

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In re

Digital Broadcast Copy Protection

MB Docket No. 02-230

**PETITION FOR RECONSIDERATION OR CLARIFICATION OF
THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

The National Cable & Telecommunications Association (“NCTA”) hereby submits its Petition for Reconsideration or Clarification of the Federal Communications Commission’s digital broadcast copy protection rules, adopted in the above captioned proceeding.

NCTA is the principal trade association of the cable television industry, representing operators serving more than 90 percent of the nation’s cable customers. These companies also provide high-speed access to the Internet and other services. NCTA’s members also include more than 200 cable program networks as well as companies that provide equipment and services to the industry. NCTA is pleased that, in adopting rules to implement a “broadcast flag,” the Commission has sought to preserve flexibility in means for implementing the broadcast flag as well as paths for rapid innovation, as urged by NCTA and others in comments in this proceeding. Nevertheless, there are four areas in which the Commission’s rules—or misinterpretations of those rules—may result in inadvertent departures from this overarching goal.

I. THE COMMISSION SHOULD REMOVE THE RULE'S INADVERTENT FREEZE ON NETWORK INNOVATION

As published, Rule 76.1909(c) provides that when an MVPD retransmits Unencrypted Digital Terrestrial Broadcast Content in unencrypted form—which is how almost every cable system transmits over-the-air broadcast signals—the MVPD must “use 8-VSB, 16-VSB, 64-QAM, or 256-QAM signal modulation” on its network. Under the new rule, a system cannot use 1024 QAM, or any other form of signal modulation that may be more effective or have other benefits to consumers or to the MVPD. If an operator wished to use a more effective signal modulation approach, it would be required to pursue a rulemaking or, if available, a waiver.

This requirement is in addition to the independent requirement that the MVPD’s network “preserve the Broadcast Flag, if present, in both the EIT and PMT.” The rule seems to place a straitjacket on network innovation by limiting the ability of the MVPD to change signal modulation techniques without a rule change or waiver if they carry any unencrypted over-the-air broadcast signals. Such a rule is entirely unnecessary to preserving the flag, because Section 76.1909(c)(1) of the rules requires the MVPD to preserve the flag.

Accordingly, NCTA respectfully requests that the rules should be amended as follows:

76.1909 *** (c) Unencrypted Retransmission. Where a multichannel video programming distributor retransmits Unencrypted Digital Terrestrial Broadcast Content in unencrypted form, such distributor shall, upon demodulation:

- (1) preserve the Broadcast Flag, if present, in both the EIT and PMT; and
- (2) use 8-VSB, 16-VSB, 64-QAM, or 256-QAM signal modulation, or successor modulation schemes for the retransmission.

§73.9000 Definitions *** (g) “Demodulator” means a component, or set of components, that is designed to perform the function of 8-VSB, 16-VSB, 64-QAM or 256-QAM demodulation or successor modulation schemes and thereby produce a data stream for the purpose of digital television reception.

II. THE RULES SHOULD APPLY TO DBS QPSK DEMODULATORS AS THEY DO TO CABLE SET-TOP BOXES

The rules treat cable networks and DBS networks in quite different ways.

Because the definition of “Modulators” subject to the Compliance and Robustness Requirements include QAM demodulators (used by cable) but exclude QPSK and 8-PSK demodulators (used by DBS), retail and leased cable set-top boxes are “Covered Demodulator Products,” but DBS boxes are not. “Covered Demodulator Products” are required to adhere to the output, recording, robustness, and other rules prescribed by the rules. Because of this distinction, the rules do not impose the same output, recording, robustness and similar requirements on manufacturers of retail DBS boxes, their retailers, or the customers who purchase them. As a result, the broadcast flag rules impose more burdens on cable operators than they do on their chief competitors, DBS providers, since there are far fewer requirements on those in the supply chain for DBS boxes than for cable set-top boxes.

There is no sound reason for this distinction.¹ Cable and DBS devices are competitive in the MVPD market. The enforcement mechanisms to assure that the broadcast flag rules are implemented properly are likely to be the same—testing each

¹ Some might argue that, because DBS operators are subject to a direct obligation under Rule 76.1909(b)(2) to “require that such consumer product, following such decryption, protect the content of such signal as if it were a Covered Demodulator Product,” they are being treated in the same manner as cable operators. But cable operators are also subject to similar requirements with respect to leased set-top boxes, under Rule 73.9002(b) (“No party shall sell or distribute in interstate commerce a Covered Demodulator Product that does not comply with the Demodulator Compliance Requirements and Demodulator Robustness Requirements.”). Therefore, to maintain parity between DBS and cable providers with respect to their obligations under the broadcast flag rules, the changes proposed herein should be adopted.

industry's set-top boxes to assure that the network and the boxes are working together to protect the flag. The rules should likewise be the same.

