

Copyrights

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Abstract— In this paper, we will discuss a type of intellectual property which is copyrights. Copyrights are a main issue and they are protected by the law. A type of copyrights that is related to us as computer engineers is digital copyrights. Examples of digital copyrights are software and file sharing.

Index Terms— Intellectual property, copyrights, digital rights, software protection, file sharing, bittorrent, mp3.

I. INTRODUCTION

In law, intellectual property (IP) is an umbrella term for various legal entitlements which attach to certain names, written and recorded media, and inventions. The holders of these legal entitlements are generally entitled to exercise various exclusive rights in relation to the subject matter of the IP. The term intellectual property reflects the idea that this subject matter is the product of the mind or the intellect, though the term is a matter of some controversy COMPUTER ETHICS.

Intellectual property laws confer a bundle of exclusive rights in relation to the particular form or manner in which ideas or information are expressed or manifested, and not in relation to the ideas or concepts themselves (see idea-expression divide). The term "intellectual property" denotes the specific legal rights which authors, inventors and other IP holders may hold and exercise, and not the intellectual work itself.

Intellectual property laws are designed to protect different forms of subject matter, although in some cases there is a degree of overlap.

- Copyright may subsist in creative and artistic works (e.g. books, movies, music, paintings, photographs, and software) and give a copyright holder the exclusive right to control reproduction or adaptation of such works for a certain period of time.
- A patent may be granted for a new, useful, and non-obvious invention, and gives the patent holder an exclusive right to commercially exploit the invention for a certain period of time (typically 20 years from the filing date of a patent application).
- A trademark is a distinctive sign which is used to distinguish the products or services of different businesses.

- An industrial design right protects the form of appearance, style or design of an industrial object (e.g. spare parts, furniture, or textiles).
- A trade secret (which is sometimes either equated with, or a subset of, "confidential information") is secret, non-public information concerning the commercial practices or proprietary knowledge of a business, public disclosure of which may sometimes be illegal.

Patents, trademarks, and designs rights are sometimes collectively known as industrial property, as they are typically created and used for industrial or commercial purposes.

II. COPYRIGHTS

Copyright is a set of exclusive rights regulating the use of a particular expression of an idea or information. At its most general, it is literally "the right to copy" an original creation. In most cases, these rights are of limited duration. The symbol for copyright is ©, and in some jurisdictions may alternatively be written as either (c) or (C).

Copyright may subsist in a wide range of creative, intellectual, or artistic forms or "works". These include poems, theses, plays, and other literary works, movies, choreographic works (dances, ballets, etc.), musical compositions, audio recordings, paintings, drawings, sculptures, photographs, software, radio and television broadcasts of live and other performances, and, in some jurisdictions, industrial designs. Designs or industrial designs may have separate or overlapping laws applied to them in some jurisdictions. Copyright is one of the laws covered by the umbrella term 'intellectual property'.

Copyright law covers only the form or manner in which ideas or information have been manifested, the "form of material expression". It is not designed or intended to cover the actual idea, concepts, facts, styles, or techniques which may be embodied in or represented by the copyright work. For example, the copyright which subsists in relation to a Mickey Mouse cartoon prohibits unauthorized parties from distributing copies of the cartoon or creating derivative works

which copy or mimic Disney's particular anthropomorphic mouse, but does not prohibit the creation of artistic works

about anthropomorphic mice in general, so long as they are sufficiently different to not be deemed imitative of the original. In some jurisdictions, copyright law provides scope for satirical or interpretive works which themselves may be copyrighted. Other laws may impose legal restrictions on reproduction or use where copyright does not - such as trademarks and patents.

Copyright laws are standardized through international conventions such as the Berne Convention in some countries and are required by international organizations such as European Union or World Trade Organization from their member states.

Use of a copyright notice — consisting of the letter C inside of a circle (that is, "©"), the abbreviation "Copr.", or the word "Copyright", followed by the year of the first publication of the work and the name of the copyright holder — was part of previous United States statutory requirements. (Note that the letter C inside of parentheses ("(c)") has never been an officially recognized designator.) But since 1976, when the U.S. passed a new Copyright Act that followed the model of the Berne Convention, the use of copyright notices has become optional to claim copyright, as the Berne Convention makes copyright automatic. However, notice of copyright (using these marks) does have consequences in terms of allowable damages in an infringement lawsuit in some places.

