

Wired Shut: Copyright and the Shape of Digital Culture

By Tarleton Gillespie

Cambridge, MA: The MIT Press, 2007, ISBN-13: 978-0-262-07282-3

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Journal of High Technology Law

Suffolk University Law School

Through digital rights management (DRM), motion picture and recording industries (content producers) are increasingly seeking technological, rather than legal, means to protect their intellectual property (IP).¹ Amidst stories of continuing music “piracy”, revenue lost by recording artists, and legal action against college students who have illegally downloaded songs via the internet, building a better mousetrap by incorporating IP protections into digital goods seems attractive.² As with all things, however, DRM’s benefits must be weighed against its costs. In *Wired Shut: Copyright and the Shape of Digital Culture*, Tarleton Gillespie³ examines how DRM’s restrictions on the use and distribution of content may impact digital culture.

The purpose of Gillespie’s book is to consider DRM’s technological tools—its “artifacts”—within their broader social and political context so that the reader may fully understand the controls that content producers are developing.⁴ Gillespie points out that society is becoming more and more reliant upon technological fixes to social problems. “We hope

¹ In digital format, music, documents, or other creative content is stored as code (numbers) that can be encrypted so that it is readable only with a key. <http://computer.howstuffworks.com/encryption1.htm> (last visited Oct. 7, 2007). Unlike content in analog format (cassette tapes, records, and traditional television and radio broadcasts), content in digital format is susceptible to perfect reproduction when left unencrypted. Content produced in analog format (which involves reproduction of a sound wave) degrades from age or continued copying.

<http://entertainment.howstuffworks.com/question7.htm> (last visited Oct. 7, 2007).

² See, e.g., Jefferson Graham, [RIAA chief says illegal song-sharing ‘contained’](#); [Double-digit piracy growth hits Hollywood, though](#), USA Today, June 13, 2006, at 1B; Heather Laroi, [Illegal music use is costly for UW](#), The Wisconsin State Journal, Oct. 14 2007, at D1.

³ Gillespie, an Assistant Professor in Cornell University’s Communications Department, holds a PhD in Communications. Prior to joining Cornell’s faculty, he wrote as a freelance journalist for the San Diego Union-Tribune. He has authored several publications on subjects related to digital rights management. <http://www.tarletongillespie.com> (last visited Oct. 7, 2007).

⁴ TARLETON GILLESPIE, *WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE* 8-9 (2007).

trigger locks will reduce violent crime, cameras and facial recognition algorithms will ensure privacy and public safety, smart ID cards will squelch terrorism, the V-chip will protect children from images of sex and violence,” he writes.⁵ This faith in technology, often misplaced, allows DRM to gain acceptance as a solution to the problem of music and movie piracy. DRM needs to be recognized as more than just technology, however. In chapters dealing with copyright law, social and political theory, and content producers’ communications strategy, Gillespie provides the context required to meaningfully evaluate all facets of DRM. With the reader thus prepared, the author moves on to examine DRM systems that have been implemented and attempted.

In order to be effective in controlling the distribution of digital media, Gillespie explains, DRM requires the creation of a regulatory regime—referred to as a “trusted system”—made up of artifacts (encrypted goods and trusted devices capable of decrypting them for playback), industry agreements (between content producers and device manufacturers), and legal protection (to discourage circumvention of DRM protections). The author highlights some significant shortcomings of this system: it provides IP owners with absolute control over content (even though this has been historically rejected by copyright law), lacks flexibility and political transparency, and treats users of IP as consumers of culture rather than contributors to it.

For those unfamiliar with copyright law, Gillespie tells readers that authors and inventors have never enjoyed an absolute right of ownership in IP. Quite the contrary, by specifying that Congress has the authority to “promote the Progress of Science and useful Arts” by securing—for a limited time—authors’ and inventors’ “exclusive right to their respective writings and discoveries,” the copyright provision of the Constitution clearly seeks to balance individual and public interests.⁶ IP owners are given an opportunity to profit, but it is granted primarily for the

⁵ *Id.* at 1.

⁶ U.S. Const. art. I, §8, cl. 8.

sake of encouraging the public availability of their work. Additionally, copyright law has developed “fair use” provisions that create exceptions to IP owners’ limited exclusive rights by allowing reproduction of their works for “criticism, comment, news reporting, teaching, scholarship, or research.”⁷ The author describes fair use as a “safety valve” that prevents copyright owners from impairing the free expression of individuals who engage in the aforementioned activities.⁸

Gillespie warns that DRM threatens to undermine fair use because its artifacts lack flexibility. Encryption and trusted devices, like walls and speed bumps, prevent IP user actions (such as reproduction) without regard for whether they are legal.⁹ Just like a speed bump is unable to offer an exception for a driver with a medical emergency, the author explains, DRM is unable to accommodate a fair use in timely fashion (because redesign would be required). Moreover, if an IP owner’s assent to a fair use would subject his work to criticism, the use may not be accommodated at all. If a police officer with a stop sign is used in place of Gillespie’s speed bump, or copyright law is used instead of DRM to protect IP, individuals can determine their own conduct and argue for it to be excused under the law. For a fair use such as news reporting, which requires timely access to information, copyright law’s approach is preferable to DRM.

