

THE RELEVANCE OF INTELLECTUAL PROPERTY RIGHTS IN THE DIGITAL MILLENNIUM

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ABSTRACT

The paper briefly touches about the concerns of digital technologies and the contribution of copyright-related industries to the nation's economy. The issues and concerns of librarians in the face of the intellectual property laws like perpetual dependency; societal rights, pricing, access and ownership are highlighted. The adverse impact of IPRs acts on knowledge society and open source initiatives are discussed. Suggestions like the enactment of Consumer Rights Act and fair dealing rights in the case of digital resources, are made for the benefit of and to safeguard the interests of librarians.

1. INTRODUCTION

Information is the primary 'commodity' for any R&D activity. The ever changing technological developments and the ever-growing number of publications in a multitude of subject fields led to a paradigm shift in the library management. Due to the problems of 'plenty' and 'resource overload' coupled with budgetary constraints, library managers started providing access to information to the users rather than acquiring and owning them. The developments in the information technologies have brought in new products and formats for storage, retrieval and dissemination. The digital information has greatly enhanced the quality and range of services provided in a library. The growing electronic publications including e-books, e-journals and the billions of web pages and Peta bytes of information on Internet have had a profound impact on the knowledge society. The CD-ROM technology became a popular storage and retrieval mechanism. These led to a number of licensing agreements.

These technologies posed many problems. A number of issues and concerns arise in using volatile electronic information (see Lakshmana Moorthy and Karisiddappa, 2004). The advent of local and wide area networks, intranets and the Internet have further aggravated the problems due to their inherent character of instantaneous distribution. The copyright issues concerned to the players—network administrators, Internet service providers, users and authors involving electronic information, databases and multimedia works—have been dealt by the authors elsewhere (Lakshmana Moorthy and Karisiddappa, 1998 & 2000).

1.1 Contribution of Copyright-Related Industries to Economic Growth

Copyright subsists in books, sound recordings, audiovisual/musical works, films, radio and TV broadcasts, artistic works and computer software. Copyright-related aspects include printing, paper, advertising, newspapers, etc. In totality, copyright-related industry is contributing significantly to the gross national product (GNP) and to the economies of nations. Book publishing is a multibillion-dollar industry dominated by the developed countries like US, UK, Germany and France that among them account for more than 50% of the book exports. The contribution of the book publishing industry to the GNP ranges from 3.2 per cent (Australia) to 5.8 per cent (USA); it is 5.06 per cent for India. The employment generated by this industry is also quite significant (roughly about 3 per cent in developing countries) (Alikhan and Mashelkar, 2004). India is the biggest producer of films, third (after USA and UK) in the publication of books in English, fifth in terms of volume of music recorded and is among the top 10 countries in computer software. The annual loss world over from piracy of books, music, films and software runs to billions of dollars. For example, in 2002, the US trade losses due to copyright-related piracy was estimated at US\$ 9208 billion (Eskicioglu, 2003); in 2003

India suffered a loss of Rs 350 crore due to piracy of films and video records (for US, the loss was US\$ 3.5 billions) and the loss due to illegal copying of software in the same year in India is nearly Rs 1700 crore. In 2001 the Indian music industry suffered an estimated loss of Rs 6073 crore while world lost US\$ 4.3 billions (Parth and Varma, 2002, and Movies, 2004).

2. INTELLECTUAL PROPERTY RIGHTS IN THE DIGITAL MILLENNIUM

Though every country has enacted laws to protect intellectual property of its citizens, many infringements take place and a majority of them end up in courts of law. The developments in information and communication technologies made the situation grimmer. In tune with the fast changing technological developments, countries like USA (Digital Millennium Copyright Act), Australia (Digital Agenda Act), India (Information Technology Act and Communications Convergence Act), Japan, European Union, Malaysia, Singapore etc have taken steps to strengthen the existing copyright legislations to protect intellectual property rights (IPRs). The relevant provisions of the European Union, the American and the Indian developments as well as the international efforts in the copyright have been discussed elsewhere (Lakshmana Moorthy and Karisiddappa, 2001).

