

Copyright Control v. Digital Technology: A Policy Suggestion

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P2P Technology: Legal and Policy Challenges

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Introduction

The struggle between copyright control and digital technology raises a difficult dilemma for policy makers. Copyright owners want control over their works in order to derive rewards from them. This desire manifests itself in copyright law, which was created on the premise that creators would be encouraged to add to the body of art, music, literature, and other creative works as long as they had incentives (*e.g.*, control, the ability to make money, acknowledgement). Digital technology threatens these incentives, as its very nature makes it *far* too easy for any person to make identical copies of works, store them in large quantities, and distribute them to large numbers of other people.

A current battle rages between the entertainment industry and peer-to-peer (P2P) technologies in the *MGM v. Grokster* Supreme Court case. Though it is not new for advances in technology to threaten copyright owners (past threats include the printing press, player piano, broadcast radio, and VCRs), much is at stake in this new case. Technology threatens to take away the livelihood of copyright owners; copyright owners call for monopoly-like control over technology at the expense of innovation.

The landmark *Universal v. Sony* Supreme Court ruling in 1984 clearly delineated the boundary between copyright and technology. Any technology with a “significant non-infringing use” (SNIU) was virtually immune to copyright lawsuit (as long its creators did not have a relationship of control over users that enabled them to stop infringement). If ruling solely on the *Sony* precedent, the Supreme Court would favor Grokster. However, it is not clear that this will be the final decision.

When considering the complex conflict between copyright control and digital technology, Congress may be the best body to make a decision that considers all stakeholders. In this case, there are many:

- Creators: people who produce new creative works. These people want rewards for their labors (acknowledgement, control of their works, and money).

- Copyright owners: creators and anyone to whom creators have assigned their copyrights (*e.g.*, publishers, record labels, *etc.*). This group wants absolute control over their works in order to get maximal rewards.
- Technology product businesses: companies that create new technology. This group wants the freedom to invent profitable new technology (and answering to copyright owners limits this).
- Related businesses: venture capitalists, ISPs, credit card companies, advertisers, technology magazines, *etc.* This group wants to work with or provide services to technology product businesses in order to make profits.
- Open source developers: (typically unpaid) programmers who write software that they freely distribute to others. Members of this group want the freedom to invent new technology and are often idealistic about limiting control of creative works.
- Consumers of copyrighted works: people who use technology to obtain and use creative works. These people want access to creative works at a reasonable cost (many believe that “reasonable” means free).
- Society: the greater good of all people. Society values progress and the availability of new creative works. Society enables control over copyrights in order to ensure creators continue contributing, but puts access to new works as its highest goal.

The goal of this paper is to present the issues at stake in the conflict between copyright control and digital technology, and to advocate a Congressional law that strives for balance between stakeholders. The law I advocate narrowly targets “bad actors,” who take unfair advantage of copyright owners for their own financial benefit. The balance created by such a law is not even: I argue that technological freedom should be favored over copyright control. One of the key reasons is that the nature of a world-wide Internet community makes copyright control via limits on technology in the United States impractical. Because file sharing technology can move off-shore, the U.S. should not chill its own technology industry (which makes more for the GNP than the entertainment industry) to protect copyright owners. Instead, I argue that copyright owners should adapt their business models to *work with* technology.

Overview

In this paper, I begin with a discussion of the *MGM v. Grokster* Supreme Court case. I argue that the Supreme Court should uphold the *Sony* safe-harbor for technology with significant non-infringing uses (SNIUs). I explain how a ruling favored by copyright owners would not give them control of their works, which makes excessive restrictions on technology impractical. I then discuss the legislation I advocate that Congress pass, which would codify *Sony* and add a third form of secondary liability called “active inducement.” I present wording for an active inducement law that targets violators as those who show specific intent to induce infringement, massive distribution of copyrighted works, and commercial gain from infringement. Finally, I discuss ramifications of this law on copyright owners and argue that their best option is to adapt their business models to work with technology.

Supreme Court Ruling in *MGM v. Grokster*

The Supreme Court should uphold the *Sony* safe-harbor, which clearly defines when technology can be held liable by copyright owners: in cases when it does not have or is not capable of a substantial non-infringing uses (SNIUs). This *Sony* “bright line” leads to business certainty and promotes technological innovation.

If the Supreme Court does not uphold the *Sony* safe-harbor, the outcome of future cases would be uncertain. Businesses, venture capitalists, researchers, and many other stakeholders would not be able to predict if a new technology could be held liable for copyright violations, which would chill technological innovation.

The Supreme Court’s ruling will affect possible future legislation on copyright issues and P2P technology. In this section, I discuss the issues at play in the *MGM v. Grokster* case and present favorable rulings. This will lead to a discussion of the legislation I advocate to protect technology from a copyright owner monopoly, while preventing certain bad technologies from taking unfair and illegal advantage of copyrighted material.

