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If my right to extend my fist stops at your nose, does Michael Eisner's right to extend his "spyware" stop at your Personal Video Recorder (PVR)? Usually, but Eisner and his Hollywood chums have rights, too. The video pirate who crashes a pre-theater screening of J-Lo's latest, with a mini-camcorder to lift a pre-release print for black market production and distribution to your PVR, is a thief—one without the celluloid charm Cary Grant lavished on Grace Kelly, to be sure. Drawing a line between bookend extremes—purely personal use and commercial thievery—is essential, to give digital content providers maximum incentive to adopt digital broadband distribution. Most copiers are not true pirates.

To be sure, it is hard to be overly sympathetic to the Hollywood set. The studios vehemently decry counter-terror measures taken by the Bush Administration as intrusive threats to civil liberties, all the while aiming to burrow into the innards of your PC, DVD player, VCR and PVR, to protect their precious copyrights. But copyright is a legitimate legal concept, indeed, one enshrined in the U.S. Constitution. Among the powers it delegates to Congress is:

> To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.[1]

The United States has taken an "instrumentalist" view of copyright that balances owner and user rights, in contrast to Europe's embrace of the "natural rights" doctrine, which sees such rights existing prior to societal creation. Curiously, the leading homegrown instrumentalist, Thomas Jefferson, was also America's apostle of pre-political natural rights (a concept borrowed from 17th century English philosopher John Locke). The author of the world's most celebrated expression of natural rights was the nascent republic's first secretary of state, and thus first in charge of patents and copyrights. As founding father of our intellectual property rights, Jefferson set forth his instrumentalist perspective:

> Stable [property] ownership is the gift of social law, and is given late in the progress of society. It would be curious then, if an idea, the fugitive fermentation of an individual brain, would of natural right be claimed in exclusive and stable property. If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea…..Its peculiar character, too, is that no one possess the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.[2]

Digital property maven James DeLong maintains that "natural rights" theory is the basis of copyright, citing a 1783 Massachusetts Legislature statement that the "security [of] learned and ingenious persons [to the] fruits of their study and industry [is a] natural right of all men, there being no property more peculiarly a man's own than that which is produced by the labor of his mind."[3] But if copyright is a natural right it is unique: Unlike natural rights embedded in the Constitution, such as freedom of speech and worship, or due process of law, copyright protection is limited in three ways: in *time* (albeit unspecified), *entitlement* (authors and inventors) and *utility* (the material must be "useful"). By contrast, natural rights are deemed pre-political in character. They are thus " unalienable" by their possessors, whereas copyrights are alienable.

Guided by the Sage of Monticello, American copyright confers on holders a limited exclusive right as to creative product, codified in statute and modified by "judicial gloss" (court rulings). The right is subject to superior access rights of the public, with many statutory exceptions. It is not a classic economic monopoly either, which as DeLong notes implies a monopolist's ability to extract supra-competitive profits.[4] Just how limited the right has been is encapsulated in the words from Justice Stevens's majority opinion in the famous *Betamax* case, in which the Supreme Court held that video home recording did not violate copyright ownership rights, due to the existence of substantial non-infringing use of the devices (*i.e.*, time-shifted television program viewing):

> *The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved*. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired.[5]

Then, after quoting earlier High Court cases that placed primacy of public purpose over the secondary rights of the copyright owner, Justice Stevens stated that "[copyright] protection has never accorded the copyright owner complete control over all possible uses of his work."[6]

Justice Stevens also addressed the "theft" analogy favored by the studios: The use of stolen property is irrelevant to the criminal character of the theft; the property owner's rights against theft are supreme as against all others, not a special reward of limited exclusive use subordinate to rights of public access.[7]

In 1991 the Supreme Court re-affirmed that the primary purpose of copyright law is to promote progress in science and useful arts and not to dispense private rewards to creators.[8] Indeed, a 1922 Supreme Court holding went further: "The *sole* interest of the United States and the primary object in conferring the monopoly lie in the general benefits derived by the public from the labor of authors."[9]

The consequences of excessive tilt towards the rights of copyright holders is graphically illustrated by the family of the late Reverend Dr. Martin Luther King suing news organizations who have aired footage of King's landmark "I Have a Dream" speech; CBS news was sued for airing nine minutes of Dr. King's speech as part of a documentary, and USA Today was sued for re-printing the speech text on the thirtieth anniversary of the event; both cases were settled out of court.[10] One of the seminal civil rights orations in American history was thus transformed into the private pecuniary domain of a family determined to profit maximally from the fame of one of the most significant figures in twentieth-century American history. Valuable public access rights have thus been denied.

"Fair Use" Is In the Eye of the Beholder

The common law doctrine of "fair use" of copyrighted material permits some lawful use of otherwise protected creations. Fairness being famously plastic, numerous court decisions carved out niches for various kinds of use. In 1976, Congress amended the Copyright Act of 1909 to codify in statute, without any intended changes, the body of judicial common law of fair use that had accumulated since 1909. The law enumerates four factors in determining the validity of a user's claim of fair use: (1) the "purpose and character" of the use, including whether it is commercial or non-profit educational use; (2) the "nature" of the copyrighted work; (3) the "amount and substantiality" of the use, relative to the work as a whole; (4) its effect on the work's "potential market or value."[11] The House Report that accompanied passage of the 1976 law called the fair use doctrine "an equitable rule of reason."[12]

In the new economy, line drawing argues for the extension of old economy "fairness" to the world of digital content. But certain characteristics of digital production, transmission, storage and replication significantly alter the potential for unfair use, and arguably justify adjusting boundary lines to conform to the empirical reality of the new media. Hollywood sees its business models imperiled; users see their privacy and rights of free expression equally put at risk.

