

developed in response to concerns that the prior copyright law did not adequately address new digital technologies and the explosion in Internet use. Copyright law has always involved a balance between the private interest of copyright holders and the public interest in wide distribution of information and knowledge. The digital revolution has created fear on all sides that the traditional copyright balance could be destroyed. On the other hand, librarians, educators, and researchers fear the use of technological controls that could severely limit fair use rights and other rights essential

4.2 Online Service Provider (OSP) Provisions

The DMCA created limited copyright infringement protections for the online service providers. The goal of the OSP provisions is to exempt from liability organizations that merely act as a conduit for digital content or that store digital content for other users. Of most significance for libraries is the requirement that to qualify for the exemption the organization must have no knowledge of the infringing activity. Because libraries know or should know, what is



library rights under the anti-circumvention provisions. Currently, it is very unclear how library users are guaranteed their traditional fair use rights under the provisions of the DMCA. Regardless of the results of the rule-making process, libraries need to vigilantly protect user rights when negotiating licenses or making purchases from digital content providers.

large number of end user copies. Although it seems to be a logical response to the changing economics of copyright law, unfortunately, it is not a socially optimal response. To find out the reason behind this fact, an in-depth exploration into the lumping legal and illegal conduct on the part of the intermediaries, facilitators and the end users has to be undergone. Also it directly threatens technological innovations.

- A parallel approach is to implement Digital Rights Management in an effort to make it technologically more difficult for users to make copies. In the context of online copyright infringement, the real policy question is how to bring infringement down to a manageable level akin to the rate of infringement in the traditional copyright environment, particularly if this is done in conjunction with making available attractive and reasonably priced legitimate online dissemination alternatives. The increasingly common approach of building safeguards against copyright infringement into devices or into the network itself is the Digital Rights Management (herein after DRM).

6. DRM and Copyright (Amendment) Act, 2012 in the Digital Era in India

DRM is that technique that attributes certain conditions on some digital products to be used and shared in libraries and information centres. The DRM is set up as a system for the protection of digital works, and created or designed to protect the unauthorized duplication and illegal distribution of copyrighted digital products. As the internet is becoming widely used, it is easy to copy and illegally sell a variety of marketed digital information and products. Therefore, this type of technique prevents users from adopting any illegal and unauthorized attempts. The DRM systems have reached to a stage of maturity and flexibility where libraries can actually consider their adoption to provide integrated access to all digital information. The success of information society depends on digital content being accessible. Libraries must not be prevented by DRM from availing themselves of their lawful rights under national copyright law and must be able to extend their services to the digital environment. [4]

The DRM system makes use of the technology and tools to create an end-to-end secured packaging and distribution system for protected contents. The system generally includes the following steps:

- Watermarks and identifiers are used to identify the content uniquely. This identification can also be used for downstream tracing of the content to ensure an authorized use of the content.
- To ensure that only consumers with appropriate keys can access the content and to ensure that the content is unchanged throughout the process.
- To manage the encryption and decryption of the content by authorized entities in the content value chain
- It contains usage rules to decide what conditions must be met for access and how the consumer can use the resource.

While the discussion gathers mass with the enactment of the 'Indian Copyright (Amendment) Bill, 2012' in the Parliament in May 2012, largely based on two treaties, the World Intellectual Property Organization (WIPO) Copyright Treaty, 1996 and the WIPO Performances and Phonograms Treaty (WPPT), 1996. It addresses the challenges posed by digital technology to the protection of copyright and related rights, particularly with regard to the dissemination of protected material over digital networks such as the internet and deals with copyright protection for the authors of literary and artistic works such as writings, computer programs, original

databases, musical works, audio-visual works, works of fine art, and photographs. This Indian copyright Act includes two new Sections 65A and 65B to punish persons found guilty of piracy by using technology to take away somebody's copyright and then use that material to make profits. 'Section-65A7 – Any person who circumvents an effective technological measure applied for the purpose of protecting any of the rights conferred by this Act, with the intention of infringing such rights, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine.' 'Section-65B7 – Any person, who knowingly: (a) removes or alters any rights management information without authority, or (b) distributes, imports for distribution, broadcasts or communicates to the public, without authority, copies of any work, or performance knowing that electronic rights management information has been removed or altered without authority, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine' So, the Copyright (Amendment) Act, 2012, makes substantial progress in filling the gaps in the parent Act (1957) so as to benefit all stakeholders. The act provides a clear picture on the rights of authors for his/her creative works. [5]

