COMMENT

A POSTMORTEM OF THE DIGITAL TELEVISION BROADCAST FLAG*

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> "The 19 men who changed the world on Sept. 11 used as their primary weapon not box cutters or jet airliners but something more American and much more powerful: the television set."[1]

I. INTRODUCTION

Broadcast television is a fountainhead of American zeitgeist.[2] The arrival of digital television (DTV) has revolutionized many aspects of this quintessential American institution by ushering in exciting new features, such as dazzling image quality, immersive interactivity, and sophisticated recording and playback options.[3] A Federal Communications Commission (FCC) mandate known as the broadcast flag threatened to severely circumscribe the American public's ability to record and copy digitally broadcast television content—activities protected by the fair use doctrine.[4]

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1. Mark Danner, Op-Ed., *The Battlefield in the American Mind*, N.Y. TIMES, Oct. 16, 2001, at A23 (asserting that the 9/11 terrorists used the unparalleled communicative power of television to deliver images that sparked a sense of vulnerability within the American psyche).

2. *See* JOCK GIVEN, TURNING OFF THE TELEVISION: BROADCASTING'S UNCERTAIN FUTURE, at ix–x (2003) (arguing that television is "the single most important feature distinguishing the world since World War 2 from the world before it"); Lisa M. Ezra, Note, *The Failure of the Broadcast Flag: Copyright Protection to Make Hollywood Happy*, 27 HASTINGS COMM. & ENT. L.J. 383, 387 (2005) (suggesting that American pop culture has substantial international impact).

3. *See* GIVEN, *supra* note 2, at ix (discussing the benefits of digital television (DTV) and the government's plan to complete the transition by December 31, 2006); *see also* MARGHERITA PAGANI, MULTIMEDIA AND INTERACTIVE DIGITAL TV: MANAGING THE OPPORTUNITIES CREATED BY DIGITAL CONVERGENCE 57–58 (2003) (describing the advantages of a digital signal, such as better picture and sound quality, the possibility of utilizing bigger screens without a corresponding loss in clarity of picture, and integration of web technologies); Jonathan L. Rubin, *A Red Flag for the Broadcast Flag*, FTC: WATCH NO. 618, Oct. 20, 2003, *available at* http://www.antitrustinstitute.org/recent2/279.cfm (arguing that, among other benefits, "DTV is interference free [and] uses the airwaves more efficiently").

4. *See* Michael Geist, *Mr. Minister, Please Protect the Public Interest*, TORONTO STAR, Sept. 6, 2004, at C2, *available at* 2004 WLNR 6082229 (stating that the broadcast flag raises serious "copyright, privacy, consumer, and marketplace concerns" in the United States and abroad, and pleading with the new Canadian Industry Minister not to yield to U.S. pressure to adopt broadcast flag regulation for Canada).

Imagine the following fair use scenario. A teacher requires his students to give a presentation on a current social issue. One student chooses the topic of terrorism. She records an episode of the Fox network's show *24* using her VCR, and then transfers the recording to her computer. The episode involves members of a seemingly harmless suburban Muslim-American family who are actually key conspirators in a terrorist plot.[5] Using her computer, she edits the video into a series of short clips, and transfers her work back to a videotape. She integrates the videotape into her presentation. Impressed, the teacher asks the student to e-mail him a digital copy of the videotape. When he receives the e-mail, he forwards it to his friend, who is a civil rights lawyer. After viewing the clips, the lawyer reflects upon the negative portrayal of Muslim-Americans on television and uses her computer's DVD writer to archive the video clips.

This scenario is technologically possible today, and a court would likely find that the scenario does not infringe copyright law because it constitutes fair use.[6] The fair use exception in U.S. copyright law exempts from infringement the use of copyrighted content for limited purposes, such as scholarship and commentary.[7] On December 3, 2003, the FCC mandated that all DTV tuners manufactured after July 1, 2005 implement a "flag-based redistribution control system."[8] This mandate would have the effect of curtailing the scope of consumers' fair use activities.

The redistribution control system, more commonly referred to as the broadcast flag, is a sequence of digital instructions inserted into DTV broadcasts.[9] This flag persists between copies and dictates the limits of what a consumer electronics device may

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5. *See* Kate Aurthur, *Fox Responds to Muslim Complaints*, N.Y. TIMES, Jan. 15, 2005, at B8 (reporting the Fox network's response to accusations from Muslims that the show *24* represents Muslims in an offensive light).

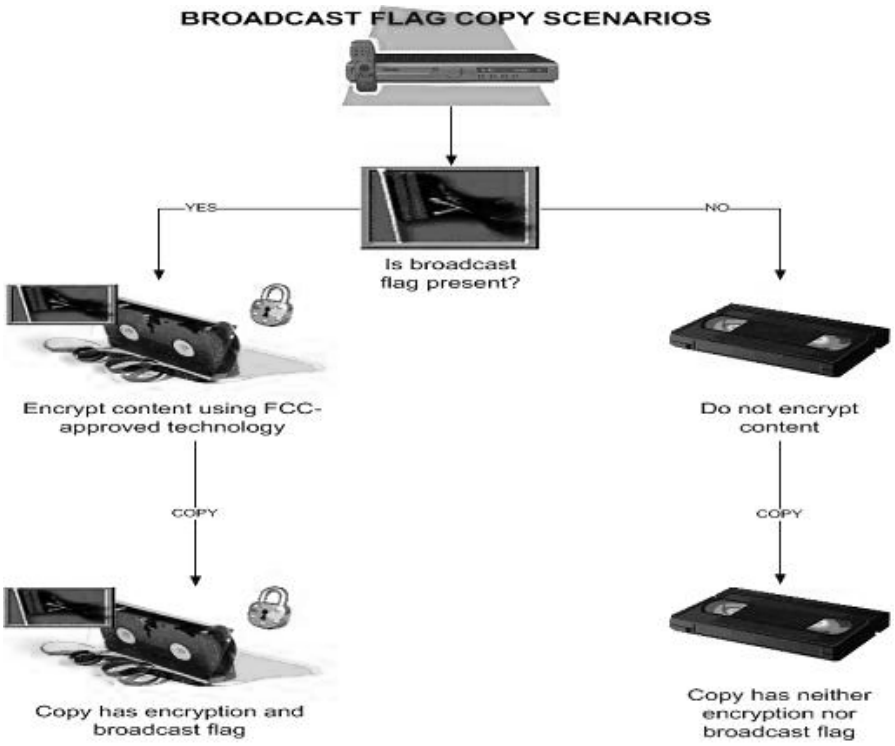
6. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 560 (1985) (acknowledging the First Amendment protections built into the Copyright Act, which provides wide latitude for scholarship and comment). *But cf.* Geist, *supra* note 4 (noting that the broadcast flag gives broadcasters the ability to eliminate activities that qualify as fair use).

7. 17 U.S.C. § 107 (2000) (setting out factors used to determine whether a use qualifies as a fair use).

8. Digital Broadcast Content Protection, 68 Fed. Reg. 67,599 (Dec. 3, 2003) (codified at 47 C.F.R. §§ 73.9000–73.9009 (2004)) (justifying the necessity of a DTV redistribution control system "to preserve the [future] viability of over-the-air broadcasting" from the threat of indiscriminate distribution of digital programming over the Internet).

9. *See* DIGITAL CONNECTIONS COUNCIL, COMM. FOR ECON. DEV., PROMOTING INNOVATION AND ECONOMIC GROWTH: THE SPECIAL PROBLEM OF DIGITAL INTELLECTUAL PROPERTY 39–42 (2004), *available at* http://www.ced.org/docs/report/report_dcc_v2.pdf (providing a brief explanation of how the broadcast flag will function).

do with the recorded DTV signal.[10] For example, recording devices may not transfer "flagged" content to "downstream" devices that do not implement broadcast flag technology.[11] The following is a graphical example of how the broadcast flag works:



The broadcast flag mandate appeased content owners, such as the Motion Picture Association of America (MPAA), by allaying their concerns regarding "indiscriminate redistribution of digital broadcast content."[12] However, the broadcast flag would have undermined the expansion of consumers' fair use recording activities initiated by the Supreme Court in *Sony Corp. of America v. Universal Studios, Inc.*[13]

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10. *Id.*

11. *See* CTR. FOR DEMOCRACY & TECH., IMPLICATIONS OF THE BROADCAST FLAG: A PUBLIC INTEREST PRIMER (VERSION 2.0) 10 (2003), *available at* http://www.cdt.org/copyright/031216broadcastflag.pdf (summarizing the compliance requirements under the broadcast flag order).

12. *See* Digital Broadcast Content Protection, 68 Fed. Reg. at 67,600 (stating the need for and objectives of the rule).

13. *See* Sony Corp. of Am. v. Universal City Studios, Inc. (*Betamax*), 464 U.S. 417,

The D.C. Circuit Court of Appeals invalidated the FCC broadcast flag mandate before the rule went into effect.[14] In a unanimous decision in the case of *American Library Ass'n v. FCC*, the court struck down the broadcast flag rule on the ground that the FCC lacked the authority to regulate functionality of consumer electronic devices that do not involve transmitting radio or wire signals.[15] Congress granted the FCC the power to regulate the transmission of television signals, but this power does not include the authority to regulate device functionality once the device receives the signal.[16]

Although the D.C. Circuit vacated the broadcast flag order in *American Library Ass'n*, broadcast television piracy continues to be a growing problem.[17] In order to preserve fair use in the age of digital media, future regulation should balance permission control with fair use.[18] The FCC's broadcast flag rules reflect several key policy mistakes that future proposals must address in order to preserve consumers' fair use activities.

