

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of	)	
	)	
	)	MB Docket No. 02-230
Digital Broadcast Content Protection	)	
	)	
	)	

**Reply Comments of the Center for Democracy and Technology**

March 15, 2004

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**Reply Comments on Further Notice of Proposed Rulemaking**

The Center for Democracy and Technology (“CDT”) is pleased to submit these reply comments in response to the Commission’s Further Notice of Proposed Rulemaking (“FNPRM”) in the above-captioned proceeding. CDT is a non-profit, public interest organization dedicated to preserving and promoting free expression and other democratic values and civil liberties on the Internet.

**Summary**

In its Report and Order adopting the broadcast flag regulations, the Commission indicated that the timing of its ruling reflected the fact that digital video technology is approaching a crucial threshold. While technological constraints currently inhibit transmission of high quality video content over the Internet, the Commission argued that advances in compression technology and increased consumer access to bandwidth are bringing these barriers down.<sup>1</sup>

While these developments raise the specter of video piracy, they also promise to facilitate a vast array of new consumer uses of video content on computers and online.

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<sup>1</sup> FCC Report and Order and Further Notice of Proposed Rulemaking, MB Docket No. 02-230, In the Matter of Digital Broadcast Content Protection (released November 4, 2003 ( “Order/FNPRM”) at ¶¶ 6-8.

Consumers will be able to securely email video clips; to send local news to their children at college; to move content from their home into their car and onto their mobile devices; and to take it with them on vacation. If the Commission is correct in its predictions, the same technological developments that prompted it to pass the flag regulations will open a world of technical possibilities for consumer uses of video, many of which are now in their infancy.<sup>2</sup>

The Commission must ensure that the flag regulations do not create a barrier to these developments. Numerous groups from a variety of industries have stressed the importance of a narrow, lightweight version of the flag regulations for facilitating innovation. Basing the flag regulations on transparent processes with objective criteria and frequent oversight is the only way we can protect the vision of a diversity of competing content protection schemes, promote the development of new uses of content, and protect the democratic and creative potential of new digital media and networks.

Specifically, in this filing CDT argues that:

- The Commission must reiterate that the scope of protection required of approved technologies is to effectively frustrate ordinary users from indiscriminate redistribution of protected content online, and make this requirement the basis of the approval process for new technologies.
- The Commission should adopt an open, lightweight approval process based on objective functional criteria, as suggested by numerous commenters in the IT and CE industries;
- The Commission must not create alternate, less transparent routes for technology approval that could over time supplant or undermine open approval procedures.

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<sup>2</sup> See, e.g., Joint Comments of Hewlett Packard, Microsoft, Dell, and Apple Computer, in CS Docket No. 97-80 (filed February 13, 2004) at 3-5.

- The Commission should ensure that the rules it makes with regard to software demodulators and software based protection schemes do not preclude the development and use of DTV technologies on general purpose computers.

## 1. Introduction

In CDT's initial comments in response to the Commission's FNPRM, we highlighted three goals set forth by the Commission in its broadcast flag rulemaking:

1. To "prevent the indiscriminate redistribution of [flagged] content over the Internet or through similar means."<sup>3</sup>
2. To "facilitate innovative consumer uses and practices, including use of the Internet as a secure means of transmission," and to "promote consumer access to content in new and meaningful ways."<sup>4</sup>
3. To allow "consumers [to] cop[y] broadcast programming and us[e] or redistribut[e] it within the home or similar personal environment as consistent with copyright law," so long as done in a way that does not allow indiscriminate redistribution online.<sup>5</sup>

CDT emphasized that promoting these goals relies on maintaining a carefully circumscribed vision of the flag, and we applauded the Commission's express commitment to a narrowly tailored flag rule. Continued innovation and free expression on the Internet are best protected through a robust marketplace with a diversity of competing digital content protection technologies. Consumers are just beginning to see

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<sup>3</sup> Order/FNPRM at ¶ 10.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

the exciting and empowering possibilities for handling video content that are created by digital technologies and increased access to bandwidth in homes. It is imperative that the Commission allow these new technologies to develop.