The libraries are thus placed in a conflicting situation to deal with both DRM and copyright. As libraries realize that they cannot afford dual formats, their new journal and index holdings are increasingly solely digital. Libraries are also licensing a growing variety of "born digital" information. On the other side, the DMCA extends the criminalization of copyright infringement by providing criminal penalties for circumventing copyright protection systems and tampering with copyright management information. These terminologies copyright law, infringement, DMCA and DRM has declared war in the Digital era and the courtrooms as battlefields.

6.1 DRM sowing bitterness among content providers, library and information professionals (hereinafter LIP) and users

The complexities of dealing with license restrictions for these commercial digital products are well understood, but imagine if DRM was layered on top of license restrictions it will allow content producers and distributors to monopolize and monetize access to digital information in ways that were previously impossible. What may be every publisher/vendor's dream could be every library's nightmare. Aside wq

DRM makes solving many of these problems both *legally* and *technically* impossible. For example, under DMCA, libraries have the right to circumvent DRM for a work in order to evaluate whether they want to purchase it. However, they cannot do so without the software tools to crack the work's DRM protection. But the distribution of those tools is illegal under DMCA, and local development of such tools is likely to be prohibitively complex and expensive. [6]

The DRM provides media and technology companies the ultimate control over every aspect of what people can do with their media. This essentially moves control of the library's digital collection into the hands of the publishers and

intermediary companies which will immediately be implementing DRM. This disables the LIPs to fulfill their motto of providing users with abundance of information at their disposal and effect is on the attitude of the user bent towards dissatisfaction and moving out in search of alternative information seeking. So, the "Readers Bill of Rights" [7] currently makes the following demands for readers:

- Ability to create a paper copy of the item in its entirety.
- Ability to retain, archive and transfer purchased materials.
- Digital Books should be in an open format (i.e. one can read on a computer, not just a book reader device)
- Reader information will remain private (what, when and how one reads will not be stored or marketed)

A few remarkable addresses and decisions from the international platform provide relief for the library professionals to a certain extent in dealing with the complicated aspects of the DRM guidelines.

6.2 IFLA's Views on Copyright in Digital Environment

In order to maintain a balance between the interest of the rights holders and users in the digital environment, IFLA [8] has developed the following state of principles, which are as follows:

1. In national copyright legislation, exceptions to copyright and related rights, allowed in the Berne Convention and endorsed by the World Intellectual Property Organisation (WIPO) treaties should be revised if necessary to ensure that permitted uses apply equally to information in electronic form and information in print.
2. For copying over and above these provisions there should be administratively simple payment schemes.
3. For works in digital format, without incurring a charge or seeking permission all users of a library should be able to:
 - browse publicly available copyright material ;
 - read, listen to, or view publicly marketed copyright material privately, on site or remotely;
 - copy, or have copied for them by library and information staff, a reasonable portion of a digital work in copyright for personal, educational or research use.
4. Temporary or technical copies which are incidental to the use of copyright material should be excluded from the reproduction right.
5. Providing access to a digital format of a protected work to a user for a legitimate purpose such as research or study should be permitted under copyright law.
6. The lending of published physical format digital materials (CD-ROMs) by libraries should not be restricted by legislation.
7. Contractual provisions, for example, within licensing arrangements, should not override reasonable lending of electronic resources by library staff.
8. Legislation should give libraries and archives permission to convert copyright protected materials into digital format for preservation and conservation related purposes.
9. Legislation should also cover the legal deposits of electronic media.

10. National copyright legislation should render invalid any terms of a license that restrict or override exceptions or limitations embodied in copyright law where the license is established unilaterally by the right holders without the opportunity for negotiation of the terms of the license by the user.
11. National copyright laws should aim for a balance between the rights of copyrights owners to protect their interests through technical means and the rights of users to circumvent such measures for legitimate, non-infringing purposes.
12. Copyright law should enunciate clear limitations on liability of third parties in circumstances where compliance cannot practically or reasonably be enforced.

