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Issue Analysis

Expanding the Market's Role in Advancing Intellectual Property

by James Plummer

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Executive Summary

The debate over copyright is one of technology and economics. The rapid progression of technology and, concomitantly, consumer attitudes and behavior, poses problems for the content industries' dominant paradigms and business models as configured today. Enforcement costs for protection of old models—encouraged and calcified by congressional expansion of the length of copyright terms—are mounting. Some rights holders are now developing promising new business models that recognize these realities. To encourage this trend, lawmakers should consider dismantling regulatory barriers—particularly antitrust—obstructing the development of potentially superior alternatives to legal copyright protection. The Constitutional justification for copyright to "promote the progress of science and useful arts" is best served by markets not overburdened by excessive copyright regulation.

Proponents of an expansive copyright regime argue that enforcement costs are justified to protect a "right" that they maintain is as important as physical property rights. But intellectual property (IP) is different from physical property in many ways. As with physical goods, an important question in the copyright debate is: To what degree should copyright holders—artists, their agents, and the content industries—who choose to use the force of the state to protect their intellectual property pay for this assistance?

Technological innovation can provide the answer. Instead of relying on taxpayers to fund enforcement actions, large copyright holders can internalize the costs of enforcing—or at least protecting the value of—their copyrights through new technologies for preventing unauthorized copying, while making copyright protection more efficient. Content producers can also use new technologies to offer differentiated products at differentiated prices to consumers showing different levels of interest in the work of particular artists. Such innovations should not be hampered by antitrust and other government regulations. One-size-fits-all mandates on critical consumer technologies will stifle the growth of the intellectual property industry and indeed, of new forms of art. A wide array of hardware-software combinations to choose from would best serve copyright holders—artists and the content industries—and consumers.

Introduction

As processing power and bandwidth expand, the cost of replicating and distributing digital content like music and movies is rapidly approaching zero. Technological advances are changing the way consumers spend their entertainment dollars and make use of copyrighted culture and content.

This new landscape provides the entertainment industry an opportunity to reevaluate many of the economic assumptions under which they have operated for decades. Is the current system of extremely long copyright, backed by criminal prosecution, the most efficient method to advance copyright's constitutional justification, "to promote the progress of science and the useful arts"?

Technological advances are changing the way consumers spend their entertainment dollars and make use of copyrighted culture and content.

Congress has noted the entertainment content producers and copyright holders' concerns over exponential technological progress and acted on it. The 1997 Digital Millennium Copyright Act (DMCA) made it illegal to circumvent copyright protection technology and ordered Internet service providers (ISPs) to take steps to identify any user who posts copyrighted material on their servers. Major content owners—the recording and the film industries—have asked courts to construe the latter provision to also apply to consumers who share files from their own hard drive on peer-to-peer (P2P) networks.

The major recording and film industries now also seek policies that could effectively outlaw file sharing itself. In the *MGM vs. Grokster* case, the film studios seek to hold file-sharing software manufacturers liable for copyright infringement by people buying their products. After losing in the Ninth Circuit Court of Appeals, the plaintiffs have brought the case to the Supreme Court. A ruling is expected in June on the arguments made March 29.

Members of the 108th Congress, taking to heart concerns that threats of fines are an insufficient deterrent, sought to clamp down on file sharing by introducing legislation like the Author, Consumer and Computer Owner Protection and Security Act of 2003 (ACCOPS), which would have imposed prison sentences of up to five years and fines of up to $250,000 for sharing a file via P2P. The Inducing Infringements of Copyright Act, also considered by the 108th Congress, like the DMCA, would have extended contributory liability to P2P technology itself, effectively banning it with the threat of both fines and jail time.

The rapid progression of technology and, concomitantly, consumer preferences and behavior, poses problems for the content industries' dominant paradigms and business models as configured today. Enforcement costs for protection of old models—encouraged and calcified by congressional expansion (and court ratification) of the length of copyright

terms—are mounting. Some rights holders are now developing promising new business models that recognize these realities. To encourage this trend, lawmakers should consider dismantling regulatory barriers—particularly antitrust—obstructing the development of potentially superior alternatives to legal copyright protections.

Changing Technology and Marginal Cost of Copying

Enforcement costs for protection of old models—encouraged and calcified by congressional expansion (and court ratification) of the length of copyright terms—are mounting.

Why do large copyright holders insist on seeking harsh punitive measures against file sharers? The simple answer is that the increased risk of prosecution and penalty is an increased cost—a disincentive—to those who would make unauthorized copies of digital content, particularly for distribution to others.[1] However, higher statutory penalties don't necessarily raise the risk of prosecution. For that to occur, someone—either a public or private entity—would have to devote more resources to prosecution.

"Competition" from file sharing has impacted the prices set by the entertainment industry for authorized products. For example, record labels have slashed prices on their compact discs.[2] That move seems to prove the argument made by many file-sharing defenders that the typical pricing of music by the major record labels – bundling together several songs on one compact disc album for around twenty dollars – is increasingly outdated.

For years, the system of copyright provided a solution to the declining marginal cost problem. The granting of copyright—a limited monopoly to produce a specific creative work—has traditionally been a remedy to the content industries' challenge of recouping costs and earning a profit. A "monopolist"[3] can charge more than marginal cost because it is illegal for anyone else to offer the same product at any price, much a less a cheaper one.

However, the marginal cost for reproducing much intellectual property has fallen to approximately zero, posing a new challenge—without a solution, no one could profitably produce the product and hence, investment in production would dry up.

Near-zero-cost digital copying throws a monkey wrench into standard economic models that predict that competitive goods will be priced at their marginal cost—the cost of producing the last unit sold—due to price competition among sellers. Nobel Prize winning economist Ronald Coase outlined the "marginal cost" problem in 1946 thusly[4]:

> The amount paid for each unit of the product (the price) should be made equal to the marginal cost...when average costs are decreasing, marginal costs are less than average costs, the total amount paid for the product will fall short of total costs

The typical solution posed by economists at that time to this problem of declining marginal cost was to set the retail price at marginal cost and have the loss—the difference between total revenue and total cost—reimbursed by the government. Coase rightly disparaged this solution, since state subsidy acting in place of individual purchasing power cannot take into account the relative differentiated demands of individual consumers.

Copyrights and patents secure—and promote the production of—intellectual property better than do government subsidies. A culture produced wholly by state subsidy would resemble drab Soviet art and dry PBS programming than, say, Hollywood and Sundance. The copyright solution allows for competition and feedback, with consumers making choices, indicating which copyrighted products they want to buy more of, and rewarding producers who fulfill those desires. This is in contrast to, say, a local electric power monopoly in which taxpayers pay for fixed costs and consumers—those same taxpayers—pay additional variable costs based on usage and carrier costs. If a similar system were used for intellectual property, studios would get the same government subsidy for producing *Star Wars* as they would for producing *Ishtar*, displacing consumer demand as signaled by box office revenues as the driving factor in determining which sequels are made and which studios survive.

Regulation, particularly under antitrust law, currently impedes cultural innovation and production.

As Coase points out, prices are a "most useful guide to what consumers' preferences really are." Copyrights allow consumer demand for a scarce item—copyrighted content—to drive up prices, returning a profit to their preferred culture producers and encouraging those cultural producers to continue producing similar works.