The comments filed in response to the Commission's FNPRM demonstrate broad recognition of the importance of fostering competition and innovation in content protection technologies, including in the use of the Internet for secure transmission of flagged content.<sup>6</sup> Many commenters also specifically praised the FCC for adopting narrowly focused flag rules.<sup>7</sup>

Given the widespread agreement on these goals, CDT reiterates its call to the Commission to enshrine in the flag regulations the narrow, innovation-friendly vision it has said it intends.

**2. The Commission should explicitly incorporate the narrow, already-stated purpose of the flag scheme into the criteria for approving content protection technologies.**

Many commenters pointed out that the touchstone of the approval process must be a determination of whether or not a proposed technology provides the appropriate level of

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<sup>6</sup> See, e.g., Comments of Time Warner, in MB Docket 02-230 (filed February 13, 2004) ("Time Warner Comments") at 2 ("Time Warner shares the Commission's goal of facilitating the digital transition and broadening consumer access to new digital devices and advanced services."); Comments of the IT Coalition, in MB Docket 02-230 (filed February 13, 2004) ("IT Coalition Comments") at ii-iii, 8-9; Comments of Verizon, in MB Docket 02-230 (filed February 13, 2004) ("Verizon Comments") at 1-2, 6-7; Comments of Phillips Electronics, in MB Docket 02-230 (filed February 13, 2004) ("Phillips Comments") at 1; Comments of the American Antitrust Institute, in MB Docket 02-230 (filed February 13, 2004) ("AAI Comments") at iii; Comments of Public Knowledge and Consumers Union, in MB Docket 02-230 (filed February 13, 2004) ("PK & CU Comments") at 2.

<sup>7</sup> See, e.g., IT Coalition Comments at ii, 2-3; Verizon Comments at 1-3; Phillips Comments at 2-3; PK & CU Comments at 2, 4-6.

protection for content.<sup>8</sup> Several commenters specifically proposed incorporating functional requirements for proposed technologies that define the “scope” of protection expected and how “robust” these protection measures must be.<sup>9</sup>

CDT agrees that the question of whether a proposed technology provides the appropriate level of protection should be the question central to a determination of whether it is approved. We emphasize that the Commission *has already specified what this necessary level of protection is*, both in terms of scope and of robustness. Specifically, the Commission has said that the intended scope of protection is against “indiscriminate redistribution of [flagged] content over the Internet or through similar means,” and that physical copying or secure transmission online to a small number of addresses is not restricted.<sup>10</sup> The Commission also ruled that the appropriate standard of robustness for protection technologies is that they not be circumventable “merely by an ordinary user using generally available tools or equipment.”<sup>11</sup> CDT applauded the

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<sup>8</sup> See, e.g., Time Warner Comments at 14 (“The Commission’s primary objective should be to ensure that the approval process for new content protection technologies accomplish the threshold purpose of robustly protecting content and seamlessly interoperating with cable systems and other video programming distribution networks.”); Comments of Digital Transmission Licensing Administrator, in MB Docket 02-230 (filed February 13, 2004) (“DTLA Comments”) at 3 (“DTLA supports adoption of standards and procedures that would facilitate the rapid approval of any technology that demonstrably can provide effective protection against unauthorized redistribution of digital terrestrial broadcast”); Phillips Comments at 13.

<sup>9</sup> See, e.g. DTLA Comments at 8-9; IT Coalition Comments at 11-12; Phillips Comments at 14-18.

<sup>10</sup> Order/FNPRM at ¶ 10. The FCC states that it intends for the flag rule to “in no way limi[t] or preven[t] consumers from making copies of digital broadcast content.” Order/FNPRM at ¶ 9. See also ¶ 38.

<sup>11</sup> Order/FNPRM, at Appendix B, § 73.9007.

