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Regulating Copyrights in Cyberspace

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ABSTRACT

The explosive growth of the Internet has created critical new challenges to national and international intellectual property policies. Intellectual Property protection has become the most important issue in Cyberspace. When technological advances has outpaced the law, several problems arise which require an approach suitable to the digital age. Several international conventions have been enacted with principal objective of bringing world law into the digital world. The TRIPS Agreement and the WIPO Copyright Treaty were adapted, which require Member States to give protection to digital content providers against copyright infringements. However, as with the Berne Convention, TRIPS and WIPO do little to reduce substantial disharmonies in the substantive content of national copyright laws. The digital age has seen three controversial views on intellectual properties emerge. There are people who believe that intellectual property should be unprotected and unrestricted. On the opposing view, Intellectual Property Right (IPR) owners feel that the national governments need to pass and enforce laws to protect intellectual property. They claim that violation of intellectual property is inhibiting them from investing and making information more available in cyberspace. Others contend that traditional copyright law is able to deal effectively with digital copyright issues in cyberspace. At the same time, there is a need to maintain a balance between the rights of authors and the larger public interest. The core issue is how to protect copyrighted materials while at the same time serving the public's right for privacy, information access and dissemination.

Keywords: copyright, digital management, file-sharing, circumvention

1. INTRODUCTION

The advent of the Internet over the past 10 years has paralleled the emergence of globalization as a concept. It has become the principal means of global information. In a relatively short amount of time, the Internet has become a ubiquitous tool throughout the world. Net population is expected to hit 950 million by year 2005. Consumers are taking advantage of higher speed networks and new technologies to share and distribute information. The ease and speed in which contents are copied and distributed over the Internet have become a contentious issue with major companies, in particular the movie and recording industry, demanding stronger copyright regulation and enforcement. Concern over theft of intellectual property and the ensuing technological and financial losses have raised new clamours among legislators and Intellectual Property Rights (IPR) owners for a harmonized international intellectual property law to govern the Internet. IPR owners claim that violation of intellectual property is inhibiting them from investing and making information more available in cyberspace. Opponents of cyberspace regulation insist that there is little to fear on this issue as IPR owners could easily manage the problems through tighter technological safeguards and self-regulation. Traditional copyright law is able to deal effectively with digital copyright issues in cyberspace. Others contend that the current copyright law must be amended to adapt to the new technologies and to serve the public's right to information. At the heart of the opposing views is the issue of protecting ownership of copyrighted material, while at the same time facilitating greater ease of access and online content. This paper will examine the various issues and problems

surrounding copyright protection in Cyberspace and determine whether the current international conventions and enforcements are sufficiently applicable to the Internet regime.

2. COPYRIGHT

Copyrights are rights given to persons over what one has created. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time. Copyrighted work can be a literary work, musical work, dramatic work, pantomime, choreographic work, pictorial work, graphic work, sculptural work, motion picture, audiovisual work, sound recording, architectural work, mask works fixed in semiconductor chip products, or a computer program. Also protected through copyright and related rights are the rights of performers, producers of phonograms (sound recordings) and broadcasting organizations. The main social purpose of protection of copyright and related rights is to encourage and reward creative work. The owner of a copyright has the right to exclude any other person from reproducing, preparing derivative works, distributing, performing, displaying, or using the work covered by copyright for a specific period of time. The rights of a copyright owner are subject to a number of qualifications such as fair use, compulsory licenses and substantiality.

3. INTERNATIONAL LEGAL FRAMEWORKS

Most countries are members of the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention) which gives protection to works in countries of which one is not a citizen or national. It has