In the information age, the key intellectual property issue is the cost of keeping it secure. Ensuring that security costs are incorporated into the pricing system and not passed on to taxpayers would more accurately reveal consumers' cultural preferences. Internalizing the costs of intellectual property security—rather than increasing reliance on legal protections—encourages competition, innovation, and optimum production of cultural output. Regulation, particularly under antitrust law, currently impedes cultural innovation and production.

The Roots of Intellectual Property Law: Utility or Natural Right?

Intellectual property protections have been crucial to the growth of commercial culture. The modern English novel first flourished in Britain following the seminal copyright law, the Statute of Anne, in 1710. It's not controversial to note that more art will be created, and scientific discoveries made, when artists and scientists are ensured a return on successful work. The framers of the U.S. Constitution recognized this when they granted Congress the authority "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."

Alexander Hamilton, writing in Federalist 43, justifies the inclusion of the copyright clause with an appeal to rights derived from the common-law process: "The copyright of authors has been solemnly adjudged in Britain to be a right of common law." Hamilton, also speaking of patents, goes onto say: "The public good in both cases fully coincides with the claims of individuals." This is the only mention of the copyright clause in the *Federalist Papers*.

The Sonny Bono Copyright Term Extension Act of 1998, extended that monopoly protection to the life of the creator plus 75 years, or, for a work copyrighted by a corporation, 95 years.

Like their British forbears, the U.S. Congress would eventually codify what Hamilton called the common-law right of copyright into statute. Congress established the first "limited times" under the Copyright Act of 1790—14 years with an option for 14 more.

The fourth update to that law, the Sonny Bono Copyright Term Extension Act of 1998, extended that monopoly protection to the life of the creator plus 75 years, or, for a work copyrighted by a corporation, 95 years. Many observers—some may call them cynics— note that statutory copyright extensions seem to correlate with impending expiration of the Disney Co.'s Mickey Mouse character into the public domain.

In a legal challenge to the Bono law, *Eldred v. Ashcroft,* the U.S. Supreme Court found that the promotion of the progress of science and the useful arts clause does not limit the power of Congress to write copyright law, but is a generalized justificatory clause for granting Congress statutory power over copyright. The Court then went on to rule that there is virtually no room for judicial review on whether a specific exercise of statutory power exceeds constitutional bounds.[5] Be that as it may, said "progress" does not seem an unreasonable test of the utility of any particular copyright statute passed by Congress.

Natural Right?

James DeLong of the Progress and Freedom Foundation, in defense of the Bono copyright regime,[6] argues that Congress is free to do virtually anything to protect the "natural right" of copyright—said right's naturalness derived from the fact that it arises from the common law right to copyright in unpublished works (as well as appeals to natural rights in justificatory clauses in earlier copyright statutes). Many common-law theorists view the evolutionary common law as a process whereby an efficient "natural" law is found through a continuous process of litigation and decision.

However, when copyright explicitly became a product of statutory rather than common law, it parted from the common-law process that "discovers" natural law. Common law arose in England in competition with other legal regimes, so when it became the dominant legal system, it retained some features

absorbed during its evolution from competing systems, which helped gear results toward efficiency in the long term.[7] Thus, although imperfect, there is much to Judge Richard Posner's view of common law:

> The economic theory of the common law, defined broadly as law made by judges rather than legislatures or constitutional conventions or other nonjudicial bodies, is that the common law is best understood not merely as a pricing mechanism but as a pricing mechanism designed to bring about an efficient allocation of resources.[8]

Thus, appeals to natural law and common law rest largely on the presumed efficiency of the common-law process in discovering "natural rights." Many modern writers assert that the common-law copyright was a perpetual right granted to the author and his heirs. But the common law with regard to copyright was by no means a settled question when the Statute of Anne was passed in 1710. For instance, the highest common-law court in the United Kingdom, the House of Lords, ruled in the 1774 case *Donaldson v. Becket* that perpetual copyright applied only to unpublished works and that the Statute applied to published works (but did not clarify whether that ruling implied a perpetual common law right for works published prior to the 1710 statute). Indeed, in 1834, the United States Supreme Court cited *Donaldson* to hold that common-law copyright did not exist in perpetuity.[9]

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Thus, partisans of broad copyright as "natural law" base their argument on a common-law discovery process that was incomplete when it was overtaken by statutory law. But statutory law doesn't have an elegant discovery process. Rather, it operates as the rationed, limited grant of a state's power to its subjects, top-down as opposed to bottom-up, and is therefore institutionally incapable of "discovering" natural law.

But, if the common law is the basis of the "natural" right to copyright, why do supporters of expansive copyright turn to statutory law rather than a judicial common-law process to build their preferred copyright regime?

Rise of Statutory Protection

Statutory law arises from the legislature, and the enforcement of those laws and interpretations guiding that enforcement result from the actions of the executive branch. Both powers are significant—efforts to change the length and breadth of copyright and the vigor of its enforcement by the state will result in wealth effects on intellectual property holders and consumers alike. Such spoils are known as "economic rents." Theoretical and empirical studies show that when government creates a rent, rent-seekers will arise to try and capture the wealth.[10] This rent-seeking manifests itself in many ways, including lobbying, campaign contributions, and bribery (both legal and illegal).

When considering rent-seeking phenomena in the context of copyright law, it is important to recall the work of the late influential political economist Mancur Olson, in the work widely regarded as his masterpiece, "The Logic of Collective Action." Olson points out that in rent-seeking games, the winner is inevitably the group that can, organizing at relatively low costs, identify and capture concentrated benefits, with the dispersed costs of the state action being foisted on unorganized, larger groups, such as consumers and taxpayers. Thus, in the case of the Bono Copyright Term Extension Act, one interpretation is that we see, as University of Chicago legal scholar Richard Epstein puts it, "a plain and simple giveaway of future public domain resources to the powerful institutional holders of valuable copyrights."[11] A relative handful of powerful copyright holders can organize far more easily than can millions of consumers who do not know one other—nor, for that matter, know which works thus taken from the next 20 years' public domain they might use in the future.

The U. S. Department of Justice's budget for copyright prosecutions jumped to $10 million in 2001, up from $4 million the previous year—not counting the $4 million for new computer systems for the copyright division.

For example, one of the most critically acclaimed graphic novels in recent years, *The League of Extraordinary Gentlemen* by Alan Moore, threw together characters from late Victorian literature—including Robert Louis Stevenson's Dr. Jekyll, Jules Verne's Captain Nemo, and Bram Stoker's Mina Harker—and put them in a new situation.[12] Had the "life plus 75 rule" been in effect at the turn of the last century, this work would not have been legally possible.

One work that repurposed the characters of another creator was successfully suppressed by copyright law, in a case that is troubling because of its implications for political speech. *Air Pirates Funnies*, published in the 1970s, was a savage comic book deconstruction of corporate ethos, using Disney characters such as Mickey Mouse. The *Air Pirates* creators regarded Disney as part of a reactionary establishment, a political entity in itself, and therefore a legitimate target of political speech. The courts did not agree, and fined its creators. Disney also sought jail time for the *Air Pirates* creators before the defendants finally agreed to an injunction barring them from continuing the series.[13] Under the original copyright regime instituted by the Founding Fathers, the case would have been moot as Disney's copyright on Mickey would have already expired.

Another key recent change to copyright law, the 1997 Digital Millennium Copyright Act (DMCA), bans technology used to crack the encryption of copyrighted works and limits the liability of Internet Service Providers whose users distribute copyrighted material.

