has emerged to adequately protect high definition analog outputs. During the same period of time, high definition services have begun to proliferate, as Congress and the FCC intended, from HD sports channels to HD video-on-demand services. Lamentably, in the absence of adequate protection on the analog outputs (including HD analog outputs) of consumer devices, content providers are faced with a Hobson's choice: release high value content such as movies, new HD services or program premieres to insecure analog outputs, through which unauthorized redigitization, distribution and copying can take place (thereby undermining the value to MVPDs of such content as licensed to them); or limit the nature of the content and services made available to MVPDs, thereby diminishing the full potential of bidirectional digital receivers.

MPAA believes that in light of the increased adaptability available in bidirectional devices, the Commission should adopt a more flexible approach and allow for the capability to remotely deselect particular output connections and permit MVPDs to activate its use, as described herein. The Commission should: (i) support SOC capability in all bidirectional digital receivers; and (ii) allow for the use of SOC functionality for all content that passes through bidirectional devices.

As noted above, bidirectional devices hold the promise of offering consumers a wide array of new opportunities to receive and use high quality content throughout their homes. Content creators and MVPDs should be permitted to agree on circumstances in which SOC functionality would enhance consumers' experience by, for example, providing a sufficient level of security to enable more high value content to be available through two-way devices.

Both the cable and CE industries have recognized the need for SOC in bidirectional digital receivers. The National Cable & Telecommunications Association has indicated that

a supplier of "high-value theatrical motion picture content" may require a cable operator to "route the content through only the most secure [output] ports that offer the highest protection against unauthorized copying or redistribution over the Internet."[12] CableLabs, moreover, has included SOC enablement in the Host 2.0 specifications (the hardware specification associated with the OpenCable Application Platform ("OpenCable")) and has implemented SOC through OpenCable.[13] Thus, the cable industry already has proposed that all bidirectional devices implement SOC via OpenCable. Likewise, the CE industry has acknowledged that SOC implementation in bidirectional plug and play devices would be advisable.[14]

If marketplace negotiations reflect that key industry stakeholders are now comfortable incorporating SOC functionality into bidirectional digital receivers, there is no reason for the Commission to continue to have any reservations about that functionality.

B. Flexible Approaches to Expanded Content Protection and Usage Rights Would Provide More Choices to Consumers

As discussed above, MPAA and its member companies have worked extensively with the CE and cable industries to establish market-driven standards to ensure that the content restrictions and usage rights granted by content owners are respected when consumer electronics devices are used to receive MVPD services. Market-driven forces have guided, and will continue to dictate, when content restrictions and usage rights are implemented by different MVPD services, including cable television. Indeed, given that such usage rights

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12 NCTA Proposal, at 13, note 28.

13 *See id.* at 13.

14 *See* Joint Status Report of the Consumer Electronics Association and the National Cable & Telecommunications Association, CS Docket No. 97-80, dated November 30, 2005 (the "Joint Status Report"), at 2.

already are being adopted in the marketplace, government regulations are entirely unnecessary. If consumers are to realize the full potential of bidirectional digital devices, the Commission should refrain from adopting regulations that would interfere with marketplace developments, including an expansion of the range of controls governing consumer use of content.

1. Implementation of Redistribution Control

Present FCC regulations for content delivered to unidirectional devices rely on a rudimentary set of restrictions that govern consumers' rights to use programming received from MVPDs based solely on whether a particular program can be copied.[15] Currently, content creators can tag a particular program with a signal as either "Copy Never" or "Copy One Generation/Copy Once."[16] Alternatively, programming can be marked as "Copy Control Not Asserted," which would enable copying to occur without limitation. These criteria, however, address consumers' content usage rights only with respect to whether particular content can be copied (*i.e.*, to a VHS cassette or DVD, or to a DVR), and the number of copies that can be made. Copy restrictions alone are far too imprecise to effectively account for the variety of security concerns that currently confront content creators, including, for example, the threat of redistribution of content over the Internet. Yet because they are the only tools currently available, content suppliers find it extremely difficult to protect their content solely from unauthorized redistribution.