been signed by 156 countries since 1886. It is a multi-national agreement on copyrights which is administered by the WIPO, a specialized agency of the United Nations. In addition to proscribing discriminatory treatment of qualified foreign authors, Berne sets forth minimum standards of protection that must be accorded to those authors even if a country accords its own authors lesser protection. The provisions serve to protect the following author's rights: the right of reproduction including translations and adaptations, the right of dissemination to a non-material form including public performance, broadcasting (etc.), and the right to protect their moral interests. Under the Berne Convention, the following works may be protected: (i) both unpublished and published works of an author who is a national or resident of a country that is a member of these treaties; or (ii) published works, with permission, of an author who is not a national or resident of a country that is a member of these treaties (Art.5). In this case a work may be considered simultaneously published in several countries if it has been published in two or more Berne countries within 30 days of its first publication (Art.3). Copyright under the Berne Convention is automatic: no registration is required, nor is the inclusion of a copyright notice. The Berne Convention provided for a minimum term of copyright protection of the life of the author plus fifty years, but parties are free to provide longer terms of copyright protection. Indeed, the principal contribution of Berne to the international norms of copyright has been in persuading countries to agree on the principle of national treatment under which the works of foreign nationals receive the same level of protection as the country accords to its own nationals. Even though the Berne Convention has achieved some harmonization in national copyright laws by virtue of its establishment of minimum standards, it nonetheless defers to national traditions to a considerable degree. While national laws may be different in other countries, one is guaranteed at least certain protections. Unfortunately, the Berne Convention does not have the judicial nor police power to enforce the Convention. Neither does it have an effective means of calling signatory countries to account for non-compliance with Berne standards. It can, however, withhold copyright protection to authors from non-Berne countries and exert pressures on them to enact or amend their laws to conform to the same requirements as the Berne Convention.

The Universal Copyright Convention (UCC) provided an alternative mechanism by which states could enjoy international protection. It was adapted in 1952 under the auspices of UNESCO to cater to the US objections against the Berne Convention. The United States refused initially to become a party to the Berne Convention, since it would have required major changes in its copyright law (particularly with regard to moral rights and the registration of copyright works). Although it is not as exhaustive as Berne Convention, it requires formalities concerning deposits, registration and fee

payment. While the Berne Convention does not establish any formal requirements to benefit from the copyright protection other than having the author's name on the work, the UCC requires a copyright notice. It embodies the principle of national treatment, but not automatic protection. This notice should consist of the copyright symbol "©" accompanied by the year of first publication and the name of the copyright owner, all "placed in such a manner and location so as to give reasonable notice". Generally works are protected for a minimum of 25 years beyond the life of the author.

The World Intellectual Property Rights Organization (WIPO) has sought a leading role in the international copyright administration and harmonization. Since 1967, it has administered the Berne Convention. WIPO and the signatory nations to the Berne Convention have developed a new international treaty, known as the WIPO Copyright Treaty (1996), which extends the rights of authors in the digital era. 47 countries have signed the treaty. Explicit references to new technologies are found in Articles 4 and 5 which extend the copyright protection to computer programs and compilations of data. Article 7 creates rental rights in respect of computer programs. Articles 11 and 12 contain important provisions obligating member states to prevent circumvention of technological measures used to protect copyrighted works, and to prevent tampering with the integrity of copyright management information.

The Trade-Related Intellectual Property Rights (TRIPS) agreement appended to the General Agreement on Tariffs and Trade (GATT) went into effect on January 1, 1995 as part of the agreement that established the WTO. It was designed to remedy the perceived weaknesses in the Berne Convention and other multilateral intellectual property treaties. TRIP establishes minimum levels of protection that each government has to give to the intellectual property of fellow World Trade Organisation (WTO) members. The Agreement adds rights beyond those that it incorporates from Berne by requiring countries to make available effective remedies for copyright enforcement. By bringing copyright within the ambit of the WTO, it provides a mechanism for international enforcement through the imposition of trade sanctions against non-complying countries. The agreement covers five broad issues: how basic principles of the trading system and other international intellectual property agreements should be applied; how to give adequate protection to intellectual property rights; how countries should enforce those rights adequately in their own territories; and how to settle disputes on intellectual property between members of the WTO. Each of the main elements of protection is defined, namely the subject-matter to be protected, the rights to be conferred and permissible exceptions to those rights, and the minimum duration of protection. The Agreement sets these standards by requiring that the substantive obligations of the main conventions of the

WIPO, the Paris Convention for the Protection of Industrial Property and the Berne Convention must be complied with. All the main substantive provisions of these conventions, with the exception of the provisions of the Berne Convention on moral rights, are incorporated by reference and thus become obligations between TRIPS Member countries. Under Articles 10 and 11 of TRIPS, GATT countries are now bound to protect computer programs as literary works. It outlines how databases should be protected and expands international copyright rules to cover rental rights of authors of computer programs and producers of sound recordings. A similar exclusive right applies to films where commercial rental has led to widespread copying which is materially impairing the right of reproduction. It also requires performers to be given protection from unauthorized recording and broadcast of live performances (bootlegging). Producers of sound recordings must have the right to prevent the unauthorized reproduction of recordings for a period of 50 years. When there are trade disputes over intellectual property rights, the WTO's dispute settlement system is now available.

