Managing Intellectual Property Protection in the Digital Age

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ABSTRACT

Managing intellectual property (IP) protection in the digital age raises numerous challenges for global organizations and copyright owners. Due to web-enabled accessibility, copyrighted works are being exploited without ever acquiring the consent of the author. As technology evolves at extraordinary rates, copyright laws struggle to keep pace. The Digital Millenium Copyright Act (DMCA) has been a legislative pillar in balancing intellectual property protection with the rights of online service providers. However, the law is facing widespread criticism and appeals for modernization to adapt to advancements in pirating, Peer to Peer (P2P), and User Generated Content (UGC) websites. More recently, proposed legislation SOPA and PIPA failed to answer the challenges remaining after DMCA without risking restriction of the very freedom of expression lawmakers sought to protect, garnering strong opposition. Experts have grappled with how to address challenges without failing under similar circumstances as SOPA and PIPA. They suggest that a combination of increasing legal enforcement, consumer education, and supporting private, non-legislative, voluntary efforts will curtail infringement and nurture legitimate use of copyrighted works. But can we manage IP by finding a balance between copyright protection and personal freedom?

CONCEPT

The concept of intellectual property (IP) protection is not a novel invention of recent history. In fact, legal cases have imparted authorship rights into law dating back over three hundred years (Franklin, 2015). However, very little in the way of content mediums and accessibility are the same today as they were then. Now, in the digital age, anyone with access to a computer and Internet can consume copyrighted content almost instantaneously, with incredible ease, and all the while bypassing all traces of antiquated modes of distribution. Because of this, a typical person's exposure to IP protection has evolved from recognizing copyright as a distant legal notion to confronting the concept in a number of common online activities (Palfrey, 2009).

As recently as two decades ago, it would have been impossible to predict the impact the Internet would have in disrupting the way the global community accesses content (Internet Policy Task Force, 2013, p. 8). The sheer volume of exposure to digital content is staggering. For example, the vast majority of all youth and adults alike use at least one form of social media (Table 1), many accessing these platforms at least daily (Weisse, 2015; Lenhart, 2015). It's perfectly common for millennials to spend an aggregate of eighteen hours a day with varying types of media, spending over five hours a day accessing User Generated Content (UGC) sites, while tens of millions of Americans continue to access peer-to-peer (P2P) networks (EFF.org, 2008; Kassaway, 2014).
Table 1: Percentage of Adults Using Social Media

<table>
<thead>
<tr>
<th>Platform</th>
<th>% of Adults Using Social Media</th>
<th>% of Adults That Visit Site Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Instagram</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Pinterest</td>
<td>31</td>
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Source: Adapted from Pinterest, Instagram use doubles in three years. E. Weisse (August 9, 2015). USA Today.

As people are constantly exposed to a plethora of content—including a substantial amount of copyrighted content—it is critical that both managers and technology users develop knowledge of copyright laws and understand their individual role in protecting the intellectual property rights of the global community. Despite the amount of contact everyday people have with copyrighted work, most still are unaware of even basic copyright laws (Palfrey, 2009). Many confuse trademark, patent, and copyright, using them interchangeably and are not even aware that copyright automatically arises at the very moment that original work is put in a tangible format, no registration required. Most have no knowledge that the United States permits authorship for the lifespan of the creator plus seventy years (Mableson, 2013). Not only will knowledge of IP laws protect the innovative culture of society, it will help organizations and individuals identify their own rights as creators themselves. Having a functioning knowledge of existing IP laws and appreciation for what they aim to accomplish, is vitally important to cultivating a global society that enjoys and fosters creativity concurrently with online freedom. The challenge of balancing IP rights and technological freedom can be answered through the analysis and understanding of current copyright laws, reforming and improving upon these laws and developing solutions to identified problems via improved legal enforcement, consumer education, and voluntary, non-legislative efforts.

LITERATURE REVIEW: COPYRIGHT

Although copyright laws are not unique to the United States, the country has served as a global leader on the issue, perpetually striving to accommodate technological progress while balancing rights afforded by law and free expression (Internet Policy Task Force, 2013, p. 9) With global Internet in contrast to territorial copyright laws, it is imperative that the international community work closely with one another to ensure authorship rights are protected across borders. As a key signatory of numerous international copyright treaties, the United States has an obligation to consider the global context when drafting and revising domestic laws and must present a model of transparent, comprehensive processes in order to inspire global advocacy for IP protection (Internet Policy Task Force, 2013, p. 9).