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15 *See* 47 C.F.R. § 76.1901, *et seq.*

16 Content that has been tagged as "Copy One Generation/Copy Once" will be re-tagged "Copy No More" to prevent additional copies from being made after the first, permissible copy is made.

Copy restrictions are signaled by embedding two bits (the Copy Control Information, or CCI) in content. When content that has been tagged with "Copy Never" or "Copy One Generation/Copy Once" CCI is sent across the CableCARD to Host Interface, the content is scrambled by the CableCARD, and the host device then implements the applicable level of protection. Once applied, these two types of copy restrictions also serve to preclude unauthorized redistribution of content over the Internet. Content that is tagged with "Copy Control Not Asserted," however, is not scrambled by the CableCARD and is not protected from that point. Thus, content owners have no tools to protect their content solely from unauthorized redistribution.

In the modern media marketplace, consumers desire to exercise more control over how they utilize content; copying to physical media or a single device is no longer the consumer's only focus. As long as content creators can ensure adequate protection of their programming, they want to provide consumers with additional flexibility, such as providing "rental" or home networking rights or the ability for consumers to move content to a portable device while retaining the original on a personal video recorder. Perpetuation of a regime based only on copy restrictions entrenches MVPDs in the rapidly-fading past just as consumers seek to capitalize on the benefits provided by modern distribution technologies. Moreover, a use-restriction that focuses solely on copying would lead to legal uncertainty for the cable industry if it were to attempt to implement permissions that have not been explicitly authorized by content providers.

The market-driven solution to this problem is to expand permissible content restrictions and usage rights signaling beyond copy controls. At the very least, signaling should be expanded by including a third bit, which would enable content to be marked to

preclude unauthorized redistribution. As technical capabilities improve for consumer electronics equipment and home networks, a more sophisticated means of employing usage rules can be utilized to foster new business models that will increase consumers' choices and access to high value content. A third bit would act as a signal to indicate that content should be controlled (*e.g.*, prevented from being retransmitted over the Internet) even if the content otherwise was marked "Copy Control Not Asserted" under the copy restriction signaling. Flexible signaling using a third bit is already specified in several existing industry standards: both DCAS (Downloadable Conditional Access System) and OCUR-DRI (OpenCable Unidirectional Receiver-Digital Receiver Interface) include provisions for redistribution control signaling.[17]

Content marked with a redistribution control bit would be afforded the same protection from unauthorized redistribution as content subject to copy control signaling. While content marked with a redistribution control bit would still be allowed to be distributed throughout a home via secure home networking, such content would not be remotely accessible in an unrestricted manner.[18] MPAA understands that CableLabs is proposing to include a redistribution control bit as part of its CHILA and DFAST licenses in its August

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[17] DCAS has defined the third bit as a Redistribution Control Trigger ("RCT"), while OCUR-DRI defines the same bit by its reciprocal state as Encryption Not Required ("ENR").

[18] A redistribution control bit could also be combined with additional functions enabled by OpenCable, which is capable of recognizing alternative restrictions. This could lead to a more nuanced approach to rights management that will enable more consumer choice – and higher adoption rates for new services. For example, usage rule tags might indicate one or more of the following expansions of rights beyond simply "no remote access": (i) enabling remote access within a so-called personal domain (*i.e.*, devices owned by the same user or family); (ii) enabling remote access within a personal domain after a certain period of time; or (iii) enabling remote viewing while restricting remote copying.

23, 2007 revisions of those agreements. If the next versions of the CableLabs licenses do not include a redistribution control bit, then MPAA would encourage the Commission to mandate the use of this more precise tool that will both enable content to be adequately protected and permit consumers to utilize more flexibly the programming they value. At a minimum, signaling between a CableCARD and Host Interface should include this redistribution control bit that triggers more precise usage permissions and constraints. In any event, the Commission should refrain from taking any action that would impede CableLabs' ability to implement this mechanism.