Thus we see in the recent changes in statutory copyright law not only the expansion of copyright as more years are added, but the state taking on the burden of higher enforcement costs resulting from the decreasing cost of copying works. For instance, the U. S. Department of Justice's budget for copyright prosecutions jumped to $10 million in 2001, up from $4 million the previous year—not counting the $4 million for new computer systems for the copyright division. Producers and copyright holders are eager to externalize enforcement costs[14]—and judging from proposed legislation, many in Congress seem willing

to oblige them. But if statutory law were to expand copyright beyond its "natural right" scope, perhaps the enforcement cost of that "excess copyright" should be internalized—through technology, contract, and other market-driven innovations. However, determining the boundary between natural-law copyright and statutorily granted copyright requires further examination of copyright's constitutional justification.

The "Public Good": What is It?

Let us turn to proponents' arguments that copyright law extensions enhance the public good. This invokes questions raised in Alexander Hamilton's Federalist 43—what is "the public good"? Hamilton was not an economist and was not directly referring to the technical definition of "public goods" as goods that are "nonexcludable" or "nonrivalrous"—respectively, goods that yield benefits to those who have not paid for them and goods that can be used by one consumer without lowering the quality or quantity available to others. He was arguing that encouraging compensation for inventors and creators increases the general welfare. But part of this concept of public good is that, ultimately, the public can make use of the invention. So, this leaves us with a series of questions:

- Is the Hamiltonian justification for copyright as serving the public good served by 95-year copyrights?
- Is the public good better served by a set of incentives to create fewer copyrighted cultural goods?
- Are too many resources allocated to the creation of original copyrighted works?[15]

A strong state role in policing copyrights should indeed result in the production of more such works. But that increased production is not necessarily optimal.

Perhaps the "public good" is better served by more limited copyrights that expire and allow the previously copyrighted works to be more freely used as inputs into new cultural works—freeing up human resources for other endeavors, say, journalism or bricklaying.

It becomes increasingly harder for impartial observers to assert that "more is better" as the process for writing copyright rules moves from found law and efficient incentives to statutory law whose chief aim seems to be extending protections that otherwise would expire. A strong state role in policing copyrights should indeed result in the production of more such works. But that increased production is not necessarily optimal.

Optimum quantity of cultural output may in fact be below current levels. If the state unduly subsidizes the production of copyrighted work, it is possible that *useless* arts and sciences are progressing as well as the useful. The Roman Empire subsidized entertainments for the masses in the form of bread and circuses, a situation generally regarded by historians as a factor in that society's eventual

downfall. Thus, the mere quantity of entertainment produced cannot sensibly be regarded as the only measure by which to judge a copyright system's success.

The public good may be better served by a larger public domain of works which present-day artists could more freely adapt. Less protection may result in less output of certain forms of copyrighted works, but those works created could be characterized by a greater give-and-take of ideas over time, a richer, more *useful* intellectual property produced and owned by more individuals and firms. Art builds on what came before. Disney, for instance, has made films from the works of many authors, from Homer to Hans Christian Andersen. But no one can release a new spin on cultural icon Mickey Mouse until 2023.

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Consider another example in which broad intellectual property enforcement stifled creative expression. One of the most popular comic books of the 1940s was *Captain Marvel*, published by Fawcett Comics. The adventures of the costumed superhero regularly outsold those of competitor National Periodical Publications' Superman stories in *Action Comics*. National Periodical sued Fawcett on the grounds that the flying costumed superhero concept was plagiarized from the Superman character. Fawcett responded by featuring in one issue a villain who copyrighted all the letters of the alphabet so that no one could use them to combine words—not even Captain Marvel who needed to say the word "Shazam" to access his superpowers. The case was resolved before it went to trial. Fawcett, facing both declining sales and court costs, settled the suit, turning over the Captain Marvel character to National Periodical, which would later become DC Comics.[16]

Potential Problems With Overly Expansive Intellectual Property Protection

Intellectual Property vs. Free Speech

The Captain Marvel and *Air Pirate Funnies* cases illustrate how a wide holding of intellectual property rights can interfere with freedom of speech and expression. The standard interpretation is that, in the words of the University of Chicago's Richard Epstein, "the law of copyright only protects the expression of ideas and not the ideas themselves. The facts and ideas that inspire the creation of the copyrighted work remain in the public domain even after their expression receives protection under the copyright law."[17] Yet the Captain Marvel suit was an example of a copyright holder seeking to take an *idea* out of the public domain and bundle it within a certain copyright. Some critics of the DMCA argue that it represents an attempt to bundle into a copyrighted work, via legally-unbreakable encryption, the right to wholly dictate the manner in which the consumer uses the work. The act's prohibitions on breaking encryption could preempt the legitimate rights of consumers and creators to cut and paste pre-existing content into sound or video collages that are new works of art in their own right, and could *de facto* extend a work's copyright period beyond its legitimate term.[18]

Hardwiring Intellectual Property Rights By Law?

Many copyright holders have decided that only government-mandated digital rights management (DRM) can protect content. Such DRM would involve an elaborate, centrally controlled, governmental copy-protection system spanning both hardware—DVD players, personal computers, handheld devices—and software—DVDs, CDs, operating systems. Industry groups like the Motion Picture Association of America (MPAA) endorse this approach as the only way to capture "lost revenue." Movie producers have long been able to capture revenue from consumers in a number of markets—theaters, home video, premium cable, and broadcast on networks and basic cable. But now, as consumer power to replicate high-quality digital copies of films approaches that of the studios, the MPAA is understandably worried.

The MPAA's basic proposal, embodied in the Consumer Broadband and Digital Television Promotion Act introduced by Sen. Ernest Hollings (D-S.C.) in the 107th Congress, at first appears an ideal solution for intellectual property creators. Under the Hollings bill, every piece of hardware conceivably able to play digital content would have to be equipped to read and obey certain commands written into the software to bar copying. The bill would have imposed fines of up to $2,500 per violation on the shipping of DRM-free or reverse-engineered playback devices.

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The idea here is that, for example, a DVD may have an embedded command, or "flag" granting permission for the consumer to watch it on his PC, but barring "ripping" from the DVD to the hard drive. A "flag" or DRM capabilities embedded in one's VCR or DVD burner might allow the consumer to record a program and watch it once. Or maybe it would be set so that the consumer can't fast forward through the commercials. The Hollings plan would have extended beyond software such as DVDs to broadcast television.

The Hollings bill never passed, but the FCC has started enacting elements of it. For example, the FCC has decreed that, starting in July 2005, all digital televisions sold must be equipped to read and adhere to broadcast flags (and by 2007, all televisions sold must be digital).

Privately driven DRM efforts by content owners are appropriate. The producer and consumer can agree on an explicit contract when the DVD is purchased. The consumer knows the rules of the game up front, and agrees to the terms set forth on the packaging. If the consumer feels the rights are too restrictive, he can simply not buy the product. The problem comes when mandates are involved.

A one-size-fits-all mandate simply cannot respond to the diverse tastes of consumers, who are becoming increasingly accustomed to controlling how they enjoy media. The VCR revolution got many consumers (those who can program their VCRs) used to "time-shifting"—watching a program at a time other than

it airs. Consumers value this kind of control; witness the quick death of the now-forgotten "DivX" format. DivX was a kind of pay-per-view DVD. While there may be a place for micropayments, consumers did not support a format that so limited the use of a physical asset. The more stringent a one-size-fits-all mandate, the greater the risk of such a system being rejected by consumers—and the greater probability of increased "piracy" activities by both hackers and sufficiently tech-savvy consumers than would be the case if content producers pursued market approaches to digital rights management.