Decomposing the Copyright Owners’ Position

The copyright owners in this case believe that *Sony* does not apply to *Grokster*. They and their supporters propose several alternatives to the *Sony* safeguard that would lead to future judicial uncertainty. These alternatives include examining a product’s primary use and technical design, the company’s business model, and copyright owners’ ability to control unauthorized uses.

Copyright owners have raised a serious issue that *Grokster* encourages infringement on a massive scale and profits from it. It is quite possible that *Grokster* is a “bad guy” and the copyright owners deserve a ruling in their favor. However, the alternative ruling they propose is not narrow enough to only target “bad actors” like *Grokster*. Rather, it would enable future lawsuits on many legitimate business.

The first alternative test promoted by copyright owners is primary use (*i.e.*, is the product mainly used for infringement). Primary use is a problematic metric for judging violations because it depends on *users*, not on the technology itself. Users commonly employ technology for many purposes, some of them legitimate, some perhaps not. It is not unreasonable to expect users to discover obscure uses of a technology that are illegal. The technology company should only be responsible for making sure their products have a SNIU, not preventing all possible infringing uses. In addition, a primary use test does not enable efficient litigation since it raises questions of fact, ruling out summary judgments.

Similar to primary use, copyright owners advocate that non-infringing uses should have to be “commercially significant.” This is problematic for the same reasons as a primary use test: technologists should not have to predict how users will use their products.

A second test promoted by copyright owners is determining if a product was intentionally designed to facilitate infringement. This test is problematic for two reasons: (1) it involves speculating about technology developers’ intentions which are not tangible, and

(2) it enables copyright owners to dissect technology feature-by-feature for any small sign of encouraging infringement. For either, any small indication of a developer's intention to encourage infringement might be used against him/her, and it is unclear where to draw the line. If a software company puts "Napster" in its HTML meta tag (to attract search queries for Napster), does this mean it intends users to infringe as Napster did? If a software product *enables* users to download copyrighted music, does this mean it *intends* users to infringe? If an iPod MP3 player is built with a large hard drive, didn't Apple intend that users would infringe to fill it with music?

A third test promoted by copyright owners asks if a company's business model is dependent on users infringing. Taken alone, this test is misleading. Again, it depends on how consumers will primarily use a technology, which will not necessarily match the company's intent. Also, a valuable and legitimate use of the product might not be as commercially significant as an infringing use. Just because it is less commercially significant does not mean the valuable and legitimate use should be considered secondary.

A fourth test promoted by copyright owners is the extent to which they can limit unauthorized uses of their works, considering the cost of this control to software developers. They argue that if the developers *could have* built their technology to minimize infringement without undue cost, then they should be held liable for secondary infringement for not doing so. This argument is flawed because it is unpredictable and difficult to prove, which will lead to business uncertainty. It also does not lend well to efficient litigation, rendering summary judgment impossible since issues of fact must be individually examined. Finally, it enables copyright owners to control how technology is designed, which is an unfair extension of their power into other enterprises.

Fundamentally, the copyright owners' proposed ruling would enable them to control technological innovation. All of the tests above impose restrictions on technology that are stringent and unpredictable, leading to business uncertainty for fear of copyright lawsuits. Copyright owners should not be allowed to extend their monopoly of rights so far that they can "deprive society of the good that comes from the existence of other enterprises¹." The Supreme Court has shown that it favors copyright owner rights, but not at the expense of other enterprises. In *Sony*, they found it "extraordinary to suggest that the Copyright Act confers upon all copyright owners, much less the respondents in this case, the exclusive right to distribute VTRs simply because they may be used to infringe copyrights²." They would not rule to enlarge the scope of copyright owners' "statutory monopolies to encompass control over an article of commerce that is not the subject of copyright protection³."

¹ Brief of *Amici Curiae*, Sixty Intellectual Property and Technology Law Professors and The United States Public Policy Committee of The Association for Computing Machinery, in Support of Respondents, *MGM v. Grokster*, 01 March 2005.

² *Sony Corp. of America v. Universal City Studios, Inc.* 464 U.S. 417 (1984), at n. 21

³ *Id.* At 421.

P2P Technologies have SNIUs

Even though Grokster might be considered a “bad actor,” the P2P technology underlying it is not. P2P is a generic platform technology that has many SNIUs and prohibiting them would be at the detriment of future technological efficiency, flexibility, and applications. The P2P platform is a distributed, redundant network that provides a reliable system for storing and distributing information. Avoiding the bottleneck of client-server communication, it enables efficient, reliable access to information despite denial of service attacks, equipment failures, and excessive network traffic. It also enables efficient distribution of public domain works, grassroots distribution by creators, and other legitimate dissemination. Finally, P2P technologies enable new types of applications. For example, researchers at the University of Saskatchewan developed a P2P based environment called Comtella⁴, which “allows students to contribute and share class-related resources.” The system was deployed in an undergraduate class on Ethics and IT and resulted in “a significant increase in participation and contribution... in comparison with a previous offering of the class where students contributed class-related resources via their own personal web-sites.”