2. Potential Additional Expanded Usage Rights

If the Commission decides that it must take action in view of the impending digital transition, its regulations should require navigation devices to include an additional bit that could signal a bidirectional digital device to look elsewhere for alternative sources of expanded usage rights signaling (for instance, a bit could be used to alert a device to use an application running on OpenCable middleware to identify and exercise expanded usage options).

There are currently two industry standards applicable to cable systems that can serve to expand the usage rights information beyond simply the copy control information described above. The open-membership Society for Motion Picture and Television Engineers ("SMPTE") is in the process of defining an Extended Copy Control Information ("ExCCI") specification. The scope of this document is usage rights signaling for conveyance from a content provider to a broadcaster. The second standard already has been published by the Digital Video Broadcasting ("DVB") consortium as Blue Book A094, revision 1. This standard, known as Content Protection and Copy Management ("CPCM"), was developed over a period of seven years by a broad cross-industry team that worked according to DVB's

consensus-driven process. CPCM manages content once received into the home and enables secure home networking and even personal remote access initiated from beyond one's home for connection to devices within one's home.

Though they were developed by two different groups for distinct purposes, the ExCCI draft specification and the DVB CPCM standard speak with a unified voice regarding the types of content protection usage rights signaling that are needed for products such as bidirectional digital navigation devices. Each of the standards is an example of work that has been undertaken to provide for additional usage signaling options, and together they demonstrate that the marketplace is moving toward more flexible approaches to content usage rights. Again, MPAA is not advocating that the FCC endorse any specific signaling regime. MPAA merely requests that, in the event the Commission takes any action in this area, it require bidirectional navigation devices to include an additional bit to direct the device to look for expanded sources of usage rights signaling.

3. Usage Rights Signaling on Analog Outputs

Furthermore, if the FCC decides affirmatively to promulgate regulations regarding usage rights, MPAA respectfully requests that the Commission mandate usage rights signaling in the vertical blanking interval ("VBI") of all analog outputs of bidirectional digital receivers. Analog outputs are typically used to connect bidirectional digital receivers to legacy display devices, such as an analog-only television. These signals do not impact the performance of such analog-only display interfaces and are widely used today. The signals are important because they indicate the copy control and redistribution control status of the content passed through such analog outputs. If an analog signal is subsequently captured into a digital device through an analog-to-digital conversion process, then the usage rights signals can and should be observed and honored. Inclusion of signaling in the VBI would be a

positive step toward plugging the analog hole and preventing the unauthorized use of digital content.

Industry standards have been defined for signaling in analog-to-digital conversion situations, and they are presently in use by a wide variety of consumer products, including MVPD products.[19] These signals are easy and inexpensive to generate, as evidenced by their inclusion in all DVD players, HD-DVD players and Blu-ray Disc DVD players. Additionally, many MVPD receivers already generate these signals. These signals are used by a variety of devices that use analog signals as inputs while honoring copyright rather than exploiting the analog hole. Various digital content protection systems, including the OCUR-DRI specification for cable and the DVD+RW recorder license, require that such signals be recognized. To ensure that content remains protected after passing through analog connections, a bidirectional MVPD receiver must necessarily include the ability to effectuate these signaling obligations.

C. System Renewability Mechanisms Should Be Available to Allow Content Protection Systems to Heal After Suffering Inevitable Attacks

Digital content protection systems, in order to ensure long-term effectiveness, typically implement mechanisms to renew their security in response to inevitable attacks and

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[19] Specifically, the CCI, APS and RCT signaling of any received cable content must be mapped to the respective CGMS-A, APS and RCD/RCI signals specified in the most current versions of the following standards for their respective output types:

- CEA-608-D for inclusion on Line 284 of 525i outputs
- IEC-61880 for inclusion on Line 20/284 of 525i outputs
- CEA-805-C for inclusion on Lines 40 and 41 of 525p outputs
- CEA-805-C for inclusion on Lines 23 and 24 of 720p outputs
- CEA-805-C for inclusion on Lines 18/581 and 19/582 of 1080i outputs