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A government copy protection mandate passes the cost of intellectual property protection on to all taxpayers, in the form of enforcement costs for new criminal and civil laws accompanying the mandate. Every digital consumer would also pay—such tech mandates would raise costs for consumer electronics and radically constrict consumer choice. Further, in today's information age, many consumers are also creators—cutting and pasting and repurposing content in new and innovative ways—and too-rigorous DRM mandates would have them buy essentially pre-disabled equipment. Such a regime would also spawn a classic principal-agent problem: With so many key decisions made by fiat, those designing a mandated one-size-fits-all DRM system won't face much market pressure to keep costs down or to look at innovative ways of protecting intellectual property.

Market Approaches to Copy Protection

The Key is Internalizing Costs

An important question in the copyright debate is: To what degree should copyright holders—artists, their agents, and the content industries—who choose to use the force of the state to protect their intellectual property pay for the assistance? Rights to tangible, physical property are held by virtually everyone who pays taxes and their protection is paid for by funds from the general tax pool. So is intellectual property, which is held only by a relative few. Yet the present legal-financial structure, with enforcement costs socialized across all taxpayers, encourages large intellectual property holders to push for the expansion of rights at general expense. As it stands, present copyright fees don't even cover the operating budget of the Library of Congress' copyright office, much less the costs of the intellectual property-enforcement arms of the FBI and Department of Justice.[19]

Even worse, socialized enforcement costs borne by taxpayers rather than large intellectual property holders can be used to enforce copyrights that do not necessarily enhance the public good. The situation could be ameliorated by statutory rule changes that internalize such enforcement costs. For example, raising copyright fees to a level that would fully fund these budgets would give creators and consumers a better idea of the true costs of intellectual property protection, providing impetus for additional copyright reform—individual copyright holders could then press for shorter copyright lifespans, as the chief beneficiaries of the ever-extending terms of copyright tend to be larger firms.

Better expression of the true costs of state protection of intellectual property, borne by intellectual property holders, might incentivize those intellectual property holders to look for other, more efficient ways to protect their content.

Some firms have already taken the self-help initiative. When rap artist Eminem's 2003 album, *The Eminem Show*, leaked onto the peer-to-peer networks before its official release, his studio flooded the Internet with bogus files masquerading as the album's tracks. This is a much more efficient method of guaranteeing album sales than having FBI SWAT teams storm networked dorm rooms. Other cost-effective self-help methods include joining the queue of downloaders of pirated files, and then downloading the file v-e-r-y s-l-o-w-l-y in order to keep others from downloading. Such measures do nothing to violate consumer rights or Fourth Amendment rights against unreasonable (computer) searches. That is the kind of innovation that should be encouraged as technology changes: adaptive, low-cost, and largely internalized by the studios themselves rather than socialized.

Requiring copyright holders to continually renew their copyright would present an opportunity for the state to recoup its copyright enforcement costs.

However, the studios want to take this a step further and are looking to Congress for help. Legislation introduced in 2002 by Rep. Howard Berman (D, Calif.) would have granted legitimacy to not only the self-help tactics mentioned above—which are already legal—but to more aggressive methods such as hacking onto file-sharers' hard drives to delete offending files. The language in the bill would even have allowed the studios to impinge upon other files as they deem "reasonably necessary," granting rather wide latitude to copyright holders to behave in a manner that for others would constitute trespass. If the studios feel a violation is egregious enough to warrant such a step, they should take their case to court—and, should the alleged pirate file a complaint, defend themselves with an appeal to their right of copyright protection. As for alleged foreign pirates, American studios could be free to restrain them through aggressive "dirty tricks" such as destroying the pirates' booty, were it not for ever-increasing American participation in international bodies that frown on such behavior.

Infinitely Renewable Copyrights and Rent-Seeking Problems

One possible solution for internalizing costs is proposed by University of Chicago legal scholars William M. Landes and Richard A. Posner in their paper, "Indefinitely Renewable Copyright."[20] The copyright holder, they argue, could choose at the end of each copyright period whether to pay the renewal fee or let the work enter the public domain.

Requiring copyright holders to continually renew their copyright would present an opportunity for the state to recoup its copyright enforcement costs. This could be done by setting the renewal price so that each renewal approximates the social cost, based on tax dollars spent and attendant deadweight loss as scored by GAO economists, of enforcing copyright for that period among all copyright holders (the fees proposed by Landes and Posner are more modest). Another

option would charge each copyright holder the cost of enforcing his particular copyright.[21] Opponents argue that, without an upper limit, renewal fees may become too high for most copyright holders to pay.

Renewable copyrights may be the best institutional instrument for intellectual property holders to properly internalize the true costs of state enforcement of copyright; but the inherent vulnerability posed by calculation difficulties and by rent-seeking suggests a limit on the renewals would seem wise.

Obviously, such schemes would involve huge calculation costs; moreover, they would be subject to rent-seeking problems. When law is made by statute and enforced by regulation, both lawmaker and enforcer possess a monopoly power—a rent. That rent has real value, which creates its own demand among "rent-seekers," as discussed earlier. And this power is no less real in the realm of intellectual property—giving copyright holders the motive and means to seek expansion of their copyrights' length and scope through campaign contributions, lobbying, and other influence. This could result in artificially low fees assessed by the regulating agency and an ever-expanding legal interpretation of the scope of a copyright.

Therefore, a system as open-ended as *indefinitely* renewable copyrights seems unwise. Renewable copyrights, if designed correctly, may be the best institutional instrument available for intellectual property holders to properly internalize the true costs of state enforcement of copyright; but the inherent vulnerability posed by calculation difficulties and by rent-seeking—ever-widening interpretation of the copyright at an increasingly subsidized rate—suggests a limit on the renewals would seem wise. A way to limit these inherent dangers would be for the copyright to be eventually released in a set number of years.

Rethinking Loyalty and Pricing

Encouraging loyalty

Something else creators need to consider is that fostering a mutual consideration of interests among themselves and their fans can protect profits. This too, can be price-effective—respect is rather cheap in dollar terms. After all, consumers on the bleeding edge of "digital piracy" are often those most dedicated to supporting the artists they admire. Dedicated fans who go to the trouble to find and download a TV show episode they missed are spending time, which represents a cost, to do so. That time and effort are indicative of the level of fan interest in purchasing specialized DVD boxed sets containing extra features not in the original telecast, authorized merchandise, and the like. One will often find such loyal consumers doing such things as limiting their offerings of media files to programs not in current commercial release.[22] Fans understand that acting as consumers in the legal marketplace encourages the kind of productions they favor. The year 2005 will see two canceled television series revived because of strong DVD sales— Fox's cartoon series, *Family Guy*, will soon return with new episodes, and the sci-fi series *Firefly* will see new life as a major motion picture called *Serenity*. Studio heads have explicitly indicated

both of these decisions were driven by stronger than expected DVD sales, and consumers and fans understand this, as Internet fan discussion sites illustrate.