A Supreme Court ruling like one promoted by the copyright owners or the INDUCE Act would prohibit many of these potential benefits of P2P technologies. It is important that the ruling target “bad actors” with careful, narrowly-tailored language.

Targeting “Bad Actors”

Copyright law does not explicitly target “bad actors” that also have SNIU. Senators Orrin Hatch and Patrick Leahy⁵ attempted to solve this by introducing a new bill to create a new secondary liability of *inducement*, even for technologies with SNIUs (the INDUCE Act⁶). The original wording of the INDUCE Act leaves many legitimate businesses open to copyright lawsuits. Since its introduction, the INDUCE Act has been modified many times, though it has yet to accomplish both protection of copyright and technology.

How Should the Supreme Court Rule?

The most important part of any ruling in the *MGM v. Grokster* case is that it uphold the *Sony* safe-harbor to protect technological innovation. Beyond that, the Supreme Court has two favorable choices: it could exonerate Grokster and defer to Congress the restriction of “bad actors;” or it could create a narrowly-tailored ruling that finds Grokster and very similar technologies liable for copyright violation. Because an explicit law on inducement does not exist, it would be best for the Supreme Court to defer to Congress to create such a law that could consider all stakeholders: copyright owners, technologists, venture capital, researchers, and so on. In this case, Congress would have pressure from copyright owners to pass legislation prohibiting bad technologies like Grokster.

⁴ Julita Vassileva, “Harnessing P2P Power in the Classroom,” *Intelligent Tutoring Systems: 7th International Conference*, 2004, pp. 305-314.

⁵ Senators Orrin Hatch and Patrick Leahy both received significant campaign contributions from the entertainment industry in 2004.

For Hatch, see <http://www.opensecrets.org/politicians/indus.asp?CID=N00009869&cycle=2004>.

For Leahy, see <http://www.opensecrets.org/politicians/indus.asp?CID=N00009918&cycle=2004>.

⁶ For originally proposed wording, see http://www.lessig.org/blog/archives/COE04694_LC.pdf.

If the Supreme Court instead chooses to create a narrowly-tailored ruling against Grokster, it should follow the same guidelines Congress does for carefully considering the impact on both copyright owners and technologists. Even with this ruling, Congress might still receive pressure from copyright owners, because massive copyright violation would still be possible due to other technologies that do not induce copyright infringement but might be repurposed for infringement.

No Supreme Court Ruling will Help Copyright Owners

Even if the Supreme Court unwisely rules as the copyright owners suggest, people will still be able to illegally obtain and share copyrighted material. It is unlikely that any ruling will stop off-shore products, open source projects, and already distributed P2P software.

Off-shore products may not fall under United States jurisdiction⁷, but can still be obtained by U.S. citizens. In some cases, people in other parts of the world are practically untouchable by U.S. law. For example, Earthstation 5, P2P file sharing software from a Palestinian corporation⁸, openly defied the RIAA and MPAA. They posted the following on their website:

“Please take notice: EarthstationV Ltd., a Palestinian corporation, does not accept any legal process via e-mail, nor will we accept any attachments via e-mail. For service of process, you must serve our legal department located at our offices in the Jenin refugee camp, Jenin, Palestine.”

Even if P2P technologies are outlawed in the U.S., copyright owners will see their works distributed by software from other parts of the world.

In addition to off-shore companies, open source projects threaten copyright owners. Theoretically, a law could be passed to stop open source project in the U.S. that enable file sharing, though such a law would be controversial. Software is protected by copyright law as a creative work, which implies that code written without intent for commercial gain should be protected as free speech. Though it could be said that direct infringers profit from using open source software since copyrighted works are worth money, it is a stretch to accuse developers of secondary liability since they do not profit from users' infringement.

Also, P2P technology is already in the hands of users and cannot be taken away because of its de-centralized architecture. Users of Grokster, Morpheus, and other P2P file sharing products will be able to continue using the clients even after the companies are shut

⁷ The question of jurisdiction on the Internet is still unclear, though many parts of the world do not recognize U.S. laws or jurisdiction. Therefore, it is reasonable to expect that a person in certain countries would be immune to U.S. law, especially if s/he does not explicitly target U.S. customers.

⁸ The location of Earthstation 5 was never verified, though the Washington Post investigated and found no trace of the company in Jenin. See <http://www.washingtonpost.com/ac2/wp-dyn/A61110-2004Feb21>.

down. Of the Supreme Court ruling in *MGM v. Grokster*, Mike Weiss, CEO of StreamCast Networks, the parent company of Grokster said,

“No matter what decision the court makes, the technology doesn’t stop. There are 130 million copies of Morpheus [P2P software] already downloaded, and they will continue to work no matter what.”

Finally, new technologies are continually created and many more will no doubt threaten copyright owners. For example, many new software products enable users to convert streaming music to MP3s⁹. This legitimate software, when used in conjunction with Internet radio and other legitimate subscription-based streaming music products like Real Rhapsody¹⁰, enables illegal music downloading.