The IPR Acts aim a three-level protection, viz. legal—through legislations like copyright laws; technological—through digital rights management systems (DRMS); and legal protection to help technological protection—through prohibition of acts of circumvention of copyright laws. Technologies have been developed to protect the content through watermarking, finger printing and tamper proof hardware and software; access control by user ID and password; content use through disabling printing and downloading, copying specified number of times only and restricting copying through originals (masters) only. Some provisions in these Acts are stringent and non-user friendly.

2.1 Issues and Concerns of Librarians **(a) Perpetual Dependency**

In the case of printed publications, library procures (*hence owns*) and issues them to its users as many number of times as required. In some cases, the publication is lent to other libraries on inter-library loan. But in the case of digital resources, the same is becoming infringement. For example, a CD-ROM publication cannot be lent out on inter-library loan. Initially, the libraries required returning the old CD-ROMs to the supplier when a new CD-ROM is received; this posed Audit problems. Further the time-lock in CD-ROM installation software renders it unusable after certain period. While in the case of printed publications, the library can use it perpetually as long as they are relevant and useful, it is not so with digital resources. It is not uncommon to retrieve information from the 'expired' CD-ROMs librarians change the system date thereby meeting the information requirements. Is it not unfair of publishers to force librarians to resort to unfair means to retrieve information from legally-procured products? This leads to a perpetual dependency of the library on publishers. If due to budgetary problems, the product is not subscribed, the information cannot be retrieved and is lost forever which is unfair.

The librarians also face continued access problem in the case of the *online only* publications. Archival access is provided by many publishers and some aggregators. But in the age of acquisitions and mergers of publishing firms, is there a guarantee to the subscriber? Further, obsolescence of technology and retrieval software also restricts access to the legally procured information.

(b) Copyright vs Societal Right

No wonder, in the age of competition and pressures in professional advancement, authors are transferring copyright to the commercial publishers, who go on making huge profits. For instance, the pre-tax profit of Elsevier Science, publishers of about 1800 S&T

periodicals, for the year 2003, is US\$ 2 billion or about Rs. 9500 crore (Balasubramanian, 2004). But the intellectual content marketed by commercial publishers is the result of many players. Referees and their institutions contribute time, resources and efforts in evaluating the research papers. The institutions to which the authors belong spend provide infrastructural facilities for carrying out the research: sometimes, these pay page charges for the speedy publication of the research work. The government extends grants, financial assistance, and budgetary support to these institutions from the tax payer's money. The library provides the authors necessary information for carrying out research. But in the end, it is only the publisher, who is reaping the benefits. What are the benefits to the authors who are the brains behind the intellectual content, the institutions and libraries that provide infrastructure and information, and the society at large that is responsible for the financial resources, except the marginal satisfaction of publication in a competitive world? Is it not the duty of profit making publishers to reward them?

(c) Pricing

A person with little knowledge of printing can easily distinguish that electronic or online (i.e. digital) version precedes the plate making process. The costs of paper, printing, binding, packaging and forwarding charges that roughly add up to 30 percent (24-36 per cent as per a study by Woolfrey, 1993) are saved in the case of these publications. This means that the electronic versions should be cheaper by 30 percent over print versions. Even after considering retrieval software and other overheads for providing access, their cost should be 15 to 20 percent less. But this is not so. Is it not unfair?

One more major concern with respect to the online publications is their pricing. While some publishers provide free access to full text online versions of the print journals (for example Elsevier Science and Taylor and Francis), some publishers charge about 15 percent extra over and above the print version prices, whereas a few charge more than 200 percent or more (for example Jane's). In some cases, subscribing only online journals costs more than 200 percent of the print version (for example Jane's). The publishers who charge higher for online versions (such as Jane's) also price CD-ROM versions high depending on the plea that digital versions contain far more information than the print version (sic).