The phrase All rights reserved was once a necessary formal notice that all rights granted under existing copyright law are retained by the copyright holder and that legal action may be taken against copyright infringement. It was provided as a result of the Buenos Aires Convention of 1910, which required some statement of reservation of rights to grant international coverage in all the countries that were signatory to that convention. While it is commonplace to see it, this notice is now superfluous, as every country that is a member of the Buenos Aires Convention is also a member of the Berne Convention, which hold a copyright to be valid in all signatory states without any formality of notice.

This phrase is sometimes still used even on some documents to which the original author does not retain all rights granted by copyright law, such as works released under a copyleft license. It is, however, only a habitual formality and is unlikely to have legal consequences.

III. DIGITAL RIGHTS

Digital Rights Management (DRM) is an umbrella term that refers to any of several technologies used by publishers or copyright owners to control access to and usage of digital data or hardware, and to restrictions associated with a specific

instance of a digital work or device. The term is often confused with copy protection and technical protection measures; these two terms refer to technologies that control or restrict the use and access of digital content on electronic devices with such technologies installed, acting as components of a DRM design.

IV. SOFTWARE PROTECTION

Though that copyrights protect companies' products and programs, these companies still have to protect their products. Two ways of doing that are:

- **Product activation:** Restricts a product's functionality until it is registered with a publisher by means of a special identification code, often recording information about the specific computer the software is installed on to prevent its use across multiple machines. Activation schemes may place some users at risk by incorrectly identifying their purchased software as unauthorized. An example of this vulnerability occurred in 2003, when Intuit's use of a defective product activation scheme angered thousands of customers who were denied legitimate use of the product, resulting in a formal apology by Intuit and their cancellation of the system.
- **Digital watermarking:** Allows hidden data, such as a unique disc ID, to be placed on the media. It is, in this sense, an instance of steganography. The system allows such information as the name and address of the purchaser (acquired, for instance, taken at the point of sale), and entered into a database along with a unique ID for each copy (e.g., disk). In the most common implementation, this scheme does not prevent copying, but ensures that any copies made of the media will be traceable to a particular copy and perhaps to a particular user. However, the scheme relies largely on authenticating the purchaser's identity (e.g., at point of sale), and can be easily circumvented by a customer who provides false information. Any user who can generate such watermarks will also be able to circumvent the system, so there is also a reliance on restrictions in the use of either hardware or software.

V. FILE SHARING

File sharing is the practice of making files available for other users to download over the Internet and smaller networks. Usually file sharing follows the peer-to-peer (P2P) model, where ~~the~~ files are stored on and served by personal computers of the users. Most people who engage in file

sharing are also downloading files that other users share. Sometimes these two activities are linked together. P2P file sharing is distinct from file trading in that downloading files from a P2P network does not require uploading, although some networks either provide incentives for uploading such as credits or force the sharing of files being currently downloaded.

VI. BITTORRENT

BitTorrent is a peer-to-peer (P2P) communications protocol for file sharing. The protocol was designed in April 2001 and implemented in summer 2002 by programmer Bram Cohen, and is now maintained by BitTorrent, Inc.

BitTorrent is a method of distributing large amounts of data widely without the original distributor incurring the whole of the corresponding costs of hardware, hosting and bandwidth resources. Instead of the distributor alone servicing each recipient, under BitTorrent the recipients each also supply data to newer recipients, thus significantly reducing the cost and burden on any given individual source as well as providing redundancy against system problems, and reducing dependence upon the original distributor.

VII. MP3

In the first half of 1995 through the late 1990s, MP3 files began to spread on the Internet. MP3's popularity began to rise rapidly with the advent of Nullsoft's audio player Winamp (released in 1997), the Unix audio player mpg123 and the peer-to-peer file sharing network Napster (released in 1999). These programs made it simple for average users to play back, create, share and collect MP3s.

The small size of MP3 files has enabled widespread peer-to-peer file sharing of music which would previously have been impossible. The major record companies, who argue that such free sharing of music reduces sales, reacted to this by pursuing law-suits against Napster, which was eventually closed down, and eventually against individual users who engaged in file sharing.

Despite the popularity of MP3, online music retailers often use other proprietary formats which are encrypted (known as Digital Rights Management) to prevent users from using purchased music in ways not specifically authorised by the record companies. The record companies argue that this is necessary to prevent the files from being made available on peer-to-peer file sharing networks. However, this has other side effects such as preventing users from playing back their purchased music on different types of devices. Some services, such as eMusic, continue to offer the MP3 format which allows users to playback their music on virtually any device.

VIII. CONCLUSION

Every day in our daily life we see people buying illegal copied cd-roms filled with programs that break the very essence of a major ethical issue that we discussed in this paper. Copyrights for these products should be protected from piracy whether they are on a cd-rom or on the web because of our view of the ethical issues concerning intellectual property.

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