This phenomenon interplays with the increased specialization and segmentation of entertainment markets—the "narrowcasting" that arises from falling production and reproduction costs in the digital age. As University of Vienna economist Dennis C. Mueller writes in *Public Choice II*:

> Small, stable communities may be able to elicit voluntary compliance with group mores and contributions for the provision of local public goods by the use of informal communication channels and group peer pressure.[23]

Falling production costs mean that ongoing productions—video or music—can be supported by smaller groups of fans who spend their entertainment dollars in a targeted fashion and even act as free advertising—through word of mouth, contribution to online website—for productions and artists they would like to see. File sharing can be, and has been, part of that free advertising; these savvy digital consumers can make it easier for more casual consumers to find newer content on the Web. If studio executives fervently assert their right to perpetual copyrights and studio-circumscribed consumer use of media, they should understand that overly restricting these digitally savvy culture consumers will hurt their bottom line as users embrace rival artists and studios with a more lenient perspective. Such artists and corporations can build a reserve of goodwill—which can manifest itself in fans and consumers policing against the more egregious copyright violators. This phenomenon has been a reality of cyberspace since even before the World Wide Web overtook Usenet newsgroups; perhaps most notably in the case of author Harlan Ellison, whose fans regularly informed him of unauthorized postings of his work to the Internet since the mid 1990s.

If studio executives fervently assert their right to perpetual copyrights and studio-circumscribed consumer use of media, they should understand that overly restricting these digitally savvy culture consumers will hurt their bottom line as users embrace rival artists and studios with a more lenient perspective.

Pricing innovations

Respect for the file-trading culture would indeed involve changes in many dominant media players' business models. This is not necessarily a bad thing, even for the incumbents. There are ways for content producers to get willing consumers to spend more money based on their intensity of preference.

It is worth noting that, over the past quarter century, the music industry's business model has been less innovative than that of the film and television industries specifically because of statutory copyright law. The Copyright Term Extension Act of 1976 banned audio rentals, thereby creating an exception for audio recordings to the "first-sale" doctrine—whereby owning of a physical copy of a copyrighted work, gives the owner the right to lend the item, resell the item, or make a copy for personal use. But audio rental markets thrive in Japan, where copyright holders get a cut of the proceeds—¥3.6 billion ($29.4 million) in royalties from compact disc rentals were paid in 2001.[24] According to the Recording Industry Association of Japan, 17,458 unique audio recordings were released in Japan in 1999,[25] comparing favorably with the 33,100 for the United

The success of television series on DVD reveals that many fans are willing to pay to see shows in their entirety.

States that year,[26] as reported by a UC-Berkeley study.[27] The first-sale exception insulated the American recording industry from information on consumers' willingness to purchase music at lower price points than paying full retail price for several songs bundled together on one album. But a micropayment market for audio has finally begun to emerge in the U.S. with the advent of innovations like Apple's iPod mp3 player. Thus, the major music labels are only now learning how willing American consumers are to pay small amounts to listen to single audio recordings—that, unlike P2P downloads, are of greater quality and provide a return to the artist—rather than $15-20 to own an album permanently.

As digital realities force copyright holders to begin to let go of business models such as bundling high-demand recordings with low-demand ones, copyright holders are discovering ways to get willing consumers to spend more money based on their intensity of preference. For instance, major studios have been surprised at the success of sales of DVD sets of television series.[28] Syndicated TV show reruns usually have a minute or two cut out to make room for additional advertising. Many consumers still choose to watch the "free" reruns, but the success of television series sold on DVD reveals that many fans are willing to pay to see these same shows in their entirety: without scenes cut for time; without a network "bug" in the corner; without the closing credits squished onto one third of the screen—and often with extras such as outtakes and cast and crew commentary. This is a clear example of copyright holders engaging in differential pricing selling different versions of the same good—to various segments of a culture market fragmented along a spectrum of less- and more-discriminating consumers.

Market segmentation in culture markets occurs on a global scale as well. DVD region encoding has worked reasonably well to differentiate prices across markets.

Where possible, intellectual property holders should be free to engage in differential pricing across markets in order to recoup their research, development, and creativity investments necessary to produce content. Technologies such as Internet auctions can make differential pricing for everything from concert tickets to limited-edition releases a reality for intellectual property holders, enabling them to earn more profits than before. *The New York Times* has reported that Ticketmaster, the nation's leading concert and event ticket vendor, is implementing just such a system.[29]

Indeed, one cost-effective way of dealing with the threats to intellectual property in the digital age may be to offer more non-digitizable, or expensively-digitizable, product. After all, consumers who take considerable pains to download songs to burn into a personal mix CD are more likely to support their favorite artists by attending a concert and buying authorized merchandise. Indeed, total concert ticket sales hit an all-time high of $2.1 billion in 2002, 20 percent higher

than in 2001.[30] And the largest concert promoter in both revenue and tickets sold, Clear Channel Communications, also plays prodigious amounts of "free" music as the dominant radio station owner.

Rethinking Advertising Strategies

Studios and broadcasters might look to both new and old advertising models to capture revenue. Non-separable advertising/programming will play a larger role, as it did in the early days of television, when shows like the *Texaco Star Theater* were wholly paid for by a single, prominently-featured sponsor. Recently, the WB network aired a commercial break-free variety series with advertising woven into the show. This tactic can also be used in serial scripted programming. For instance, Revlon recently paid ABC for a unique kind of product placement: The cosmetics company was written into the storyline of the soap opera *All My Children* as the antagonist of Susan Lucci's character Erica Kane. Two popular shows, *24* and *Nip/Tuck*, have broadcast episodes without commercial interruption by featuring products from advertisers Ford Motors and XM Radio, respectively, as part of their plotlines. Moreover, embedding advertising into entertainment content would render piracy less of a problem—and might even be encouraged, as advertisers would be willing to pay more if they thought they were reaching more people. Newspapers and magazines typically charge for ad space based precisely on such "pass-along" rates of readership.

The WB network aired a commercial break-free variety series with advertising woven into the show. This tactic can also be used in serial scripted programming.

Cultural "purists" may balk at the idea of mixing business and entertainment—but is there really that much artistic integrity in daytime soap operas to be frittered away? Is a story about contemporary Americans compromised when the characters make use of contemporary American products that happen to have a brand name? Are *Fear Factor* or *Everybody Loves Raymond* works of such high cultural value that they'd wither under such treatment? As discussed above, a "clean" version of such broadcasts without the advertising could be one of the features of the follow-up DVD release, capturing the market of consumers with more purist preferences.

There are other examples. Live sporting events are increasingly featuring computer-generated advertising inserted in to the televised image of the field of play. Why is this a worse way for sports leagues to raise revenue than extracting taxpayer-financed stadiums from local governments? The stock ticker continues during the commercials on CNBC, keeping viewers from changing the channel. Would an advertising ticker detract from the ambience of the screaming-face programs on cable news? Confronting technological realities is a far better option for both producers and consumers than trying to freeze current paradigms in place.

Adding Value in the Face of New Technologies

Adding value to the entertainment experience, above and beyond what can easily be replicated at home, is key to drawing consumer dollars.

Differential pricing is often, though not always, coupled with marginal changes in the product offered, but added value is also important. Adding value to the entertainment experience, above and beyond what can easily be replicated at home, is key to drawing consumer dollars. The movie industry has done this before. When television arose as a major player after World War II, movie studios added new features such as widescreen and color. The theatergoing experience still holds allure for consumers who appreciate the time premium, the large screen and surround sound, and the social and communal aspect.

More recently, studios have adapted with the rollout of DVD—a permanent medium that can bring surround sound, crisp picture quality, director's commentaries, director's cuts, and so on.