Commission's decisions as consumer friendly and appropriately reflecting the narrow purpose of the flag rule as a "speed bump" against massive redistribution online.<sup>12</sup>

We believe that the submissions of commenters demonstrate the importance of incorporating into the regulations the specific language of the Commission setting forth the goals of the flag scheme. Specifically, CDT suggested in earlier comments that the approval of Authorized Technologies hinge on one main functional requirement that incorporates these standards: "Does the technology effectively frustrate an ordinary user from indiscriminate redistribution of protected content to the public over the Internet or through similar means?"<sup>13</sup>

Some commenters have suggested expanding the scope of flag protection—for example to frustrate all unauthorized redistribution, or to limit redistribution to a geographically defined area. CDT opposes any such broadening of the flag, especially insofar as such extensions of the flag's reach directly contradict the Commission's stated goal of "facilitat[ing]...use of the Internet as a secure means of transmission."<sup>14</sup>

### **3. The Commission should adopt an approval process that provides minimal barriers to entry for new technologies.**

Commenters from the information technology and consumer electronics industries, along with public interest and consumer groups, emphasized that a lightweight approval process based on objective functional criteria will best meet the goal of

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<sup>12</sup> See CDT's report, *Implications of the Broadcast Flag: A Public Interest Primer*, first issued in October 2003, revised December 2003 to reflect the FCC's Order, online at <<http://www.cdt.org/copyright/broadcastflag.pdf>>.

<sup>13</sup> Comments of Center for Democracy and Technology, in MB Docket 02-230 (filed February 13, 2004) ("CDT Comments") at 5.

<sup>14</sup> Order/FNPRM at ¶ 10.

facilitating a robust marketplace in protection technologies.<sup>15</sup> These groups agreed that the process should be arbitrated by a neutral third party, and no subgroup of players should hold veto power in the approval process.

A self-certification process of this type based on the scope and robustness criteria outlined above would ensure that the reasonable piracy fears of content companies are answered. Content companies and other interested parties would have the opportunity to challenge proposed technologies that did not adequately protect content from indiscriminate redistribution online, and the FCC would reject such proposals. In addition, this approach would have several specific and important advantages over alternatives.

- *It would be predictable.* Unpredictability will reduce the willingness of programmers and hardware manufacturers to develop new products, since they run the risk that those products will be blocked from entering the market. Narrow objective functional criteria would ensure that designers know at the outset the standards to which their products must be built. If risk or unpredictability raise product development costs, the Commission's express goal of "facilitat[ing] innovative consumer uses and practices" will be hindered, and consumers will be harmed.

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<sup>15</sup> See, e.g., DTLA Comments at 3-4; Phillips Comments at 12-28; IT Coalition Comments at 8-14, Comments of ATI technologies, in MB Docket 02-230 (filed February 13, 2004) at 1-2; Comments of the National Cable & Telecommunications Association, in MB Docket 02-230 (filed February 13, 2004) at 4; Verizon Comments at 6-8; PK & CU Comments at 13-15; Comments of the Home Recording Rights Coalition; in MB Docket 02-230 (filed February 13, 2004) at 5-6; AAI Comments at 8-9; CDT Comments at 5-8.

- *It would promote innovation.* Approaches based on “market acceptance” of new technologies by large industry players would tend to favor the technologies that facilitate the current business models of those groups. A process based on functional criteria would allow new and innovative solutions to enter the market.
- *It would prevent “mission creep.”* Narrow functional criteria would keep the flag process anchored to its specific, stated purpose. Other approaches would allow the approval process for new technologies to be used to block technologies even if they provide the protection necessary to meet the explicit goal of the flag rule.
- *It would be transparent.* CDT has emphasized the need for ongoing oversight of the flag regulations and their effects. We believe that both the formal oversight structures CDT has outlined and less formal oversight by Congress, non-governmental organizations, and the public are essential to the legitimacy and success of the flag. Only an open, objective process will provide the requisite level of transparency for effective oversight.

The Commission identified some of these issues as reasons for its rejection of “market acceptance” tests for the interim approval process created under the Commission’s initial Report and Order.<sup>16</sup> We believe these reasons still stand.

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<sup>16</sup> See Order/FNPRM, ¶ 52.

