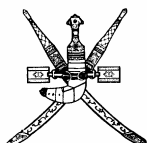


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COPYRIGHT ON THE INTERNET: RISKS AND OPPORTUNITIES
FOR AUTHORS AND COMPOSERS

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RISKS & CHALLENGES

Risks

The Internet presents a formidable challenge to intellectual property policy, and poses huge challenges to authors of copyright works.

1. **Perfect copies:** First, all protected content in the networked environment is in a digital form. Technology today makes it extremely easy to make perfect copies of such works using programs such as MP3 or zip and using hardware such as scanners. Copying on a commercial (i.e., piratical) scale can damage any particular industry.
2. **Loss of profits/rewards:** Secondly, the distribution of digital works undermines the ability of creators to derive profits from their creations – this may have the knock-on effect of stifling creativity as the rewards and incentives for producing works disappear.
3. **Uncontrollable technologies:** Thirdly, the software that drives the online environment have facilitated new forms of exploitation, such as peer-to-peer networking, that are unprecedented in the analog world.

Opportunities

Protection of copyright works on the Internet requires new approaches to meet these challenges at both the human and technological level. Copyright owners, collecting societies, jurists and governmental institutions should work together to find a digital solution. The vital reason is that the Internet may prove to provide advantages that outweigh the risks currently associated with Internet distribution of copyright works. Although technologies offer new and improved means of copying and disseminating works, they are doubled edged swords in that they also offer the means to quell public demand for infringing works. Here, it is submitted, are several convincing examples of how technology and mass consumption works for the copyright owner:

- i) mass production of books and curtailment of prices of paperback books quell the average consumer's enthusiasm in developed countries for photocopying whole books as opposed to purchasing them lawfully;
- ii) the introduction of music in improved digital formats raises a new source of income as the average consumer replaces his existing collection of works with digital versions;
- iii) the ready availability of video rental stores with commensurate low prices convinces the average consumer to stop video taping programmes from the television or from friends (which causes heavy storage problems) and instead to borrow videos;
- iv) the introduction of higher storage mediums (for example, DVDs) allows the industry to convince the consumer, who has already viewed the film in the theatre, to purchase the DVD, which contains the "uncut" version, an interview with the director, the history of the making of the movie, and other such interesting trivia;

In turn, these advantages can be classified as satisfying three consumer demands:

1. **Lower costs of products:** Books and music can be distributed in an e-format today, directly from the creator/producer to the consumer. Middle men or retailers could be eliminated. Distribution costs would fall. Moreover, where authors and composers can distribute their own works over the Internet without the assistance of publishers, the costs of such works will fall.

2. **Accessibility and wider distribution:** the current formulae for the sale of consumer products tends to be still dictated by the retailer or the producer: students must purchase an entire book rather than just the chapters that they wish to study; teenagers must purchase the entire CD album rather than the 2 or 3 songs which they really wish to hear. With Internet distribution of educational textbooks and music, consumers could narrow their purchaser choice. Moreover, news and information, which may have been difficult to obtain in the past, can now be readily accessed in a digital format as many libraries and companies convert their knowledge into digital databases.
3. **Cultural diversity and preservation:** Currently, global music and film production and distribution is controlled by a small group of producers/distributors who dictate the tastes of many consumers according to market demands. This means that music or films made by fringe artistes or by artistes from many countries do not reach a much wider audience. The Internet can increase the opportunities available to new artists that appeal to "niche" markets. In the field of fine art, indigenous craft and artifacts, for example, numerous museums and art galleries have digitized their collections and made them available for viewing on the Internet.¹ One such site, Artnet,² allows users to access works by over 16,000 artists and in over 1,300 art galleries. Moreover, the Internet offers one means of preserving the culture: as one WIPO Survey notes, the Internet offers an unprecedented channel through which the Diaspora of nationals living abroad and hungry for access to their cultural heritage, can be exploited.

RISKS ANALYSIS

The questions are numerous:

How do we control the dissemination of our copyright works?

Are current mechanisms of distribution and remuneration adequate to ensure that authors receive their due rewards?

Can we ensure that these mechanisms do not stifle the development of Internet technology and usage?

What are the available means of promoting the production of copyright goods, both for cultural and economic goals?

Who is affected by piracy, especially in respect of the music industry?

Performers (musicians, dancers, etc.)

Music composers

Broadcasting industries (radio/television)

Retail industries/record shops

Music/dance venues

Recording companies (large & small)

¹ See the Museum Computer Network (at <http://www.mcn.edu/resources/sitesonline.htm>) and Virtual Library Museums Pages (at <http://vlmp.museophile.com/>).