There are marking standards available for 625i and 625p standards that should be referenced in any regulation if such outputs were to be allowed on digital cable receivers. These outputs are not typically used in the United States.

periodic breaches. There are two common "renewal" methods that are often used in tandem: (i) "revocation" of the ability of a compromised device to participate in trusted activities with other devices through the delivery and processing of system renewability messages ("SRM"); and (ii) "update" of a compromised device through software so that it again may be trusted. Digital MVPD systems and retail navigation devices must support both of these methods to be effective. MPAA understands that CableLabs plans to incorporate SRM mechanisms in both its CHILA and DFAST license agreements. The Commission should take no action that would preclude implementation of these important renewability methods.[20]

1. Revocation Using SRMs

Most digital output protection technologies implement revocation by delivering SRMs (otherwise known as Certificate Revocation Lists ("CRLs")) to devices that use such protection technology. Devices use "certificates" to confirm that they are trustworthy participants in a content protection system. The SRMs convey a list of certificates of compromised devices. Devices with revoked certificates are denied the ability to participate with other devices in activities that require trust (*i.e.*, sharing or receiving protected content).

In their November 30, 2005 joint status report filed with the Commission, the cable and CE industries agreed that there is a need for a multi-industry means for sending revocation messages to compromised devices.[21] The technical requirements to implement

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[20] In addition, the CE Proposal indicates that, to the extent that the Commission considers endorsing a downloadable security solution as part of this proceeding, it should be implemented through a non-proprietary hardware requirement. *See* CE Proposal, at 6, note 11. MPAA filed comments on the importance of a robust downloadable security implementation on February 6, 2006, and it respectfully requests that the Commission review those comments as part of its consideration of this issue. *See* Comments of MPAA, CS Docket No. 97-80 (filed February 6, 2006).

[21] *See* Joint Status Report, at 2.

the SRM mechanism already have been established by CableLabs in a number of its licenses. MPAA is pleased that CableLabs now has committed to include an SRM carriage specification in its CHILA and DFAST licenses and to rely upon the industry standard published by the Advanced Television Systems Committee ("ATSC") in January 2007. This ATSC Standard A/98: System Renewability Message Transport is designed to support SRMs from a variety of content protection technologies and may be easily adapted or used "as is" by MVPDs to deliver SRMs for various content protection technologies to bidirectional digital receiver devices that use those technologies. The bidirectional receivers must (i) use SRMs for the content protection technologies that they employ; and (ii) be required to pass-through all SRMs to digital outputs that may, in turn, link to other content protection technologies further along in the chain of networked devices.

Given the importance of system renewability in digital outputs for bidirectional digital receivers and the work already completed to implement SRMs, MPAA strongly urges the Commission to avoid taking any action that would preclude the use of the ATSC A/98 standard, or variations thereof, to enable delivery of SRMs to the content protection systems that are used by existing and future approved digital outputs of bidirectional receivers. In the event that the Commission adopts regulations, it should ensure that an end-to-end obligation to send, receive, process and pass-through SRMs is included in bidirectional digital receivers.

2. Software Update for Content Protection System Renewal

The Commission should also allow for sufficient software update capability on all bidirectional digital receivers so that such receivers can upgrade via software to the extent allowed by their architectures – a capability that both the cable and CE industries agree is important. This capability provides a significant tool to enable software renewal of content protection systems – and serves as an important complement to the revocation regime

described above. MPAA states no preference as to the outcome of the cable and CE communities' discussions relating to how such capacity ultimately is provided (though MPAA notes that this capability is enabled for digital terrestrial receivers by the ATSC Standard A/97: Software Download Data Service, published in November 2004). MPAA's concern is simply that capacity be made available by some means to ensure that bidirectional devices can be updated via software when necessary.