**4. The Commission should not approve alternate or parallel approval processes that are less transparent, and that could supplant a primary open approval procedure.**

Some commenters have suggested that if the Commission approves a self-certification process based on functional criteria, it could also approve “market acceptance” or other routes as secondary or parallel approval options. This approach is facially attractive; it could potentially provide “multiple avenues” that could allow technologies to be approved more readily.

However, CDT is concerned that creating alternate approval routes would come at the expense of the primary self-certification process. Creating multiple approval avenues would effectively place different standards on technologies that had the “blessing” of established market players than on novel technologies striving for market acceptance. In the long run, CDT fears that this approach could lead to neglecting or impoverishment of the publicly accountable and open approval track.

In addition, a “parallel tracks” approach could eliminate transparency in a subset of approval determinations. No proposed technology should be exempted from the open and publicly accountable process that self-certification and challenge against objective functional criteria would provide. Robust public oversight requires that all approval decisions be made in the open.

CDT believes that if the FCC adopts the lightweight, open, and objective self-certification approach, multiple avenues for approval will not be needed. Such a process would already provide the minimal possible barriers to entry for new technologies subject to the content protection goals of the flag, and would operate in a transparent and publicly accountable manner.

**5. Certification and compliance requirements must be written so that they do not preclude software-based TV technologies used on general purpose computers.**

CDT did not originally comment regarding the “interplay between a flag redistribution control system and the development of open source software applications, including software demodulators, for digital broadcast television.”<sup>17</sup> We comment now in response to specific issues raised by some commenters suggesting that Commission’s rules, as written, do not seem to allow for pure software solutions.<sup>18</sup> CDT emphasizes that if the Commission does decide to regulate software solutions, it must provide for pure software solutions and the general purpose computer.

Given the Commission’s express desire to “actively promoted the development of software defined radio and other software demodulators as important innovations in the

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<sup>17</sup> Order/FNPRM, ¶ 60.

<sup>18</sup> Specifically, The Electronic Frontier Foundation commented that the Commission’s rules, as currently written, appear to exclude pure software-defined demodulators, because the rules refer to demodulators fashioned from “components” (Comments of the Electronic Frontier Foundation, in MB Docket 02-230 (filed February 13, 2004) at 2). The Motion Picture Association of America also argued that:

If open source programmers wish to design a software component of an 8-VSB, 16-VSB, 64-QAM, and 256-QAM demodulator, they have three options: they can choose not to sell or distribute their demodulator in interstate commerce; they can either incorporate their software components into a compliant Demodulation Product, which is robust against attack and has only the outputs and integrated recording methods permitted under the regulation; or they can sell or distribute their software demodulation component to a Bona Fide Reseller for incorporation into a compliant product. (Comments of the Motion Picture Association of America, *et al.*, in MB Docket 02-230 (filed February 13, 2004) at 14.)

In other words, both EFF and the MPAA appear to agree that the rules as currently written do not provide for the public sale or redistribution of software solutions when not in connection with a specific, physically secure hardware device—i.e. pure software solutions for use on a general purpose computer. The MPAA and EFF only disagree in their view of whether this omission implies that such products are not covered (EFF) or are implicitly prohibited (MPAA).

digital age”<sup>19</sup> and the growing importance of computers in handling digital media, CDT believes it is imperative that the Commission clarify this issue in its further ruling on the broadcast flag. Flag regulations that implicitly or explicitly preclude the development and distribution of pure software solutions run directly counter to the Commission’s stated goal.

## **6. Conclusion**

CDT’s initial comments emphasized that the Commission must not leave out the Internet and the computer in the age of convergence. We urge the Commission to respond in its rules to the comments of the numerous groups from a variety of industries that have stressed the importance of a narrow, lightweight version of the flag regulations in facilitating innovation. CDT believes that the democratic and creative potential of new digital media and networks will be best protected if the Commission enshrines in its regulations this carefully circumscribed version of the flag scheme.

Respectfully submitted,

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<sup>19</sup> Order/FNPRM, ¶ 60.