Next, Gillespie cautions that DRM lacks political transparency because it regulates conduct through the use of software code that is inaccessible to most individuals. While the law’s public formation and adjudication allows for scrutiny, DRM’s success depends upon secrecy. In DRM’s trusted system, content is released in encrypted code, and decryption keys

⁷ 17 U.S.C. §107 (2007).

⁸ GILLESPIE, *supra* note 3, at 30.

⁹ For example, digital television (DTV) receivers that obey encrypted instructions to prevent reproduction may stop the fair use of “time shifting”—recording a program from one time slot for viewing in another—by consumers wishing to play the recorded content on a device other than that allowed by the trusted system. *Id.*

are provided exclusively to device manufacturers that produce hardware that limits reproduction or other uses of IP. The devices are then built with “robustness” features, which are measures that prevent discovery of decryption codes.¹⁰ Lastly, individuals possessing the expertise to examine the inner workings of DRM’s devices are discouraged from doing so by legal prohibitions on circumvention of DRM protections.¹¹ By thoroughly examining these aspects of the trusted system, Gillespie makes clear the difficulty in seeing what goes on within it. Although a trusted system protects DVD content, the author suggests it is unlikely that many people look beyond their DVD player’s lack of a record button to see the system responsible for their inability to record.

Finally, Gillespie expresses concern that expanded use of DRM could limit cultural exchange occurring via the internet through the implementation of intricate and discriminatory payment schemes for IP.¹² As individuals encounter a digital culture that is increasingly pay-per-use, they may come to accept a paradigm—fostered by content distributors—that views them as consumers of culture rather than contributors to it.¹³ Although the effect of this phenomenon cannot be fully predicted by Gillespie, it would represent a dramatic change to today’s internet culture, wherein a wide variety of creative content is exchanged free of charge. Gillespie reminds readers that today’s internet—which began as a military project designed to allow

¹⁰ One manufacturer’s failure to adhere to robustness rules resulted in hackers gaining access to DVD decryption codes and sharing them on the internet. The hackers and the manufacturer faced legal action by content producers. GILLESPIE, *supra* note 3, at 228.

¹¹ The Digital Millennium Copyright Act (DMCA) prohibits circumvention of digital copyright protection features. 17 U.S.C. § 1201 (2007).

¹² Regional coding is already added to DVDs and allows the release of movies to different regions at varied times and prices. A DVD released into the U.S. market is encoded to prevent its playback in a European DVD player and vice versa. GILLESPIE, *supra* note 3, at 264.

¹³ Separate payment might be required for viewing and printing, for example. Some e-books have already been designed to disable the read-aloud function, creating difficulty for the blind and visually impaired until circumvention was eventually allowed. See Kate M. Manuel & Brian T. Yeh, *The Digital Millennium Copyright Act: Exemptions to the Prohibition on Circumvention*, Congressional Research Service Report for Congress, at 10 (2007).

personnel in the field to utilize remote computing power for calculations—only exists because of the collaboration of scholars who reshaped the network into a tool for sending messages.

Amidst the drawbacks of DRM, Gillespie examines the justifications offered for it. As technology has evolved (producing digital audio tapes, video cassette recorders, compact disks, digital video disks, and the internet), content producers have warned that movie and music artists would be seriously harmed by the increased ease of unauthorized content reproduction and redistribution. Moreover, content producers have argued that artists will be forced to withhold content if it—and the artists’ opportunity to profit—is not protected. Although copyright law already provides IP protection, this fact is overshadowed by carefully constructed rhetoric designed to characterize the internet as an economic and a moral threat to artists.¹⁴ By presenting DRM as a way to avoid the withholding of content, so that a robust internet culture may be preserved, content producers have portrayed DRM as the savior of individual choice. Placed in the context Gillespie provides, however, it appears that DRM may be just the opposite.

Although content producers succeeded in convincing Congress to provide legal protection for DRM through passage of the Digital Millennium Copyright Act (DMCA), Gillespie tells readers that the use of trusted systems has been limited thus far.¹⁵ A system was established to protect DVD content, but efforts to establish one for CD content—through the Secure Digital Music Initiative (SDMI)—failed. Gillespie examines SDMI’s development, and attributes its failure to the competing interests of content producers (seeking to protect intellectual property), and device manufacturers (interested in offering portable music players with few restrictions). By the time SDMI discussions began, consumers were already seeking

¹⁴ The term “piracy”, for example, conjures up images of plunder on the high seas of the internet. This highlights theft, but ignores the existence of legal reproduction of intellectual property. GILLESPIE, *supra* note 3, at 115. When the VCR was introduced in 1982, the Motion Picture Artists of America’s lobbyist, Jack Valenti, compared the device to the Boston Strangler. *Id.* at 111.