In an ever-changing digital world, it is essential for private organizations and governments to frequently reevaluate the landscape by which creative IP exists to ensure sufficient copyright laws and protections are in place. Identifying the possible need for reform is critical in equalizing the balance between safeguarding copyrighted property and necessary exceptions like fair use (Internet Policy Task Force, 2013, p. 8). Fair use refers to the limited legitimate use of copyright materials without the obligation to acquire permission from the owner (Franklin, 2015). These uses can comprise criticism, comment, reporting, teaching, research, and others and are typically subjected to four standardized legal tests to determine if the use is lawful. These four factors are 1) the nature of the use; transformative...
and/or used for commercial purposes, 2) the nature of the work; published, out-of-print, creative, etc., 3) the portion used in comparison to the work as a whole, and 4) the market and value effect the use has on the copyrighted work (Wymore, 2012). Essentially, the concept of fair use establishes the right to transform or critique a copyrighted work to a certain extent, although this doctrine is criticized as being far too vague and complex (Palfrey, 2009).

Furthermore, governments, citizens and businesses alike should identify whether adequate technological and legal tools exist that enable appropriate enforcement of said laws. Copyright laws in the U.S. have been historically proven to be fundamentally sound even generations after their initial inception (Internet Policy Task Force, 2013, p. 2). However, best practice calls for unearthing new ways that licensure processes, copyright protection and enforcement can be improved to accommodate a progressive and creative society. To conduct a review of this nature, the Secretary of Commerce created the Internet Policy Task Force in 2010. The aim of the original analysis was to further public policy relating to "combat(ing) online copyright infringement more effectively and sustain(ing) innovative uses of information and technology." (Internet Policy Task Force, 2013, p. 2). By focusing on topics related to the impact of online copyright infringement, emerging legal and illegal business models, and concerns in the application of existing laws, the Internet Policy Task Force became a sounding board for reform and began successfully identifying problem areas in U.S. copyright policies. One of the foremost areas the task force appraised was existing legislation in the U.S., its efficacy and determining compulsory changes required to accommodate progressive technological advancements that threatened IP rights.

**DMCA Introduced:** In 1998, President Bill Clinton signed into law the Digital Millenium Copyright Act (DMCA), in a move to integrate copyright legal protections into the digital age (Franklin, 2015). DMCA applied in the United States two World Intellectual Property Organization (WIPO) treaties from 1996: the WIPO Performances and Phonograms Treaty and the WIPO Copyright Treaty in conjunction with addressing several other copyright issues including limiting copyright infringement liability for online service providers that engage in certain activities (Copyright Office, 1998). The WIPO treaties compelled member countries to safeguard works not in the public domain in the country of origin, provide equal caliber protection of foreign works from member countries as that of domestic works, exempt foreign works from Copyright Office registration requirements prior to the filing of legal action, and finally mandate the ban of circumvention of technological protection measures and copyright management information (Copyright Office, 1998). DMCA amended existing U.S. copyright law to include these functions as applicable to the U.S. including controversial Internet Service Provider (ISP) safe harbors. ISPs are broadly defined by DMCA to include any entity that provides online services or network access (17 U.S. Code § 512).

**TPMs and RMI:** DMCA amended Title 17 of the U.S. Code, adding Chapter 12 to address the gravity of affording sufficient legal protection and remedies against circumvention of technological measures used by copyright owners (Copyright Office, 1998). 17 U.S. Code § 1201 dictates that no one may circumvent technological measures that aim to control access to a protected work and that no one may manufacture, offer or sell a product with the primary purpose to circumvent technological protection measures. Exceptions to this are fair use, law enforcement, libraries and education, government activities, among others (17 U.S. Code § 1201). Two of these protected tools are technological protection measures (TPMs) and rights management information (RMI). TPMs are tools that are designed to prevent illegal use or access to digital works and include access controls like digital signatures, cryptographic locks, as well as use controls such as digital locks (Internet Policy Task Force, 2013, p. 17). DMCA deters the use of TPM tampering as well as the manufacturing and distribution of products that have no other significant
purpose other than to tamper with TPM while defining that TPMs are not to be used in a way that obstructs fair use and other copyright exclusions (17 U.S. Code § 1201).

DMCA also provides that the alteration or removal as well as the distribution of fraudulent RMI is illegal. RMI is information that enables a works' licensing. RMI is defined by the WIPO Treaties as: "information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of the use of the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public" (Internet Policy Task Force, 2013, p. 19). WIPO further defines RMI as a valuable tool for locating and identifying content via customizable searches while aiding the establishment of appropriate licensing agreements with copyright owners (WIPO, 2015). TPMs and RMIs enable creative copyright owners to control the terms of their works' use. Establishing legal safeguards for these tools and deterring and penalizing those who seek to evade technological controls, encourages copyright owners to make their works available on the Internet (Internet Policy Task Force, 2013, p. 16).