Digital rights management (DRM) refers to the "description, identification, trading, protection, monitoring, and tracking of all forms of [intellectual property] rights."[19] DRM technology, such as the broadcast flag, prevents the question of fair use from ever reaching the courts because DRM constrains fair use experimentation.[20] Future DRM solutions can address the FCC's

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454–55 (1984) (holding that time-shifting—a consumer's recording of a television broadcast for later viewing—constitutes fair use); *see also* Digital Consumer.org, Overview, http://www.digitalconsumer.org/overview.html (last visited Nov. 12, 2005) (arguing that a Consumer Technology Bill of Rights is necessary to remedy recent changes in copyright law, which go too far in favoring content holders, thereby depriving citizens of fair use activities).

14. Am. Library Ass'n v. FCC, 406 F.3d 689, 708 (D.C. Cir. 2005).

15. *Id.*

16. *Id.*

17. Digital Broad. Content Prot., 18 F.C.C.R. 23,550, 23,554 (2003) ("[W]e anticipate that the potential for piracy will increase as technology advances.").

18. *See* Frank Ing-Jye Chao, *The FCC and Congress Should Consider Consumer Rights When Making the Transition to DTV*, 2003 DUKE L. & TECH. REV. 0017, ¶ 6, http://www.law.duke.edu/journals/dltr/articles/PDF/2003DLTR0017.pdf ("[T]he FCC should keep in mind that consumer rights, as established by the fair use doctrine, must coincide with the property rights and copyright of content providers.").

19. PAGANI, *supra* note 3, at 185 ("At the heart of any DRM [digital rights management] technology is the notion of a rights model. Rights models are schemes for specifying rights to a piece of content that a user can obtain in return for some consideration.").

20. *See* FRED VON LOHMANN, FAIR USE AND DIGITAL RIGHTS MANAGEMENT: PRELIMINARY THOUGHTS ON THE (IRRECONCILABLE?) TENSION BETWEEN THEM 4 (2002), *available at* http://www.eff.org/IP/DRM/cfp_fair_use_and_drm.pdf (noting that courts have modified the fair use doctrine over time, and it is vital that courts continue to have the ability to adjust the doctrine).

policy mistakes by eliminating barriers to competition and innovation at two levels: (1) devices and (2) protection technologies.[21] The resulting diversity provides consumers with a variety of options that collectively restore the scope of their fair use recording activities.[22]

This Comment explores flaws in the FCC's broadcast flag rules and examines how future television broadcast piracy solutions should address the broadcast flag's shortcomings.[23] Part II begins with a brief history of television and the circumstances that brought the broadcast flag into existence and then proceeds to map out the evolution of broadcast flag regulation. Following this history, Part III examines the fair use doctrine in the context of broadcast television. Part IV proposes that the best way for future DRM schemes to preserve fair use is to adopt competition- and innovation-friendly policies that provide consumers with a variety of options that will collectively restore the scope of their fair use activities. Part IV also critiques the FCC's policy choices and explains why these policy decisions fall short of establishing the competitive and innovative climate necessary to preserve fair use. Part V concludes that the broadcast flag policies will provide important lessons in this ever-evolving debate of fair use.

II. BACKGROUND

A. Brief History of the American Television Broadcast System

A brief history of American television broadcasting provides insight into the motives underlying broadcast flag regulation.[24] The National Television Systems Committee (NTSC) sets the current standard for analog, non-DTV broadcasts in the United States.[25] The original, monochromatic NTSC standard evolved in

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21. *See infra* Part IV.B–C (examining key issues which the FCC should focus on to restore consumers' fair use activities).

22. *See* VON LOHMANN, *supra* note 20, at 5 (observing that new products under the broadcast flag "will fail to protect the full range of *future* fair uses that will be made possible by DTV").

23. A discussion of whether the FCC acted ultra vires is outside the scope of this Comment.

24. *See* JERRY C. WHITAKER, DTV HANDBOOK: THE REVOLUTION IN DIGITAL VIDEO 2–24 (3d ed. 2001) (narrating the history of analog and DTV from a technical viewpoint). *See generally* JOSEPH H. UDELSON, THE GREAT TELEVISION RACE: A HISTORY OF THE AMERICAN TELEVISION INDUSTRY 1925–1941 (1982).

25. *See* Advanced Television Sys., 2 F.C.C.R. 5125, 5126 (1987) (recounting the evolution of the National Television Systems Committee (NTSC) standard). On July 1, 1941, the FCC established technical standards for production, distribution, transmission, and reception of American monochromatic television broadcasts. *Id.*

1953 to include color information, and this has remained the standard for analog broadcast television for more than sixty years.[26] Despite the durability and flexibility of the NTSC standard, it has reached the limits of its scalability.[27]

In 1987, the FCC created the Advisory Committee on Advanced Television Service to counsel the NTSC on technical and public policy issues related to adopting new standards for an advanced DTV delivery platform that would replace the NTSC's analog system.[28] The Advanced Television Systems Committee (ATSC) worked closely with the Advisory Committee to develop and document specifications for the new television system.[29] On December 24, 1996, the FCC adopted the ATSC Digital Television Standard and mandated its use for DTV broadcasts in the United States.[30]

B. Transition from Analog to Digital

The adoption of the ATSC standard was an important first step in bringing DTV to the masses.[31] High-definition television (HDTV) sets equipped with a digital tuner provide almost double the picture resolution of traditional television sets as well as digital surround sound.[32] These improvements will change the way the American public watches television.

Aside from the audiovisual benefits, the FCC is eager to spur the transition from analog to digital for financial reasons.[33] Once

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26. *Id.*

27. *See id.* (asserting that the NTSC standard suffers from numerous defects due to the addition of color information to the original monochromatic NTSC standard, and thus it will not be able to support the delivery of digital media).

28. *See* Advanced Television Systems Committee (ATSC), Development of the ATSC Digital Television Standard, http://www.atsc.org/history.html (last visited Nov. 12, 2005) (describing the origins of the Advisory Committee on Advanced Television Service).

29. *See id.* (recounting the collaboration effort between the government and the private sector to develop a nationwide DTV standard).

30. *Id.* (chronicling the events that led to the adoption of the ATSC Digital Television standard).

31. *See id.* (detailing the rapid succession of efforts to implement the agreed upon ATSC standard, which provided half of the U.S. population with access to DTV signals within the first year).

32. *See* Susan R. Athari, Comment, *High Definition Television: A New Breed of Television Enters the Regulatory Jungle*, 1 COMMLAW CONSPECTUS 87, 87 (1993) (describing the picture quality of high-definition television (HDTV) as comparable to that of thirty-five millimeter film and audio quality of HDTV to that of a compact disc). A standard television has 480 horizontal lines. Wilson Rothman, *Seeing the Light on HDTV*, MONEY, Nov. 2004, at 187, 187. In contrast, HDTVs have either 720 or 1080 lines, which results in an image that is up to six times sharper than what is available on a standard television. *Id.*

33. *See* Susan P. Crawford, *The Biology of the Broadcast Flag*, 25 HASTINGS COMM. & ENT. L.J. 603, 604–05 (2003) (asserting that Hollywood is using the pressure to

the transition is complete, television broadcasters will only be able to transmit signals on their newly allocated digital spectrum.[34] Broadcasters will have to give their analog spectrum back to the FCC.[35] The FCC will then auction licenses for the recovered analog spectrum for new uses.[36] Congress has estimated that revenues from the auction of the recovered analog spectrum will exceed $6 billion.[37]

With such a large amount of money at stake, the FCC has devoted a great deal of effort to encourage the swift adoption of DTV.[38] Television broadcasters have steadily upgraded their legacy NTSC broadcast equipment to DTV-capable transmission equipment, and television manufacturers have fervently met consumer demand for new DTV-capable television sets.[39] To Congress's consternation, however, television content producers have been reluctant to participate in this new high-definition world without reassurance that their intellectual property will not fall prey to the widespread piracy that currently plagues the music industry.[40]

Peer-to-peer ("P2P") file sharing programs, such as the original version of Napster software, allow users to trade files

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complete the transition to push its agenda upon regulators).

34. *Id.* at 604; *see also* GIVEN, *supra* note 2, at 118 (examining the motivations behind the FCC's DTV rollout plans).

35. Crawford, *supra* note 33, at 604.

36. *Id.*

37. *Id.* at 604–05; *see also* Chao, *supra* note 18, ¶ 11 (asserting that Congress and the FCC will be able to generate more revenue from the recovered spectrum because digital information requires smaller spectrum allocation).

38. *See, e.g.*, Digital Television (DTV), DTV Home, http://www.dtv.gov/ (last visited Nov. 12, 2005) (educating consumers about DTV).

39. *See* Ted Hearn, *N.Y. Broadcast Outlet Goes Digital*, MULTICHANNEL NEWS, July 19, 2004, at 44 (chronicling a Kingston, New York station's receipt of FCC approval to completely shut down analog service more than two years before the FCC-mandated deadline); Rothman, *supra* note 32, at 187 (reporting that Americans have purchased roughly ten million HDTVs).