Because no ruling will save copyright owners from illegal file sharing, it does not make sense to stunt technological growth with a broad ruling. As stated above, a Supreme Court ruling in favor of Grokster or a very narrow ruling in favor of MGM will likely cause copyright owners to push Congress for protective legislation. In the following sections I discuss the legislation I advocate that Congress pass.

Congressional Legislation on P2P v. Copyright Issue

Congress should pass a law to target bad actors not stopped by current copyright law. The goal of a new law passed by Congress should be to (1) protect technological innovation, (2) protect copyright owners from unfair infringements on their rights. To accomplish both requires a challenging balancing act between technological freedom and copyright owner control. I advocate a law that adds to the Copyright Act a form of “active inducement” liability, while upholding the *Sony* safe-harbor.

Active inducement is a principle already employed in patent law, which “expressly brands anyone who ‘actively induces infringement of a patent’ as an infringer¹¹.” Patent law also protects products with SNIUs (except those that actively induce): “whoever offers to sell or sells” a “staple article or commodity of commerce suitable for substantial noninfringing use” is not “liable as a contributory infringer¹².”

An active inducement law, the INDUCE Act, was proposed by Senators Hatch and Leahy and is currently being modified and advocated. Unfortunately, the wording of the INDUCE Act leaves many legitimate businesses open to copyright lawsuits.

I advocate a new active inducement law for copyrights with narrower wording than the original INDUCE Act, that would target “bad actors” like Grokster. The law should

⁹ For a list of MP3 recorder software, see <http://www.mp3-recorder.net/>.

¹⁰ Real Rhapsody, <http://www.real.com/rhapsody/>.

¹¹ Brief of *Amici Curiae*, Sixty Intellectual Property and Technology Law Professors and The United States Public Policy Committee of The Association for Computing Machinery, in Support of Respondents, *MGM v. Grokster*, 01 March 2005.

¹² 35 U.S.C. § 271(b).

follow suit with patent law, protecting products with SNIUs but condemning active inducers. To do so, the wording of the new law would need to uphold the *Sony* safe-harbor (*i.e.*, technologies with SNIUs are immune), except for bad technologies. In this section, I discuss traits of a desirable law, define bad actors, explain the INDUCE Act and why it is not desirable, and propose new wording for a law on inducement liability.

Desirable Qualities in a New Copyright Law

A new law that will accomplish a desirable balance between technology freedom and copyright owner control will have several qualities. First, it should specifically target bad actors in a way that is neither *too restrictive nor too expansive*, and that is *flexible* enough to apply to future similar cases. An overly restrictive law will not enable copyright owners to enforce their rights against technologies that promote massive infringement. An overly expansive law would chill technological innovation and business ventures. If the wording is so specifically targeted at P2P software like Grokster, technologists may simply redesign their products to be *different enough* from Grokster to circumvent the ruling.

Second, a new law should be *technology-neutral*, but with care. This means that the law should cover not only P2P technologies, but any technology (including not-yet-invented ones) that could be used to induce copyright infringement. However, the course of technological research and innovation is difficult to predict. A new law would need to be careful to not prohibit beneficial technologies of which we are currently unable to conceive.

Third, the law should be *precise* and *predictable* so as to enable business certainty. Investors should be able to consult an attorney who can tell them whether or not a new technology could be held liable for copyright infringement. At this point, potential bad actors should be deterred by a clear law and legitimate businesses should be comfortable with proceeding. Grokster's lawyers probably advised investors that their software was protected by the *Sony* safe-harbor since P2P technologies have SNIUs and they couldn't control the infringement of their users due to their system's de-centralized architecture¹³. Until the *Grokster* case, the *Sony* safe-harbor provided clarity and predictability for investors, which has led to a flourishing technology industry (that ironically makes more money for the United States GNP than the entertainment industry). Obviously, something is missing from the law because Grokster is clearly profiting from massive copyright infringement. However, any addendums to the law should continue promoting the important technology industry for the good of the entire country, in addition to deterring bad actors.

Finally, the law should lead to *efficient litigation*. This means that elements of the law should be comprehensible and limited in number. Judges (who are not technology

¹³ Napster on the other hand, was found liable for contributory and vicarious infringement since they had control over users (due to a centralized indexing system) and could have stopped their direct infringement. Grokster did not have a centralized indexing system, and so did not have control to stop users from directly infringing.

experts) should be able to rule in cases without delving into the details of a technology's architecture or examining its every feature.

In summary, a new law should be specifically targeted at bad actors without being too restrictive or expansive, technology-neutral, precise, predicable, and it should lead to efficient litigation.

Defining Bad Actors

The wording of an active inducement addendum to the law would need to uphold the *Sony* safe-harbor (*i.e.*, technologies with SNIUs are immune), except for bad actors. In order to target a new law at bad actors, we must first define them. I argue that bad actors are those that show

- *specific intent to induce* infringement,
- *massive distribution* of copyrighted works (*i.e.*, not just copying or storing), and
- significant *commercial gain* from copyright infringement (*i.e.*, the law should apply to people who make profits, not open source or academic projects).