ISP Liability Limitations: Title II of DMCA amends Title 17 U.S. Code Chapter 5 to include section 512, codifying limitations on copyright infringement liability for online service providers (Copyright Office, 1998). 17 U.S. Code § 512 removes liability from the service provider rendering them exempt from sought monetary relief and restricting injunctive relief for copyright infringement when the material is routed, cached, transmitted, or indexed via its network, website, servers or other system when the infringing content is user-generated (Copyright Office, 1998; Mableson, 2013; 17 U.S. Code § 512). When the service provider engages in any activity outside these four covered activities specified by statute, they may expose themselves to full liability (Internet Policy task Force, 2013, p. 53).

Immunity is not automatic and several conditions must be met in order for an Internet Service Provider (ISP) to enjoy the safe harbors afforded by DMCA. First, the material being transmitted, routed, cached, or indexed/linked must have been made available online by someone other than the service provider (17 U.S. Code § 512). Content uploaded or posted to a website or system is described as user-generated content (UGC) and sometimes that content is copyrighted work that is uploaded or shared without permission by the owner, otherwise known as infringing UGC (Mableson, 2013). The ISP must not select, store, or route the material unless via an automatic process, must not select recipients of the material unless through an automated process, and must not modify the material in order to receive non-liability protection from infringing UGC (17 U.S. Code § 512). Also, ISPs must employ a policy to terminate the accounts of repeat copyright infringers and must not impede copyright owners' lawful technological measures to protect their works (Copyright Office, 1998).

Furthermore, wherein information resides on a system, an ISP cannot have actual knowledge that the UGC on the website or network is infringing and cannot be aware of facts or circumstances that make the infringing activity obvious (17 U.S. Code § 512(c)). Moreover, DMCA prevents ISPs from "policing" UGC to identify infringing content as by doing so, they would lose protection under DMCA under the "actual knowledge" requirement (Mableson, 2013). Essentially, some might conclude that DMCA stops ISPs from acting proactively in identifying infringing content, instead rendering them exclusively reactive.

There are several other key factors in determining eligibility under DMCA safe harbors beyond content being exclusively user-generated and the "actual knowledge" requirement. Another critical requirement is that the ISP cannot receive a direct financial benefit from the infringing activity when the ISP has the ability to control such activity. Additionally, when an ISP is notified of an infringing activity by a copyright owner, they must promptly remove or disable the infringing content (17 U.S. Code § 512).
Finally, liability immunity for ISPs with systems in which UGC content resides are subject to the requirement of assigning a designated agent, available to the public on their website and registered with the Copyright Office for the purpose of handling notices received claiming infringement violations (17 U.S. Code § 512).

**Notice and Takedown:** In 1995, a case against Netcom by one of the Church of Scientology's publishing arms was decided by the U.S. District Court for the Northern District of California (Mableson, 2013). The plaintiff's complaint involved the posting online of Scientology literature without the permission of the owner by a user named Dennis Erlich (Hollaar, 2002). Erlich had posted copies of Scientology's works to a small bulletin board service ran by Tom Klemesrud that was connected to the Internet via Netcom. After Erlich refused to remove the postings, Scientology requested Netcom to act on their request to disable the content. Netcom refused because in doing so, they would have blocked all of the bulletin board service's postings including the legal ones. Meanwhile, the owner of the bulletin board, Klemesrud could have removed the content by terminating Erlich's account but this was not factored in to the legal proceedings of the case (Hollaar, 2002). The court decided that Netcom could not be held directly liable for an infringing act wherein their role is limited to "nothing more than setting up and operating a system that is necessary for the functioning of the Internet" (Mableson, 2013).

However, the court found that it was likely that Erlich infringed on Scientology's copyrights and Netcom played a role in Erlich's infringement, leaving Netcom subject to possible vicarious or contributory liability (Hollaar, 2002). Although Netcom could have potentially controlled the infringer's illegal actions, they did not receive financial benefit from the infringing activity and therefore could not be held vicariously liable. The question remained if Netcom could be held liable for contributory infringement. Once Netcom received notice of the infringing activity and they still did not act to prevent further damages, could they be held liable for contributory infringement? Although this case never went to full trial, it established a precedent for DMCA and paved the way for notice and takedown procedures (Hollaar, 2002).