The studios first realized this revenue stream when they started pricing prerecorded videotapes for purchase—at about $20—rather than for rental. That pricing strategy fought piracy by making the copying of videotapes not worthwhile for most consumers. Yet for years, this extremely profitable tactic eluded the imagination of the film industry. MPAA President Jack Valenti testified before Congress in 1982 that:

> [T]he rights of creative property owners as owners of private property... is going to be so eroded in value by the use of these unlicensed machines, that the whole valuable asset is going to be blighted...[W]hile the Japanese are unable to duplicate the American films by a flank assault, they can destroy it by this video cassette recorder...[W]hen you use copyrighted material on a video cassette recorder, it is an infringement of copyright.[31]

However, in the real world, between the price of a rental, the price of a blank tape, investment in a second VCR,[32] the time and effort involved, and recording quality degradation, it's just easier to shell out $15 or $20 dollars for a tape. Those economic realities, more than the copy-protection system named Macrovision, which resulted in a scrambled picture whenever one tried to copy from tape to another, have kept widespread video piracy to a minimum in the United States. AOL Time Warner acknowledged as much by quietly releasing *Harry Potter and the Sorcerer's Stone* on both DVD and VHS without Macrovision protection.

It is, however, conceivable that, as fast and easy methods of playing and recording home-entertainment-compatible digital files become standard equipment on PCs, remaining barriers to cost-free copying will fall—which is why new strategies such as differential marketing and pricing, creative advertising methods, and new business partnerships and synergies across copyright holders, content distributors and hardware manufacturers need to be explored aggressively.

Vertical Integration and Horizontal Business Alliances—and DRM

Many large content producers remain convinced they cannot stay in the black without the full force of government behind them. After Hollings left the Senate without his Consumer Broadband and Digital Television Act being voted on, the major players organized the Broadcast Protection Digital Group (BPDG) in 2003 to draw up digital rights management plans they would like to see mandated by Washington. The BPDG would like to see all basic consumer entertainment hardware—VCRs, PCs, DVD players, etc.—banned unless programmed to read and obey "broadcast flags" limiting how many times a movie or television broadcast can be watched or recorded.

However, it takes a lot of effort to assemble and hold together a cartel, and this case was no different. While most hardware companies were glad to have a system that mandated a market for more complicated and therefore more expensive devices, each proposal would ultimately leave an odd man out. Phillips Magnavox found fault with the BPDG process because it believed that it did not include enough of its proprietary technology. Without such a sales guarantee, a hardware-focused company like Phillips doesn't have the incentive to cater to content creators rather than consumers' preference for more flexibility to do what they please with the media they purchase.

Vertical integration, from content production to delivery to consumer, enables firms themselves to better police without passing the cost on to the taxpayers.

Now, if Phillips were taken over by, say, Viacom, it would naturally have the financial incentive to build digital rights management into home entertainment appliances. Vertical integration, from content production to delivery to consumer, enables firms themselves to better police without passing the cost on to the taxpayers. For instance, Time Warner operates many cable systems that also provide broadband Internet access. As a major content provider, it has policed its own broadband networks in an attempt to shut down file sharing of copyrighted material. When these costs are borne by the firm holding the copyright and its customers, the firm has incentives to innovate in order to keep costs low. Other firms could test similar approaches, such as offering low-cost access to consumers in exchange for greater overt surveillance of consumer behavior regarding copyrighted material. This approach would require a thorough reexamination of the nation's current antitrust regime.

Cooperation and innovation between firms should today be similarly encouraged. "Horizontal integration" that would be frowned upon by today's antitrust regulations helped bring 19th-century British books to America. U.S. publishers would bid among themselves for the right to publish an authorized edition of a book from the UK (which then was not protected by US copyright). Less-respectable publishers would in some cases produce lesser-quality unauthorized editions, risking the wrath of the more established publishers, who back then, before antitrust laws had more tools, such as agreements with retailers, to apply economic pressure on the "wildcat" publishers. So British authors could

be compensated for works published in America. Charles Dickens, for instance, continually agitated for a British-American copyright agreement; though the compensation systems then at hand did apparently produce enough incentive for him to continue prolific writing.[33] Similarly, a combination of clothing designers called the "Guild of Fashion Originators" in the 1930s used private-sector boycott methods to protect against piracy of dress styles.[34]

It is becoming evident that both vertical and horizontal integration of the entertainment industry, from studio to desktop, will be necessary to keep expensive, large-scale content production profitable.

Innovative, commonsense solutions ought to pass muster with Washington antitrust enforcers. It is becoming evident that both vertical and horizontal integration of the entertainment industry, from studio to desktop, will be necessary to keep expensive, large-scale content production profitable. Today, such cooperation would likely be considered collusion in violation of antitrust laws.

In 2002, when Microsoft and Intel announced they were working to develop Palladium, an all-in-one security-privacy-intellectual property-spam solution—currently named the Next Generation Secure Computing Base—the heated responses on the Internet came within hours. Microsoft and Intel were accused of looking to corner the market on DRM platforms for future integrated home entertainment-information systems. But a broad DRM is desirable, since platforms will need to be, at the very least, interoperable for the consumer to have access to the full range of copyrighted digital material. As long as such a system is not backed by a government mandate, the question becomes, So what? Ideally, such a free-market DRM system would, like vertical integration, internalize the costs of enforcing copyrights on the firms involved and their consumers. Rather than insisting on expanding copyrights backed by federal law enforcement, a private-sector DRM system could provide the model for the eventual movement to more narrowly-drawn copyrights and to contracts between consumer and copyright holder. A study of the software industry by Kobayashi and Ribstein found that innovation is best encouraged not by strong copyright law, but rather by a combination of moderate copyright protection backed by strong "copyright contracts" which the consumer familiarizes himself with before purchase.[35] The software, employed by the firm—rather than a prosecutor paid for by taxpayers who may have nothing to do with the firm—"enforces" the contract. Recognition that some bad actors will always try to break such encryption regardless of the law just means that a dominant DRM system will have to be both on the cutting edge technologically and respectful enough of consumer preferences to encourage as few attempts as possible to "crack the code."

Bundling DRM with Content

Another promising approach for internalizing costs to copyright holders and their customers is tying DRM to content rather than hardware. A recent paper published by Cryptography Research, Inc. [36]outlines the technical feasibility of embedding the digital rights management system into digital content. Instead of

one standard permanently installed on every piece of playback hardware, all the player would need is a "virtual machine" software program that could interface with a wide range of DRM information embedded in the encrypted content. For instance, a unique "key" hidden within each discreet unit of content itself, a technique known as steganography, could identify its originally purchaser. Variations on this technique have been successfully used for years, particularly with "digital watermarks" embedded within still graphic files.[37] And different content firms can experiment with different DRM regimes for different products and different consumers. Price and product differentiation can, of course, extend beyond DRM to other variables such as picture resolution.

Open-source: Canary In the Coal Mine

Whether under a Palladium-like DRM regime or simply facing competition from rigorous content/DRM packages, open-source operating systems such as Linux will likely continue to thrive. Thus, developers of the competing DRM regimes will need not only to keep the user interface simple and secure but also to keep the DRM rules reasonable. Should rules on the use of copyrighted material get overly restrictive, more people will migrate to the open-source frontier and the artists who embrace it for distribution. And the more active the open source sector, the greater the number of pirated files loosed into cyberspace.[38]

Thus, by monitoring how many people stick with authorized services versus how many migrate over to off-the-grid systems, with all the inconveniences such platforms entail, the content-hardware producer alliances manufacturing a DRM system would be able to adjust certain variables of their products—price, features, security, privacy, quality—to keep customers from fleeing.