6.3 UNESCO's Approach

Two fundamentals that govern our actions from UNESCO's viewpoint are

- Firstly, the concept of "knowledge societies" is preferable to that of "the information society" because it better captures the complexity and dynamism of the changes taking place. The knowledge in question is important not only for economic growth but also for empowering and developing all parts of society. Thus, the role of new ICTs extends to human development more generally.
- Secondly, most developing countries are under the web of "Digital Divide" in terms of access to scientific and technological information and learning opportunities. If knowledge societies capable of generating new knowledge in a cumulative, cooperative and inclusive process are to be created, they need to be based on a foundation of shared principles. In this sense national policies, supported by international frameworks, can be the tool to encourage creativity and to facilitate access to essential information for all.

A key component of such frameworks and policies is the work of the United Nations system, under the leadership of the World Intellectual Property Organization (WIPO), to continue to develop balanced and consistent international standards for copyright and neighboring rights as exemplified by the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT).

It is important to underline that copyright relies on balancing the interests of protecting created works and their creators and guaranteeing public interest and fundamental freedoms. This balance derives precisely from one of the basic principles of copyright, which is to promote progress in the arts and sciences and to spread culture. In this context UNESCO's policy is to encourage the Member States, on one hand, to formulate efficient copyright policies, keeping in mind the necessity of rigorous conformity with international conventions on intellectual property, and on the other hand, to promote lawful access to information and knowledge for the progress of science and the promotion of education. It is in this spirit that the General Conference of UNESCO adopted in 2003 the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace. Two of the four main sections of the Recommendation – "development of public domain content" and "reaffirming the equitable balance between the interests

of rights-holders and the public interest” bear directly on the theme of copyright protection.[9]

Public domain information is “publicly accessible information, the use of which does not infringe any legal right, or any obligation of confidentiality. It thus refers to the realm of all works or objects of related rights, which can be exploited by everybody without any authorization.” While many people associate the public domain mainly with classical and traditional literature, an equally important store of public domain information for development, and undoubtedly most important for science, is public data and official information produced and voluntarily made available by governments or international organizations. A paradox arises here. Public domain information, which is free of copyright, is often not sufficiently well-known to potential contributors and users, and in some countries there are restrictions on the availability and use of public information and data. In fact the electronic public domain forms an international virtual public library that is vast and growing. This electronic public domain, furthermore, is both a world heritage and an invaluable support for productive, commercial and creative sector activities in developing and industrialized countries.

Thus, the UNESCO Recommendation encourages Member States to “recognize and enact the right of universal online access to public and government held records” and to “identify and promote repositories of information and knowledge in the public domain and make them available to all”. Another quite distinct matter concerns provisions for a fair balance of interests in the use of copyrighted works in the digital environment. This refers to the limitations and exceptions to copyright and related rights protection which is authorized in national legislation - as required by the two WIPO treaties; provided that they are applied only in certain special cases which do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of rights-holders. Such provisions for equitable use in the public interest, which vary from country to country, typically provide for exceptional free reproduction of copyrighted information for such uses as education, research, library services, journalism and access for disabled persons. These equitable use provisions, which in the pre-digital world made the public library possible, are potentially of even greater importance in the digital world. However, they also present greater risks to the legitimate interests of rights-holders given the ease with which digital information can be redistributed once released. UNESCO recognizes the importance of a fair balance between the interests of rights-holders and those of users when cultural works and performances are exploited in the digital environment in the fields of teaching, scientific and the needs of the visually impaired. Along with the above activities, UNESCO is actively engaged in public awareness initiatives about the need to respect copyright and related rights in the digital environment, in actively promoting copyright teaching at university level by promoting the creation of UNESCO Copyright chairs, and in contributing to efficient copyright enforcement and fight against piracy of intellectual works, which is also one of the pillars of UNESCO’s Global Alliance for Cultural Diversity. [10]