40. *See* Stephen Labaton, *F.C.C. Acts Against Pirating of TV Broadcasts*, N.Y. TIMES, Nov. 5, 2003, at C1 (relating some producers' belief that "at the dawn of digital television, they need regulatory and technological protection to avoid the experiences of the recording industry, which has been forced to cut prices and has filed hundreds of lawsuits to try to stop swapping of music on the Internet"); *see also CBS to Halt HDTV Unless There's Broadcast Flag*, TELEVISION DIG. WITH CONSUMER ELECTRONICS, Dec. 16, 2002, at 1 (reporting on the CBS network's threat in late 2002 to stop DTV broadcasting if the FCC failed to implement and enforce a broadcast flag by summer 2003); Kristen E. Fligel, *FCC Issues Broadcast Flag Order to Protect Digital Content*, METROPOLITAN CORP. COUNS., Feb. 2004, at 19, *available at* http://www.metrocorpcounsel.com/pdf/2004/February/19.pdf (describing the broadcast flag as "a more proactive approach to piracy and unauthorized distribution" as compared to the Recording Industry Association of America's unsuccessful attempts to curb piracy).

with other users over the Internet.[41] Some content providers claim that they will not permit their content to be broadcast in a high-quality digital format without some form of copy protection.[42] Fearing that a dearth of available programming would slow the digital transition by discouraging consumers from purchasing new DTV devices, the FCC and Congress began looking into ways to protect digitally broadcast video content.[43]

C. Consumer Broadband and Digital Television Promotion Act

The history behind broadcast flag legislation began in March 2002, when Senator Ernest "Fritz" Hollings of South Carolina introduced the Consumer Broadband and Digital Television Promotion Act (CBDTPA).[44] The CBDTPA would have granted the FCC the broad power to mandate a security standard to protect digital content on every digital media device.[45] According to the bill, a "digital media device" included

> any hardware or software that—(A) reproduces copyrighted works in digital form; (B) converts copyrighted works in digital form into a form whereby the images and sounds are visible or audible; or (C) retrieves or accesses copyrighted works in digital form and transfers or makes available for transfer such works to hardware or software described in subparagraph (B).[46]

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41. *See* A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1011–12 (9th Cir. 2001) (describing peer-to-peer ("P2P") file sharing); *see also* MGM Studios, Inc. v. Grokster Ltd., 380 F.3d 1154, 1158–60 (9th Cir. 2004), *vacated*, 125 S. Ct. 2764 (2005) (detailing how a P2P typical file sharing network operates).

42. *See* Crawford, *supra* note 33, at 610 (identifying content producers' fears that consumers will be able to share movie-length digital video files over the Internet).

43. *See id.* at 610–11 (stating that the lack of high-quality digital content deters consumers from purchasing DTV transmitters, delays the DTV transition, and thus necessitates government regulation); *see also* Chao, *supra* note 18, ¶¶ 13–16 (asserting that the FCC may encroach on consumers' rights to protect DTV content).

44. *See* Consumer Broadband and Digital Television Promotion Act (CBDTPA), S. 2048, 107th Cong. (2002) (claiming that a lack of security resulted in significant copyright piracy, which led to a lack of quality content).

45. *See id.* § 2 (claiming that the legislation was necessary because the private sector had not yet taken sufficient initiative in preventing content piracy); Symposium, *The Law & Technology of Digital Rights Management*, 18 BERKELEY TECH. L.J. 697, 736 (2003) [hereinafter *Law & Technology DRM Symposium*] (discussing some of the recent legislation aimed at protecting content owners, and predicting that future legislation will also have to deal with side issues related to consumer protection as part of the effort to protect copyright holders).

46. S. 2048, § 9; *see also* Crawford, *supra* note 33, at 608 (remarking that the definition of digital media device in the bill would have included electronics devices ranging from "TV sets to personal digital assistants to wristwatch cell phones to general purpose computers").

The bill would have also made it illegal to manufacture or distribute a digital media device that did not conform to the adopted standard.[47] Development of the standard for a given device would begin in the private sector, and the government would intervene if private sector businesses could not come to a consensus.[48] Content providers maintained that this broad blanket legislation was necessary because consumer electronics companies would not voluntarily implement DRM technology.[49] Many device manufacturers criticized the bill, arguing that it was overly broad and was an incongruous solution to digital media piracy: "So, the consensus, to the extent that there is any consensus on this panel, seems to be, [that] the Hollings bill is a bad idea. Why is it a bad idea? Because it mandates the way we build technology, and the market is generally the preferable solution."[50] The Hollings bill did not pass, so the content industry refocused its efforts on protecting its content in the nascent world of DTV.[51]

D. The FCC Broadcast Flag Mandate

Responding to content providers' requests for additional protection of their copyrighted works, the FCC issued a Notice of

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47. S. 2048, § 5(a); *see also* Crawford, *supra* note 33, at 608 (noting that the bill would have made it illegal to remove security measures on a device). The bill did contain an exception for devices that were manufactured or imported before the effective date of the regulation. S. 2048, § 5(b).

48. S. 2048, § 3 (providing that even after the private sector has agreed on a security systems standard the private sector could, if necessary, modify the standard).

49. *See* Crawford, *supra* note 33, at 608 (suggesting that consumer electronics companies would be reluctant to implement DRM technology because it would increase manufacturing costs while turning away consumers who disliked restrictions on their media usage).

50. *Law & Technology DRM Symposium*, *supra* note 45, at 757 (quoting a panel discussion regarding DRM-related legal and policy initiatives in the United States); *see also* Press Release, Home Recording Rights Coalition, Home Recording Rights Coalition Criticizes Hollings/Stevens Bill for Inviting Undefined and Unlimited Regulation of Digital Consumer Devices (Mar. 22, 2002) (on file with the Houston Law Review), *available at* http://www.politechbot.com/docs/cbdtpa/hrrc.cbdtpa.032202.html (last visited Nov. 12, 2005) (protesting the dangers associated with such a broad intrusive regulation). Home Recording Rights Coalition Chairman Gary Shapiro has noted that the Hollings bill "represents a particularly dangerous delegation of broad, unfettered regulatory authority, which could have severe, adverse, long-term consequences for American consumers" because it does not provide the FCC guidance as to when and to what extent security measures should apply. *Id.*

51. *See* Crawford, *supra* note 33, at 608 (referring to these efforts as a "mini-Hollings" approach); *see also* Walt Crawford, *The Broadcast Flag: CBDTPA Reborn?*, CITES & INSIGHTS: CRAWFORD AT LARGE, Jan. 2003, at 15–16, *available at* http://cites.boisestate.edu/civ3i1.pdf (capturing some of the early reactions to broadcast flag regulation, which the author felt were the "CBDTPA reborn").

Proposed Rulemaking in the fall of 2002.[52] As a result of this request, the FCC received an overwhelming response of over 6000 comments.[53] On December 3, 2003, the FCC adopted a broadcast flag proposal in its "final rules implementing an ATSC flag-based redistribution control system to protect digital broadcast television content from unauthorized redistribution."[54] The final rules proposed that beginning July 1, 2005, all devices that can demodulate, store, or copy HDTV content must comply with the FCC order.[55] A nonexhaustive list of regulated devices included digital televisions, set-top boxes, computers, and other hardware or software capable of demodulating a DTV signal.[56] FCC compliance required that new devices (1) check for the presence of the flag, (2) encrypt any flagged content using FCC-approved technologies, (3) use only FCC-approved technology to copy flagged content, and (4) use only FCC-approved technology and secure digital outputs to transfer flagged content to other broadcast-flag compliant devices.[57]

Under the FCC's Compliance Requirements, incoming DTV content fell into one of three categories: unscreened content, unmarked content, and marked content.[58] Unscreened content is content that the device has not checked for a broadcast flag.[59] Unmarked content is content that the device has checked for the presence of the broadcast flag, and the device has found that a flag is not present.[60] Finally, marked content is content that the device has tested for a broadcast flag, and the device has found the flag to be present.[61]

Broadcast flag-compliant devices may freely copy and distribute unmarked content.[62] The regulation required that both

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52. *See* Digital Broadcast Copy Protection, 67 Fed. Reg. 53,903, 53,904–05 (Aug. 20, 2002) (exploring whether the FCC should mandate copy protection for digital broadcast television in order to facilitate the analog to digital transition).

53. *See* Crawford, *supra* note 33, at 614 (observing that many of the comments came from individuals).

54. Digital Broadcast Content Protection, 68 Fed. Reg. 67,599 (Dec. 3, 2003) (issuing the final broadcast flag rule).

55. 47 C.F.R. § 73.9002 (2004); Crawford, *supra* note 33, at 611–12 ("Starting in 2005, all newly-manufactured equipment capable of demodulating, storing, or copying content that originates as a DTV signal will have to have approved copy protection technologies built in.").

56. CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 11.

57. *Id.*

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.*

unscreened and marked content comply with rules established for distribution of content,[63] and that devices not transmit unscreened and marked content to noncompliant devices.[64] However, devices could transfer unscreened and marked content to other compliant downstream devices, but the regulations required them to utilize FCC-approved technologies.[65] These technology restrictions would have had the effect of reducing the scope of consumers' fair use activities—activities allowed under the fair use provision of the Copyright Act.

III. FAIR USE AND HOLLYWOOD

A. Fair Use Under the Copyright Act

U.S. copyright law, as defined in the Copyright Act, seeks to balance the exclusive rights granted to a copyright holder with a fair use defense to infringement.[66] Section 106 of the Copyright Act grants a copyright holder the exclusive rights to reproduce, prepare derivative works, distribute copies, and perform, display, and transmit the copyrighted work.[67] Section 107 defines a fair use limitation on a copyright owner's exclusive rights.[68] That section states that "the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, [or] teaching . . . is not an infringement of copyright."[69] Section 107 also lists guiding factors for determining whether a use falls into the category of fair use:

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;

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63. *Id.* (listing compliance requirements).

64. *Id.* (noting that noncompliant devices included all insufficiently secure devices).

65. *Id.* at 11–12 (clarifying that in addition to meeting FCC compliance requirements, devices would have been subject to the license requirements associated with the approved technology).

66. *See* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 575–78 (1994) (chronicling judicial struggles to achieve a balance between these competing goals); Sony Corp. of Am. v. Universal City Studios, Inc. (*Betamax*), 464 U.S. 417, 479 (1984) (summarizing fair use as a balance between the risk that depriving authors of their monopoly will reduce the creative ability of those authors and the risk that granting a complete monopoly will reduce the creative ability of others).