Specific intent to induce infringement is key, because without it technology companies would be at the mercy of their users. If users decided to use a product to infringe, regardless of its intended use, a company could be held liable. *Specific intent* indicates that there were overt acts take by a company to induce users to infringe, such as advertising, documentation, or tutorials that encourage users to download music. For example, Aimster P2P file sharing software has a tutorial that only includes examples of sharing copyrighted music. The music industry had notified Aimster that the same music was being infringed by Aimster's users.

Massive distribution of copyrighted works is included to protect fair use and to prevent the law from being too expansive. Fair use enables people to make personal copies of works they have purchased. Copyright owners are not threatened by a person who makes two copies of a CD s/he owns and stores it on two different computers. In general, products that enable people to copy or store copyrighted works are not the problem. Products that enable people to distribute works to hundred or thousands of other people are the real threat. Just about any piece of technology is capable of copying, storing, and small-scale distribution of copyrighted works: hard drives, CD ROMs, lipstick drives, USB cables, iPods, PDAs, cell phones, *etc.* None of these products by themselves are capable of distributing massive quantities of copyrighted works. A law that does not narrow its wording to specify massive distribution would be too expansive, considering that storing, copying, and small-scale distribution are inherent to all digital technology.

Commercial gain from copyright infringement should be required for liability in order to protect First Amendment rights. Software is protected by copyright law as a creative work, which implies that code written without intent for commercial gain should be protected as free speech.

Specific intent to induce, massive distribution, and commercial gain should be the three tests to determine "bad actors." Wording that successfully targets such bad actors would

protect other legitimate actors, such as ISPs, search engines, advertisers, credit card companies, libraries, hard drive manufacturers, *etc.* It would also protect business ventures, such as Apple's iPod and other products with SNIUs that do not induce copyright infringement. In addition, it would protect copyright owners from products like Grokster, the original Napster, Aimster, Kazaa, and others that built commercial success by inducing illegal music downloads on a large scale.

I advocate that Congress pass a law that codifies these three factors. Currently, Congress is exploring similar legislation, the INDUCE Act, that will have negative impact if passed because it does not define bad actors narrowly enough to protect legitimate businesses. Next, I describe the INDUCE Act and then I present a better solution.

INDUCE Act

The Inducing Infringement of Copyrights Act of 2004 (INDUCE Act) was proposed by Senators Hatch and Leahy. It extends secondary liability to include "intent to induce infringement," which "may be shown by acts from which a reasonable person would find intent to induce infringement based upon all relevant information about such acts then reasonably available to the actor." This wording is vague and open: it is not clear what digital technology even remotely related to infringement could *not* be found liable under this law. Ernest Miller maintains an extensive list of potentially infringing technologies under the INDUCE Act that includes

- Lego Mosaics (allow children to put any image on their legos, inducing them to use copyrighted images since they do not know better),
- automatic online translators (aid and abet your ability to create derivative works),
- AM/FM transmitters (induce people to transmit music from their CD player in one room to their AM/FM radio in another room),
- Jane Magazine (induces girls to take pictures of its magazine with camera phones and send them to friends, teaching them how to infringe copyrights of other magazines),
- MIT IO Brush (a research project that induces children to copy "ink" from any surface (including copyright protected ones) using a camera-augmented brush, and "paint" with it on a digital canvas),
- and many more¹⁴.

The INDUCE Act wording is so broad that a magazine, newspaper, blog, or other media source could be sued for reviewing one of these products. For example, the Electronic Frontier Foundation wrote a fake lawsuit against Apple, Toshiba, and C|Net under the INDUCE Act. First, they described how Apple could be sued for the iPod, which might be accused of encouraging users to download music to fill up its large hard drive (despite its other SNIUs)¹⁵. Then they described how a review of the iPod written by C|Net¹⁶ (a

¹⁴ Ernest Miller, "Hatch's Hit List," http://www.corante.com/importance/archives/cat_hatches_hit_list.html.

¹⁵ See the Electronic Frontier Foundation's "Fake Complaint Against Apple, Toshiba, and C-Net for Inducing Infringement of Copyrights." http://www.eff.org/IP/Apple_Complaint.pdf

¹⁶ C|Net, "Apple iPod Mini Review," http://reviews.cnet.com/Apple_iPod_Mini_4GB_Green_/4505-6490_7-30657036-4.html.

news website), could make the company liable because it “intentionally induced, aided, and abetted its readers to infringe Plaintiffs’ copyrights” by “explicitly suggested not only that users ‘rip’ their entire CD collection onto their computers and into their iPod device, but even specifically instructed users on how to make further unauthorized reproductions of these infringing files by copying them between multiple computers.”