7. Conclusion

The present article deliberately strives to presents the justification towards the up gradation of Digital Libraries through technological adaptation. Since the library and information industry are the only channels for disseminating information, they have a joint responsibility in fighting against intellectual property infringement as it affects everyone including users. On the other hand, it should not be construed as saying that copyright law should be abolished or violated, that DRM can serve no useful purpose (if it is possible to fix certain critical deficiencies and if it is properly employed). This paper restricts from presenting all of the issues that threaten the Internet, such as assaults on privacy, increasingly determined (and malicious) hacking, state and other censorship, and the seemingly insolvable problem of overlaying national laws on a global digital medium. What this paper has said are simply three issues—a dramatic expansion of the scope, duration, and punitive nature of copyright laws; the ability of DRM to lock-down content in an unprecedented fashion; and bear careful scrutiny by those who believe that the Internet has fostered (and will continue to foster) a digital revolution that has resulted in an extraordinary explosion of innovation, creativity, and information dissemination.[11] These issues may well determine whether the much-touted information superhighway lives up to its promise or simply becomes the “information toll road” of the future, ironically resembling the pre-Internet online services of the past. The digital technology has enabled the library to break the shackles of space and time, giving an excellent opportunity to improve its services and providing new ways of preservation and dissemination of library collections.

The present paper tries to touch upon some of the consequences resulting from the collision of digital copyright and DRM. It is strived to reach calibration of the copyright balance to suit the IPR issues on digital content. The punitive nature of copyright laws and the rampant ability of DRM system to lock down digital content are having a potential impact on libraries. Moreover none of these two legal codes can be expurgated from the digital content battlefield to the upstarts.

There is a spanning scope and demand for investigation on the chain of consequences following simply copyright law and moving across digital milieu. Research and in-depth empirical studies on conjunction of both legal and technological applications can advocate for the public interest in the development of copyright legislation leading to overemphasis on the problems of infringement and an underemphasize on technology’s ability to enable effective control over online content providers. The digital copyright paradigm can be enriched and at the same time secured and “democratized” to the concerned when sincere focus is on stamping out unauthorized uses and improving encryption technologies as well as a new digital norm is established that treats the present dilemma. The motivation behind this campaign is necessarily opaque, but the most plausible assurance is simply imposing desperation.

References

- [1] John N. Gathegi, Digital content convergence: Intellectual property rights and the problems of preservation: A US perspective.
- [2] Mark A. Lemley, & R. Reese Anthony. Reducing Digital Copyright Infringement without restricting innovation. *Standard Law Review*, 2004, 6(56)
- [3] Abhijeet Sinha & Rajesh Kr. Bhardwaj. Digital Libraries and Intellectual property Rights. DRM and access management. ICDL, 2010
- [4] Mark A. Lemley, et al. op.cit.
- [5] Zakir Thomas. Digital Technologies and and emerging copyright scenario. *Journal of Intellectual Property Right*. 2003, v8.
- [6] Charles W. Bailey Jr. Strong Copyright+ DRM+ weak net neutrality =Digital Dystopia. *Information Technology and Libraries*, 2006
- [7] Kristin R. Eschenfelder. Every library's nightmare? Digital rights management, use restrictions, and licensed scholarly digital resources. *CollegeRes. Lib.*, 2008, 3(69).
- [8] S. B. Sahu, S. B. (2003, 13-15 February). Copyright, Libraries and the Digital Age. Paper presented at the First International CALIBER - 2003, Ahmedabad.
- [9] Petya Totsharova. Legal Advisor, Cultural Enterprise and Copyright Section, Division of Arts and Cultural Enterprise, Culture Sector, UNESCO
- [10] Petya Totsharova, et al. op.cit.
- [11] Sharma, R. K & Vishwanathan, K. R. Digital Libraries: Development and Challenges. *Library Review*. 2001, 50(1)

Author Profile

Ms. Nitumika Gogoi obtained MSc. in Mathematics from Dibrugarh University, Assam, India in 2004 and received the Masters degree in Library and Information Science from Indira Gandhi National Open University (IGNOU), India in 2008. She is presently working as a lecturer in the Centre for Library and Information Science Studies, Dibrugarh University, Assam, India.