It is important to grasp that lawful fair use does not require consent of the creator; it is, rather, a set of uses sanctioned by law, to which the copyright owner must consent (the so-called "compulsory license"). The Electronic Frontier Foundation believes that "digital rights management" enables private parties to control user access so as to snuff out fair use privileges long recognized in law:

> "Architecture is policy." Since control and regulation are primarily imposed by computer code in the digital environment, the way these systems are designed architecturally dictates the way society may use creative expression in a digital world.[13]

One way to examine competing rights of use is to divide problems into three categories: (1) purely commercial use; (2) purely personal use; and (3) non-commercial, non-personal use—*i.e.*, freely sharing copyrighted material. But the digital realm is, alas, not so neat: The ease of immediate, near-zero-cost global electronic public distribution of perfect electronic clones makes separating the latter two categories a daunting task.

Purely Commercial Use: Is Thine Mine?

If filmgoers can copy a bootleg *Matrix Reloaded* onto their hard drives or DVDs before the pre-release file is re-loaded into theaters, does *Matrix Revolutions* make it to the Silver Screen? Such an outcome would give the cultural curmudgeons among us no-small amount of *schadenfreude*. But if such piracy is not deemed theft, than we have reached the purest form of communism yet devised, one without any concept of private property. It is a price too steep to pay for the pleasures of cultural revenge. For pure pirates, send for the Navy.

To begin with, contrary to cyber-dreamers, information usually does *not* want to be free. Information, of course, is inanimate, while volition is the province of those who create, use or, as may be the case, lose it. Some creators, most notably World Wide Web creator Tim Berners-Lee, give it away. But most, including denizens of Tinseltown, prefer Alexander Hamilton's commercial republic (all the while styling themselves creators in the mold of Thomas Jefferson, Hamilton's mortal rival, but rejecting Mr. Jefferson's narrow instrumental copyright view). Commercial use is, properly, the most stringently restricted under copyright laws. Cyber-romantic "information wants to be free" incantations would, if obeyed, undermine two centuries of balancing competing private and public claims.

Purely Personal Use: Who May Invade One's Digital Domicile?

You purchase online and download a digital copy of *Alice in Wonderland* in e-book format, and must surrender as a condition of purchase all rights of reproduction—including (no, you are *not* hallucinating) reading it aloud to your kids.[14] Or try this: The author of a copyrighted work decides to circumvent copy-protection on his DVD player, to make a back-up copy of his own work—and the moment he does so, he breaks the law, per the Digital Millennium Copyright Act (DMCA).[15]

The author Jessica Litman has observed that for two centuries--from 1790, when Congress passed the first federal copyright law, to its 1992 enactment of the Audio Home Recording Act—statutory limitations on reproduction of copyrighted material were aimed at *commercial* copying. The 1992 law, by mandating that vendors of audio home recording devices embed technology limiting serial copying capability, brought copyright law to bear against *non-commercial* use. With the DMCA, passed in 1998, Congress imposed a blanket prohibition against attempts to circumvent anti-copying technology.[16] Litman further notes that a "fair use" defense has yet to prevail against copyright infringement claims made against users who circumvent technology protection schemes.[17]

In response to this trend, Congressman Rick Boucher introduced the Digital Media Consumers' Rights Act in January 2003, by which traditional rights of non-infringing fair use would be restored to users who circumvent copy protection.[18] Senator Sam Brownback introduced the Consumers, School Users, and Libraries Digital Rights Management Awareness Act of 2003 to protect privacy rights from excessive vendor intrusion. Specifically, the bill would require judicial approval of subpoenas of personal information, based upon a factual, evidentiary showing. This would put a stop to companies using DMCA to serve subpoenas without even going to court. Further, it would require congressional authorization for access control and redistribution control rules imposed upon vendors, and then only with adequate notice to consumers as to what limitations on device capability are thereby incorporated into affected products.[19]

Digital domicile raises the issue of privacy, a right oft cited in the intellectual property debate. Litman and others distinguish—correctly—between property rights and privacy rights. Property rights are designed to promote voluntary transfer; privacy rights, by contrast, aim to keep certain information secure. Treating private information as personal property could subject it to a body of law designed to foster the very thing—transfer—privacy advocates seek to limit.[20]

In the hyper-democratized world of the World Wide Web, every online user has access to his own virtual global, distributed digital domain. What extensions, if any, should attend personal use? The purchaser of a DVD surely can physically take it upstairs and play it on a second DVD player. In principle, then, electronic transfer of the digital file encoded on the physical DVD should equally be permissible. Taking the DVD physically next door is also obviously permitted. Should sending it electronically next door also be permitted, or does this go too far down the slippery slope? If a music teacher instructs pupils online, can he distribute to the class his annotated copy of the music being played, as educational fair use? What if instead he sends the file to a friend, without educational intent?

In a widely-noted recent federal court decision, Verizon was ordered to turn over, in response to a subpoena from the Recording Industry Association of America (RIAA), the name of an Internet customer who downloaded 600 songs and made them available to the world via peer-to-peer file-sharing. After noting that copyright infringers have "little expectation of privacy," the Court added:

> And if an individual subscriber opens his computer to permit others, through peer-to-peer file-sharing, to download materials from that computer, it is hard to understand just what privacy expecta-

tion he or she has after essentially opening his computer to the world.[21]

Purely personal use merits placing strong limits on enforcement tactics. Large-scale peer-to-peer traffic should be detected at the server nodes inside the Internet domain. Prowling around home devices to micro-police user behavior confers powers to digital copyright holders never dreamed of in the analog world. It means policing *every* user, most of whom who do not invite the world to search their hard drives for accessible entertainment material. *The flip side of digital vulnerability is digital power: ease of mega-replication meets concomitant ease of distant creator control over user devices*. Content providers should be able to pursue large-scale diversion of their product, but not the small stuff. As with the physical analog world, small diversions should be regarded, per Sydney Greenstreet in *Casablanca*, as "incidental carrying charges."

Non-Commercial and Non-Personal: Digital Boundaries

If, as argued above, I can send a DVD file electronically upstairs inside my home instead of porting it via "sneaker-net," how can I be stopped from shipping the same file to my e-pal in Katmandu? With digital the devil lies in such details, for digital file transfer is equally easy to both destinations.