Notice and takedown procedures established under DMCA require the ISP to remove or disable content once notified by a copyright owner of infringement (Mableson, 2013). The notification must include reasonable information to sufficiently identify and locate the copyrighted work, a physical or electronic signature of the copyright owner or someone legally designated to act on their behalf, contact information of the complainant, a statement that the complainant believes the material is infringing and that the information in the claim is true under penalty of perjury (Ruiz, 2012). As a safeguard against erroneous copyright infringement notifications, Title 17, Section 512, subsection (g) provides a user the option of filing a counter notice. In order to comply with the counter-notification requirement, ISPs must promptly notify the user that their content has been removed or disabled due to a copyright infringement claim. The user then can send a statement to the ISP that includes that the material was misidentified or removed by mistake. Once the counter notification is received by the ISP, they have 10-14 business days to reinstate the material unless the copyright owner files a legal action against the user (Copyright Office, 1998). Any person who submits a fraudulent or knowingly false DMCA takedown notice, is subject to liability for resulting damages incurred by the other party (17 U.S. Code § 512(f)).

**DMCA Application and the Example of Pinterest:** Pinterest, a company valued at eleven billion dollars that markets itself as a "visual bookmarking tool that helps you discover and save creative ideas" is the quintessential successful startup, operating under an almost exclusively UGC-focused business model (Huddleston, 2015; Pinterest.com, 2015). According to Pinterest's website, the company operates in accordance with DMCA and facilitates DMCA notification and takedown requirements.
"expeditiously," encouraging copyright owners to report alleged infringements occurring on the site (Pinterest.com, 2015). The website also provides clear explanation and instruction of available counter-notification procedures for those who believe a "pin" was removed in error. It's very clear by the language and instruction offered by Pinterest, that the company believes they are operating in accordance with DMCA and therefore can enjoy the liability safe harbors afforded by it.

However, there are many critics who would disagree with Pinterest, citing potential contributory copyright infringement and void DMCA safe harbor liability protection due to insufficient takedown processes and facilitating infringement via "willful blindness" (Mableson, 2013). When a Pinterest user "pins" (i.e. uploads or shares) a picture or other content that does not belong to them and has not received permission to do so, the user is distributing and copying the content in violation of the exclusive copyrights of the owner. Had it not been for the protections afforded by DMCA, ISPs would be more susceptible to degrees of culpable liability.

In 1996, prior to DMCA and Pinterest, an ISP bulletin board system named Maphia encouraged users to upload Sega games and proceeded to provide free downloads to users who had purchased a game copier from the operator of the ISP (Hollaar, 2002). The court found that the users of the ISP who created the digital copies were the direct infringers and that because the operator had knowledge of the infringing activities (demonstrated by the ISP's ability to track uploads and downloads) and that he to some degree participated in the activities, the ISP was in fact, found to be contributory liable. The court stated in it's decision that "providing the site and facilities for known infringing activities is sufficient to establish contributory liability" (Gross, 1998). In this case, the court summarized that owning and operating a site with full knowledge that infringing activities are occurring and profiting from them assumes the site is contributing in the infringing activity and therefore, liable. Some critics argue that Pinterest too is fully aware that infringing activities are taking place and to some degree, profits from the infringing activity. With 80% of "pins" being "repins" or material that has been shared from other user's Pinterest boards, it isn't far-fetched to assume that copyright infringement is occurring (Fink, 2014). One might question how Pinterest could get away with operating as an ISP under such conditions legally, especially where precedent has codified strikingly similar activities as illegal.

One need not look any further than DMCA for these answers. Unlike the Netcom and Maphia cases, Pinterest is operating in the post-DMCA digital age. Because of the safe harbors afforded ISPs, Pinterest is immune to injunctive and monetary relief for copyright infringement so long as it can successfully claim that it has no actual knowledge of infringing activities, receives no direct profit from the illegal content, and once made aware of the activities, the site moves quickly to remove them and follow due process of takedown procedures. However, considering how much content is known to be "repins," Pinterest might soon come under fire for "consciously avoiding" or being "willfully blind" to the high probability that the UGC on their website is infringing material (Mableson, 2013). Past precedent describes these terms as having awareness of the "high probability of the fact in dispute and consciously avoided confirming that fact" (Mableson, 2013).

However, Pinterest may have more recent precedent on their side when it comes to the knowledge standard for ISPs. In a 2013 case precided over by the Ninth Circuit, the court underscored that if it were to hold ISPs to a "general knowledge standard," the DMCA would be rendered useless. The court cited a 1984 Supreme Court case logic that as long as the service was "capable of substantial noninfringing uses," then the court would not ascribe knowledge of copyright infringement (Sony Corp of America v. Universal City Studios, Inc., 1984) Specifically for ISPs, the Ninth Court stated: "If merely hosting material that falls within a category of content capable of copyright protection, with the general
knowledge that one's services could be used to share unauthorized copies of copyrighted material, was sufficient to impute knowledge to service providers, the §512(c) safe harbor would be rendered a dead letter” (UMG Recordings, Inc. v. Shelter Capital Partners, LLC, 718 F. 3d 1006, 1021 (9th Cir. 2013).