One hundred and forty seven (147) members of the WTO have accepted the terms of the Berne Convention as part of the trade-related aspects of intellectual property rights (TRIPS). Moreover, for the twenty five member states of the European Union, the rights are enshrined within Directive 29/2001/EC. However, as with the Berne Convention, TRIPS actually does very little to reduce substantial disharmonies in the substantive content of national copyright laws.

4. COPYRIGHT ISSUES

Many legal issues arise in cyberspace, but no other single area of law presents such a variety of interesting and diverse legal problems. This is true in no small part due to the fact that people all over the world are increasingly becoming connected via the global telecommunications networks. As Internet usage grows, new legal questions associated with the technology continue to surface. Currently, all content available in cyberspace is protected under copyright law. The reality is that digital communications and the digitization of information of all types make the infringement of intellectual property rights, particularly copyrights, easier than ever before. Existing intellectual property doctrines may not provide the level of control that content-providers would like. Copyright law may not be able to protect authors' rights in cyberspace, in the same manner as it has in the physical world. The problem may not be the law, but the difficulty in enforcing copyright protection in cyberspace and the public perception that information on the Internet is public domain. Cyberspace is not as constrained by national boundaries as the physical world. The old legal system, developed during a time when borders were important,

is probably inadequate to deal with the borderless nature of the Internet and the rapid technological changes.

4.1 Enforcement

According to the OECD's 2004 Information Technology Outlook, file-sharing networks are being used to freely download more movies, games and software than music. The number of people logged on simultaneously to popular file sharing networks approached close to 10 million in April 2004. The Motion Picture Association claims that it is losing hundreds of millions of dollars to Internet piracy. The origin of movies circulating on the Internet varies. Some are advance copies of blockbusters, apparently stolen from studios or otherwise leaked to the public before they are shown in theatres. The copies are converted into digital files and put on the Internet, or resold in the form of illegal DVDs and videocassettes. In other instances, people armed with digital video cameras make their way into an early screening of a movie, record the movie and turn it into a digital file. Once a movie has been released on the Internet, it spreads via peer-to-peer file-sharing services.

New studies show that contrary to protests from record labels, piracy is not responsible for the 15 percent drop in music sales in the past two years. According to Forrester Research, Inc., a research firm providing data and analysis that defines the impact of technology change on business, there is no evidence of decreased CD buying among frequent digital consumers. Times are tough on the music business, not because of downloading, but due to other factors such as economic recession, competition from videogames and DVD sales and the levies that are arbitrarily applied to music-playing equipment like MP3 players at wildly varying levels in different countries. It could also be that the introduction of CD anti-piracy methods has alienated the consumers. There is evidence that some of the protected CDs do not play correctly even on normal CD players and consumers complain that even when a CD is purchased, it cannot be played in the format of choice or the medium of choice.

Although the European Union (EU) has strict harmonised laws against piracy, the enforcement varies among Member States. In the first quarter of 2004, the Motion Picture Association sent out more than 350,000 cease and desist letters of which illegal downloads accounted for 90%. Seventy-seven % (271,000) of these letters were sent to Internet Service Providers (ISP) in the European region. The MPA uses tools to monitor and take evidence to sweep the Web for evidence that movies are illegally online and then asks Internet service providers to block access to illegal content. Many of the ISP providers in Europe have remained uncooperative and insist that anti-piracy groups present a valid search warrant before they can be allowed to access the user's file in order not to intrude on the

privacy of their customers and violate their trust.