Hollywood would have draconian enforcement on its behalf. The folks who fear Attorney General John Ashcroft's minions tapping into their PCs wish to tap into every suspect's DVD player, VCR and PVR as well. But avoiding another 9/11 by tracking terrorists in cyberspace is surely a vastly more compelling interest than protecting Disney's bottom line. Punishing the student who shares an MP3 file with a college chum must be proportionate.

Or should the student be punished at all? How much protection for its business model is an industry entitled to? Horse and buggy fans, take note. If I can use a zapper to fast-forward past commercials in time-shifted taped TV shows, why not an automatic one inside my PVR? Is advertiser-supported TV a constitutional right? Hollywood cited zappers as one reason home video time-shifting violated copyright, a position the Supremes rejected. But Hollywood is nothing if not persistent; it sued PVR manufacturer Sonic Blue to kill automatic zapping functionality on its ReplayTV 4000 model. Movie moguls take the position that when they sell a video to an intermediary who inserts commercials, what results is a "derivative work"—one of five classes of copyright-protected material.[22] But if viewers can zap commercials manually, is it logical that they cannot buy equipment that does so automatically? Traditionally, "derivative" has meant alteration of the program itself, not inserting ads; editing Casablanca so Rick marries Ilsa would create a derivative work. Does inserting commercials that stand separately do the same? With no court ruling, Congress should reverse the industry on this.

Further complicating matters is that adults are not much more sympathetic to copyrights on downloaded music than do the kids; a recent survey found that 76 percent of the 35 million adults who download music files online do not believe such material merits copyright protection, an attitude shared by 65 percent of the 26 million adults who share files online. (There is group overlap: 42 percent of downloaders also share files.) At 41 percent usage, broadband users download songs more often than their narrowband cousins. And what kids don't learn from Hollywood they learn from mom and dad: 58 percent of parents say that copyrights don't matter (versus 75 percent of non-parents).[23]

These figures should be kept in mind, in terms of how realistic it will be to back highly-intrusive enforcement of digital rights. Further, the profits accruing to today's performers—vast in the case of megastars—reflect not merely their own efforts. Global distribution networks and promotional impetus hugely amplify the earnings of today's stars. Today's movie comedians make many times what Charlie Chaplin made, by meshing the positive economic synergy of immense distribution networks with the enormous purchasing power of today's global consumers. Having benefited hugely from this marketplace, it is not unreasonable to ask content creators and vendors to make reasonable compromises and temper their zeal for monitoring America's homes.

Under the legalistic rubric of "digital rights management," the traditional balance between creators and users has been upended. Breaking down doors, whether digital or wood, enlists the state in enforcing private claims by private parties via tactics long since rejected in other contexts. However, James DeLong points out that there is no conflict where consumers consent to intrusion. If a digital content provider offers a discount to those who purchase product for use only on a single device, monitoring such use to track attempts to "port" content to other devices is surely legitimate—so long as it is pursuant to meaningfully voluntary contract.[24]

Economist Stan Liebowitz believes that digital rights management can be made to work. In the analog world, audiocassette copying of records could be priced into the record; ditto for photocopying of printed material at libraries. But such "indirect appropriation" cannot be so easily priced into digital copying. Copying physical material on a large scale entails what economists call high transaction costs in terms of time and convenience; digital copying is instant, cheap and hard to identify as legitimate or illegitimate. One way to address this is for digital content vendors to charge micro-payments for limited access—what economists call "perfect price discrimination"; each user is charged precisely the maximum he is willing to pay, with the price being different for each individual.[25]

"Yes" for Me; "No" for Thee

Former Grateful Dead lyricist John Perry Barlow says that profits rarely go to the artist-creators, but accrue instead to their corporate sponsors:

> Ultimately 90 percent of the people on contract with one of the major labels end up owing the company money, from their advance [but] most musicians…want to be heard…so badly that they're willing to sell their soul to Satan himself in order to be heard.[26]

If Barlow is right (record industry sources dispute this), then DMCA benefits industry and super-celebs that drive their own deal, with little for the far larger army of struggling artists. Typically, Big Five record firms (Universal Music, Sony Music, BMG, Warner Music and EMI) take 90 percent of the take, while artists reap 50 percent of the take with independent companies.[27]

Congressman Rick Boucher (D-VA) has observed that user representatives are *rara avis* on committee witness lists.[28] Boucher also raises another valid concern: The record industry intends to funnel online distribution of music through two websites that will control 80 percent of the global inventory of recorded music.[29]

Retaining complete freedom to price and structure their digital offerings, creators insist via the rubric of "digital rights management" that vendors include copy-protection schemes in their devices. Whatever happened to the freedom of vendors to design their own products?[30] While vendors would retard market development of new products if they balked at being forced to include features demanded by content creators, revenue streams are so huge that it seems unlikely that Tinseltown's corporate elite would starve as a result. In the event, Congress should no more force vendors to do Hollywood's bidding than force consumers to buy the product. But for the past decade, Hollywood has been writing the legislative script. Objections of other parties and traditional notions of copyright limits have wound up on the cutting room floor.

Hoisting Hollywood

The French have a delicious expression, translated into *Franglais* as "hoist by one's own pétard." The last word means "firecracker," and in the context of music file downloading one may ask whether cop-killer, misogynist and other music lyrics that would seem to fall comfortably within the Supreme Court's definition of obscenity did not help instill casual attitudes towards copyright infringement. Famed Hollywood director Sydney Pollack says that due to money pressures and shortened viewer attention span, film quality has declined over the past twenty years: ''If you don't get the clothes off fast or the gun out quick, you're in trouble. Audiences want to feel something intense, quickly, without wasting a lot of time."[31]

The dissemination of such lyrics could have been stopped two decades ago, had Congress amended the copyright laws to deny copyright protection to artists and corporations publishing obscene material, on the grounds that such material falls outside the ambit of "useful Arts" protected under the Constitution—*N.B.*, the First Amendment protects speech, with no "useful" qualifier. Lamentably, it is far too late to do so, as the music world is literally swimming in sewage and allowing free downloads of existing material would merely swell the ranks of copiers.