67. 17 U.S.C. § 106 (2000); *see* Columbia Pictures Indus., Inc. v. Redd Horne, Inc., 749 F.2d 154, 158–60 (3d Cir. 1984) (providing a detailed analysis of § 106).

68. 17 U.S.C. § 107.

69. *Id.*

> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work.[70]

The four factors listed in § 107 are not precise rules, but they "offer[] some guidance" when determining fair use.[71] It would be incredibly difficult to establish a detailed legal regulatory framework for fair use:

> If we actually tried to spell out, in the law, in a detailed manner, instead of the four factors, what exactly copyright and fair use would look like, I think you would soon find a statute that would begin to resemble the tax code in its complexity because it would be volumes and volumes and volumes of very detailed regulations depending on who you are, why you're using it, which context, and all the rest.[72]

The lack of precise rules has long frustrated courts as they grappled with the challenge of where they should draw the line that separates fair use from infringement, especially when faced with new technologies that enable innovative forms of sharing.[73] The following subsection discusses one of these cases.

B. Evolution of Fair Use in the Analog Age of Television

In 1984, the Supreme Court confronted the fair use issues introduced by the invention of the VCR in *Sony Corp. of America v. Universal City Studios, Inc.* (*Betamax*), the landmark case that expanded the scope of consumers' fair use with regards to video recording.[74] The plaintiffs, Universal Inc. and Walt Disney Productions, were copyright owners of various television programs.[75] The defendant, Sony, was a manufacturer of

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70. *Id.*; *see* Hustler Magazine, Inc. v. Moral Majority, Inc., 796 F.2d 1148, 1151–52 (9th Cir. 1986) (noting that "[c]ourts balance these factors to determine whether the public interest in the free flow of information outweighs the copyright holder's interest in exclusive control over the work").

71. H.R. REP. NO. 94-1476, at 66 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659, 5679–80.

72. *Law & Technology DRM Symposium*, *supra* note 45, at 731–32.

73. *See generally In re* Aimster Copyright Litig., 334 F.3d 643 (7th Cir. 2003) (addressing issues arising from the widespread pirating of digital music facilitated by an Internet-enabled program).

74. Sony Corp. of Am. v. Universal City Studios, Inc. (*Betamax*), 464 U.S. 417 (1984) (examining the issue of whether Sony was vicariously liable for copyright infringement as a result of consumers' use of Betamax video tape recorders (VTRs), more commonly known today as VCRs, to record broadcast television).

75. *Id.* at 421.

videocassette recorders (VCRs).[76] Universal and Disney sued Sony for vicarious infringement liability on the grounds that Sony's VCRs facilitated infringement by consumers.[77]

The Court explored the extent of fair use in the context of a consumer recording broadcast television for personal, noncommercial use.[78] The Court held that a consumer's use of a VCR to capture television broadcasts on videotape for later viewing, also referred to as time-shifting, constituted fair use and did not violate copyright.[79] *Betamax* was a revolutionary expansion of consumers' fair use recording activities because most copyright scholars at the time did not believe that home-recording should constitute fair use.[80] In fact, Justice Blackmun expressed in his dissent, joined by Justices Marshall, Powell, and Rehnquist, the belief that videotaping broadcast television was infringement because time-shifting does not qualify as fair use.[81] Nevertheless, the *Betamax* decision, reached more than twenty years ago, is still good law today.[82]

C. Erosion of Fair Use in the Digital Age of Television

The *Betamax* decision was a definitive victory for consumers during the analog broadcast era.[83] However, broadcast flag legislation threatens to impinge upon the legal precedent set by this landmark decision.[84] Imposing restrictions on consumers' reasonable use of digital media within their homes could

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76. *Id.* at 422 (explaining the basic components and functionality of Sony's Betamax VCR).

77. *Id.* at 420 (summarizing Universal's allegations against Sony).

78. *Id.* at 421.

79. *Id.* at 420–21 (deferring to the district court's finding that time-shifting was legitimate fair use). Two decades before the modern digital broadcast flag legislation, Justice Blackmun presciently remarked upon the utility of an analog broadcast flag in protecting copyright holders' rights: "Sony may be able, for example, to build a VTR that enables broadcasters to scramble the signal of individual programs and 'jam' the unauthorized recording of them." *Id.* at 494 (Blackmun, J., dissenting).

80. *See* VON LOHMANN, *supra* note 20, at 3 (noting that the Supreme Court "*evolved the doctrine*" of fair use because no prior court had found fair use where the copier reproduced the entirety of the work for a "purely consumptive, nontransformative purpose").

81. *Betamax*, 464 U.S. at 484–86 (Blackmun, J., dissenting) (arguing that time-shifting is not a fair use because of the substantial effect of the VCR on the potential market of people who use the VCR for time-shifting).

82. *See* Chao, *supra* note 18, ¶ 5 (identifying *Betamax* as "the decision [that] provided the foundation of fair use in the recording of analog television broadcasts with VCRs").

83. *See id.*

84. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 30 (enumerating several reasonable consumer use concerns that might suffer as a result of overly restrictive protection technology).

discourage them from participating in the DTV revolution, and thereby impede the transition from analog to DTV.[85]

Consumers should retain the same fair use recording activities in the digital era that they possessed during the analog era. Time-shifting—recording a program to watch at a later time—is a traditional form of reasonable use that consumers enjoyed during the analog era.[86] The broadcast flag threatened to curtail this reasonable use, which the *Betamax* decision qualified as fair use.[87]

Broadcast flag supporters contend that even with regulation, consumers would continue to enjoy many of the reasonable uses that they benefit from today.[88] Proponents point out that many of the FCC-approved protection technologies allow unlimited copying within a home environment.[89] What the proponents fail to mention is that several of these approved technologies, such as those in what is often referred to as the "5C suite," only allow unlimited copying when using specific technologies—those that the licensors favor.[90] Therefore, a protection technology that is not part of the 5C suite will not be able to decrypt or copy content encrypted using a 5C protection technology.[91]

Furthermore, even though approved protection technologies currently permit some of these reasonable uses, future technologies may be more restrictive.[92] Lack of competition and

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85. *See* Roy Mark, *Boucher Introduces Fair Use Rights Bill*, DC.INTERNET.COM, Jan. 8, 2003, http://dc.internet.com/news/print.php/1565901 (reporting on a fair use rights bill introduced by Representatives Rick Boucher (D-Va.) and John Doolittle (R-Cal.) that would amend the parts of the Digital Millenium Copyright Act (DMCA) that prohibit circumvention of technical protection measures even when the purpose behind circumvention is exercise of traditional consumer fair use rights). "Without a change in the law, individuals will be less willing to purchase digital media if their use of the media within the home is severely circumscribed and the manufacturers of equipment and software that enables circumvention for legitimate purposes will be reluctant to introduce the products into the market." *Id.*

86. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 18 (asserting that many consumers are also concerned that the broadcast flag might raise First Amendment issues).

87. *See* Elec. Frontier Found., Join the Digital Liberation Television Front!, http://www.eff.org/broadcastflag/ (last visited Nov. 12, 2005) (arguing against the restrictions that would have been imposed by the broadcast flag mandate).

88. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 23.

89. *See id.* at 15–16 (explaining how encryption plus non-assertion (EPN) works under 5C compliance rules).

90. *See id.* at 14 (defining the "5C suite" as the popular name for the set of four technologies that were expected to receive immediate approval from the FCC under the broadcast flag).

91. *Id.* at 15.

92. *See id.* at 23 (expressing the concern that regulatory burdens imposed by broadcast flag regulation may impede competition and therefore limit the emergence of

innovation caused by restrictive technologies could lead to the domination of draconian protection technology.[93] Promotion of innovation and competition objectives can rescue fair use from pervasive technology that is overly restrictive.

IV. PRESERVING FAIR USE IN THE DIGITAL AGE

A. Preserving Fair Use Through Competition and Innovation

Building an effective fair use mechanism into a DRM system, such as the broadcast flag, poses a perplexing task that current technology may not be able to address.[94] The challenge lies in "think[ing] creatively about anticircumvention laws that might allow some room for circumvention for fair uses without opening up the Pandora's box so that allowing these technologies means that you've essentially repealed the anti-circumvention laws."[95] The key to crafting a successful solution to the challenge of preserving fair use is adopting sound policies that focus on consumers' interests.

In order to maintain the scope of consumers' fair use recording activities, future regulation should focus on two key levels: (1) the product level and (2) the protection technology level.[96] Increased competition and innovation at the product level provides consumers with more recording and distribution choices.[97] With any DRM regulatory scheme, no single product will restore the full range of traditional fair use activities, but the aggregate effect of a variety of products, providing diverse forms of fair use, will alleviate any DRM regulation's curtailment of fair use.[98] Promoting competition and innovation at the protection technology level spurs the creation of innovative forms of fair use

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technologies that promote fair use).

93. *Id.*

94. *See* DIGITAL CONNECTIONS COUNCIL, *supra* note 9, at 50 (discussing the broadcast flag as a regulatory form of DRM as compared to contractual approaches to DRM); *Law & Technology DRM Symposium*, *supra* note 45, at 716, 730–31 (discussing the inherent difficulties in implementing a DRM system that allows for fair use and that simultaneously protects content).