D. Content Owners Must Have a Meaningful Voice in Approval of Content Protection Systems

1. The CableLabs Approval Process Presents a Fair and Workable Approach

CEA has suggested that the Commission direct CableLabs to approve all output technologies that the Digital Living Network Alliance ("DLNA") approves and to require cable providers to supply digital set-top boxes that are fully compatible with DLNA networks.[22] The DLNA, however, fails to provide content owners with a meaningful opportunity to participate and offer input in discussions about appropriate content protection and presentation systems. While DLNA currently has about 300 members, including MPAA, neither MPAA nor any of its member companies has the right to vote on DLNA decisions, such as those that impact the use or movement of copyrighted content licensed to cable operators.

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[22] *See* CE Proposal, at 8. DLNA is a multi-industry, international organization consisting of eight founding members with voting rights that constitute the Board (though any two members can reject a decision agreed to by the other six members). Its purpose is to facilitate audio-visual home networking by identifying an interoperability framework of design guidelines based on open industry standards. The Board members of DLNA are: Hewlett-Packard Company, Intel Corporation, Matsushita Electric Industrial, Microsoft Corporation, Nokia, Philips Electronics, Samsung Electronics Corporation, and Sony Electronics Corporation.

If the digital outputs in bidirectional devices are to be protected in a manner necessary to enable consumers to access all of the benefits available from new business models, content providers must have a meaningful role in the process of developing and approving all systems that impact content protection, presentation and interactivity. Otherwise, content providers cannot be assured that their content will be adequately protected on devices and networks using such outputs. And without adequate protection, content providers are less likely to make available high value content. DLNA simply does not provide content owners with a fair opportunity to participate in such decisions and thus should not be considered as an appropriate forum for approving digital outputs in two-way devices.

In contrast to DLNA, the CableLabs approval process for digital outputs and secure recording technologies has provided both content providers and technology proponents with the chance to play a substantive role in the approval process. CableLabs therefore should oversee any standard approval process endorsed by the Commission for bidirectional equipment, and the FCC should not mandate the approval or use of any other content protection technologies or interfaces.

2. Content Protection Technologies and Outputs Should Include a Four Studio Approval Process

MPAA proposes, moreover, that any approval process adopted for new content protection technologies for bidirectional digital receivers be augmented with a four studio approval option, similar to the process established for unidirectional devices in the DFAST

license.[23] The addition of the four studio approval process would provide content providers with an additional means of participating in the approval of content protection technologies and outputs.

3. Content Providers Must Have Appeal Rights

In addition to the four studio approval mechanism, content providers also should continue to have the right to appeal an initial decision by CableLabs to the Commission, regardless of whether CableLabs' decision is an approval or disapproval of any content protection technology or output, all as set forth more fully in the *Second Order*.[24]

E. Comprehensive, Formal Device Testing Is Good for the Industry and for Consumers

MPAA supports comprehensive, formal testing and certification procedures to ensure that, before coming to market, all new bidirectional devices can demonstrate interoperability with other CE equipment and implement appropriate content protection obligations. MPAA has no objection to both of these types of testing being conducted at the same testing facility. As has been observed in the context of other content protection technologies, however, self-

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[23] For example, Section 2.4.4 of the DFAST License states: "Notwithstanding the [CableLabs' approval process], in the event that CableLabs is advised that four (4) member studios of the Motion Picture Association approve a digital output or content protection technology that provides effective protection to controlled content against unauthorized interception, retransmission or copying, such output or content protection technology shall be deemed approved by CableLabs pursuant to this Section 2.4.4 . . . ."

[24] *See Second Order*, at ¶ 79 ("To ensure that innovation is not impeded while this *Second FNPRM* is pending before the Commission, we are adopting an interim policy by which CableLabs may make initial determinations regarding the use of new output or content protection technologies, subject to Commission review when disputes arise. Any interested party, including but not limited to consumer electronics manufacturers, content providers, information technology companies or consumers, may appeal an initial decision by CableLabs to the Commission.")

testing – as advocated by the CE industry – could lead to a lack of proper implementation and confusion in the marketplace.