The degree of enforcement of rules also varies from country to country, with Northern European countries more vigilant than their Eastern and Southern European counterparts. In the EU, the problem is not the lack of regulation, but the absence of uniform enforcement. Movies illegally downloaded from the Internet are hawked openly in the streets of downtown Madrid and restaurants, while such a brazen display of pirate copies will not be possible in Germany.

US authorities prosecute both downloading and uploading of files, but in Europe, the crackdown affects only uploaders. In April of 2003, three American college students became the first computer users who were forced to pay fines ranging from \$ 12,000 to \$15,000 by the Recording Industry Association of America (RIAA) for swapping unauthorized music online. They were sued by the RIAA for creating search engines on campus networks that made it easier to locate and share files that reside on others' computers, including term papers, research papers, photographs and MP3 music files. They settled their suits by agreeing to pay thousands of dollars over time. The targets were discovered by using exotic computer hardware called Spybots to scan publicly available peer-to-peer (P2P) networks and identify the ISP (Internet Service Provider) of each user. Under the Digital Millennium Copyright Act (DMCA), the RIAA can subpoena ISPs for each user's name, address and other personal information. This procedure requires only a court clerk's signature and need not come before a judge to be effective and the information can be used in collecting and identifying information of subscribers on the basis of mere suspicion. However, a recent decision by the U.S. Court of Appeals for the District of Columbia overturned a trial judge's decision to enforce copyright subpoenas, one of the most effective tools used by the recording industry. The court said the 1998 copyright law doesn't cover popular file-sharing networks used by tens of millions of Americans to download songs. Thus, the recording industry can't force Internet providers to identify music downloaders,

RIAA also went to court to shut down Napster, a peer-to-peer (P2P) file sharing service. Immediately, less centralized systems like KaZaA quickly replaced Napster. The industry has not so far persuaded the courts that these digital copying and sharing technologies are themselves "contributory" infringers of copyright. A US court has refused to order the shutdown of peer-to-peer file sharing services operated by Grokster and Streamcast Networks. Judge Stephen Wilson of U.S. District Court in Los Angeles in *MGM Studios, Inc. v Grokster Ltd* (Case Nr. CV 01- 8541) has effectively ruled that those who have no direct control of the use of their services - over the files swapped - cannot be held responsible for any misuse of those services. Without evidence of their active and

substantial contribution to the infringement, the file-trading services cannot be held liable.

If enforcement is left to the national states, IPR owners fear that piracy will continue unabated because of the laxity of authorities and corruption that has not been eradicated in some places. Infringement is possible from any corner of the globe. Countries that have not signed to the Berne convention are often referred to as copyright jungles, as there are often rampant copyright violations in those countries. The absence of any international convention on jurisdiction regarding the Internet makes it difficult to enforce copyright authority, even if the infringer has already been identified. The *Convention on Cybercrime* is the first international treaty which addresses this problem by requiring member countries to adopt similar criminal laws on hacking, copyright infringement, and computer related fraud. It also contains provisions on investigative powers and procedures, such as the search of computer networks and interception of communications. It also requires cross-border law enforcement cooperation in searches and seizures and extradition.

IPR owners also oppose self-regulatory schemes. There is no real protection because self-regulatory schemes cannot produce enforceable decisions. It can only work if it can rely on a government apparatus for enforcement. Even if the legislative rights of authors are expanded, the availability of technology that enables rapid and cheap copying of content in the digital world, as well as the global and borderless character of the Internet will render enforcement difficult outside the national boundaries of the country. Although copyright law attempts to dissuade future copyright violations, rampant piracy continues to plague the Internet and piracy of computer software has risen to an alarming level even in countries with strict intellectual property rights laws. It is apparent that the present laws are not producing their intended deterrent effects.

4.2 New Technology

Time barrier is becoming less of an issue as more people gain access to high-speed Internet connections. The software and video industry thought that slow download speeds would be a safe haven from non-commercial file-sharing, but that time is gone. Now, consumers with broadband can download a feature-length film in about six hours. The movie industry fears that advances in technology will significantly reduce that time. Current technology (most P2P file-sharing software) allows constant connections with other computers on the network as long as the software is running. Although file-sharing software is frequently associated commonly with illegal downloading of music and movies, it is a powerful technology that allows efficient distribution of legitimate files and data of all types. Record companies and movie studios may not willingly cede control to

users who have legitimately purchased their products. It will be difficult for them to lock down digital video so tightly. Someone will eventually find a way around it. The Internet abounds with freely available software that lets consumers circumvent copy-protection systems used on commercial DVDs.