Another notable case involving "general knowledge" of infringement was settled in 2014 between Viacom International against YouTube, Inc just days before it's case was to appear before the U.S. Court of Appeals. Originally filed in 2007, a federal judge in the U.S. District Court of the Southern District of New York dismissed the suit that sought $1 billion dollars in monetary damages and injunctive relief from YouTube, Inc for allowing users to post copyrighted content belonging to Viacom on the site (McAllister, 2014). The judgment held that "general knowledge" did not amount to "actual knowledge" and therefore, was protected under DMCA.

Another criticism of Pinterest is of alleged inefficiency of the takedown process once Pinterest is made aware of infringing content. One such critic is photographer Christopher Boffoli who filed a federal lawsuit again Pinterest in late 2014. His allegations decry Pinterest for not taking sufficient measures to remove his photographs when users illegally shared them on the site (Lucas, 2015). Pinterests answer to the complaintant cited the Fair Use defense and DMCA protections. Although DMCA expresses that once a takedown notice is received, content removal or disabling should be done "expeditiously," it does not specify what length of time an ISP actually has to act (Copyright, 1998). Boffoli alleges that he sent Pinterest a notice in compliance with all DMCA constraints and never received a response and the images were never removed (Lucas, 2015). Although the case remains in its early stages and has not gone to trial at the time of this report, a potential outcome from this case could be a clarification of what "expeditiously" means, establishing a time limit an ISP has to take down infringing work.

Even if Boffoli's case resolves the ambiguity in regards to the timeliness of the takedown process, it likely won't address the problem of recurrence. It is highly common due to the very nature of UGC sites like Pinterest for a copyright owner to finish the process of taking down an illegal copy of their work, only to find that it has been reposted elsewhere. Creative copyright owners can easily be bogged down with the task of locating infringing use of their works in all of the different locations it could potentially end up online without the substantial resources required to find the content in an efficient way. Copyright owners send more than six and a half million takedown notices to more than thirty thousand sites in a single month (Managing Intellectual Property, 2014). Google alone has seen an increase in takedown requests from three million in 2010 to upwards of two hundred thirty million in only three years (Managing Intellectual Property, 2014). Do these numbers represent the effectiveness of the takedown process or do they indicate that the system does not remove infringing content permanently? How many of these notices are new infringing content versus repetitive notices for the same content? Many copyright owners feel that they have an unfair burden of having to investigate where their content is being illegally shared in order to initiate the takedown process (Managing Intellectual Property, 2014). Many feel that websites like Pinterest aren't doing enough to seek out infringing content thus enabling the need for excessive repetitive notices and effort from the copyright owner. These copyright owners would be absolutely correct in that ISPs hesitate, or outright refuse to seek out or "police" their service for infringing content. But whereas a copyright owner would see this as negligent, DMCA actually forbids ISPs from engaging in such proactive measures or the ISP loses protection under its safe harbors. If the ISP were to seek out infringing material, it would demonstrate that it had "actual knowledge" of the infringement and that it had "the right and ability to control" the infringing activity and therefore would lose eligibility for DMCA's safe harbors (Mableson, 2013).
The way DMCA is written, Pinterest may be well within their rights to operate as they are despite the valid criticisms of copyright owners. Pinterest as a UGC-based business is backed by DMCA and established precedent that so long as they are only generally knowledgeable about infringing activities, unable to control said activities, and once notified of infringing activities, they comply with DMCA’s takedown notification process, it will be highly unlikely that they could be found liable for contributory copyright infringement today. However, this might now always be the case as new legislation and case law further mold IP protection.

**REFORM PROPOSALS: SOPA and PIPA**

Since DMCA, IP protection bills have been proposed in attempts to reform the existing legislation in a way that would provide for more enforcement action, both government and private. In 2011 the U.S. House and Senate proposed two bills that would have allowed the U.S. Attorney General to direct ISPs to block access or redirect users away from foreign piracy sites (Internet Policy Task Force, 2013, p. 63). The Senate bill was titled the Protect IP Act, better known as PIPA and the House bill was the Stop Online Piracy Act, known as SOPA. Both bills were met with unprecedented online opposition by companies and individuals alike, despite having the support of many copyright owners. The opposition was convinced that these bills would produce a website “blacklist” made up of sites that were accused of infringing on copyrights, potentially leading to undue censorship (Pellot, 2013).