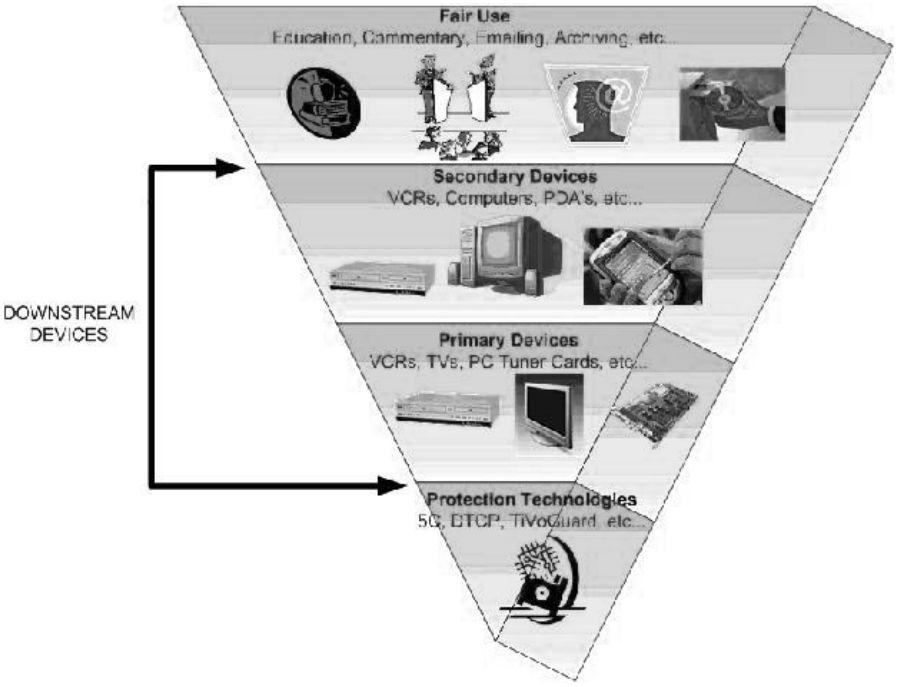
95. *Law & Technology DRM Symposium*, *supra* note 45, at 731.

96. *See infra* Part IV.B–C (examining key issues on which the FCC should focus in making broadcast flag decisions in order to restore consumers' fair use activities).

97. Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. 15,876, 15,913 (2004) (addressing the important role of interoperability among products in establishing a procompetitive environment that expands product variety in the marketplace).

98. *See* VON LOHMANN, *supra* note 20, at 6 (observing that it is unlikely any single DRM technology will be able to accommodate the full range of future fair uses made possible by DTV).

by offering novel ways of sharing digital content that still comply with DRM requirements.[99] The following graph illustrates how the levels of protection technologies and devices build upon each other, resulting in a flowering of fair use.



Broadcast flag policies failed to adequately address issues at the product and protection technology levels and would have led to the gradual atrophy of consumers' fair use activities.[100]

99. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22 (asserting that both consumers and content providers will benefit from competition among protection technologies); *see also infra* Part IV.C (examining protection technology issues the FCC should address).

100. *See* Robert T. Numbers II, Note, *To Promote Profit in Science and the Useful Arts: The Broadcast Flag, FCC Jurisdiction, and Copyright Implications*, 80 NOTRE DAME L. REV. 439, 460–61 (2004) (asserting that the broadcast flag would have chilled public access of copyrighted materials because a government "bureaucracy [would] determine, in advance, what constitutes fair use").

B. Promoting Competition Among Devices

1. Dangers of Technological Mandates. The FCC made a poor policy decision when it chose to use inflexible programmatic code to prevent piracy.[101] Public policy opposes government-issued technology mandates in areas of rapid change and technological complexity.[102] Government mandates in areas of high technology are inflexible and cannot swiftly respond to new issues.[103] Intellectual property rights protections "are at their worst when they are combined with governmental standard-setting and regulatory powers to become 'hardwired' into the design of consumer devices and public infrastructure."[104]

Broadcast flag supporters emphasize that the regulations had a narrow focus.[105] Unlike earlier proposals, which tried to regulate all forms of digital media, broadcast flag regulation solely targets indiscriminate copying of digital broadcast television.[106] Proponents also stress that the broadcast flag is less intrusive than encryption at the point of broadcast because it allows broadcasters to transmit digital media unencrypted.[107] Unencrypted broadcasts save consumers money because existing devices will continue to work.[108] Although this may be true, the benefits cited do not outweigh the harmful effects a government technological mandate would have had on fair use.

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101. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 31 & n.65 (stating the compelling reasons why public policy has resisted technological mandates in areas of rapid change).

102. *Id.*

103. *See id.* (agreeing with these concerns and recommending that policymakers continue to resist technological mandates). "By fixing the [Motion Picture Association of America's] MPAA's vision of copyright law in code, a body of code/law that does not map to current copyright law will be produced that will not acknowledge first sale, fair use rights, or the duration of copyright or the idea/expression dichotomy." Crawford, *supra* note 33, at 642–43.

104. *See* MILTON MUELLER ET AL., REINVENTING MEDIA ACTIVISM: PUBLIC INTEREST ADVOCACY IN THE MAKING OF U.S. COMMUNICATION-INFORMATION POLICY, 1960–2002, at 75 (2004), *available at* http://dcc.syr.edu/ford/rma/reinventing.pdf (noting that when such protection goes too far, it not only limits free expression, it also undermines privacy by fortifying enforcement and surveillance tools that are subject to abuse).

105. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 18 (identifying the arguments of broadcast flag proponents).

106. *See supra* Part II.C (discussing Senator Hollings's CBDTPA proposal).

107. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 9 (discussing the disadvantages of encrypting broadcasts at the source). Encryption at the broadcast source, rather than at the receiving end, is the method employed by cable and satellite providers. *See id.*

108. *See id.* (noting that an encryption at the source option would negatively affect several hundred thousand early-adopters of DTV sets).

The inflexibility of programmatic code makes it an ineffective mechanism for preserving fair use because fair use determinations require an after-the-fact review of the circumstances surrounding the use.[109] Programmatic definitions of unreasonable use are not flexible enough to recognize the contextual nuances of a usage scenario and could bar future uses, which under different circumstances could qualify as a fair use.[110] Additionally, programmatic solutions forestall innovation by creating path dependencies that limit policy choices in order to maintain backwards compatibility:

> Using code in this way to mandate one view of copyright law may create path dependencies that will be very difficult to change, cut off all social conversation about the course of the law, and allow one regime to set rules for another without a social agreement that such rules are necessary. . . . Thus, if global technical mandates are put into effect implementing the broadcast flag . . . there is a real risk that innovation will suffer.[111]

Broadcast flag regulations would have been merely a "speed bump" to suppressing the widespread piracy of digital content.[112] Although the broadcast flag would have made it more difficult for consumers to share digitally broadcast television content outside of their home network, circumvention would still be possible.[113] There are many other sources of "leaks" of pirated content, such as P2P file sharing networks.[114]

If the broadcast flag scheme did not achieve the desired effect of preventing digitally broadcast content piracy, the FCC might have responded with further regulation of downstream

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109. *See* Crawford, *supra* note 33, at 642–43. In the House Report accompanying the 1976 amendments to the Copyright Act, legislators expressly noted that "the endless variety of situations and combinations of circumstances that can rise in particular cases precludes the formulation of exact rules in the statute. . . . [T]here is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change." H.R. REP. NO. 94-1476, at 65–66 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659, 5680.

110. Crawford, *supra* note 33, at 642.

111. *Id.* at 649 (asserting that law should be "a social conversation about collective values," not "a particular vision of copyright law in mandatory code that will eventually be globally pervasive").

112. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 21–22 (emphasizing that the broadcast flag is not meant to be a perfect solution to preventing all broadcast video piracy).

113. *See id.* at 20–21 (acknowledging the remedial limitations of broadcast flag regulation).

114. *See Law & Technology DRM Symposium*, *supra* note 45, at 737–38 (noting that although DRM technology will help prevent the leakage of unprotected content onto the Internet, there will always be other avenues of compromising copyright-holder rights).

devices.[115] Thus, the broadcast flag would have set a precedent for regulatory intervention that would chill technological innovation:

> The piracy problem that . . . all copyright holders confront, will be a constantly evolving and changing one. The fear of the Broadcast Flag approach is that it sets into motion a regulatory interventionist model, which will then become a model that will have a certain gravitas, a certain center of gravity, proceeding thereafter with these issues. . . . [B]y solving the problems with certain bad ways, we end up chilling technology . . . .[116]

This "regulation creep" into downstream devices threatens innovation among manufacturers of nontraditional DTV signal processing devices, such as computers.[117]

2. Effect on Open-Architecture Devices. Broadcast flag supporters often draw parallels between the television industry and the music industry when arguing for government intervention to prevent digital media piracy.[118] Computers and the Internet have made it much easier for users from around the world to digitize and then share television and music content.[119] Proponents of the broadcast flag, such as the MPAA, argue that because computers are the primary facilitators of digital piracy, policymakers should adopt more stringent robustness standards to ensure computer compliance.[120]

Yes, policymakers should consider computers as a special case, but not for the reasons advanced by broadcast flag proponents. Broadcast flag regulations would have limited the valuable participation of open-architecture devices, such as computers, in the digital transition.[121] It is unwise to hinder

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115. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 20–22 (presenting conflicting evidence as to the FCC's intention to regulate beyond the broadcast flag).

116. *Law & Technology DRM Symposium*, *supra* note 45, at 746.

117. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22 (noting that broadcast flag regulation would require computer manufacturers to maintain different product lines for broadcast flag-compliant computers and general-purpose computers).

118. *See* Fligel, *supra* note 40, at 19 (commenting on the film and television industries' reaction to the "Napsterization" of the music industry).

119. Anne K. Fujita, *The Great Internet Panic: How Digitization is Deforming Copyright Law*, 2 J. TECH. L. & POL'Y ¶¶ 1, 5 (1996), *available at* http://grove.ufl.edu/~techlaw/vol2/fujita.html.

120. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22–23 (noting that the original MPAA broadcast flag proposal suggested a stricter standard regarding the protection against circumvention, which would have placed further restrictions on computers).