Early media reports indicated that Palladium machines will be able to play and copy "unflagged" files. Indeed, any successful DRM platform will certainly have to do so, or at the least include a "use-or-copy-anywhere" option among its array of "broadcast flags." The passive culture consumer is a thing of the past (if he ever really existed at all). Consumers will insist that they still be able to create and share content for personal use. In addition, independent artists need to be able to freely distribute their work to find an audience—and those who do so successfully often subsequently find themselves working for, and earning revenue for, the large entertainment companies.[39]

A sophisticated platform would also allow for limited, "fair-use" of content. Allowing *x* number of clips or *y* number of seconds to be freely excerpted for review or the creation of new works would not only be in line with current copyright law, but also give consumers that much less incentive to abandon legitimate services.

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Rather than recognizing and capitalizing on consumers' desire to take a more active role in how they watch and use entertainments, much of the culture industry works to calcify existing arrangements.

Unfortunately, rather than recognizing and capitalizing on consumers' desire to take a more active role in how they watch and use entertainments, much of the culture industry works to calcify existing arrangements. Witness the lawsuit filed by the major studios against the manufacturers of the digital video recorder[40] ReplayTV—among their complaints is that the hardware makes it too easy for consumers to skip commercials. Such attempts can ultimately lead to self-defeating overreach in that they increase the likelihood of individual consumers migrating to "unapproved" viewing platforms, precluding a better arrangement between broadcasters and ReplayTV. Competitors such as TiVo, which have been a bit more deferential to studio demands, (consumers can "fast-forward" but not "skip" ads, for example) have thrived by avoiding such pricey legal entanglements.

Mandating Fair Use?

Some groups, such as DigitalConsumer.org, are pushing for a congressional mandate of their own. They argue that the Digital Millennium Copyright Act went too far by outlawing not certain uses of copyrighted material, but the act of decrypting certain encryption of copyrighted materials. Their answer is to pass a competing set of mandates, guaranteeing the rights of consumers to time-shift their media consumption, to "space-shift" by making copies for use on other media, to make backup copies, and so on. There is a certain logic to this in the face of the DMCA and potential future mandates that would further erode such common-law consumer rights. All of these are important to a number of media consumers.

But this too, would go too far. Given that such uses are important to a large number of consumers, content producers have a great incentive to meet those consumer tastes. Piling one mandate on top of another isn't a recipe for anything but greater costs and prices. And although such rights generally arose in the courts as common law from copyright disputes, the occasional superceding of such rights by contract—in tandem with technology—is not wholly unreasonable. It is a mistake to ban an entire category of contracts regarding consumer use of digital content via statute in the name of protecting fair use. If copyright holders think such restrictions on certain products are worthwhile despite the risks outlined above, and consumers agree to the terms by making a purchase, overriding the contract by federal statute makes no sense.

Conclusion: Progress Cannot be Mandated

Appeals to a common-law natural right of copyright cannot justify statutes that increasingly move toward a system of a perpetual all-encompassing "right" that undermines the Constitutional justification of copyright to advance "the progress of the useful arts and sciences." The current copyright regime's

inefficiency is evidenced by claims that its enforcement will require technology mandates—that is, serious curbs on basic economic freedoms.

Large copyright holders can themselves design business models and technological systems to ensure that they earn profits from their intellectual property. Many such innovations are already taking place, as rapid technological change forces content creators to rely on their own wits, even as they insist that Washington mandate systems to support their preferred business models.

Such support—whether by law, technology regulation, or increased law enforcement—need not and should not be the only option, even if that means a long-term diminution of cultural content produced by the firms that currently lead that industry. For, as discussed in this paper, when it comes to mass-produced cultural content, more is not necessarily optimal. New ways of capturing revenue might approach an output level more reflective of true demand.

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The dominant studios and broadcasters can continue to be a vital part of the culture if they realize that some aspects of recent copyright law may go too far (even if upheld by the courts); if antitrust hawks and other regulators leave them free to jointly or separately develop rigorous DRM structures; if they pay their appropriate share of the burden of intellectual property law enforcement costs; and if they design entertainment systems user-friendly enough and intellectual property rules reasonable enough to keep enough consumers satisfied and coming back for more. As the means to create and distribute cultural content becomes ever cheaper and widespread, decentralization is inevitable. But if the content industry embraces these changing realities and government gets out of the way, there is no reason to think that consumers won't continue to support profitable culture and content.

The bottom line is this: One-size-fits-all mandates on critical consumer technologies will stifle the growth of the copyright industries and indeed, of new forms of art. A wide array of hardware-software combinations to choose from would best serve consumers and artists. Calcifying particular arrangements during rapid technological changes will stifle innovation, leaving both the level of economic freedom and the state of the culture suboptimal.

Notes

[1] RIAA is sending mixed signals on this front, following a campaign announcing an intent to crack down on song swappers—and indeed filing suit in hundreds of cases—with an offer of "amnesty" for song swappers who send a notarized letter of repentance. (Jefferson Graham. "'Amnesty' for song swappers?," *USA Today*, Sept. 7, 2003.) And even as RIAA offers repentance, it engages in a campaign to link file-swapping to pornography (Saul Hansell, "Aiming at Pornography to Hit Music Piracy," *New York Times*, Sept. 7, 2003.) while another RIAA-inspired bill, H.R.2885 was floated in the 108th Congress with the stated intent "[t]o prohibit the distribution of peer-to-peer file trading software in interstate commerce." The bill would in fact require identification for anyone buying, or receiving for free, peer-to-peer file-trading software.

[2] For example, according to *Stereophile Magazine*, Sept. 8, 2003: Universal Music Group is cutting Manufacturer Suggested Retail Price to $12.98 from $16.98, $17.98, and $18.98 on "virtually all top line" CDs. Wholesale price cut from about $12 to about $9.09.

[3] Some object to the term "monopoly" in relation to copyright; but the term is not used pejoratively here, but rather literally. The copyright owner is indeed the sole legal seller of a specific creative work, though he presumably does face competition from other copyright holders.

[4] R.H. Coase, "The Marginal Cost Controversy," *Economica* 13 (August 1946) 169-82.

[5] The Court also inexplicably dismissed plaintiffs' straightforward argument that the Constitutional prohibition (Article 1, Section 9) on writing ex post facto laws should have precluded the Congress from postponing the expiration date of, and therefore altering the property rights allocated concerning already copyrighted works.

[6] James V. Delong, "Intellectual Property in the Internet Age: The Meaning of Eldred," *Progress on Point 10.5*. The Progress & Freedom Foundation, February 2003 (http://www.pff.org/issues-pubs/pops/pop10.5meaningofeldred.pdf).

[7] See Priest 1977—Rational litigants, weighing costs and potential benefits of litigation will push legal rules toward efficiency over time, even though the judges may be biased or incompetent since it is inefficient rules that will be more often challenged and therefore more often changed.

[8] Richard Posner, *Economic Analysis of Law* (3d ed. 1986).

[9] See Fletcher M. Reynolds, "Music Analysis for Expert Testimony in Copyright Infringement Litigation." Ph. D. dissertation submitted at University of Kansas. 1991.