The fundamental difference between the two bills was their definition of an infringing website. PIPA would have allowed redirection/blocking from all websites that were deemed to lack any other significant purpose other than enabling or engaging in infringing activities, circumvention of RMI and TPMS, or the sale and distribution of counterfeit items and services (Internet Policy Task Force, 2013, p. 63). Meanwhile, SOPA defined an infringing site in even broader terms as an Internet site “dedicated to the theft of U.S. property (when the site) is taking, or has taken, deliberate actions to avoid confirming a high probability of the use of the U.S.-directed site to carry out infringing activities or circumvention of TPMs and RMI” (Internet Policy Task Force, 2013, p. 63). This broad definition was aimed to confront the issues of an ISPs’ “willful blindness” encouraged by DMCA. These vague definitions spurred such strong opposition as their provisions would allow for significant removal of non-infringing content. Under these bills' respective definitions, UGC websites such as Pinterest, YouTube, Etsy and others might have survived, but the chance that they couldn't was certainly increased.

On January 18, 2012, a historical digital protest occurred involving an estimated seventy-five thousand websites taking part in a blackout to lobby against the two proposed bills because of their censorship capability. The results were overwhelming, with one hundred sixty-two million views of the blackout landing page, over four million signatures on Google's petition, three hundred fifty thousand emails sent to Congressman, and over one hundred thousand signatures on a petition to the White House (Ngak, 2012). The shelving of SOPA and PIPA due in large part to the digital strike, inspired protests in Europe to strike down the Anti-Counterfeiting Trade Agreement (ACTA), defeating it only a few short months later. Although these bills were indefinitely suspended as a result of the backlash, some worry that they will return in similar form.
ANALYSIS AND CONCLUSIONS: MANAGERS CHALLENGE

As copyright laws struggle to keep pace with advancing technology, copyright owners and managers are unfairly burdened with the difficult, time-consuming task of managing and safeguarding their work under laws that encourage ISPs to be reactive as opposed to proactive in combating infringement. On all sides of the debate, there is little question that reform is needed. Some even support an alternative compensation system that would pay copyright owners for the use of their works through a type of blanket licensing system that essentially "rewards" them for secondary use of their works (Palfrey, 2009). In 2013, the Internet Policy Task Force recommended a threefold strategy calling for legal enforcement reform, voluntary non-legislative initiatives, and educating consumers on IP rights (Internet Policy Task Force, 2013, p. 42).

Under the first strategic opportunity for reform, law enforcement improvements can be made in four specific areas including enhancing cooperation with foreign governments, moving away from random sampling litigation campaigns, reevaluating DMCA's safe harbor protections, and implementing an alternative remedy to costly litigation in the form of small claims (Internet Policy Task Force, 2013, p. 42-61). First, with copyright laws territorial and diverse by nature, vast globalization poses a unique and significant challenge to enforcement. WIPO and WIPO Treaties are a huge factor in international collaboration. International copyright laws are heavily reliant on treaties and "involves the use of treaty regimes and the other tools of public international law to create international predictability in the state-by-state definition and enforcement of private rights" (Larrick, 2008). Treaties such as the WIPO treaties develop relationships between different countries' domestic IP laws, synchronizing them and ensuring foreign IP is treated consistently on a global landscape, although this is limited only to participating "member" countries. Adding more incentives to encourage participation as a member state of WIPO would help eliminate infringing content in countries who are currently unaffiliated. Expansion of WIPO and its initiatives would improve enforcement of foreign copyright policy across all international borders.

Furthermore, the enforcement approach of copyright owners suing a random sampling of file sharers or a select few who have uploaded a particularly large amount of infringing content, have proven to be an inefficient method of combating online infringement. This method of suing a small sample of violators for significant monetary relief may have provided an educational benefit, but lacked deterrent effects and proved to be quite controversial (Internet Policy Task Force, 2013, p. 47). For example, when the Recording Industry Association of America sued a Minnesota mother of four and received nearly two million dollars in monetary relief as punishment for downloading twenty-four songs that cost less than a dollar a piece to purchase, society took notice (Friend, 2009). However, later even the recording industry conceded to the ineffectiveness of bringing to trial individual users, instead focusing on the worst offending piracy websites (Cassena, 2010).