In 2002 Hollywood studios earned 24 percent of their $17.38 billion total revenues from theaters, compared to a whopping 59 percent from video rentals.[32] But the Motion Picture Association of America (MPAA) claims the industry has surrendered one-quarter of its sales to pirates, with 600,000 daily downloads over the Internet.[33] MPAA has imposed unprecedented restrictions on distribution of advance copies of new movies to the industry's 5,800 Oscar voters, to prevent piracy of the 10,000 "screener" copies sent out; screeners will have to guarantee that the physical copy, distributed only in (analog) VHS format, does not leave their home, under penalty of expulsion from the Academy of Motion Picture Arts and Sciences.[34] MPAA President Jack Valenti justified the new rules by stating that 34 of 68 film titles sent out in 2002 were pirated in Asia or Russia.[35] A recent study states that 77 percent of online piracy is committed by industry insiders.[36] However, a federal judge on December 5 granted an injunction sought by "indie" filmmakers, finding that MPAA's policy violates the antitrust laws.[37]

The RIAA blames piracy for the 25 percent decline in CD sales since 1999, but some of the decline is clearly due to the three-year post-bubble economic doldrums.[38] Since 1999 CD sales have fallen from $40 to $30 billion.[39] Forrester Research estimates that in the past year 23 million consumers avoided the inconvenience of buying 47 million CDs.[40] In 2002 blank CD sales, at 1.8 billion, were more than twice the 800,000 sales figure for recorded CDs.[41]

With many consumers considering music CDs overpriced, and in an effort to reduce incentives for online piracy, Universal, the market leader, cut the suggested retail price for nearly all its CDs from $12.98 to $9.99, a 32 percent drop.[42] One survey shows that 70 percent of consumers under 40 say CDs are too expensive, a view shared by 62 percent of adults; 28 percent of respondents would pay $1 for a download, and another 20 percent would pay 50 cents.[43] It is worth noting that listening to recorded music is now second only to television viewing as a leisure activity for Americans, with the average consumer listening to more than three hours daily.[44]

The impact of music downloads on music CD sales is disputed by Professor Lawrence Lessig of Stanford University. He points out that for one (not given) period when (worldwide) MP3 downloads ran five times the volume of physical CD sales, the (domestic) sales drop was only 5 percent; Lessig advocates a compulsory license, with random sampling, to compensate artists.[45] Legitimate downloads of music could comprise one-third of music sales by 2008.[46]

The RIAA has now enlisted college freshman in an effort to dissuade large-scale file downloads; RIAA estimates that 2.6 billion files are downloaded each month, and that the record industry's recent revenue declines have been caused by music piracy.[47] Industry revenue has declined from $14.6 billion in 1999 to $12.6 billion in 2002.[48] A Forrester Research survey found that 68 percent of users aged 10 to 22 would stop downloading given a "serious risk" of jail time.[49] But does suing a few hundred of 60 million wayward users create a "serious risk?"

RIAA believes, however, that 90 percent of illegal sharing is the work of a small cadre of megapirates (the pattern for career criminals and violent crime).[50] By late August RIAA had obtained over 1,300 subpoenas seeking evidence of MP3 file downloading, aiming to sue for damages ranging from $750 to $150,000 *per song*; the organization uses digital "hashes" to trace illegal copying.[51] Copyright fines may not be dischargeable in bankruptcy.[52]

In September RIAA filed suits against 261 families (kids and parents), mostly targeting users who shared more than 1,000 songs, including people of meager economic means. One household with a teen who downloaded 800 songs faces a (fortunately) theoretical liability exceeding $1 billion.[53] Said one target, who vows not to buy CDs anymore, "If you're going to lose your house, how are you going to buy a CD?"[54] Indicative of record mogul attitudes on this is a comment from one flack: "When you fish with a net, you are going to catch some dolphins."[55]

One "dolphin" story illustrates how thuggish the RIAA's tactics can be. A student working part-time was sued by the RIAA. With $1,500 in the bank and credit card debt near her limit, she could hardly seriously contest the suit. Showing the tenderness for which the IRS is famous, RIAA sought $3,000 to $4,000 but eventually settled for $2,500—only after ascertaining that the student could not get money from family or friends to help discharge her prospective legal liability. She has resolved not to buy CDs anymore. After launching a third round this December, RIAA filings now total 382 suits.[56] (RIAA is hardly alone in using sharp tactics. Senator Brownback's bill limiting digital rights subpoena power is motivated in part by a pornographer's ploy: Online porno purveyor Titan Media has issued subpoenas seeking information from suspected porn copiers to get such target customers to buy Titan's porn, or else be exposed by publication of the DMCA subpoena.[57])

RIAA's campaign may not make it warm and cuddly in the eyes of the public, but it may be having its intended effect: Music downloads peaked at 14.5 million in April but fell to 10.4 million by June. In the three summer months, home file-sharing via market leader KaZaA fell from 6.7 to 3.9 million, or 42 percent, but summer vacations may well account for part of the decline.[58]

RIAA has generally dropped suits in exchange for $12,000 to $17,500, but can play hardball. In one case an attorney threatened to raise the settlement cost by $50,000 if the college student-defendant's counsel filed an answer. DirecTV, for its part, has run its own campaign against video piracy, sending cease-and-desist letters to 65,000 people, suing more than 10,000 and settling cases for $3,500 to $4,500.[59] Whatever financial harm copycats and pirates are causing, the targeted industries can afford to file lots of lawsuits.

The international picture is even worse for the record companies, especially in Europe and Asia. In Germany, CD sales are down one-third from their peak, with a projection of another 20 percent decline in 2003. Some 32 percent of 151 million European Net users swap files. Piracy paradise is China, where 90 percent of CDs are purloined. In Singapore, paragon of thrift, 75 percent of people say music piracy is OK, with 500,000 of the city-state's 4 million downloading music.[60]

Dawn of a New Digital Day?