[10] The seminal paper here is G. Tullock 'The Welfare Costs of Tariffs, Monopolies and Theft,' *Western Economic Journal*, 5, 1967, pp. 224-232. Though it would make an interesting study to search for rent-seeking in the passage of the Bono Act by running a regression on certain

campaign donors and senatorial votes, we find that the Senate vote was taken by voice and no record of the ayes and nays remain.

[11] Richard A. Epstein, "The Dubious Constitutionality of the Copyright Term Extension Act," *Loyola of Los Angeles Law Review*. Vol 36:123 Fall 2002.

[12] The film adaptation was critically panned, however.

[13] Bob Levin, "Disney's War Against the Counterculture," Reason, December 2004 (http://www.reason.com/0412/fe.bl.disneys.shtml).

[14] After a U.S. Circuit Judge ruled (*RIAA v. Verizon*) that the latter provision also applied to consumers who share files off their own hard drive on peer-to-peer (P2P) networks, the Recording Industry Association of America (RIAA) flooded the U.S. District Court in the District of Columbia with "administrative subpoenas" demanding information. The paperwork deluge was such that the court has had to reassign staff to deal with it.

[15] In the Cato Institute policy analysis, "Why Subsidize the Soapbox?: The McCain Free Airtime Proposal and the Future of Broadcasting," Adam Thierer and John Samples suggest that there can be such a thing as "too much" political speech on broadcast television and cite poll results indicating same. There is as little reason to necessarily think that "more is better" when it comes to copyrighted entertainment as there is with televised political speech (http://www.cato.org/pubs/pas/pa480.pdf).

[16] Ironically, by the time DC revised the character, they did so under the comic magazine title SHAZAM so as not to invite a lawsuit from rival publisher Marvel Comics. But the character has been involved in another intellectual property lawsuit since then. When Fawcett quit publishing, a UK reprint publisher produced a knockoff title called "Marvelman." Marvelman was revived in the 1980s and published in the U.S. as "Miracleman" for the same reasons. Miracleman went on to become the subject of a 1990s court case between two comic book auteurs, the UK's Neil Gaiman and America's Todd McFarlane. For more, see, Joe Simon with Jim Simon, *The Comic Book Makers* (New Jersey: Vanguard Productions, 2003).

[17] Epstein, "The Dubious Constitutionality of the Copyright Term Extension Act."

[18] One group that has distinguished itself in this art form is Negativland, resulting in legal tangles with CBS News and U2, among others. Other recent examples of this kind of de/reconstruction include the so called "Gray Album," a popular mix of the rhymes of rap artist Jay-Z laid down on backbeats from The Beatles album (a.k.a. The White Album).

[19] For FY2002, Copyright Office budget was $40,896,000 with $19,624,226 in user fees taken in. (http://www.copyright.gov/reports/annual/2002/budget.html) The U.S. Sentencing Commission website data lists only four cases of restitution and/or fines for trademark/copyright violation from 1999-2001 with damages

unspecified. (Civil restitution and fine figures are not available, but considering the heretofore low numbers of cases resolved in such a manner it does not seem such fines would have made up the difference.)

[20] William M. Landes & Richard A. Posner, The Law School, University of Chicago, *John M. Olin Working Paper No. 154* (2D Series), Aug. 1, 2002, p. 3 (http://www.law.uchicago.edu/ Lawecon/ WkngPprs_151-175/154.wml-rap.copyright.new.pdf).

[22] E.g., see www.dapcentral.org , the most comprehensive digital television library maintained by any website/Internet community where tech-savvy fans of "cult" television shows are "dedicated to the digital preservation of our favorite shows."

[23] Dennis C. Mueller, *Public Choice II : A Revised Edition of Public Choice* (Cambridge, U.K.: Cambridge University Press, 1997) p. 14.

[24] Japanese Society for Rights of Authors, Consumers Publishers (www.jasrac.or.jp/ejhp/ operation/ licensing_activities.html).

[25] See the report, "Japan's Music Industry," issued by the Japanese Economy Division of the Japan External Trade Organization (http://www.jetro.go.jp/en/stats/economy/jem0406-2e.pdf).

[26] See the report, "How Much Information?" issued by University of California at Berkeley (http://www.sims.berkeley.edu/research/projects/how-much-info/index.html).

[27] One reason why this market has thrived may be the regulatory measures that prevent retailers from discounting the sale price of Japanese-made CDs (and books and newspapers). See Chester Dawson, "Japan's Music Industry Is Losing Its Groove," *BusinessWeek*, June 10, 2002.

[28] "Television DVD's, an afterthought in the DVD market just three years ago, were an estimated $2.3 billion-dollar business last year, according to a recent Merrill Lynch research report. They now represent nearly 15 percent of total DVD revenue, with profit margins between 40 and 50 percent."—from "Steal This Show," *New York Times*, January 30, 2005.

[29] Chris Nelson, "Ticketmaster Auction Will Let Highest Bidder Set Concert Prices," *New York Times*, September 1, 2003 (http://www.nytimes.com/2003/09/01/technology/01TICK.html).

[30] *Online Reporter*, January 11, 2003, (www.onlinereporter.com/torbackissues/TOR330.htm).

[31] Jack Valenti, "Home Recording of Copyrighted Works" Hearings before the Subcommittee on Courts, Civil Liberties, and the Administration of Justice, of the Committee on the Judiciary, House of Representatives, Ninety-Seventh Congress, Second Session, April 12, 1982, Available at http://cryptome.org/hrcw-hear.htm.

[32] Current U.S. law outlaws double-decker VCRs, but similar disincentives, though perhaps not as severe, would still hold for such machines with their higher costs and bulkier size (representing an opportunity cost for the alternate use the space could be put to).

[33] See "COPYRIGHT." LoveToKnow 1911 Online Encyclopedia. © 2003, 2004 LoveToKnow (http://60.1911encyclopedia.org/C/CO/COPYRIGHT.htm) and research by Tim Palmer cited by Long, Roderick T. "The Libertarian Case Against Intellectual Property Rights" in the journal *Formulations*, Autumn 1995 issue.

[34] James V. Delong, "Intellectual Property in the Internet Age: The Meaning of Eldred," (http://www.pff.org/issues-pubs/pops/pop10.5meaningofeldred.pdf).

[35] Bruce H. Kobayashi, Bruce H. and Larry E. Ribstein, "Uniformity, Choice of Law and Software Sales." George Mason Law Review, Vol. 8, pp. 261-306, Winter 1999 (Text downloadable from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=177428).

[36] "Self-Protecting Digital Content," Cryptography Research, Inc., November 2003.

[37] Another troubling example of a similar technique's successful use was revealed in November 2004. News reports detailed how major printer manufacturers had secretly set their printers to include hidden markings (visible under LED light) on each document, indicating the serial number of the machine on which the document was printed.

[38] The other alternative would be to increase patronization of content producers who do not encode digital content with DRM at all, perhaps as such under the "creative commons" rules designed by Lawrence Lessig et al. Again, DRM designers would have to be careful to allow some room for such open content on closed DRM systems; to do otherwise would just drive consumers to operating systems over which they have no control, making the potential audience for "pirated" files that much larger.

[39] For example, Trey Parker and Matt Stone's widely distributed video Christmas Card served as the pilot for the television series and pop-culture phenomenon "South Park." Other examples abound.

[40] Paramount Pictures v. SonicBlue; see http://www.eff.org/intellectual property/Video/Paramount_v_ReplayTV/20011031_complaint.html

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