² See Artnet (at <http://www.artnet.com/>).

THE NATURE OF THE PROBLEM: THE MUSIC INDUSTRY EXAMPLE

In one sense, this is not a new query. Authors and copyright owners have always felt threatened by the onset of new technologies. Copyright owners have found some solutions but these cannot be effective unless all stakeholders in a particular society co-operate in providing solutions. The Napster phenomenon has highlighted the severe problems which intellectual property owners face today. The problem is real. Physical piracy accounts for about 10% of the music recording market but piracy accounts for almost a third of all total unit sales. Why? This is apparently due to rampant CD-Burning and the proliferation of file-sharing services such as Gnutella. The Financial Times this year predicted that piracy threatens the music industry, and indeed creativity, if the copyright system fails to provide labels with a decent return on their investment.³

Central to the music dilemma that is Napster and all other peer-to-peer sharing is the early 1990's technological breakthrough - the MP3 compression technology.⁴ Prior to MP3 compression technology, music files (normally in WAV file format), were very large, utilised hard drive space on a computer, and made the transmission of a single song over the Internet a cumbersome task that took hours to complete. The MP3 software technology allows the compression of audio files into MP3 files (i.e. digitally encoded music files) which can subsequently be transferred quickly and repeatedly. As modem speeds have increased, MP3 files have been downloaded countless times from dozens of Web sites.⁵ The quality of a sound recording that is transmitted in MP3 format has a slightly diminished audio quality; but because it is smaller and requires less disk space, less memory, and less transmission time, it is the *de facto* standard for transmitting music over the Internet. Two groups have embraced MP3 technology especially enthusiastically:

musicians unable to obtain recording contracts with the major record companies have found that, at modest cost, they can record their material in MP3 format and then make it available over the Internet;

consumers, mainly high-school and college students, have discovered that they can obtain on the Internet MP3 copies of most of the songs of their favorite musicians. A high percentage of the MP3 recordings available in this manner were prepared without the permission of the owners of the copyrights in the music.

MP3 files are ordinarily created by consumers themselves who copy original CD audio files to their disk drives, and then compress those files into the MP3 format using software programs which are freely available over the Internet (the process is called "ripping"). The consumer then is able to make available or transmit these small MP3 files over the Internet using standard search engines, email, or any other file transfer protocol.⁶ Consumers can also

³ Financial Times, 21 January 2002.

⁴ MP3 is the abbreviated term for for MPEG 1 Audio Layer 3.

⁵ A. Berschadsky, "RIAA v Napster: A Window into the Future of Copyright Law in the Internet Age", (2000) 18 J. Marshall J. Computer & Info. L. 755, at p. 758; and J. Blackowicz, "RIAA v Napster: Defining Copyright for the Twenty First Century?", (2001) 7 Boston Univ. J. Sci. & Techn. Law 182, at pp. 183-184.

⁶ *Ibid.*

obtain MP3 files directly from web-based search engines, such as altavista.com, or through hundreds of websites. In addition, artists make their music freely available to the public over the Internet in MP3 format.

The downloaded MP3 file can also be played directly from the user's hard drive using freely available programs such as RealPlayer or the Napster Music-Share program or other software; the file can also be transferred onto an audio CD if the user has access to equipment designed for that purpose. Finally, the file can be directly transmitted to portable music players (for example, a "Rio" player or a "Jukebox"). All this has been rather disconcerting to the Recording Industry Association of America (RIAA) which represents roughly half-dozen major record companies (and the artists on their labels) that control approximately ninety percent of the distribution of recorded music in the United States.⁷

TECHNOLOGY AND COPYRIGHT LAW

Technological revolutions have invariably been greeted by both enthusiasm and consternation from the copyright owners. This is especially true within the international arena where copyright law tends to embrace new forms of expressions and technologies. For example, since the Berne Convention 1886, the convention has been amended several times to keep pace:

- Berlin (1908) incorporated photography, film, and sound recording;
- Rome (1928) added broadcasting;
- Brussels (1948) television.

The two new WIPO copyright instruments merely confirm that, inevitably, copyright law does extend its umbrella of protection to secure the rights of authors and producers against new technology-enabled exploitations. For instance, the 1996 WIPO Copyright Treaty and the 1996 WIPO Performances and Phonograms Treaty have introduced three key clauses:

Right of Communication to the Public

The right provides authors the right to control any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them; (Art. 8, WCT; Arts. 10 & 14, WPPT);

Technological Measures

This provision obliges contracting states to provide adequate legal protection and effective legal remedies against the unlawful circumvention of effective technological measures that are used by authors in connection with the exercise of their copyright, and that restrict acts which are not authorized by the authors concerned or permitted by law (Art. 11, WCT; Art. 18 WPPT);

⁷ *RIAA v. Diamond Multimedia Systems Inc*, 180 F.3d 1072 (9th Cir. 1999), at p. 1074.