Legal enforcement can also be improved via DMCA clarification and reform concerning the "actual knowledge" intent of the law and the takedown process. The way DMCA is written currently, there is no duty for the ISP to monitor infringing content and actually having a certain level of knowledge could invalidate an ISP’s protection under DMCA's safe harbors (Internet Policy Task Force, 2013, p. 54). Although Congress sought to ensure that DMCA did not overburden ISPs with having to police their services for infringing content, the law ended up placing the burden on the copyright owners to ensure their works were not being infringed (Internet Policy Task Force, 2013, p. 55). Although large corporations with vast resources can likely handle investigating and reporting copyright infringement of their works, smaller businesses and individuals struggle to shoulder the burden and no one is satisfied
with the insipid results of DMCA takedown procedures (CPIP, 2013). Of the millions of notices filed in a single month, copyright owners, big and small, are unsatisfied with the inability for infringing content to stay down after it’s taken down under the current DMCA takedown system (CPIP, 2013). ISPs are heavily burdened with processing takedown notices, counter-notifications and the repetitive requests for the same content to be removed multiple times after infringing content reappears right after it is taken down. One possible solution to the massive workload of the takedown process would be for ISPs to develop a way that would enable them to be proactive in seeking out infringing content without them losing their safe harbor protection under the “actual knowledge” requirement. Furthermore, ISPs should be required to develop a takedown capability that would enable infringing content to remain down permanently once notification is received. This technology would have to balance permanent takedown results with an ability to differentiate infringing content from legal uses of content, like those covered by fair use (Managing Intellectual Property, 2014). Furthermore, a clearer definition of what constitutes a "repeat infringer" per DMCA should be addressed to aid in decreasing the amount of repeat violations.

Finally, the last step to enforcement reform is to provide for alternative, less expensive litigious avenues for copyright owners to seek monetary and injunctive relief. The current legal system may act as a deterrent for copyright owners to file claims against infringers when the expense of the legal process cancels out or significantly outweighs the benefit. In a report published by the United States Copyright Office titled "Copyright Small Claims" which addressed barriers to individual IP rights holders ability to seek relief in the current legal system, the disparity between nominal claims versus costly enforcement was proven evident (U.S. Copyright Office, 2013). One comment offered to this report from the Graphic Artists Guild stated that "as a practical matter, except for large corporate copyright owners, our current copyright laws are virtually unenforceable when it comes to the infringement of visual works." These sentiments were echoed by other creative entities including the Songwriters Guild of America, the Alliance for Visual Artists, the Authors Guild, and American Photographic Artists (U.S. Copyright Office, 2013). The report recommended establishing a small claims tribunal that would be a voluntary alternative to federal court and would focus on cases with valuations not to exceed thirty thousand dollars with streamlined proceedings, restricted discovery, and no formal motions (Mahony, 2013). Having a small claims avenue to address lesser infringements would likely relieve some of the dependence on DMCA notices and takedowns and increase injunctive relief as a viable resolution (Internet Policy Task Force, 2013, p. 50, 58).

After law enforcement reform, the second opportunity for IP protection improvement is through the encouragement of non-legislative initiatives by ISPs to defray copyright infringement. Practices can include voluntary filtering, severing payment processor and advertising relations with infringers, demoting listings on search engines, and utilizing a graduated response system to curb infringement by individual users. (Internet Policy Task Force, 2013, p. 66-72). If a voluntary filtering system is able to differentiate between infringing content and is automated, the courts have held that this would not exclude them from DMCA safe harbor protection, even suggesting that failing to implement an automatic copyright filter would result in evidence that it demonstrated intent to encourage infringement (Internet Policy Task Force, 2013, p. 66). However, similar provisions failed under SOPA and PIPA due to possible censorship implications. Therefore, it is extremely important that an automatic filtering system have the ability to differentiate infringing work versus non-infringing work and that any filtering be done on a voluntary basis by the ISP.

Another voluntary measure can be implemented by payment processors who handle pirating websites payment transactions as well as advertisers who generate revenue for illegal sites. Pirating
websites are at the mercy of the payment processors to generate profit from their infringing activities. If these payment processors were to sever their relationships with infringing websites, this would cut off their income stream and would put them out of business (Internet Task Force, 2013, p. 67). For example, Visa, Mastercard, and Paypal have cutoff payment processing services to the Mega cloud storage site created by Kim Dotcom after the demise of Megaupload, effectively rendering the site unable to accept income (Teinowitz, 2015). Likewise, cutting off advertisement on infringing sites would similarly cut off a significant revenue stream (Internet Policy Task Force, 2013 p. 68). As an example of an advertising agency ceasing to advertise on infringing sites, GroupM created a listing of two thousand websites that the agency blacklisted and would not receive ad revenue from major companies like Ford and AT&T (Bachman, 2011). Cutting off the ability to earn a profit via payment processing and advertising is a strategy known as the "Follow the Money Approach" (Internet Policy Task Force, 2013, p. 67).