Ernest Miller summed up the INDUCE Act well on his blog: “If contributory liability is similar to charging the promoter of illegal street races for reckless driving, the INDUCE Act is similar to charging automakers with reckless driving for making fast cars that can be used in street races¹⁷.”

New Inducement Policy Proposal

I advocate a law that codifies active inducement as a form of secondary liability without changing the *Sony* safe-harbor, defining active inducement to include specific intent to induce infringement, massive distribution of copyrighted works, and commercial gain from infringement.

Ernest Miller’s wrote a “Draft Substitute for the INDUCE Act¹⁸,” which I believe can be the basis for such a law. I propose one addition to his proposed law. Ernest Miller’s draft is as follows, with my addition in bold:

Section 501 of title 17, United States Code, is amended by adding at the end the following:

(g)(1) Inducement of Infringement. Whoever actively and with actual knowledge induces **massive** infringement of a copyrighted work by another under Subsections 106(3), 106(4) or 106(6) of this title with the specific and actual intent to cause and to financially benefit from the infringing acts shall be liable as an infringer.

(2) Contribution to an Infringement. Whoever materially and with actual knowledge contributes to the infringement of a copyrighted work by another shall be liable as an infringer.

(3) Vicarious Infringement. Whoever has the right and ability to supervise an activity resulting in a direct infringement and has a direct financial interest in such activity and infringement shall be liable as an infringer.

(4) Limitations on Secondary Liability.

(A) manufacture, distribution, marketing, operation, sale, servicing, support, or other use of embodiments of technology capable of use for infringement, with or without the knowledge that an unaffiliated third party will infringe, cannot constitute inducement of infringement under Subsection g(1) in the absence of any additional active steps taken to encourage direct infringement.

(B) manufacture, distribution, marketing, operation, sale, servicing, support or

¹⁷ Ernest Miller, “The INDUCE Act (IICA) and Tertiary Liability,” 2004, <http://www.corante.com/importance/archives/005027.php>.

¹⁸ Ernest Miller, “Draft Substitute for the INDUCE Act,” 2004. <http://www.corante.com/importance/archives/005287.php>

other use of embodiments of technology capable of a substantial non-infringing use shall not be liable under this title, except for direct infringement and as provided under Subsection g(1).

(5) Damages for violations of section (g)(1) of this section shall be limited to an injunction against inducement, and actual damages for infringement of a work for which the defendant had specific and actual knowledge the work would be infringed.

This phrasing codifies active inducement as a form of secondary liability without changing the *Sony* safe-harbor. Part (1) defines an active inducer as “whoever actively and with actual knowledge induces massive infringement... with the specific and actual intent to cause and to financially benefit from the infringing acts.” Like patent law, this requires an overt act that is meant to induce users to infringe, clearly targeting bad actors. The clause “under Subsections 106(3), 106(4) or 106(6) of this title” limits inducement to particular types of direct infringement (distribution, public performance, and transmission). This protects copying and storing, which do not typify problematic infringement and are characteristics of all digital technology. As Ernest Miller commented on his blog, “If you have 100 copies of a work at home, what is the harm? The real problem is when those copies are distributed¹⁹.” Finally, it specifies that commercial gain from infringement is required for liability.

I added to part (1) the word “massive” to qualify infringement. As argued above, this more closely targets products that actually cause harm to copyright owners and it protects fair use. It is also synergetic with other proposed alternatives to the INDUCE Act. For example, the DONT Induce Act²⁰ states (bold added for emphasis),

“Whoever actively distributes in commerce a computer program that is specifically designed for use by individuals to engage in the **indiscriminate, mass infringing distribution** to the public of copies or phonorecords of copyrighted works over digital networks, with the specific and actual intent to reap financial gain by encouraging such individuals to engage in such indiscriminate, mass infringing distribution, shall be liable as an infringer.”

This wording is even narrower than the previous, prohibiting only inducement of “indiscriminate, mass infringing distribution.” This proposed wording uses the term “mass” to qualify infringement, which properly classifies the type of infringement that is problematic. However, the term “indiscriminate” seems confusing and too narrow. It means “not making or based on careful distinctions; unselective²¹,” the opposite of which is “discriminating” or “selective.” If one shows that infringers were selective in their

¹⁹ Ernest Miller, <http://www.corante.com/importance/archives/005287.php>

²⁰ American Association of Law Libraries, American Library Association, Association of Research Libraries, BellSouth Corporation, Computer & Communications Industry Association, Consumer Electronics Association, Consumer Electronics Retailers Coalition, DigitalConsumer.org, Digital Future Coalition, Home Recording Rights Coalition, MCI, Public Knowledge, SBC, U.S. Internet Industry Association, U.S. Internet Service Provider Association, U.S. Telecomm Association, Verizon. “Discouraging Online Networked Trafficking Inducement Act,” 2004. http://www.corante.com/importance/archives/Dont_Induce_Act.pdf.

²¹ From Dictionary.com.

distribution (*i.e.*, sharing to a set of 100 friends on their “buddy list”), would that absolve guilt?