To address this issue, the following rule change should be made in the definition of "Demodulator:"

§73.9000 Definitions *** (g) "Demodulator" means a component, or set of components, that is designed to perform the function of 8-VSB, 16-VSB, QPSK, 8-PSK, 64-QAM or 256-QAM demodulation or successor modulation schemes and thereby produce a data stream for the purpose of digital television reception.

III. PROFESSIONAL CABLE EQUIPMENT SHOULD BE EXPRESSLY AND AUTOMATICALLY EXEMPTED

The broadcast flag rules as initially proposed by the BPDG, and adopted in part by the Commission, are clearly oriented towards consumer equipment. However, they are a bit vague with respect to the limits on the coverage of "products" that reside in the home. The rules treat "Demodulators" as "Covered Demodulator Products" if they are subject to the compliance obligations imposed by Rule 73.9002(a)(1) or 73.9002(b). This turns on what is a "product"—the key term used in Rule 73.9002(a)(1) or 73.9002(b) but not defined in the rules.

When it comes to equipment used by businesses like cable and DBS, the rules require certification with respect to certain components and impose obligations to preserve the intent of the flag as a substitute for the detailed rules applicable to consumer devices. But there appears to be no explicit professional equipment exemption (often found in comparable laws²), that would give comfort to businesses that employ demodulation equipment in their ordinary course of business. There appeared to be no

² Section 1201(k) of the Digital Millennium Copyright Act, 17 U.S.C. § 1201(k)(3), exempts professional recorders used in the media business from the copy protections consumer electronics devices must employ.

disagreement in the comments that a professional equipment exemption should be included in the broadcast flag rules as well.³

It has been suggested that a professional equipment exemption is found in the “written commitment” exemption of Rules 73.9002(a)(2) and 73.9002(d). However, footnote 119 of the Order states that a “written commitment would not be required in the case of buyers who are ... MVPDs who retransmit Unencrypted Digital Broadcast Television Content.” If the intention of the “written commitment” exemption is to apply to demodulator components alone and not to professional equipment (i.e., “products”), then a professional equipment exemption for finished professional products is essential. NCTA respectfully suggests adding the following rules to achieve such a result:

73.9000***(x). Professional equipment means any component or product that is designed, manufactured, marketed, and intended for use by a multichannel video programming distributor, or other party engaged, or about to become engaged, in the lawful retransmission of Unencrypted Digital Terrestrial Broadcast Content pursuant to § 76.1909.

73.9002***(x) Any party who is a multichannel video programming distributor, or other party engaged, or about to become engaged, in the lawful retransmission of Unencrypted Digital Terrestrial Broadcast Content pursuant to § 76.1909 of this chapter, may utilize professional equipment within its network without such equipment being deemed Covered Demodulator Products.

Alternatively, if the Commission concludes that its “written commitment” exemption is the means by which MVPDs can exempt professional equipment, then NCTA suggests an approach less burdensome on the Commission and MVPDs than the current “written commitment” rule. The current rule appears to address parties that are not otherwise subject to the FCC’s rules, and imposes an obligation to file a “written

³ See, e.g., BPDG Report Tabs D and E – alternative X.2 riders prepared by certain MPAA and CE/IT BPDG representatives, at footnote 1 (“We anticipate that an appropriate provision would be crafted so as to exempt these requirements from applying to products that are specifically intended for professional video and broadcast use.”).

commitment” to abide by the broadcast flag when handling demodulation components or equipment. Whatever need there may be for such commitments from entities not otherwise subject to FCC rules, there is a simpler means for handling cable television operators.

Any MVPD that has filed a registration statement with the FCC should not be required to file an additional “written commitment” declaring itself to be a cable system in order to be deemed an MVPD under the broadcast flag rule. This would be consistent with the Commission’s ongoing commitment to reduce unnecessary paperwork. The existing database of CUIDs would then be available for cross-referencing cable systems for this rule as well. This could be accomplished with this rule:

73. 9002 (d) *** (x) Any cable system that has filed a registration statement with the Commission pursuant to §§76.1801, 76.12, or otherwise, shall be deemed to have filed a written commitment pursuant to this section.

IV. THE COMMISSION SHOULD CLARIFY THAT CABLE OPERATORS MAY DISTRIBUTE PROGRAMMING OVER ROBUST HOME NETWORKS

The language of the rules and the text of the Report and Order provide important paths to innovation in home networks. As detailed below, the rules permit both Marked Content and Unscreened Content to be transported around home networks using Robust Methods, so long as the content is under the “sole control” of a Covered Demodulator Product. Under the rule, a multi-room DVR could control and send the display to another room via Robust Methods, much as a similar multi-room device can place transport stream processing in one device and demodulation in another, so long as they are connected using a robust method. This approach allows innovation to proceed rapidly (but robustly) in the emerging home network market, without requiring that every

component be subject to the “Table A” approval processes. In the discussion below, we explain this understanding in more detail. However, it has come to our attention that some program suppliers may not share our understanding of the rule. We therefore respectfully request that the Commission clarify the rule as necessary.