Hollywood is showing signs of an awakening, with the successful *iTunes* leading the way; Apple has unveiled a version compatible with Microsoft *Windows*, impishly dubbing it "the best Windows app ever." One estimate is that as many as a dozen companies will enter the field in the next year, including Wal-Mart, which accounts for 20 percent of nationwide music sales. Making money at 99 cents per tune may prove dicey, however.[61] Jupiter Research sees $3.3 billion in digital online sales by 2008, 20 percent of Jupiter's total projection for the record industry.[62] Apple computers with *MusicMatch* software enable users to subscribe to Internet radio for $4.95 per month. And Hollywood antagonists have their services, too. Napster 2.0, reincarnated after its copyright comeuppance, is offering online albums at $9.99. While $1 per song and $10 per album seem high numbers, adjusted for inflation these are considerably cheaper than the $24 buyers paid for a 1955 Frank Sinatra LP record and $26 for a 1966 Beatles album.[63]

Conclusion

Hollywood is surely entitled to see that the customer's digital realm is bounded, but the 21st century domicile should be a virtual digital castle, whose protection permits raising a digital drawbridge. Line drawing must be proportionate, with room left for business models to evolve as the new economy grows. History te] Ӱ ҫ M

> who never swears, gambles, or loses his temper; who uses nothing except in moderation, and even while he flogs his child is meditating only on the golden mean.[66]

"Reasonable" must not mean a concept of digital rights management based upon primacy for creator rights, pervasive home surveillance, remote corporate control over personal digital devices regardless of use and perpetual protection of preferred business models. Protecting Hollywood's revenue stream from piracy is legitimate policy; slighting all other considerations—vendor design freedom, user privacy, user control of personal property, two centuries of established copyright legal principles—is not. It makes the sheriff the guarantor of the saloon-keeper's prosperity, and holds the town citizenry captive.

The FCC has adopted a "broadcast flag" rule intended to provide copy-protection equipment for broadcast programs; consumers buying digital devices would have to buy "compliant" equipment, should they wish to record a broadcast program received on a digital television set. Existing digital products—digital VCRs, DVDs, PCs—are not covered by the new rule.[67] Potentially significantly, the agency seeks further comment on the "usefulness of defining a personal network digital environment ('PDNE') within which consumers could freely distribute digital broadcast network content."[68] One expert group suggests that a PDNE could include "home, automobile, personal portable devices, and communications between primary and secondary residences."[69] Should a PDNE be defined it would enable striking a balance between personal use and mass distribution. This would go a long way towards imposing reasonable bounds upon the reach of digital rights management, by giving the digital castle a digital drawbridge.

Digital rights management harbors within it the danger of compromising the best use of computer and communication technologies. World Wide Web creator Tim Berners-Lee put it succinctly, saying that the recording industry wants to turn a "Turing machine" into a game player.[70] (A "Turing machine," as conceptually described originally by the legendary British mathematician Alan Turing, refers to the computer as a "universal machine"—one capable of general-purpose computing; game players are special-purpose machines, and thus far more limited in capability.) The vast potential power of computing and the benefits it can bring are too vital to modern society to support empowering a few industries to circumscribe computing and networking use to pursue private gain. The Electronic Frontier Foundation's "architecture is policy" principle applies here; Hollywood must not become tomorrow's systems designer.

The "P" in PVR stands for *personal*, and the "p" in copyright stands for *public* rights. Restoration of the traditional balance of public versus private claims should be the prime goal of federal digital copyright reform. The digital rights script needs a new, more equitable ending.

[ET CETERA]

2003's Landslide Election. The Federal Trade Commission won clearance from a federal appellate court (Tenth Circuit) to begin enforcing its Do-Not-Call Registry. As of November 3, 54.3 million lines were signed up—about *one-third of all telephone lines—and more votes than any presidential candidate has garnered since President Reagan won re-election with 54.5 million votes in 1984;* also as of November 3, 51,000 complaints had been filed with the FTC.[71] In 2002 telemarketers made 70 million calls daily to make $214 billion in sales.[72] Dave Barry published in his nationally syndicated column the phone number of the American Teleservices Association (ATA), a telemarketer trade group, causing the ATA to spend five hours daily for more than a week clearing voicemail. Barry quotes ATA's executive director (*not* made up) that the impact on telemarketing jobs would be "like an asteroid hitting the Earth."[73] The last time a major asteroid slammed into the planet, the dinosaurs were extinguished. See a pattern, ATA?

VDSL Goes Video. Very High-Bit-Rate DSL—VDSL—now provides 125,000 customers nationwide with cable television service, with most lines in the Southwest; Qwest alone serves 40,000, via its purchase of US West. Qwest VDSL customers in Phoenix and Denver pay $99.97 per month. With VDSL bandwidth ranging from 13 to 52 megabits-per-second (Mb/s)—it is distance-determined, with 52 Mb/s over 1,000 feet and 13 Mb/s over 4,000—programs must be ordered serially from the central office, rather than have all programs broadcast down to a cable set-top converter box. A consultant at In-Stat/M.D.R., whose firm projects 600,000 VDSL users in 2005, notes that providers could customize ads by home, unlike cable's broadcast service; no firm has tried this, however.[74]

Virtual Viral Vampires. Business Week's recent cover story offers disquieting computer virus metrics. The first half of 2003 saw 76,404 reported viruses, nearly equal to 2002's total; one estimate is that viruses will inflict $13 billion in damage in 2003. One virus alone, LoveLetter, caused $8 billion in global damage in 2000. At its mid-August peak, SoBig infected *half* of all Internet e-mails. The January 2003 Slammer virus infected 100,000 computers in the first 10 minutes. (To its credit, Verizon Communications, which constantly updates its 200,000 computers with security patches, escaped SoBig.) But bad guys outnumber good guys: an estimated 10,000 active virus writers but only 500 virus sleuths—true experts are in the mere dozens.[75] In August, when the SoBig virus peaked, one in 29 e-mails was infected, versus one in 166 in July.[76]

Spam Soars. Brightmail reports that spam in July comprised half of all Net traffic, versus less than 40 percent a year earlier.[77] One reason spammers are so hard to stop: According to a veteran spammer, an ISP's digital server log typically is overwritten every 12 hours, preventing cops from tracing spammers.[78]

The "Spampire" Strikes Back. Spammers are targeting anti-spam websites, using viruses and denial-of-service attacks, and already have shut down several. Asked to help, the FBI told one anti-spammer that absent monetary damage no investigation would be made. Anti-spam groups often offer their services for free. One crusader ruefully said: "I had no idea they could or would stoop this low, or that they would engage in quite this level of criminality."[79] With whom did he think he was dealing, Mother Teresa's disciples?