4.3 Free Speech and Human Rights Principle

Copyright can also interfere with free flow of ideas, information and commerce. The Internet serves as a worldwide public commune, exposing the people of the world to a dizzying variety of ideas, expressions, cultures and creations in a manner so free and easy that it sparks an immense amount of additional creativity and innovation. The Internet's shelves will be empty unless individuals and institutions possessing relevant information place it in the Internet. To gurus of copyright free cyberspace, information should be free—that is, the public should have the right to share, enjoy, criticize, and build on the works of others in order to promote progress. One extreme view states that there are no property rights in cyberspace, and therefore, there is no need to obtain authorization to reproduce a copyrighted work. It is argued that by posting materials on the Internet, copyright owners are granting implied licenses to users.

Large corporate interests seek to narrow the freedom of the Internet for their own economic advantage. Many countries have adopted the Digital Rights Management, which control the accessing and use of creative materials in ways that are often inconsistent with a free and democratic copyright system. These systems are developed on the assumptions that IPR owners can exercise complete control over works in which they hold copyright. Therefore by attempting to wall off portions of cyberspace they are destroying the Internet's potential to foster democracy and economic growth worldwide. In print publication, no license is required to purchase a book, but in the digital world, organizations are imposing copyright license. This requirement prevents access to information and infringes on the individual's right to privacy as identification requirements are demanded on the users.

Mistaking the free distribution of content with the placement of intellectual property in the public domain is common among web users. If there is no copyright notice posted on the website, it is assumed that anyone can feel free to use it. But this argument can be fallacious if the same principle governing copyright of books is applied on the Internet. An exemption would be "fair use" for scientific and educational purposes. Use of copyrighted works or portions thereof, for any other purpose is not deemed fair use. Property holders can distribute their works freely while retaining their right of control over that work.

4.4 Unfair Protection of a few interest groups

Increased copyright protection and enforcement in their countries, as mandated by TRIPS and the Berne Convention, has mainly benefited the industrialized countries, in particular the United States. Multi-national enterprises from industrialized countries are the main producers of copyright-protected works, and the developing countries (third world) are primarily copyright users. The Berne Convention has been sharply criticized for hindering the development of developing countries by making it too restrictive for the latter to access the materials. Many claim that the Berne Convention is an artefact of the 18th century intended for another type of works and not for the Internet technology. Critics contend that Berne protects the interest of the industrialised countries by ensuring that the creators will be able to recoup their cost and prevent copyist from the developing countries from offering identical products at very low prices. This will enable the creators to charge prices for access to those works substantially greater than they could in a competitive market. They contend that this is economically inefficient, wasteful of social resources and deter progress. In order to make the Convention relevant to the needs of the developing countries, pundits are advocating the creation of exemptions to copyright restrictions, improved affordable access and assistance to the developing countries.

In the United States, the "Sonny Bono Copyright Term Extension Act" extended the term of copyright protection to nearly a century for corporations and even longer for many individuals and their heirs. A number of products – books, films and music have been given unreasonably longer copyright protection and prevents them from being made available in the Internet. The 1998 law that extended copyright protection to 95 years for most existing copyrights and 70 years after the death of the author for most new ones. The Act has been criticized for protecting private groups and condoning their rent-seeking behavior by granting them a monopoly in order to solidify their dominant position in a marketplace and exempting them from the free market pressures. A constitutional challenge to the Sonny Bono law was rejected by the Supreme Court in 2003 (*Eldred v. Ashcroft No. 01-618, No. 01-618*). The Court's decision implies that Congress can freeze the public domain indefinitely. Defenders of public interest have organized to lobby for changes in the copyright system which would allow classical and valuable works to be made available for the public interest.