Rights Management Information

This provisions obliges contracting states to provide adequate and effective legal remedies against any person who unlawfully removes or alters any electronic rights management information; or who disseminates copyright works have had their rights management information tampered with (Art. 12, WCT; Art. 19, WPPT).

The WIPO Treaties sees the copyright industry achieving another level of control: the provisions on technological control devices and rights management information extend the industry's ability to rein in the activities of third parties who facilitate dissemination. These provisions have been confirmed both within E.C. and U.S. law. The new E.C. Copyright in the Information Society Directive 2001⁸ confers the right of communication to the public (as defined above),⁹ whilst simultaneously conferring a right of private use on natural person for non-commercial. The latter however is qualified in that the user's right is on condition that the rightholders receive fair compensation

"which takes account of the application or non-application of technological measures referred to in Article 6 to the work or subject-matter concerned"¹⁰

Article 6 not only confirms but expands the WIPO provisions. In the U.S., not only does the Digital Millennium Copyright Act implement the WIPO provisions, it confers positive duties on internet service providers to actively respond to any notice from copyright owners that the ISP's sites are harbouring infringing material: the ISP must either remove or disable access to the infringing material in order to qualify for immunity from infringement proceedings (the "notice and takedown" procedure).¹¹

Database right

The E.U., in a further move, has also introduced the database right in an effort to protect the databases of its industry. The database right is akin to copyright except that it protects collections of information and prevents unauthorised extraction or reutilisation of the database.¹²

⁸ Directive 2001/29/EC of the European Parliament and of the Council on the harmonisation of certain aspects of copyright and related rights in the information society, adopted on 9 April, 2001.

⁹ *Ibid.* art. 3.

¹⁰ *Ibid.* art. 5(2)(b).

¹¹ S. 512, U.S. Copyright Act; however, failure to qualify for immunity under the DMCA does not make the service provider liable for copyright infringement. The copyright owner must still demonstrate that the provider has infringed, and the provider may still avail itself of any of the defenses, such as fair use under s. 107, U.S. Copyright Act.

¹² Database Protection Directive No. 96/9/EC of March 11, 1996.

POSSIBLE SOLUTIONS AND REMEDIES

Technological tools such as encryption and watermarking provide practical solutions and, together with digital rights management initiatives, will contribute to meeting current concerns of the risks imposed by employing the internet as the main means of production and distribution of copyright works.

Collecting Societies

Essentially, collective management of copyright is a system under which a copyright owner assigns/transfers or licences his rights to an organisation and authorises it, on his behalf, to grant licences to potential users of his work and to collect income due thereof. These organisations are generally referred to in legal literature as collecting societies, rights management organisations, collective management/administration organisations. Within specific areas of copyright licensing, a more specific title is accorded for example:

- reproduction rights organisations (RROs);
- performing rights societies;
- mechanical reproduction rights societies.

The copyright holder may either voluntarily or compulsorily mandate such an organisation to administer his rights. Collective management avoids the need for individual licensing and makes the process of collection and clearing rights easier for both rights-holders and users respectively. In many cases, both copyright law and the contractual mandate granted to such organisations confer the necessary *locus standii* on these entities to enforce those rights in civil proceedings. Armed with such rights, collective management organisations offer a united front on behalf of their members and have grown in importance in assisting the individual rights holder to monitor the usage of his work. This is the traditional model in dealing with traditional types of copyright works.

Digital Rights Management

Digital rights management (DRM) technologies are part of the emerging framework for management of copyright and related rights in the digital era. DRM is based partly on the legal developments as proposed within the 1996 WIPO treaties, the Digital Millennium Copyright Act and the recent EU Directive on Copyright and Related Rights in the Information Society, and partly on the new business models for IPR licensing on the Internet.

“Rights management information” refers to any information which a copyright owner deems appropriate to annex to the copyright work, the most likely means of inserting such information being by digital means such as watermarks or other digital identifiers. The information can relate to the identity of the work, the author or the rights owner, or terms and conditions as to use of the work, or bar coding. The rights management information can also, if stretched, refer to other identifying information placed on a copy of a work by the reproduction device: for example, if a person records a film being screened in a theatre with his video camcorder, the latter will mark the film with several identifiers: the date on which the recording took place or the serial number of the camcorder. This apparently non-erasable information can be used by the industry to trace the origin of an illegally copied film.