Broadband (Lite) Blooms. RHK, Inc. estimates that US broadband household penetration rose 43 percent year-over-year to 22 million in June 2003; Forrester Research predicts that in four years broadband household subscribership may reach as high as 50 percent. While Korea leads in penetration at 75 percent, Japan's 10 megabit-per-second access speed is tops, reaching 27 percent of households. (Korea's 8 Mb/s speed runs typically, by one estimate, at 3 Mb/s, but a few Koreans enjoy 20 Mb/s service; in the US, Comcast is testing 3 Mb/s service in Atlanta, Pittsburgh and Knoxville. The US average price of $45 for Broadband Lite is almost as much as the combined total for Japan's $23 plus Korea's $25. One key factor as between Korea and the US: America has 100 times the geographic area of Korea but only 7 times as many households, *i.e.*, density is fourteen times higher in Korea; part of the reason for that is that 60 percent of the Korean population lives in apartments. In North America, Canada leads with 36 percent household broadband penetration.[80]

Disney's DVD Device Debuts. Disney, which estimates that customers have bought some 250 million new devices since 1998, is betting they will add another. It has combined with Samsung to introduce Moviebeam, a device that attaches to television sets and allows storage of 100 movies on its 160-gigabyte hard drive. Customers will pay a $29.99 activation fee, $6.99 per month and a per-movie fee ($3.49 for new film rentals, $2.49 for old), and must attach a phone line for billing purposes (similar to satellite tv). Seattle, Salt Lake City and Jacksonville are the initial cities slated to receive the rollout. Viewers renting a film have a 24-hour window to see it. New films will be swapped on the Samsung device's hard drive, using existing broadcast spectrum, at the rate of ten films per week. Moviebeam bypasses both satellite and cable physical distribution networks. Disney is targeting the 10 million households that rent 8 or more movies per month and account for 43 percent of all video rentals; these customers typically pay $15 per month for late rental fees (which once accounted for 15 percent of Blockbuster's revenues). Competition includes Movielink, a studio consortium, and companies like Netflix that fed-ex videos to homes.[81]

Landline Labor Lock-In? Organized labor represents 265,000 of 405,000 jobs at landline units of Verizon (103,000 of 154,000, or 67 percent), SBC (116,000 of 175,000, or 66 percent) and BellSouth (46,000 of 76,000, or 61 percent), a 65 percent share. Unions have had success at Cingular, the wireless joint venture between SBC and BellSouth, organizing 18,000 of 35,000 (51 percent), but only 51 workers of 40,000 at Verizon Wireless are union. For the long-distance industry, 23,000 of AT&T's 69,000 are union (33 percent), while 8,000 of Sprint's 18,000 are union (44 percent). All employees at AT&T Wireless (18,000) and Sprint PCS (20,000) are non-union. Cable companies are far less unionized; less than 5 percent of Comcast's 55,000 workers are members.[82]

How to Destroy 20,000 Miles of Cable in Six Hours. The recent passage of Hurricane Isabel brings to mind the most destructive storm ever to hit the United States—first in property loss and fourth in loss of life, the Great Hurricane of 1938 (hurricanes were not given nicknames until 1954). It was a rare "100 years storm" (only in 1635 and 1815 had New England seen major hurricanes—the water that far north rarely is warm enough for a tropical storm). The September 21, 1938 monster destroyed 20,000 miles worth of telephone, telegraph and power cables, 72 million feet of wire, 31,000 telephone poles, 18,000 crossbars, and knocked out service to 500,000 AT&T customers in 350 communities from Long Island to Maine. Messages to New England from New York and Washington were routed via undersea telegraph cable to London, and then back across the Atlantic to wireless stations on Cape Cod. Screen legend Katharine Hepburn began the day by shooting a hole-in-one at the local links, then saw her Fenwick, Connecticut family house carried away—Kate was nearly swept away with it.[83]

Minitel Lives! France's Minitel online access network, a fixture since 1983, was finally surpassed in subscriber penetration by the Internet just last year, and today 41 percent of French households have Internet access, versus 32 percent for Minitel. But the venerable network still sports 4 million terminals—all given out for free by the French government. This is down from its 1997 peak of 6 million, but Minitel generated $340 million for content providers in 2002. Fees run 2 cents per minute up to $1.50, after three free minutes, making monthly use several times more expensive than with the Internet, but it is easier to use and hacker-free. Internet and wireless links to Minitel are in use. Minitel inaugurated online chat rooms, which account for 20 percent of total traffic; the system's only major crash occurred in 1985, due to overload from porn chat lines.[84]

(Endnotes)

[1] U.S. Constitution, Article I, section 8 clause 7.

[2] Post, David G, *His Napster's Voice*, quoting letter from Thomas Jefferson to Isaac MacPherson, August 13, 1813, in Thierer, Adam & Crews, Wayne, *Copy Fights*, pp. 113-14 (Cato Institute 2002).

[3] DeLong, James V., *Fair Use: Less Can Be More*, Copyright Colloquium, p. 1 (Media Institute, Feb. 28, 2003). DeLong directs the Center for the Study of Digital Property at the Progress and Freedom Foundation.

[4] DeLong, James V., *Intellectual Property in the Internet Age: The Meaning of Eldred*, Progress on Point, Release 10.5, p. 7 (Progress & Freedom Foundation, Feb. 2003).

[5] *Sony Corp. v. Universal City Studios*, 464 U.S. 417, 429 (1984). (Emphasis added.)

[6] *Id.*, 464 U.S. at 432.

[7] *Id.*, 464 U.S. at 451.

[8] *Feist Publications v. Rural Telephone Co*., 499 U.S. 340 (1991).

[9] *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127 (1932). (Emphasis added.)