The law has been formulated and drafted by legal experts who are heavily influenced by IPR owners. These industry groups are well organized and have strong lobby powers with legislators and bureaucrats, and very often the latter relies on their views for decision-making. The current legal and political regime is inclined to extending more rigid protection to IPR

owners and not the user's rights. Copyright protection of the Internet cannot favour one group over another. Unfortunately, the consuming public has not been consulted, mainly because they are disorganized and consist of individual users. Any framework convention needs to be based on agreements involving different constituencies. There is a need to revise the law to accommodate individual user's rights and to draw a line between legitimate copying and not – what should be allowed on the web and what is illegal. A decade ago, lawsuits and clarifications of copyright law resulted in "fair use doctrine, which permitted the limited reproduction of copyrighted material by journalists and scholars.

4.5 Difficulties in Legal Interpretation

Courts take a variety of approach in interpreting copyright law. In the light of furious litigation in the United States, the latter is seen as taking a stricter interpretation of the copyright law than its European counterparts. The Swedish MP3 case exemplifies the problems of applying the old intellectual property legislation to the digital media. The plaintiffs were a number of international record companies who claimed that the defendant, Mr. Olsson, made illegal copies of the CD's and then via hyperlinks from his own homepage made these copies available to the public. The court found that the hyperlinks on the defendant's homepage could not be regarded as a public display or performance. Neither was the hyperlink considered as "distribution of a work" based on the fact that Mr. Olsson did not produce the copies made available via his homepage because it was the Internet-users who downloaded the music file from the hyperlink. Although the putting up of a hyperlink is considered a public performance, the defendant was found not guilty because the Swedish Copyright Act exempts public performance of sound recordings from copyright.

The courts have not always been equal to the task of resolving copyright conflicts protection. In the US, there have already been many lawsuits involving the Digital Millennium Copyright Act (DMCA). In one early case, the federal government criminally prosecuted a company that created a device to decrypt electronic books. A jury eventually acquitted the company. But in another case, online journalists who distributed "DeCSS," a program for decrypting DVDs, were found to have violated the DMCA even though the program could be used in ways that would not infringe copyright.

There is a need for clarification and enforcement of copyright law. Court decisions have failed to settle various issues associated with copyright (such as hyper linking, circumvention, framing, and liability of access providers and users) and the question of how much sharing should be allowed or whether all of it should be stringently prosecuted as a violation of copyright law.

5. NEED FOR BALANCE

The Digital Millennium Copyright Act (DMCA), which was signed into law in 1998, created significant new rights for copyright owners. Whereas copyright law previously centered on the exclusive rights of copyright owners to perform certain acts with their works, this new legislation for the first time created a right to exclude access to copyrighted works. The DMCA prohibited the distribution of technology that circumvents the industry's electronic locks on books, films, articles, software, or songs, even though circumvention itself could contribute to research and technological innovation. The DMCA protects owners of copyrights, without regard to whether those owners were the creators of the protected work. It regulates technology that controls access to and use of works, rather than regulating the use itself. Its so-called "anti-circumvention" and "rights management" provisions facilitate copyright owners in preventing others from viewing their works and from performing acts that would previously have been allowed under the "fair use" exception to the copyright laws.

Copyright protection technology faces a legal challenge in France where a consumer association is filing damages in a legal action which contends that the copyright protection used by EMI label to prevent CDs from being pirated, stops consumers from making personal copies of their CDs - a privilege granted to French consumers by a 1985 law- and makes it impossible to play them on many car stereos, home stereos and personal computers

In the United States, a maker of software that enabled users to copy DVD's and computer games folded under the mounting weight of lawsuits filed by movie studios and video games producers. Unfavourable court rulings by three federal courts in 2004 assured the demise of 321 Studios. A federal judge in New York imposed a worldwide ban on the production and distribution of 321's Games X Copy software, which let users make what 321's Web site had called "a perfect backup copy of virtually any PC game." Hollywood and the computer-gaming companies accused 321 of violating the 1998 DMCA. The company's software was meant to let consumers make backup copies of their DVDs and computer games. Consumer advocates warn that the court decision restricts the rights of the consumers to make copies of their own legally obtained digital materials.