Also, renewal prices vary depending upon 'how early' renewal orders are placed. In one case the renewal price of a set of periodicals on CD-ROM is 100 per cent more if orders are placed beyond 20 December (!). To say the least, this is an unfair and unhealthy practice in the case of *professional publications*. There are two different pricing schemes for e-books: one-time payment (Kluwer) and yearly subscription (Springer). In general, periodicals published by professional associations are on a lower side while those of commercial publishers are much higher. There is a need that the library professionals unite to bring out harmonization in pricing of periodicals.

(d) You Bought It – But Do You Own It?

Standards and specifications, issued by various government and professional bodies, are important primary sources of information for research work. Many of these consist of thousands of standards, and so these are brought out on CD/DVD format and are highly costly. However, publishers do not treat them as periodicals although periodical updates are issued. On an average about 1000 standards are revised every year. Thus, to revise all the standards it would take 10 years. It would have been highly helpful if these organizations periodically issued the revised standards separately like individual issues of periodicals. This would enable accessing all the standards whenever necessary and would be cheaper. Unfortunately this is not so. Each year, the revised standards (about 10%) are issued along with un-revised standards (90%) with cumulative index. As soon as the next update is received, the earlier one becomes obsolete. The library receives installation software every

year it is renewed. This is leading to *un-revised standards* with revised standards every year, *although they are available with the library*. If, due to resource crunch, any product is not subscribed, all the old issues become inaccessible as they are issued with time-locks. So, although the library is the legal 'owner', the access is controlled by the publisher, forcing the library to renew it year after year. Same is the case with the publications of Engineering Science Data Unit. About 100 data sheets (of a few thousands) in 38 series are revised annually. The library cannot buy *only the revised data sheets*; but all the revised and non-revised data sheets of the series! To compound the issues further, if the subscription is broken and renewed after two or three years (due to resource crunch, of course), the library has to pay a higher cost than the normal renewal cost.

When these issues are raised, the publishers say that they do not want the use of out dated standards. Is it concern for the user or undue transgression? It would be pertinent to leave the decision to use the information to the library and the users of the product. Are these not unfair practices? Why cannot these be treated as monopolies and restricted trade practices and libraries given suitable rights to products legally procured?

(e) Repeated Usage

A printed publication could be used or lent out again and again without any extra payments. Digital resource, by analogy, should allow better usage over print material, i.e., simultaneous usage by many people, there by leading to savings. But it is exactly the opposite—sometimes paying more than two times for the digital resources over the print material (as in the case of Jane's, IHS, etc) in stand-alone, single or multi-user price tags. Is it justified?

3. IMPACT OF IPR ACTS ON KNOWLEDGE SOCIETY

Safeguarding intellectual property is necessary to reward the creators of artistic work and encourage for further pursuits. IPR laws are supposed to facilitate free flow of and access to information. However, the various provisions in the digital copyright acts impose severe restrictions on free and fair research studies there by stifling R&D, academic as well as S&T research and scholarly communications. Breaking the protection technologies is vital for developing more effective and better technologies. As circumvention technologies are made illegal, researchers cannot attempt reverse engineering. Research on firewalls, computer security and encryption will take a back seat as researchers face legal wrangles. These also hinder efforts to create interoperable software. The digital rights management technologies may increase revenue to the rights owners; but they severely restrict researchers' freedom and give rise to publishers' monopoly. The knowledge society that is being created is for the developing countries that control technology and information.

3.1 Open Source Software/Open Archives Movements

The irony of the technology is that machines, meant to liberate us are instead stifling innovation. The technologies instead of controlling through accountability, are trying at incapacitation. Sony's computers use proprietary software to encrypt digital music writing the number of times a song can be downloaded. The software makes it difficult to duplicate any CD including the one created by the owner (Tenner, 2003). Statements in the user license agreement of Microsoft's Windows Media Player disable other programs.