Suppose that whenever a transport stream containing broadcast programming was altered in any way, the device was required to inspect for the flag. In the context of a multi-room DVR, this would significantly handicap the transport of broadcast signals around the home. In handling cable channels, a multi-room DVR selects the MPEG-2 program from the full MPEG-2 transport stream and uses robust and secure connections to transport it via home networks to devices that then receive the (secure) program, inspect for and implement the flag. If de-multiplexing and selecting the MPEG broadcast program from the transport stream is deemed to “alter” the signal and is therefore impermissible, then Unscreened Content would have to be carried over a secure home network at 27 or 38.8 Mbps.⁴

This is an impractical option, because many home networks already struggle to deliver two or more programs at the 1 to 5 Mbps rates that are common for standard definition television. Allowing the option of using robust and secure methods within the home minimizes overloads in transport around the home, lock-up of home devices, and failure of home networks when broadcast signals are carried. The “altered” content on a secure home network is only the desired MPEG-2 program, rather than the entire MPEG-2 transport stream. It is not at greater risk of theft, but can be carried at far more efficient

⁴ A VHS quality program can be carried at about 1 Mbps; a standard definition program can be carried at perhaps 4 Mbps, a HDTV program perhaps 12 Mbps. By contrast, for carriage on a secure cable home network, the entire unaltered MPEG-2 transport stream delivered by a cable standard 64-QAM or 256-QAM demodulator would require 27 Mbps (at 64 QAM) or 38.8 Mbps (at 256 QAM).

bit rates over the network. It also provides a home network transport path for broadcast signals that is on par with the path used for carrying cable channels within the home today, so that cable channels are not the only signals that may be practically carried within home networks.

As originally submitted by the co-chairs, the BPDG Report had left open the possibility that broadcast programming marked to restrict against Internet redistribution could be output using “robust methods,” thus preserving this crucial developing market of secure home networks. In its Comments, NCTA explained the need for the broadcast flag rules to permit carriage of a selected MPEG-2 program around robust home networks, even if selected (“altered”) from the full MPEG-2 transport stream. Under such an approach, a gateway device connected to a home network could “alter” the demodulated stream by de-multiplexing it to separate out a desired broadcast television program from other programs or data in the digital channel. A gateway device could alternatively inspect for the flag, then use various forms of encryption, conditional access, and other security tools to carry Marked Content from one set-top box to another, so long as the home network itself used secure interfaces between set-top boxes. This would permit a multi-room DVR contained in a cable television operator’s set-top box to control and send the display to another room, using security techniques to prevent Marked Content from leaking onto the Internet.

In the language of the rules, and the text of the Report and Order, it appears that the Commission agreed with this approach. Under the rules, both Marked Content (§73.9004(a)(4)) and Unscreened Content (§73.9003(a)(5)) may be transported around home networks using Robust Methods, rather than by using Table A outputs, so long as

Marked Content is under the “sole control” of a Covered Demodulator Product.⁵ This permits, as in the example above, a multi-room DVR to control and send the display to another room via Robust Methods. Similarly, the Report and Order takes pains to explain that transport stream processing may be separated from demodulation for similar competitive multi-room devices. The Report contemplates, for example, “two devices, one with a demodulator and a second with a TSP [transport stream processor] that is capable of connecting to the demodulator using a robust method.” The Commission explains that this approach “will foster innovation and allow greater interoperability of devices.” ¶48. By these terms, the Commission has already recognized that it is unnecessary and impractical to subject every robust home network connector, which is already controlled by a compliant device, to the Table A approval processes which would slow innovation needlessly.

To avoid confusion in the market, the Commission should clarify that both Marked Content and Unscreened Content that has been demultiplexed may be transported around home networks using Robust Methods, so long as the Marked Content and Unscreened Content is under the sole control of a Covered Demodulator Product.⁶ Under such a clarification—fully consistent with the rules—cable operators could use various forms of encryption, conditional access, and other security tools to carry marked content

⁵ This result is reaffirmed by the definition of Marked Content, which carves out distribution over such robust home networks from the definition. §73.9000(I)

⁶ The rules as adopted permit output of both Marked Content and Unscreened Content, “where such Covered Demodulator Product outputs, or directs to be output, such content to another product and such Covered Demodulator Product exercises sole control (such as by using a cryptographic protocol), in compliance with the Demodulator Robustness Requirements, over the access to such content in usable form in such other product.” §73.9004(a)(4), §73.9003(a)(5). The robustness requirements provide for “a reasonable method so that they cannot be defeated or circumvented merely by an ordinary user using generally-available tools or equipment.” §73.9007. Under 76.9000(n), “ ‘Robust Method’ means, with respect to the passing of Unscreened Content or Marked Content from one product to another, a content protection method that complies with § 73.9007.”

from one device in the home to another so long as the home network itself used secure interfaces between the devices.

CONCLUSION

For the reasons stated above, NCTA requests that the Commission make the changes and clarifications requested.

Respectfully submitted,

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