IPR and Digital World

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I.   INTRODUCTION

Intellectual property is an umbrella term that covers a number of different rights known as trademarks, copyright, patents, designs, trade secrecy. So what these all have in common is that they determine ownership rights in elements like websites, names, logos, software, books and so on. The purpose of copyright law is to balance the rights of copyright holders and users. Existing copyright law is applicable in the digital age also. Copyright originated in an age where the expression of the intellectual product in physical form, such as a book. Today, in the information age where digital information can be easily copied at minimal cost this natural physical limitation to unauthorized copying is removed. As more and more information becomes available in digital format, libraries must be ensure that public can enjoy the same access rights as with printed information. This paper deals with scope and coverage of various concepts connected with IPR, such as intellectual product, patents, copyright, designs, trademarks, computer software, databases, Internet and cyber laws.

And these rights are rather like property rights that you have in land. So you can pass it in your will, mortgage it and license it to other people. So they are very valuable potentially for businesses. Certainly, in the digital economy, most businesses, the value in them is in systems, knowledge, and data. They don't tend to have a lot of physical assets. So, the value in the business lies in these intangibles so it is really important, in terms of making sure you create a valuable business to attend to IP rights. it is considered a bit of an esoteric subject because in the industrial era it was just about registering a name as a trademark for big brands or inventing something. But, nowadays, in the digital economy, it is relevant to every business because everyone is on the internet and has intangible assets.

II.   FEATURES OF INTELLECTUAL PROPERTY

1. It is a form of intangible property.
2. It's existence distinct from the physical articles or goods which contain the rights.
3. In some cases the rights are capable of existence and enforcement with no tangible form.
4. The various rights might subsist in the same things. For example, a document might be subject to patent, design rights and trademarks. A pictorial trademark might also be subject to copyright.

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Categories of Intellectual Property Rights: "Intellectual property" broadly two categories:

(a)   Industrial property and (b) Copyright. Industrial property consists of rights relating to inventions, trade marks, industrial designs and geographical indications. Copyright protects rights related to creation of human mind in the fields of literature, scientific, music, art and audio-visual works etc. The basic rights of ownership of intellectual property are known as "intellectual property rights" (IPR), which are primarily derived from legislation concerning patents, designs, copyrights and trade marks.

According to the World Intellectual Property Organizations, there are seven categories of Intellectual Property Rights:

- Copyright and Related Rights
- Trade marks, Trade names and Service marks
- Geographical Indications
- Industrial Designs
- Patents
- Layout Designs of Integrated Circuits
- Undisclosed Information

III. IPR AND DIGITAL RIGHTS

In the digital age the issue of privacy is an important subject where unauthorized data sharing, data integration, unethical data utilization and unauthorized public disclosure are the major areas of concern. The major issues are to be considered as follows:

1. Is digitization to be considered as similar to reproduction, for example using Xerox machine?
2. Is digitization a creative activity such as translation from one language to another?
3. Can transmission of digitized documents through Internet be considered as commercial distribution or public communication similar to broadcasting?
4. Can we consider database as a special collected work that should be protected by the copyright law?
5. What can be considered as fair use in the Internet environment?
6. What are the concerns of the library community?
7. In the digital context if access restricted by the copyright owner, how could the public exercise fair use with those work?

The above issues are specific to the library. The libraries have allowed their users to read a document, to browse through the whole collection; to search through the library catalogue; to supply Xerox copy for research and education purpose; to procure photocopies of articles from other libraries or clearing centers; to widely distribute the re-produced copies of documents for public awareness and to provide inter library loan service. Whether all these activities will continue in the digital age? If digitization is considered as reproduction work, it is quite clear that in digitization the initial work is merely changed into the digital form and the process of changing is accomplished by a machine, without any creativity. If it is considered as a translation from one language to another, the digitization is also a change from natural human language in to machine language. However in digitization, there is no creativity involved and it could be considered as a similar activity to reprography. The copyright protects only creative works. Simply transformation in to the digital form of an original document cannot be considered as creative work. The transmission of information on Internet can be considered similar to broad casting; hence copyright law cannot be applied.

IV. WAYS FOR PROTECTION OF DIGITAL / INTELLECTUAL PROPERTY

Digital Rights Management (DRM) technologies (also known as Electronic Rights Management Systems) ensure copyright through identifying and protecting the content, controlling access of the work, protecting the integrity of the work and ensuring payment for the access. DRM technologies prevent illegal users in accessing the content. Access is protected through user ID and password, licensing agreements. Another way to protect digital content is through Technical Protection Measures (TPM). These technologies allow publishing companies in securing and protecting content such as music, text and video from unauthorized use. If an author wishes to collect fee for use of his or her work, then DRM technology can be used. The TPM and DRM technologies are increasingly employed to sell and distribute content over the Internet.

1. Cryptography:

Cryptography is the oldest mechanism employed to ensure security and privacy of information over networks. This involves scrambling (or encryption) of the information to render it unreadable or not understandable language, which only the legitimate user can unscramble (or decrypt). However cryptography protects the work during transmission or distribution only. After the work is decrypted, it does not provide any protection.

2. Digital Watermark Technology:

A digital watermark is a digital signal or pattern inserted into a digital document. It is similar to the electronic on-screen logo used by TV channels. A unique identifier is used to identify the work. The message might contain

information regarding ownership, sender, recipient etc or information about copyright permission. The system consists of a watermark generator, embedder and a watermark detector decoder. The legal user can remove these watermarks with a predetermined algorithm. The watermarking technology is extensively used in protecting multimedia works.

3. Digital Signature Technology:

Digital signature includes identity of the sender and/or receiver date, time, any unique code etc. This information can be added to digital products. This digitally marks and binds a software product for transferring to a specified customer. Digitally signed fingerprints guarantee document authenticity and prevent illegal copying.

4. Electronic Marking:

In this technique, the system automatically generates a unique mark that is tagged to each of the document copies. This technique is used to protect copyright as well as in electronic publishing where documents are printed, copied or faxed.

5. Security Features of Operating System:

For protection of files, data etc the operating system of computer such as Windows 2000 Professional, Windows 2000 Server, MS-SQL Server has some unique special security and integrity features.

V.   CONCLUSION

A number of issues are associated with the usage of digital information i.e. issue of single articles versus full issues of e-journals, user-friendliness, incompatible hardware and software, formatting, graphics, scholarly recognition and obsolescence. While it is important to protect the copyright of the publishers, it is equally important to protect interest of the libraries and the user. In digital environment it is difficult to draw a boundary line between what is permissible, to what extent and what is infringement. Small – scale violations which do not conflict with owner's rights may be accepted as a part of fair use. In the context of digital information, it is difficult to judge, comprehend fair use, access and control the infringement of copyright law. It is almost impossible for a copyright owner to know which person used his/her work. In this context it is necessary to modify the copyright law. The librarians in the digital environment have some responsibility to collect information and help the readers by giving it even if it is an electronic form. The copyright protection should be encouraging the creativity and not for creating hurdles in the use of information. The Librarians should work as a catalyst for the free flow of information between the owners of copyright and the users of the information.