The recent rollout of High Definition Multimedia Interface ("HDMI") with High-bandwidth Digital Content Protection ("HDCP") provides a significant example of the importance of third-party testing. The initial testing for HDCP-protected HDMI was conducted by the equipment manufacturers themselves. When those self-tests failed to result in sufficient CE device compatibility, the Consumer Electronics Association started hosting "plugfests" to provide CE manufacturers with an opportunity to voluntarily bring their products to perform ad-hoc testing with products of other CE manufacturers. Although "plugfests" certainly resulted in an improvement of device compatibility among the participants, it was not until mandatory formal testing was implemented by the licensor of HDMI that there was significant improvement in general compatibility of devices from all manufacturers. The HDCP/HDMI example provides a valuable lesson: self-testing is insufficiently rigorous either to ensure uniformity and compatibility of devices manufactured by different equipment makers or to inspire confidence within the creative community that content protections will be effectively implemented.

MPAA supports CableLabs as the primary test organizer and performer, and further supports the ability of third party independent laboratories to become certified by CableLabs (using objective criteria) to perform the same test suites. It is possible that some third party laboratories may perform only subsets of the total test suites, in which case the product would need to be tested by multiple facilities to complete the overall testing obligation.

F. ICT Enablement on HD Analog Outputs

MPAA remains interested in ensuring that high definition content is protected in legacy devices that rely on analog connections. MPAA believes that use of the Image

Constraint Trigger ("ICT"), which permits the down resolution of content on unprotected outputs, represents an important tool that addresses this issue. Using the ICT, content passed through analog outputs would be of lesser resolution, and content providers would be less concerned if the content were captured by pirates or others engaged in unauthorized redistribution and copying. Although the Commission has prohibited the use of an ICT for broadcast content,[25] CableLabs has incorporated the ICT functionality into its copy control technology to allow for image constraint of high definition analog content in the DFAST, CHILA and DCAS licenses. Thus, ICT functionality will be included in the ordinary course in all unidirectional and bidirectional digital receiver devices in accordance with the CableLabs' licenses, and the Commission should amend its rules to permit these devices to implement the use of ICT.

ICT technology will provide content creators with an important tool to protect high definition programming received by legacy devices with analog connectors. It provides an additional option to protect high value programming while still allowing access to such programming by consumers with legacy devices.

Accordingly, the Commission should not institute any regulation that would preclude the use of the ICT in CableLabs' licenses, and should repeal the prohibition on the use of ICT to the extent necessary to allow all devices to implement the technology.

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[25] *See* 47 C.F.R. § 76.1904(a).

G. OpenCable Platform Addresses Many Content Providers' Concerns

Given that the CE industry has not yet provided a detailed explanation of content protection features offered by its proposed system, MPAA cannot comment on its efficacy. MPAA notes, however, that the OpenCable Platform satisfies many content provider concerns by providing bidirectional devices with an industry-wide software platform that includes modern tools of interactive content delivery, presentation and protection, all of which can be exercised through marketplace negotiations, subject to any rules that the FCC may promulgate.

Further, the OpenCable Platform provides studios with a meaningful role in the approval of new outputs and content protection technologies, and it utilizes comprehensive testing that helps protect consumers. As presently formulated, the OpenCable Platform is dynamic, allowing industry parties to pursue innovative business models and specifications in a rapidly evolving marketplace.

III. CONCLUSION

Effective implementation of content protection technologies is essential to ensure that bidirectional MVPD devices are capable of offering consumers the benefits they seek while protecting the creative community's legitimate concerns. MPAA and its members will continue to work in good faith with the cable and CE industries to ensure that content is appropriately protected from unauthorized copying and redistribution. Only if content is adequately secured will consumers reap the full benefits of the digital transition, including the innovative business models that will enable viewers to use and interact with content in exciting new ways.

MPAA firmly believes that multi-industry negotiations are best-suited to achieving an agreement between all interested parties that will spur the rollout of bidirectional navigation devices by the end of 2008. If the FCC finds it necessary to intervene to facilitate the digital television transition, however, MPAA urges the Commission to take into account content owners' concerns and refrain from taking actions that would preclude the implementation of marketplace agreements for content protection.

Respectfully submitted,

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