[10] Fettmann, Eric, *A Family Tragedy*, p. 27, Aug. 27, 2003.

[11] Title 17, U.S.C., sec. 107 (1976).

[12] *Sony Corp*., fn. 3 *supra*, at 450.

[13] Gross, Robin D., *Copyright Zealotry in a Digital World*, in *Copy Fights*, fn. 2 *supra*, pp. 189-91.

[14] Barlow, John Perry, *Intellectual Property, Information Age*, in *Copy Fights*, fn. 2 *supra*, p. 38. The surrender of reading rights is per the online purchaser's agreement, not copyright.

[15] Godwin, Mike, *The New Legal Panic Over Copyright*, in *Copy Fights*, fn. 2 *supra*, p. 180.

[16] Littman, Jessica, *Revising Copyright Law for the Information Age*, in *Copy Fights*, fn. 2, *supra.*, p. 131.

[17] *Id.*, p. 138.

[18] H.R. 107, introduced Jan. 7, 2003.

[19] S.1621, introduced Sept. 2003.

[20] *Guarding Privacy vs. Enforcing Copyrights*, New York Times, p. C1 (Sept. 29, 2003).

[21] *Recording Industry Association of America v. Verizon Internet Services*, Memorandum Opinion per Bates, J., p. 38 (Apr. 24, 2003). The force of the judge's ruling is somewhat attenuated by the fact that Verizon had indicated it would respond to subpoena served pursuant to a "John Doe" complaint; it's resistance was thus more on form than substance. *Id.*, p. 44.

[22] Copyright holders have five basic rights: they may reproduce, distribute (*e.g.*, sell, lease, rent), perform, display or prepare derivative works. Title 17 U.S.C. sec. 106 (1976). The MPAA's lawsuit was filed in 2001; the case was later settled.

[23] *Music Downloading and Copyright*, Pew Internet Project Data Memo, Pew Internet & American Life Project (July 2003).

< http://www.pewtrusts.com/pdf/pew_internet_file_sharing_073103.pdf >

[24] DeLong, James V., *Intellectual Property in the Internet Age*, fn. 4, *supra*. The phrase "meaningfully voluntary" is intended to distinguish such agreements from "contracts of adhesion," *i.e.*, those where grossly unequal bargaining power makes an agreement "take it or leave it"—one made by the stronger party and imposed upon the weaker one. As there are many contracts offered that way, courts tend to strike down only those regarded as truly "unconscionable." *See* Calamari, John D. & Perillo, Joseph M., *Contracts*, sec. 3, pp. 5-6 (West Publishing 1970)

[25] Liebowitz, Stan, *Copyright in the Post-Napster World*, in *Copy Fights*, fn.2 *supra*, pp. 197-204.

[26] Barlow, in *Copy Fights*, fn. 2 *supra*, p. 40.

[27] *Upstart Labels See File Sharing As Ally, Not Foe*, New York Times, p. A1 (Sept. 21, 2003). Independent labels had only 6 of the top 100 albums through 9/14/03, up from 4 of 100 for 2002; the Big Five have 80 percent combined market share. *Id.*

[28] Boucher, Rick, *The Future of Intellectual Property in the Information Age*, in *Copy Fights*, fn. 2, *supra*, p. 102.

[29] *Id.*, p. 103. The sites: MusicNet and PressPlay.

[30] In fairness, the first case of federal legislative compulsion of vendors was with analog audio home recording devices, in the Audio Home Recording Act of 1992.

[31] *Public's Demand for Films Changing*, Pollack Says, Casper Star Tribune, trib.com, 10/06/03.

< http://www.trib.com/AP/wire_detail.php?wire_num=252858 >

[32] *Broadband Lite Blossoms: Whither the "Visionary Gleam?*, Bandwidth, p. 6 (July 28, 2003).

[33] *Tipping Hollywood the Black Spot*, The Economist, p. 43 (Aug. 30, 2003).

[34] *Advance Film Copies Halted for Oscar Voters*, New York Times, p. B3 (Oct. 1, 2003). The MPAA originally proposed an outright ban, but retreated under pressure from independent film producers, who say that voters are less likely to go to theaters to screen their films than they are for the major distributors.

[35] *Sorry, Screeners*, wsj.com, 10/29/03.

< http://www.opinionjournal.com/la/?id=110004231 >

[36] *Insiders Let Movie Piracy Flourish*, smh.com.au, 10/24/03.

< http://www.smh.com.au/articles/2003/10/23/

1066631569964.html >

[37] *Indie filmmakers Win Order Against Screeners Ban,* Yahoo News, 12/5/03. <http://news.yahoo.cm/news?tmpl=story2&cid=564&u=/nm/20031205/ts_nm/leisure_oscars_dc_8&printer=1 >

[38] Pew Internet Project Data Memo, fn. 23 *supra*, (July 31, 2003).
< http://www.pewinternet.org/reports/pdfs/PIP_Copyright_Memo.pdf >

[39] *Universal to Cut Prices of Its CDs*, New York Times, p. C1 (Sept. 4, 2003).

[40] Kessler, Andy, *The Music Industry Needs Hackers, Not Lawyers*, Wall Street Journal, p. D6 (Sept. 9, 2003).

[41] *For Music Industry, U.S. Is Only the Trip of a Piracy Iceberg*, New York Times, p. A1 (Sept. 26, 203).

[42] *Universal Slashes CD Prices in Bid to Revive Music Industry*, Wall Street Journal, p. B1 (Sept. 4, 2003). Universal's market share is 29.4%, followed by four firms grouped between 16.6% and 13.0%, and EMI at 9.8%.

[43] *Out of Tune*, Newsweek, p. 42 (Sept. 22, 2003).

[44] Liebowitz, Stan, *The Day the Music Died*, techknowledge, issue #56, p. 1 (Aug. 20, 2003).

[45] Lessig, Lawrence, *End the War on Sharing*, Financial Times, ft.com (6/19/02). The brackets around "worldwide" and "domestic" are supplied because Lessig's article did not specify these; rather, Professor Stan Liebowitz did so in a reply posted on his personal website.