Parts (1) – (3) delineate all the ways a person can be liable for secondary infringement: by (1) actively inducing infringement; (2) contributing to an infringement; or (3) vicariously being responsible because of a relationship that enables control of infringement. All of these secondary liability types require that some third party directly infringe. Part (4), “limitations on secondary liability,” codifies the *Sony* safe-harbor. Part 4(a) means that a device with *no* SNIU *can* be held liable for (1) active inducement, (2) contributory, and/or (3) vicarious secondary infringement. Part 4(b) means that a device with a SNIU can *only* be held liable for (1) active inducement secondary infringement.

The implications are clear to technologists and investors: you can build, advertise, and sell a product that has a SNIU, even if it could be used to infringe copyrights, as long as you do not actively induce (*e.g.*, overtly advertise or market) the infringement.

Business Models: Copyright Owners Working with Technology

The solution I have advocated to the copyright problem raised by file sharing technologies is Congressional legislation to codify the *Sony* safe-harbor and add active inducement to the forms of secondary copyright infringement. The narrowly tailored law I advocate is technology-neutral and targets bad actors who show specific intent to induce, massive distribution, and commercial gain. I believe the wording is precise, predicable, and it would lead to efficient litigation. It does not overly limit technological innovation, but it ensures that new ventures are not taking advantage of copyright owners for commercial gain.

However, no solution that limits technology will give the entertainment industry absolute control of its copyrights. As discussed above, file sharing software will continue to be distributed off-shore and by open-source developers. Laws might limit open-source development in the United States, but no law is likely to touch the developer in the Jenin refugee camp. In addition, once a P2P technology is in a user’s hands, it cannot be “shut down;” it will continue to run independently due to its de-centralized architecture. Therefore, copyright owners should explore alternate business models to work with legitimate technologies.

Outlawing P2P Technology = Outlawing Efficient Distribution?

P2P technologies are inherently useful for many applications outside of infringing copyrights. P2P technologies like BitTorrent²² provide users with the ability to share files (including music files), but do not actively induce copyright infringement. The BitTorrent website describes the ethically lofty goals of the product:

“BitTorrent is a free speech tool.

²² BitTorrent, Inc. <http://www.bittorrent.com/introduction.html>.

BitTorrent gives you the same freedom to publish previously enjoyed by only a select few with special equipment and lots of money.

You have something terrific to publish -- a large music or video file, software, a game or anything else that many people would like to have. But the more popular your file becomes, the more you are punished by soaring bandwidth costs. If your file becomes phenomenally successful and a flash crowd of hundreds or thousands try to get it at once, your server simply crashes and no one gets it... BitTorrent... is a simple and free software product that addresses all of these problems. The key to scaleable and robust distribution is cooperation.”

An inspection of BitTorrent’s website reveals nothing that could be considered actively inducing copyright infringement: no pictures or names of copyrighted works, no tutorial examples showing infringement, no advertisements about downloading your favorite music, *etc.* BitTorrent is a legitimate product that enables and advocates ethical, just actions: the freedom of the “little people” to publish. While the entertainment industry would love to shut BitTorrent down, it is an unjust extension of their rights. It could arguably lead to copyright owners controlling all forms of wide-spread publication, effectively monopolizing “free speech.”

Even though BitTorrent enables infringement, it does not actively induce it. (Even though a car enables street racing, it does not actively induce it.) Direct infringers are in control of their actions taken using BitTorrent; they are not tricked, conned, encouraged, or promoted to infringe. Any lawsuits regarding infringing BitTorrent users should be directed at the users. This applies to similar technologies as well.

Rather than condemning BitTorrent, many creators could put it to use. As their website claims, creators can take advantage of new the “freedom to publish” it affords using a system for “scaleable and robust distribution.”

Rather than Limiting Technology, Copyright Owners should Update their Business Models

While copyright owners have the right to sue others who actively induce others to infringe in order to financially benefit, they do not have the right to prohibit various forms of technology; all forms of technology are inherently capable of infringing copyrights. Rather than attempting to control all forms of technology, copyright owners should focus on adapting their business models to remain successful in the face of technological advances. Even better, copyright owners should take advantage of the efficiency afforded by technology to explore new distribution mechanisms.

Let’s look at the music industry as an example²³. The music industry promotes musicians and manufactures CDs for them. Currently, the music industry relies on CD sales for profit. Musicians take home only a very small portion of CD sale revenue, relying largely on live concerts and licensing. Musicians commonly complain about never seeing royalty

²³ Peter Kafka, “The Road to Riches,” *Forbes Magazine*, July 2003, http://www.forbes.com/forbes/2003/0707/078_print.html.

checks from their record labels, regardless how many CDs they sell. Since the introduction of Napster-style digital infringement, CD sales in the U.S. dropped from \$13 billion in 1999 to \$11.5 billion in 2002. Though it is unclear if the drop in profits was caused by Napster-type software²⁴, the music industry blames technology. However, musicians have not suffered a loss of revenue; in fact concert tour profits have been climbing, from \$1.3 billion in 1998 to \$2.1 billion in 2002. Record labels do not get any of this money. This begs the question: are CDs becoming an archaic mechanism for distributing music? Would music labels be able to make more money if they cut their distribution costs by employing P2P networks?