121. *See FCC Adopts "Broadcast Flag" Rule to Protect Digital TV Broadcasts Against Unauthorized Internet Redistribution*, ENT. L. REP., Dec. 2003, at 4 (examining the operation of the broadcast flag in scenarios involving computers).

computer participation in the digital revolution because a computer's open-architecture makes it a well-suited vehicle for driving digital media innovation.[122] Computers have provided much of the impetus behind the advancement of digital media.[123] However, some FCC-approved protection technologies will block current computers from acting as digital media hubs.[124] For example, 5C protection technology, one of the approved protection technologies, does not allow transmission of flagged content to a computer through a digital connection unless all of the computer's digital outputs are secure digital outputs.[125] This restriction precludes interoperability between current computers and future broadcast flag-compliant devices.[126]

Broadcast flag regulation would have imposed a major architectural constraint upon computers by severely limiting their role as open platforms through which users can freely access, process, and store digital content within a home network.[127] As part of the broadcast flag rule, the FCC defined robustness requirements as follows: "[C]ontent protection requirements set forth in the demodulator compliance requirements shall be implemented in a reasonable method so that they cannot be defeated or circumvented merely by an *ordinary user* using generally-available tools or equipment."[128] The original MPAA proposal suggested a more stringent "expert" level standard in defining robustness requirements.[129] Instead, the FCC attempted to address the unique issues posed by computers within a home network by adopting the "ordinary

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122. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22 (presenting the possibility that broadcast flag regulation could turn the open platform general purpose computer into a closed platform with no unregulated digital outputs).

123. *See id.* (commenting on the impact of broadcast regulation beyond traditional digital TV processing devices).

> Intel has a very clear focus, and the focus is not to restrict what people can use their computers for. We don't want to restrict it in any way. What we want to do is enable new stuff. And we want to enable them to get things on their computer that people would be unwilling to let them have now, or would not risk, in the situation PCs are used in right now.

Law & Technology DRM Symposium, *supra* note 45, at 698 (emphasizing the role of personal computers in driving the evolution of digital media).

124. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22.

125. *See id.*

126. *See supra* text accompanying note 64.

127. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22 (noting the major architectural changes required to create a computer that does not have any unregulated digital outputs).

128. 47 C.F.R. § 73.9007 (2004) (emphasis added).

129. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22–23 (discussing the FCC's attempts to address the concerns regarding broadcast flag regulation's effect on computers).

user" standard.[130] The FCC argues that the more generalized ordinary user standard will provide device manufacturers more flexibility in determining the best method of protecting flagged content.[131]

Although it is true that the ordinary user standard opens the field of competition to more participants than the restrictive expert level standard, it is a vague, subjective standard vulnerable to arbitrary interpretation.[132] To give the ordinary user standard the substantive force necessary to achieve true competition and innovation, the FCC should have reinforced the nebulous ordinary user standard with objective, functional criteria.[133] Functional criteria prevent unintentional discrimination against open-architecture devices, such as computers.[134] As long as computers and other open-architecture devices can implement DRM mechanisms that meet nonredistribution objectives, regulators should not exclude them from acting as hubs for receiving and displaying digital broadcast content.[135] Broad rules encourage nontraditional industrial sectors to participate in the digital broadcasting market, thereby spurring innovation and competition.[136]

3. Interoperability Among Devices. The term "interoperability" refers to the ability of two or more devices to exchange and use digital media.[137] Interoperability between computers and broadcast flag-compliant recording devices is only one example of how the inclusion of one class of devices can expand the breadth of fair use opportunities.[138] Increased interoperability among all devices promotes competition because

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130. *Id.*

131. *See* Digital Broadcast Content Protection, 68 Fed. Reg. 67,599, 67,602 (Dec. 3, 2003) (emphasizing the applicability of broadcast flag regulation to all "demodulators integrated within, or produced for use in, digital television reception devices, including PC and IT products").

132. Comments of The American Antitrust Institute at 8–9, Digital Broad. Content Prot., 18 F.C.C.R. 23,550 (2003) (MB Docket No. 02-230), *available at* http://www.antitrustinstitute.org/recent2/297.pdf (arguing that adopting functional criteria to define covered products will prevent differential treatment of computers and consumer electronics, thereby promoting innovation).

133. *Id.*

134. *See id.* (presenting the procompetition benefits of adopting flexible functional criteria in defining the scope of regulated devices).

135. *See id.* (commenting that government rulemaking should not place computer-related equipment manufacturers at a competitive disadvantage).

136. *Id.*

137. Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. 15,876, 15,913–14 (2004).

138. *See id.* (addressing the impact of interoperability in promoting competition).

the resulting diversification offers consumers more options.[139] In an environment where one competitor has an established advantage, interoperability can offset anticompetitive effects.[140]

The FCC did not adequately address the serious problem of interoperability between broadcast flag-compliant devices and legacy devices; it acknowledged this concern in a footnote to its ruling, but dismissed it as a "single, narrow example . . . [that] is not unique to a flag system and is outweighed by the overall benefits gained in terms of consumer access to high value content."[141] On the contrary, the issue of interoperability directly affects all consumers.[142] Broadcast flag regulation totally eliminates fair use when a consumer wants to use broadcast flag-compliant devices in conjunction with noncompliant legacy devices.[143] For example, a consumer who records a television show on a flag-compliant digital video recorder will not be able to play back the flagged content on legacy devices bought before the FCC mandate took effect.[144]

Encouraging interoperability *between* new broadcast flag-compliant devices is another area where FCC action fell short.[145] In a recent adjudication, the FCC settled a disagreement between Philips Electronics (Philips), a downstream device manufacturer, and the Digital Transmission Licensing Administrator (DTLA), the licensor of Digital Transmission Content Protection (DTCP), a protection technology

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139. *See id.* at 15,914; Opposition of the American Antitrust Institute at 10, Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. 15,876 (2004) (MB Docket No. 04-64), *available at* http://www.antitrustinstitute.org/recent2/314c.pdf (emphasizing the importance of interoperability to promoting competitive consumer electronics and information technology markets).

140. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. at 15,913 (agreeing with arguments made by Philips Electronics (Philips) and the Antitrust Institute).

141. Digital Broad. Content Prot., 18 F.C.C.R. 23,550, 23,559 n.47 (2003); *see also* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 24 (evaluating the validity of the digital broadcast content protection rule).

142. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 24 (asserting that this prohibition may mean that many consumers will need to substantially upgrade or replace their home theater components if they want to maintain their current fair use abilities).

143. *See id.*; Ezra, *supra* note 2, at 385 (criticizing the confusing predicament noninteroperability presents to the average user).

144. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 24 (offering a parallel fact situation involving different home theater components).

145. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. at 15,912 (advocating a more open approach for permitting downstream technology that has been approved by the FCC).

specification.[146] Philips objected to DTLA's power to prevent interoperability by denying licenses to downstream devices.[147]

Without a DTCP license, devices cannot copy or retransmit DTCP-protected content because DTLA licensing terms restrict such functionality to specific technologies.[148] DTLA could abuse this power by denying licenses to downstream devices that want to enable DTCP-compliant playback but also want to use competing technologies for making copies.[149] Allowing licensors to deny licenses is unreasonable because licensors could abuse this power to gain a competitive advantage.[150] Furthermore, requiring licensees to obtain approval from both the upstream licensor and the FCC is redundant, and will impede the adoption of new technologies: "[P]rivate contractual arrangements which preserve control over interoperability undermine competition. . . . [T]he downstream approval mechanisms employed by DTLA and 4C [perpetuate] their market power, [by] discouraging entry of noninteroperable products using competitive technologies, and locking consumers into a chain of related products."[151] Philips asserted that the FCC should require licensors to grant licenses to all FCC-approved protection technologies.[152]

DTLA argued that requiring it to ensure interoperability with all FCC-approved protection technologies was not technically feasible.[153] The FCC agreed with DTLA's argument that interoperability between all FCC-approved technologies would be difficult to achieve because of technical incompatibility and prohibitive costs.[154] Choosing a *laissez-faire* approach to the

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146. *See id.* at 15,911–12 (addressing the controversy between Philips and other upstream licensors). Digital Transmission Licensing Administrator (DTLA) is a joint venture of Sony, Intel, Hitachi, Matsushita Electric Industrial (MEI), and Toshiba. *See* Opposition of the American Antitrust Institute, *supra* note 139, at 2 n.3.

147. Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. at 15,912.

148. *See* Opposition of the American Antitrust Institute, *supra* note 139, at 10 (arguing that in light of the FCC's plans to authorize several competing protection technologies, there is no technical justification for restricting licensed functionality to favored protection technologies).

149. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. at 15,912.

150. *See id.* at 15,912–13 (arguing that DTLA might deny licenses to downstream devices that allow Digital Transmission Content Protection (DTCP) compliant playback but want to use competing technologies for making copies).

151. *Id.* at 15,912.

152. *See id.* (noting the dissent of the Antitrust Institute to DTLA's power).

153. *See id.* at 15,913 (asserting that an "automatic" approval requirement would diminish the value of DTCP).

154. *See id.* at 15,913–14 (concluding that the licensing mechanisms used by DTLA to approve downstream technologies can be a useful forum for facilitating coordination among technologies).

issue of interoperability, the FCC declared that it would only address interoperability in a limited oversight role.[155]

As part of this oversight role, the FCC would mediate disputes between product manufacturers and licensors.[156] When mediating these disputes, the FCC would presume that FCC-approved technologies should receive approval for downstream use from licensors.[157] If a licensor believes interoperability is infeasible, it must give specific reasons in writing for this belief.[158] The FCC would then handle the situation in accordance with its general procedures.[159]

Future regulation should be more proactive and should require downstream licensing for *any* FCC-approved technology.[160] One way to achieve this result is to require licensors to modify their compliance rules to allow the use of any FCC-approved technology to play back and record content encrypted with the licensor's technology.[161] This compromise leaves room for negotiation regarding other aspects of the licensing agreement.