[46] *Hammering Away at Piracy*, USA Today, p. 1D (Sept. 11, 2003).

[47] *To Fight Music Piracy, Industry Goes to Schools*, Washington Post, p. A1 (Aug. 28, 2003). Score Networks estimates that in May 2003 11,580,000 million American users shared music files, with KaZaA accounting for 7.6 million (65.6%) and WinMX 2.3 million (19.9%); four other services (iMesh, Morpheus, Grokster and LimeWire) divide the remaining 1.68 million users (14.5%). *Share and Share Alike*, New York Times, p. C6 (Sept. 9, 2003).

[48] *Hammering Away at Piracy*, fn. 46 *supra*.

[49] Id.

[50] *Global Downloading, Local Lawsuits*, Business Week, p. 64 (Oct. 6, 2003).

[51] *Revealed: How RIAA Tracks Downloaders*, cnn.com, Aug. 28, 2003.
< http://www.cnn.com/2003/TECH/internet/08/28/downloading.music.ap/index.html >

[52] France, Mike, *Music Pirates, You're Sunk*, Business Week, p. 40 (Sept. 8, 2003).

[53] *Courthouse Rock*, Newsweek, p. 39 (Sept. 22, 2003).

[54] *Out of Tune*, fn 43 *supra*.

[55] *Id*. Sony Music President Andrew Lack goes further: "P2P stands for piracy to pornography." But the National Center for Missing Children estimates that only 2 percent of its online child pornography referrals come from P2P, compared to 77 percent from simple website access. Bandow, Doug, *Play-It-Again Posse*, Washington Times, p. A16 (Oct. 2, 2003).

[56] *Music Industry Targets Even Computer-Less,* Yahoo News, 12/4/03.
< http://story.news.yahoo.com/news?tmpl=story&u=/ap/20031204/ap_en_bu/downloading_music_2 >

[57] Brownback, Senator Sam, *Who Will Police the Pirate-Hunters?*, Wall Street Journal, p. A20 (Oct. 7, 2003).

[58] Source: Nielsen/NetRatings. The survey period was June 21 to September 21.

[59] *Id.*

[60] *For Music Industry, U.S. Is Only the Trip of a Piracy Iceberg*, note 41 *supra*.

[61] *Tuning Up Like Nobody's Business*, Business Week, p. 42 (Oct. 13, 2003). Of the 99 cents sale price, 75 cents goes to the record label, 5 cents for credit card processing, leaving 19 cents for other expenses. *Id.* Apple users have downloaded 10 million songs with iTunes, or 500,000 per week. *Apple's E-Music Store Isn't the Next Beatles*, Wall Street Journal, p. C1 (Oct. 9, 2003).

[62] *Pay 2 Play*, Newsweek, p. 47 (Oct. 13, 2003). Online music vendors offer varying terms: some price per song, others by monthly rate; some offer albums, others singles only; some allow unlimited "burns"; one (MusicNet) uses AOL as a portal. *Id.*

[63] *What Price Music?*, New York Times, sec. 2, P1 (Oct. 12, 2003). The Sinatra LP, *Songs for Swingin' Lovers*, originally cost $3.50; the Beatles LP, *Revolver*, originally cost $4.50. When CDs were introduced in 1984 their price was $18 (1984 dollars). *Id.*

[64] Schwartz, John, *New Economy*, New York Times, p. C3 (Sept. 22, 2003).

[65] DeLong, *Intellectual Property in the Internet Age: The Meaning of Eldred*, fn. 4 *supra*.

[66] Herbert, A. P., *Uncommon Law*, pp. 3-4 (Eve Methuen 1935).

[67] *In the Matter of Digital Broadcast Content Protection*, Report and Order and Further Notice of Proposed Rulemaking, MB Docket 02-230 (adopted Nov. 4, 2003).

[68] *Id.*, para. 63.

[69] Final Report of the Co-Chairs of the Broadcast Protection Discussion Subgroup to the Copy Protection Technical Working Group, sec. 5.1, p. 14 (June 3,

2002).
< http://www.eff.org/IP/Video/HDTV/bpdg-report/pdf/BPDG_Report.pdf >

[70] Remarks by Tim Berners-Lee, Director, World Wide Web Consortium (W3C), MIT, at *Remedies for Telecom Recovery*, Columbia Institute for Tele-Information, Oct. 3, 2003.

[71] Source: FTC website. < http://www.ftc.gov >

[72] *Ringing Around the Rule*, Washington Post, p. E1 (Oct. 18, 2003). Of the $214 billion in sales, $114 billion (53%) were made to business customers and $100 billion (47%) to home buyers. Source: Direct Marketing Association.

[73] Barry, Dave, *I Hear America Calling*, The Washington Post Magazine, p. 40 (Oct. 12, 2003).

[74] *Who's Calling, Please? Check the TV*, New York Times, p. E7 (Oct. 9, 2003).

[75] Technology Special Report: *Network Security*, businessweek.com, 9/16/03.
< http://www.businessweek.com/technology/tc_special/03security.htm >

[76] *How to Find Your Weak Spots*, Wall Street Journal Supplement, p. R3 (Sept. 29, 2003).

[77] Baker, Stephen, *From Open Doors to Gated Communities*. Business Week, p. 36 (Sept. 8, 2003).

[78] Hitt, Jack, *Confessions of a Spam King*, New York Times Magazine, p. 48 (Sept. 28, 2003).

[79] *Spam Opponents Are Losing the Battle*, Washington Times, p. C17 (Oct. 13, 2003).

[80] Crockett, Roger O., *How to Get U.S. Broadband Up to Speed*, Business Week, p. 92 (Sept. 8, 2003).

[81] *No Late Fees: Disney to 'Beam' Rental Movies to Homes*, Wall Street Journal, p. B1 (Sept. 29, 2003).

[82] *Labor's Wireless Call-Waiting*, Washington Post, p. E1 (Sept. 8, 2003).

[83] Scotti, R.A., *Sudden Sea*, Little, Brown & Co. 2003).

[84] *France's Precursor to the Internet Lives On*, washingtonpost.com, 9/25/03.
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