Unlike record labels, musicians seem to be relatively untouched by P2P technologies due to their business model (*i.e.*, profit from concert sales rather than CDs, where only CDs are threatened by new technology). One must question whether copyright laws to give the music industry more control over technology are actually needed to provide incentive to musicians, who are doing quite well. I argue that instead it is the music industry that needs a new business model.

Professor Hal Varian presented 16 business models²⁵ that involve free copying of works (see Table 1). Copyright owners could employ one or a combination of the business models in Table 1 to improve their ability to earn money. These business models provide many alternatives for incentivizing creators to continue producing works that are synergetic with existing technology, including P2P.

Table 1: Alternative business models for copyright owners that involve free copying of works.

Business Model	Description, Examples
Make the copy cheaper than the original	Set price at transaction cost of sharing (<i>i.e.</i> , when the consumer buys the first copy) and make the transaction cost large.
Make copy more expensive than original	<i>E.g.</i> , prosecute copiers, pollute the copies with fakes.
Sell physical complements	<i>E.g.</i> , t-shirts, lotteries (buy the CD, win dinner with the band), concerts.
Sell information complements	<i>E.g.</i> , liner notes, gossip, news information, photos.
Levies on related products	Impose extra tax on products to support use of copyrighted works (<i>e.g.</i> , hard drives, bandwidth).
Subscriptions, bundled over time	To get most recent release, pay in advance.
Personalization	Personalize information so no one else wants it (<i>e.g.</i> , musician sings your name).
Advertise yourself	<i>E.g.</i> , sell live appearances, interviews.
Advertise other things	<i>E.g.</i> , Google AdSense, product placement, information complements.
Public performance licenses	<i>E.g.</i> , radio stations, restaurants, and grocery stores pay to play music.
Site licenses	Organization pays for members (<i>e.g.</i> , Apple could sell iPod preloaded with music).
Media tax	Impose extra tax on products to create required media (<i>e.g.</i> ,

²⁴ Michael Geist, "Piercing the P2P Myths: An Examination of the Canadian Experience," *First Monday Journal*, vol. 10, num. 4, 2005.

²⁵ Professor Hal Varian, U.C. Berkeley School of Business, Economics, and Information Management Systems. "Business Models," P2P Technology: Legal and Policy Challenges class with Professor Pamela Samuelson, May 2005.

	vacuum tubes for radio).
Ransom	Consumers pay before production (<i>e.g.</i> , Stephen King wrote a novel one chapter at a time, based on reader payments).
Pure public provision	<i>E.g.</i> , BBC.
Voluntary contributions	<i>E.g.</i> , Public radio
Prizes, awards, commissions	<i>E.g.</i> , NSF, DARPA.

This would not be the first time copyright owners had to compromise upon the introduction of new technology. The player piano was a digital recording and playback system. Companies sold piano-rolls for the player piano without compensating musicians. In 1908, the Supreme Court ruled in favor of piano-roll manufacturers. Congress, receiving pressure from copyright owners, imposed a compulsory license: piano-roll makers paid copyright owners 2 cents per roll and the copyright owners could not stop the piano-roll maker. This example might fall under the “public performance licenses” business model in Table 1. The player piano controversy is analogous to the current controversy over P2P file sharing technologies. Like with the player piano case, copyright owners today may well be served by a change business models that is synergetic with improvements in technology.

Conclusion

In this paper, I have presented a Congressional law to resolve the conflict between copyright control and digital technology. The characteristics of this law are that it be specifically targeted at bad actors without being too restrictive or expansive, technology-neutral, precise, predicable, and it should lead to efficient litigation. To accomplish these goals, a law should codify *Sony* and add a third form of secondary liability called “active inducement.” I advocated wording for an active inducement law that targets violators as those who show specific intent to induce infringement, massive distribution of copyrighted works, and commercial gain from infringement. Finally, I discuss ramifications of this law on copyright owners and argue that their best option is to adapt their business models to work with technology.

One major problem with the struggle between copyright control and digital technology is that the Internet enables a world-wide community, but U.S. policy cannot reach all parts of the world. Therefore, broadening secondary liability for digital technology in the U.S. to the point where innovation is chilled will not solve copyright owners’ problems and it will cause new economic problems. A just law would enable legitimate technology ventures that do not actively induce infringement to continue providing products with SNIUs for the betterment of society.

Ultimately, the purpose of copyright law is not to extend monopolistic control of creative works such that owners can make as much money as possible. Rather, its purpose is to ensure that creators have some incentive to create. There is ample room for business models that work synergetically with digital technology and would provide creators with more than adequate incentives for their works.