C. Promoting Competition Among Protection Technologies

1. Approving Protection Technologies. The FCC made the shortsighted mistake of defining broadcast flag requirements and approving an initial set of protection technologies without adequately addressing how to create real competition between protection technologies.[162] Shockingly, months before the broadcast flag was to go into effect, the FCC had yet to finalize the protection technology approval process.[163] Instead, the FCC

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155. *Id.*

156. *See id.* (outlining procedures for addressing disputes between licensors and licensees).

157. *Id.* at 15,913.

158. *See id.* (emphasizing that the technology administrator must explain "with specificity, why interoperability is infeasible, whether due to technical incompatibilities, prohibitive costs, or other good cause").

159. *See id.* (offering a forum for resolving these disputes and defining the procedures for informal requests for Commission action); *see also* Informal Requests for Commission Action, 47 C.F.R. § 1.41 (2004) (setting forth the general principles).

160. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. at 15,913–14 (disputing potential technical incompatibility issues).

161. *See id.* at 15,912 n.344 (identifying two proposals by Philips to alleviate interoperability concerns).

162. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 22 (disagreeing with the FCC's decision to defer issues of promoting competition).

163. *See* Notice of Proposed Rulemaking, 17 F.C.C.R. 16,027, 16,028–29 (2002) (requesting comments on standards and procedures for approving new content protection and recording technologies in August 2002); Fligel, *supra* note 40, at 19 (mentioning the

left this issue open for consideration in a later rulemaking session.[164]

On August 4, 2004, the FCC approved thirteen technologies under an interim process for authorizing protection technologies.[165] As part of the interim protection technology approval process for publicly offered technologies, the FCC required a copy of licensing terms and fees as well as evidence that licensing would be available on a "reasonable and non-discriminatory basis."[166] Aside from evaluating licensing fees, the FCC is "reluctant to intervene in private industry negotiations."[167] The FCC believed it could best achieve broadcast flag goals in a competitively neutral manner by acting as an oversight body that defers to private licensing mechanisms while providing a remedial forum for aggrieved parties.[168]

The FCC did not explicitly state what fair use activities would be available for marked content.[169] Instead, the FCC allowed licensing agreements between protection technology licensors and device licensees to dictate the range of usage and restrictions on marked content.[170] For example, the approved technologies, collectively known as the 5C suite,[171] allow four

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interim protection technology approval process).

164. *See* Fligel, *supra* note 40, at 19 (noting the Commission's issuance of a "Further Notice of Proposed Rule Making to establish a permanent process for approving flag recognition technologies").

165. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R., at 15,878 n.5. The Commission listed thirteen technologies certified by the FCC: MagicGate Type R for Hi-MD Hardware, MagicGate Type-R for Memory Sticks, MagicGate Type-R for Hi-MD Software, MagicGate Type-R for Memory Stick Pro Hardware, SmartRight, Vidi, HDCP, CPRM, TiVoGuard, DTCP, Helix, WMDRM, and D-VHS. *Id.*; *see also* Fligel, *supra* note 40, at 19.

166. 47 C.F.R. § 73.9008 (2004) (defining an interim set of guidelines the FCC must follow when certifying protection technology); *see also* Digital Broad. Content Prot., 19 F.C.C.R. at 15,911 (explaining the FCC's interim process for reviewing publicly available output protection technologies).

167. Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. at 15,911–12 (referring to requests from the MPAA, Philips, Hewlett Packard, American Antitrust Institute, and Genesis Microchip to modify certain licensing terms of twelve of the technologies approved under the interim certification process on August 12, 2004).

168. *See id.* at 15,912 (expressing the FCC's hopes that acting in an oversight role will help avert potential disputes before they arise).

169. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 11, at 15–16 (using the 5C encoding rules as an example of permitted uses under a broadcast flag-compliant device).

170. *Id.* (listing the permitted usage and restrictions on use in each category provided by the 5C example).

171. *See id.* at 14 (noting that the FCC did not pre-approve any technologies when it issued its final broadcast flag rule). The four technologies that constitute the 5C suite are the DTCP, CPRM, HDCP, and D-VHS. *Id.* Each technology does different things and targets a different market niche, but together the technologies provide a broad range of options for protecting content within the consumer home environment. *See id.* (explaining

possible usage scenarios: copy freely, encryption plus non-assertion (EPN), copy one generation, and copy never.[172] EPN, which requires encryption of all copies and restricts digital transfer to other 5C-compliant devices, is the usage scenario most relevant to broadcast flag regulation.[173] Users can make an unlimited number of physical copies of flagged content as long as they restrict copying and playback to 5C-compliant devices that conform to the same restrictions.[174]

To ensure competition, the FCC should have appointed an independent standards-setting body to evaluate the reasonableness of licensing terms through the lens of an antitrust framework.[175] Protection technologies have generally resulted from informal working groups heavily influenced by content producers.[176] Copyrighted content producers may have interests that are contrary to the goals of promoting competition and innovation.[177] An independent standards-setting body can more effectively identify conflicts of interests that might negatively affect consumers.[178]

The FCC should have incorporated elements of the Department of Justice's (DOJ) patent pool review procedures into the final protection-technology-approval rule.[179] Several of the licensing authorities associated with approved technologies

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which niches each technology targets).

172. *See id.* at 15–16 (explaining the encoding rules under the 5C licensing agreement). Copy freely does not require encryption; therefore, the user may make unrestricted copies of the content. *Id.* at 15. EPN requires encryption of all copies, and only 5C-compliant devices will be able to decrypt the encrypted copies; users may make an unlimited number of copies on 5C devices. *Id.* Copy one generation allows the user to make a single copy of the content; users may not make copies of a copy. *Id.* Copy never means users may never make a copy of the content. *Id.* at 15–16.

173. *See id.* at 16 (clarifying the details of the EPN encoding rule).

174. *See id.*

175. *See* Letter from the American Antitrust Institute to U.S. and E.U. Competition and Telecommunications Authorities 5–6 (Mar. 22, 2004) (on file with the Houston Law Review), *available at* http://www.antitrustinstitute.org/recent2/310.pdf (addressing the dangers of leaving the development of digital content protection technologies to informal working groups, including the resultant dangers to competition, instead of a recognized standards-setting body that might more cogently address antitrust concerns).

176. *See id.* (listing DTCP, HDCP, and CPRM as examples of technologies that emerged from these informal working groups).

177. *Id.* at 6 (discussing the dangers of giving intellectual property owners the right to exclude others without oversight and noting that licensing agreements should have demonstrable procompetitive justifications).

178. *See id.* at 5 (demonstrating how a standards-setting body would more effectively address antitrust concerns).

179. *See* Opposition of the American Antitrust Institute, *supra* note 139, at 3–4 (making recommendations to the FCC regarding the final protection technology approval process); *see also* Antitrust Division Business Review Procedure, 28 C.F.R. § 50.6 (2005) (defining the procedures for requesting business review).

consist of collaborations between large companies.[180] For example, the 5C companies—comprised of Sony, Matsushita, Intel, Toshiba, and Hitachi—jointly license DTCP protection technology.[181] These joint licensing collaborations are agreements between two or more owners to package various types of intellectual property for the purpose of joint package licensing, commonly known as patent pools.[182]

Patent pools usually promote competition "by integrating complementary technologies, reducing transaction costs . . . and avoiding costly infringement litigation."[183] On the other hand, some patent pools can restrict competition among downstream products that incorporate pooled patents.[184] DOJ guidance regarding business review offers several requirements that are helpful in evaluating the anticompetitive potential of patent pools:

> With respect to patent pools, the DOJ has consistently required (1) that only complimentary [sic] and essential patents be included, (2) the presence of an independent decision-maker for the determination of essentiality and complementarity and for the resolution of disputes, (3) reasonable and nondiscriminatory ("RAND") license terms, (4) the opportunity to negotiate licenses individually with members of the pool, (5) the absence of unduly broad reciprocal IP obligations, and (6) procedures and guidelines for the protection of competitively sensitive information.[185]

In light of the third requirement, a full evaluation of a patent pool cannot occur until the licensor discloses all intellectual property conveyed in the license.[186]

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180. *See* Letter from the American Antitrust Institute, *supra* note 175, at 5–6 (identifying the large corporations behind the licensing and development of various protection technologies).

181. *Id.* at 5.

182. *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY 28–30 (1995), *available at* http://www.ocw.mit.edu/NR/rdonlyres/Sloan-School-of-Management/15-616Fall-2004/E747BABD-B482-429E-8A0C-18D3D97D6F3A/0/ip_guide.pdf (explaining the concepts of cross-licensing and pooling patents); Opposition of the American Antitrust Institute, *supra* note 139, at 3–4 (providing concrete examples of patent pooling with regard to content protection technologies, consumer electronics, and information technology products markets).

183. U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, *supra* note 182, at 28 (explaining the procompetitive benefits of patent pools).

184. *See id.* (noting the patent pool circumstances that can lead to anticompetitive effects); Opposition of the American Antitrust Institute, *supra* note 139, at 3.

185. Opposition of the American Antitrust Institute, *supra* note 139, at 4.

186. *See id.* (recommending full disclosure of underlying intellectual property transferred in license).