Anti-Circumvention Devices

From a practical perspective, if copyright owners are to prevent digitally perfect copies of their works from being copied and disseminated via the Internet, the onus is then on them to employ copy protection devices, such as “password codes” or encryption or scrambling programs. Indeed, this much is presumed under the WIPO Copyright Treaty 1996.¹³ In enacting the treaty, the U.S.¹⁴ and the European Union¹⁵ have both acknowledged the widening of copyright policy towards assisting copyright industries in controlling not only the reproduction and dissemination of works on the Internet, but in controlling the access to the works in the first place.

Although technologies have been available for some time that would prevent MP3 files from being copied and recopied, the sound recording industry has only recently begun to implement such technologies under the “Secure Digital Music Initiative” – which will prevent SDMI-compliant devices from playing unauthorised copies. However, rightsholders are increasingly turning to technology to provide protection for their intellectual property. Technological systems of protection now include: anti-copy devices, access control, electronic envelopes, proprietary viewer software, encryption,¹⁶ passwords, watermarking,¹⁷ fingerprinting (user authentication), metering and monitoring of usage, and remuneration systems. Several industry and technology initiatives to set standards in various industries have emerged over the years, although none have yet established uniform standards for technological protection measures.¹⁸

Equipment Levies

Another target for both collecting societies and other rights owners is the manufacturers of devices used to download or playback or copyright material. If equipment is being used to curtail the profits/rewards of creators, surely manufacturers of such equipment should pay a levy towards the rightsowners?

¹³ Art. 11, WIPO Copyright Treaty 1996.

¹⁴ See Digital Millennium Copyright Act.

¹⁵ Directive 2001/29/EC on copyright and related rights in the information society.

¹⁶ Encryption, or cryptography, refers to the process of using software to encode plain text information into cipher text, which can only be decoded by the intended recipients using a key or password. The two main types are public-key encryption (asymmetric) and symmetric encryption.

¹⁷ A watermark is a “pattern of bits inserted into a digital image, audio or video file that identifies the file’s copyright information (author, rights, etc.). The name comes from the faintly visible watermarks imprinted on stationery that identify the manufacturer of the stationery. The purpose of digital watermarks is to provide copyright protection for intellectual property that’s in digital format.

¹⁸ In 1998, the Secure Digital Music Initiative (SDMI) was established by record and technology companies to agree on a standard for music copy protection. In September 2000, SDMI issued a public challenge to hack SDMI-encoded and watermarked audio content. The copy protection was hacked in three weeks, and the RIAA initiated legal action to prevent the hacking method from being published. This initiative to reach a common copy-protection standard has been overtaken by various discrete digital rights management schemes.

Such a levy would in all likelihood eventually come from the consumer of the equipment – the argument may be that at some point of usage of the equipment, the consumer is going to breach copyright of a work. The only problem would be determining the type of equipment that would be charged, especially where it involves downloading of material from the Internet: MP3 playback devices; access to internet service providers; hard drives and computers. Proceeds would be distributed by collecting societies.

CONCLUSIONS: CASUAL PIRACY, CONSUMERS AND THE FUTURE

The scenario is simple: Napster, MP3, DeCSS and other technology providers or disseminators are offering the end-user enabling systems which will ruin the lives of artists, and along with that the industry. This in turn will affect national economies, and a crisis will ensue if no solution is found. However, to state that technologies will cause the death of copyright is a banal and lazy conclusion. Copyright law has always adapted itself to technological breakthroughs in the past.

However, there is another difficulty which industries face: the consumer. Compression techniques, digital formats, easy reproduction and transmission over the Internet has increased the ability of the consumer. There has been a definite shift of concern in the past few years that, in addition to the activities of professional industrial organisations who pirate books and CDs, the industry has to look to ways to exercise control over the individual consumer. This individual is increasingly capable of harnessing the same ability, as professional pirate industries, to disseminate works. Programs such as FreeNet, Grokster and Gnutella indicate that the Napster situation was a minuscule problem. FreeNet, for example, is not controlled by any individual or company. Although it utilises a peer-to-peer network similar to Napster, it is decentralized and the information distributed on it is virtually censor-free and cannot be removed from the system. Similarly, the Gnutella system enables people to search for any kind of data. The program finds the data and returns a copy without indicating the file's source: as a result, Gnutella is very difficult for opponents to shut down, because users cannot be identified.

On the other hand, we can boldly state that copyright is safe in light of the WIPO Internet treaties as the implementation of the treaties gets underway in all developed and developing countries.

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