Search engines also have the capability to deny promotion of infringing sites by implementing technology that will prevent infringing websites from appearing on the first several pages of search results. For instance, Google has excluded copyright violating queries from its Autocomplete function, which utilizes algorithms to suggest search terms and they have also demoted websites with higher numbers of valid DMCA notices to lower positions in search queries (Internet Policy Task Force, 2013, p. 71). This strategy reduces the visibility of infringing sites, decreases traffic to these sites, and aids in the prevention of unintentional visits to infringing sites.

Finally, a voluntary method of reaching individual infringers, particularly those who utilize P2P illegal sites, in a fair and economical way is the graduated response system (Internet Policy Task Force, 2013, p. 72). This approach is far less controversial than lawsuits resulting in exorbitant monetary damages, and is less punitive and more educational. When a copyright owner finds the IP addresses on P2P networks, they pass them on to ISPs along with information on the infringement. The first level of graduated response involves the ISP notifying the subscriber that they have been identified for copyright infringement activities. If the same subscriber is identified again, the notifications escalate culminating in consequences including the termination of a user's account. Some companies that have implemented graduated response policies include Time Warner Cable, Comcast, Cablevision, and Verizon (Sandoval, 2012).

The third and final suggestion to improving intellectual property protection is through consumer education. Copyright laws are incredibly complex and subjective in today's digital world and can be extremely confusing. This is especially true for young people, the heaviest consumers of copyrighted digital content despite that the majority have grown up utilizing smartphones, social networking sites, having computers in their home with Internet capabilities, and likewise have an in-depth knowledge of how to use these technologies (Palfrey, 2009). In a 2009 study conducted by John Palfrey, Urs Gusser, Mirium Simun, and Rosalie Fay Barnes of Harvard Law School and Harvard University, published by the Massachusetts Institute of Technology, a group of young people born after 1980, growing up in the digital world from various socioeconomic backgrounds with daily access to sophisticated technology, described as "Digital Natives," were analyzed addressing specifically their lack of knowledge of copyright laws and IP protections. What the researchers found was an overwhelming level of ignorance to the very basic definitions of intellectual property protection. More so, even when a "Digital Native" could identify that an action was illegal, they continued to do it, excusing their behavior but simultaneously feeling respect for the creator of the works they infringed upon (Palfrey, 2009).

Managers can use the research findings surmising that Digital Natives do not perceive copyrights as protection of their own creative property, but rather only the property of "others" (Palfrey, 2009).
asked to define copyrights, nearly all respondents stated something related to punishment for using other people's property without permission. Most young people rarely put themselves in the role of "creator," therefore neglecting what it would mean to them if someone infringed on one of their own works. However, at the same time these young people in the study felt compassion, empathy, and a sense of responsibility and respect for the creators of the works they have violated (Palfrey, 2009). Managers in creative organizations can educate youth and all people that copyrights are to protect society's creative intellectual property, and that their infringement has a direct impact on the creator and not just a far-away corporation's bottom-line, enabling them to see the value in complying with and educating themselves on copyrights.

After people understand why they should comply with copyright laws, they should have resources available to learn and understand a very complex legal subject in a useable way. The study conducted by Palfrey and associates concluded that young people were confused as to what actions actually were illegal, many not understanding that in addition to uploading and downloading infringing content, viewing material was also illegal under copyright laws (Palfrey, 2009). In recent years, streaming has become a common manner of consuming copyrighted content and many people believe that since they are merely viewing the illegal contact versus downloading or copying it, they are not breaking copyright law, which is in fact, untrue. Young people particularly believe that content can be shared just as long as it isn't downloaded via a P2P network (Palfrey, 2009). Furthermore, most people have little knowledge of what fair use of copyright work is or what protections copyright law affords them as creators of their own works. Educational programs should include what is protected, what is illegal, and the potential consequences of infringement. This study indicated that by identifying legal and illegal uses of IP and understanding the impact of infringement, the occurrence of copyright infringement might decline.

Succinctly, as technology continues to rapidly advance and modes of sharing and accessing content over the Internet continue to evolve, it's imperative that society strives to encourage innovation and creativity by protecting creators' intellectual property at the same pace. Reassessing IP legislation and establishing legal precedent for the application of copyright laws in the digital age will promote the continuity of innovative culture. Furthermore, managers can advocate the reforming of legal enforcement, encouraging voluntary measures that seek to deter infringement, and educating consumers on the laws and impact of infringement will advocate for IP protection in the United States and serve as a model for global reform. Managing IP is about finding a balance between protection and online freedom.

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