In contrast, a Norwegian Appeals Court (Case Nr. 02-507 M/94) upheld an earlier verdict that Jon Johansen, a 20-year old Norwegian man, had not broken the law by creating a system that could get around copy protection on DVDs. The ruling is a setback to anti-piracy efforts by the Hollywood studios. Mr Johansen, known as "DVD Jon" by the net community, created his program to watch films on a Linux-based

computer. He then posted the program onto the net in 1999. His software, called DeCSS, could decrypt disks by stripping the Content Scrambling System from DVDs. The US movie industry had accused DVD Jon of theft. But an Oslo court said in January 2003 that he was free to do what he wanted with DVDs he bought legally.

Song-swapping is not the only copyright infringement that the music industry is fighting. EMI music issued a cease-and-desist letter in February 2004 to a small-time record producer demanding that he halt distribution of a clever musical mix he had made. Producer Brian Burton's "*The Grey Album*" electronically combined sounds from the Beatles' recording commonly known as "*The White Album*" with rapper Jay-Z's "*The Black Album*", without seeking permission from the artists or their labels. More than 100 Web sites rallied to his defense by offering "*The Grey Album*" for unauthorized, free downloading as part of an ad-hoc protest.

6. CONCLUSION

Although the copyright law's penalty system attempts to dissuade future copyright violations, rampant piracy continues to plague the industries. It is apparent that the present statutory remedies are not producing their intended deterrent effects. Self-regulation and innovative new technology could be the answer.

The adaptation of IPR regimes to the digital economy is needed to protect rights embedded in the new technology developments. However, the new legal rules must take cognizance of the need to balance public interest, privacy, economics and copyright protection. Any international convention would have to define how the Internet is to be governed with consideration to the technological elements and the machineries for monitoring and enforcement compliance.

Since cyberspace is constantly and rapidly in transition, copyright law may not be able to catch-up with the speed of new technology. This suggests that copyright law may not be able to protect the author's rights in the digital world in the same manner as it has in the physical world. Because many countries prefer to preserve their own copyright tradition, it would be difficult to harmonize international law. IPR owners should find new technological remedies to assist the law. Any insufficiency in the law or in enforcement of authors' rights in cyberspace may be more than made up for by emerging technological means of protecting digital works. Adoption of technological means to protect works against unauthorized use or to track down infringements may, in fact, mean that authors' rights will become better protected in cyberspace than they have ever been in the physical world. Just as people use technology to infringe copyrights, people can use technology to stop it rather than relying on the threat of litigation. The marketplace already offers a variety of technology-based solutions to meet a variety of

copyright protections. Among the relevant emergent technologies are digital envelopes, encrypted signal streams, software metering schemes, digital watermarks, and copyright management information attached to digital copies of works.

There are legal file sharing websites which gives access to a vast catalogue for a monthly membership fee. Apple Computer's approach is to use the carrot instead of the stick. While recording labels' approach is to sue, Apple has set up the successful *iTunes* music store and has attracted people to that model of paying music legally. In the year since the introduction of iTunes in the United States, Apple has tweaked its system for managing music rights slightly - for example, by reducing the number of times a list of songs can be burned onto a CD, and increasing the number of computers that can play a copy of a purchased song.

The industry is being far too heavy handed by fining people hundreds of US dollars. The damages they seek are disproportionate to the cost of purchase of one song. One of the reasons people download music files is because of the high prices of CDs. Rather than fighting a losing battle, the IPR owners should be looking at ways of updating its failing business model. Record companies must be prepared to embrace the new technology, find out how people are using it, and work out how to profit from it. Instead of lobbying to preclude the use of MP3 files, they must ask themselves why customers are choosing to download files instead of legitimately purchasing the CDs. It is possible that people no longer want CDs or tapes, not only because of the cost implication. Compression breakthroughs have made it easy to quickly download and distribute music files. This distribution can allow consumers to discover and follow new bands and to meet other fans with shared interests. An MP3 can hold up to 10 archived albums and can be played in most modern car or stand alone stereos. It allows users to compile their own music play list, unlike purchasing legitimate CDs which often contain only few albums with significant appeal. It seems that record companies are having serious trouble when it comes to picking winning albums.

The economics of the Internet dictate that business must find a way to generate revenues without charging users for intellectual property. Any new regulation must be suitable and flexible to deal with the challenges posed by Internet technology and must balance the interest of the different stakeholders.

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