¹⁵ See *supra* note 11.

new ways to enjoy the music they acquired online (legally or illegally).¹⁶ On the other hand, DVD's were introduced in encrypted format and their DRM restrictions did not conflict with existing consumer expectations. Furthermore, anticipated DVD sales provided leverage to secure hardware manufacturers' agreement to design devices with DRM features.¹⁷

As television moves from analog to digital transmission (as mandated by the federal government), content producers and device manufacturers have reached agreement on a DRM strategy to protect broadcast content. Gillespie details the "broadcast flag" (a series of bits incorporated into broadcast content), which instructs "downstream" devices (those on the receiving end of a broadcast, such as computers, digital video recorders, and DVD players) to encrypt broadcast content and impose restrictions upon its use (preventing rebroadcast or transfer to other devices). Circumvention of the flag would be prevented by Federal Communications Commission (FCC) licensing of all downstream devices, and by the legal protection provided by DMCA.

The FCC attempted to implement the broadcast flag, but its rules were struck down by the District Court of Appeals for the DC Circuit in 2005.¹⁸ Although Gillespie alerts readers that the broadcast flag proposal returned to Congress shortly thereafter, he provides no coverage of subsequent developments (apart from mentioning 2006 hearings in a footnote), which is sure to leave readers in suspense. This is unfortunate, because an examination of the Senate Commerce Committee hearings on the broadcast flag would have complemented Gillespie's arguments. Witnesses voicing fair use concerns highlighted practical problems with the broadcast flag (due

¹⁶ SDMI was attempted after the MP3 format had gained popularity and was being rapidly exchanged on the internet. GILLESPIE, *supra* note 3, at 151.

¹⁷ Expectations for DVD sales were met, with 250 million households owning a device capable of playing a DVD within 6 years of the disk's introduction. GILLESPIE, *supra* note 3, at 170.

¹⁸ The Court held that the FCC did not possess the authority to regulate downstream devices without explicit Congressional authorization. *American Library Ass'n. v. F.C.C.*, 406 F.3d 689 (C.A.D.C. 2005).

to its lack of flexibility).¹⁹ Additionally, some individuals recognized the flag’s potential to diminish civic debate occurring via the internet, and suggested that news and public affairs programming should not be flagged.²⁰

The hearings also revealed that some legislators share Gillespie’s skepticism. In his remarks, Senator John Sununu (R-NH) traced the history of new technology’s perceived threats to the entertainment industry and made it clear he was unconvinced that “the sky is really falling this time” with the advent of digital television and radio.²¹ While his colleagues focused on how a broadcast flag should be designed, Sununu encouraged them to reconsider the issue of whether a flag is even necessary.²² Most importantly, he reminded them that the history of government intervention shows that it “always restricts innovation.”²³ Notwithstanding calls for legislative restraint, the broadcast flag proposal was approved by the Senate Commerce Committee and incorporated into a larger package of telecommunications reforms in 2006.²⁴ The legislation never made it to the Senate floor for a vote, however.

Wired Shut is not only a book you should read; it is one that you should share (by sending a lawfully purchased copy to your representatives) before Congress revisits broadcast flag legislation. Gillespie does an exceptional job of placing DRM in a broader context that enhances his readers’ understanding and apprehension of DRM trusted systems. Although DRM is often

¹⁹ Libraries and Universities explained that the flag might render much of their archival and distance learning equipment obsolete. See *Broadcast and Audio Flag: Hearing Before the Senate Commerce Comm., 109th Cong. 9-11 (2006)* [hereinafter *Hearings*] (affidavit of Paul M. Gherman, Vanderbilt University Librarian), http://frwebgate.access.gpo.gov/cgi-bin/useftp.cgi?IPaddress=162.140.64.181&filename=29917.pdf&directory=/diska/wais/data/109_senate_hearings (last visited Oct. 7, 2007); *Id.* at 14 (affidavit of Peggy E. Hoon, North Carolina State University Scholarly Communication Librarian).

²⁰ *Hearings*, at 26 (prepared statement of Leslie Harris, Executive Director, Center for Democracy and Technology).

²¹ *Hearings*, at 42.

²² *Id.* at 41.

²³ *Id.* at 43.

²⁴ In addition to a video broadcast flag, the legislation included a provision for an audio broadcast flag to be applied to digital satellite and terrestrial broadcasts. See *A bill to amend the Communications Act of 1934 and for other purposes*, S.2686, 109th Cong. § 451-54 (2006).

discussed as a way to protect music and movies from piracy, it could easily be used to restrict access to (and extract profit from) an increasing amount of information that is delivered in digital format. Gillespie's book is valuable because, as they say, forewarned is forearmed.