The problems faced due to the strict IPR laws, licensing regimes and monopolistic attitude of software companies led the Free Software Foundation launch Open Source Initiative to promote free and open software. The movement encouraged software enthusiasts all over the world to freely download the software with source and object codes, alter and develop new applications, use them freely, and redistribute the applications with source code

freely. The user is obligated to credit the authorship of the source code to the original author and that of the subsequent additions to the user under General Public License (GPL). However, licensing restrictions exist under the GPL agreement, to preserve its open source status and authorship right under copyright. The GNU/Linux operating system was followed by Apache, PERL, Tomcat, MySQL, Mozilla, Sendmail, FreeBSD, etc. Linux is fast becoming preferred operating system displacing Windows.

On the same lines as Open Source Software Movement, Open Archives Initiatives also gained momentum. Many scholars felt that the exorbitant cost of the professional journals deters researchers obtaining latest developments in their fields thereby hindering further research. Also, no institution can afford to subscribe or access all the journals in a given field. The efforts of thousands of scientists from about 180 countries led to the formation of Public Library of Science (PLOS) in October 2000. The breathtaking growth of web technology and the evolution of the Internet as a major publishing medium led to the Open Archives Initiative (OAI) in 2001. The former strives to bring scientific literature into open access format, while the OAI aims to bring all research publications into the open access fold. The publicly-funded research is being made available by BioMedCentral through its 100 open access journals. The Open Access Movement further helped in creating SciDevNet and HINARI of World Health Organization that allows free (or for small fee) access to over 2000 journals in the field of health (Balaram, 2003).

4. CONCLUSION

It is always a win-win situation for the publishers while the libraries (consumers) or users are the losers. No doubt, there is a necessity to protect intellectual property from infringements; but protecting the rights of consumers is also important. The IPR laws should aim at advancing knowledge through rewards to the creators; in reality these deter potential users by curtailing free flow of information thereby defeating the Universal Declaration of Human Rights of providing free access to information irrespective of region, religion, cast or race. Perhaps Walt Crawford (1998) rightly observed "In an all-digital age, things would be different and I see no likelihood that the differences would favour libraries". *The irony is that librarians have to buy back copyright materials as highly priced periodicals that their R&D, scientific or academic community has given away to the publishers free of charge!!!*

There is an urgent need for all the developing countries should enact Digital Consumer Protection Act to safeguard the interests of the customers of digital products against the software keys, time-locks, unduly high pricing, etc as well as extending legal protection. Provisions should be made for time-shift (recording digital work to use at convenience), space-shift (to enable using the digital content in different places as long as the use is personal and non-commercial), making back up copies of legally procured digital content and use it on the platform of user's choice, and right to use technology to achieve the rights mentioned earlier.

Many groups in the West (for example, Association of American Universities) are demanding Copyright exemption of digital versions of scholarly journals; maps, newsletter archives and some databases. Their argument is that these materials are valuable mostly for their facts and so are not copyrightable. Librarians from Library of Congress, National Archives and Records Administration and the National Library of Congress also are supporting a looser interpretation of copyright in digital domain. Similar initiatives should come from the professional community in developing countries as such efforts result in the public good. Librarians should unite for getting fair dealing privileges of copying rights and meeting the inter-library loan requests of digital publications to preserve the sanctity of the library and to prevent absolute monopoly of the copyright owner over the distribution of and access to copyrighted information. The loss of these provisions would greatly harm scholarship, research, teaching and education.

To make libraries free from perpetual dependency, the software keys, time-locks must be removed from the CD-ROM products. The library should be able to access the information from the legally procured resources. When the library subscribes to both the print (or CD-ROM) and online journals, a standard pricing, say 10-15 percent, should be charged extra and not exorbitantly. When the libraries subscribe e-journals only, their prices should be 80-85 percent of the print versions. In the case of termination of subscription to an online only journal, the total data of the subscribed period should be given on CD/DVD-ROM without any locks or keys as back-up to the library.

Responding positively towards open archives initiatives, all authors of government-funded research work should self-archive the output and offer free open access to them. This would not only maximize the visibility and impact of the research output, but also facilitate creation of huge knowledge base for the institution and the country.

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