2. Disclosing Intellectual Property. The FCC did not require disclosure of intellectual property because it believed requiring licensors to submit licensing terms for review would adequately protect against anticompetitive tendencies.[187] Licensing of approved technology without disclosure of underlying patents contained in the license is a dubious policy choice.[188] Without disclosure, no basis exists for evaluating the subject of the license or the risks the license creates.[189] Of the thirteen technologies initially certified by the FCC's interim authorization process, four of the technology licenses included a reciprocal non-assert clause.[190] Under the reciprocal non-assert clause, licensees agree not to assert infringement claims with regard to their own intellectual property against licensors.[191]

In the interests of promoting competition and innovation, future regulation must learn from the FCC's policy mistake of allowing reciprocal non-assert licensing arrangements without requiring licensors to disclose underlying patents.[192] This policy combination leaves licensees at a competitive disadvantage.[193] Compelling disclosure of underlying patents is the more prudent policy choice.[194] If a licensor does not disclose underlying patents, there is no way for a licensee to know the scope of the rights that is being given up by agreeing to the reciprocal non-assert clause.[195] Reciprocal non-assert provisions discourage competition

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187. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. 15,876, 15,916 (2004) (noting that the FCC's review of licensing terms will help protect the marketplace and consumers from unnecessary costs or anticompetitive constraints). The FCC has noted that although it historically has evaluated underlying patent rights of technologies for mandatory technical standards, the broadcast flag order is *not* an adoption of a *single* federal standard. *See id.* (admitting that at the early stages of protection technology approval, there will be limited options, which might raise issues similar to those seen with the adoption of a single standard).

188. *See id.* (suggesting that without a "sufficient evaluation of the underlying patent rights," monopoly rights may be inadvertently "extended through standardization").

189. *See id.* (explaining that disclosure of the underlying patent is necessary to realistically evaluate the protection technology's impact on cost, and that without disclosure one cannot evaluate the competitive impact of a given protection technology in terms of its potential to create a monopoly via standardization).

190. *Id.* at 15,914 (identifying the protection technologies that adopted a necessary claims and reciprocal non-assert licensing scheme). The four technologies that employed a reciprocal claims and non-assert licensing approach are DTCP, HDCP, CPRM, and MagicGate. *Id.*

191. *Id.*

192. *See id.* (detailing the disputes surrounding necessary claims and reciprocal non-assert licensing).

193. *See id.* (relating Genesis Microchip's opposition to Sony MagicGate's certification).

194. *See id.* (presenting Genesis Microchip's argument in favor of disclosing underlying patents).

195. *Id.*

and innovation because such provisions "cause barriers to entry that require adopters to forfeit their intellectual property in direct contravention of the Commission's reasonable and nondiscriminatory patent licensing policy."[196] In light of the harmful ramifications of allowing reciprocal non-assert clauses, the FCC should have prohibited their use without full disclosure of underlying intellectual property.[197]

3. Promoting Novel Forms of Fair Use. Although the FCC made several policy mistakes, they got at least one overarching policy choice right. The FCC's decision to approve Internet-enabled protection technologies that promote novel forms of fair use helps preserve consumers' fair use activities and encourages companies to fashion new forms of fair use to fill the void left by the broadcast flag.[198]

Some groups feared that the FCC's authorization process for new technologies would prevent the approval of innovative Internet technologies.[199] The FCC alleviated those fears in August 2004 when it approved TiVo's controversial TiVoGuard technology.[200] TiVoGuard allows owners of TiVo digital video recording devices to play back recorded content on up to ten networked devices within the Secure Viewing Group.[201] For example, a computer equipped with a piece of hardware that contains protected cryptographic information could serve as an authorized playback device.[202] This technology enables innovative fair use scenarios, such as streaming recorded television shows to

196. *Id.* (opposing reciprocal non-assert clauses, Philips contends that they form entry barriers and forfeiture of IP rights).

197. *See id.* at 15,915 (highlighting the American Antitrust Institute's belief that a reciprocal licensing obligation ensures reasonable and nondiscriminatory compensation for innovation).

198. *See* CTR. FOR DEMOCRACY & TECH., ALL EYES ON TIVO: THE BROADCAST FLAG AND THE INTERNET 5 (2004), *available at* http://www.cdt.org/copyright/20040726tivoflag.pdf (explaining the importance of approving Internet-enabled technologies—specifically TiVo—in order to reaffirm the narrow scope of broadcast flag regulation).

199. *See id.* (arguing for the approval of Internet-enabled technologies that are secure and limited).

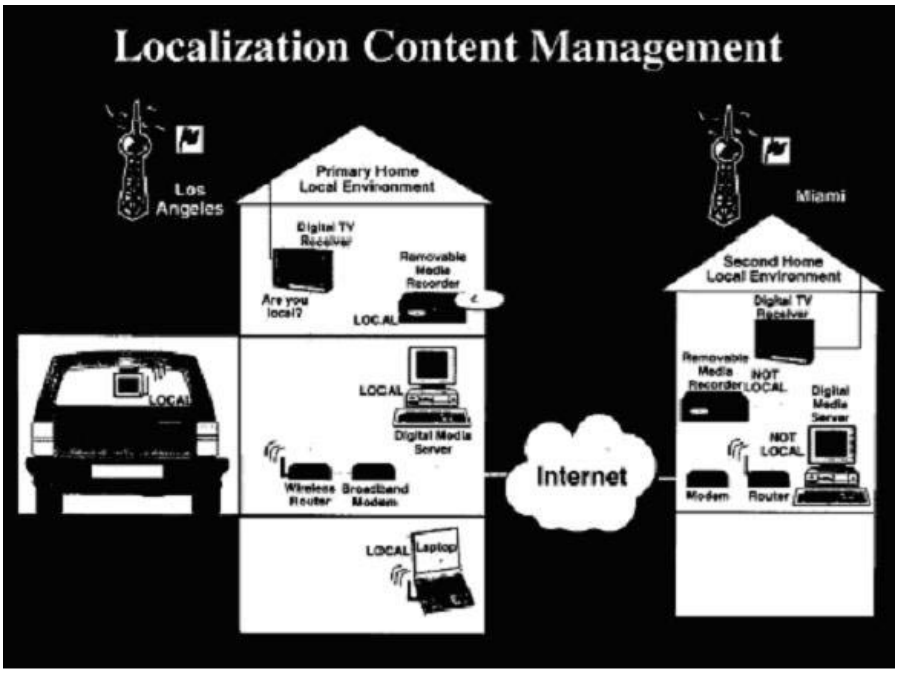
200. *See* Digital Output Prot. Tech. & Recording Method Certifications, 19 F.C.C.R. 15,876, 15,925 (2004) (certifying TiVoGuard, among other technologies, as a broadcast flag-compliant protection technology).

201. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 198, at 3–4 (explaining how TiVoGuard's Secure Viewing Groups operate).

202. *See id.* at 3 (emphasizing that limiting each device to a single Secure Viewing Group prevents subscribers from "daisy-chaining" devices to create large sharing networks).

a vacation home over the Internet, or transferring a TiVo-recorded show to a laptop for viewing on an airplane flight.[203]

The MPAA opposed approval of TiVo's technology on the grounds that TiVoGuard does not observe any distance-based limitations for content transmission.[204] The MPAA lobbied for localized content management, which limits access to devices to the immediate vicinity of the DTV receiver.[205] A consumer's yard, garage, or driveway are examples of local destinations.[206] In a slide presented to the FCC by the MPAA in an ex parte communication, the MPAA graphically depicted this local-nonlocal distinction:[207]



203. *See id.* at 3–4 (providing a scenario of innovative fair use enabled by TiVoGuard technology).

204. *See id.* at 4 (presenting the MPAA and NFL's objections to TiVo's technology).

205. *Id.*

206. *Id.*

207. *Id.*

The local-nonlocal distinction is inappropriate, because it is outside the scope of the broadcast flag ruling.[208] The explicit and narrow goal of the broadcast flag is to prevent the indiscriminate redistribution of flagged content over the Internet or through similar means.[209] TiVoGuard clearly met this objective, and the FCC's approval of TiVoGuard sent a clear message that the FCC considers secure Internet technologies to be a valid means of accomplishing broadcast flag goals.[210]

V. CONCLUSION

Broadcast flag regulation would have been a victory for content owners in their war against piracy of copyrighted works. This Pyrrhic victory would have been detrimental to fair use, an essential element in the advancement of social discourse. Prior to the broadcast flag, consumer fair use of recorded television encompassed a wide sphere of possibilities, limited by judicial discretion. This freedom enabled a consumer to spread the gospel of television. If the D.C. Court of Appeals had not struck down the broadcast flag,[211] however, fair use today would resemble a mere magic eight ball. Reducing the complex fair use determination down to a binary yes or no question stultifies the fair use doctrine.

Imagine the possible negative effects the broadcast flag would have had upon the fair use scenarios provided at the beginning of this Comment.[212] The student who records an episode of *24* to a videotape using her broadcast flag-compliant VCR is unable to transfer the contents to her computer because the computer is not broadcast flag-compliant. She can bring the videotape to class, but she cannot play back the recorded content because the school's VCR does not support the protection technology used to encrypt the recording.

The scenarios unfold very differently with the knowledge chain broken off at the student. Broadcast flag regulation would have prevented the student's peers, her teacher, the lawyer, and countless others from sharing in the benefits of the recorded content. The broadcast flag would have cost the American public

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208. *See id.* at 5 (disagreeing with the local-nonlocal distinction).

209. *See supra* note 8 and accompanying text.

210. *See* CTR. FOR DEMOCRACY & TECH., *supra* note 198, at 1–2 (commenting that the FCC's certification of TiVo's technology not only expresses its approval of the technology's viability, it is also a statement that innovative forms of secure and limited transmission over the Internet can receive certification).

211. Am. Library Ass'n v. FCC, 406 F.3d 689, 708 (D.C. Cir. 2005).

212. *See supra* Part I (providing a chain of fair use scenarios for consideration).

an invaluable fraction of the fair use spectrum. Although the broadcast flag is dead for now, policymakers should learn from flaws in the FCC's broadcast flag policies. Lessons gleaned from an autopsy of these policies will be invaluable to policymakers as they develop a future solution to television piracy that will effectively curb piracy yet preserve fair use.

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