

A Study of Intellectual Property Protection in Building and Using Information Resources in Digital Libraries

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Abstract: The study of intellectual rights in the construction and use of information resources in digital libraries is a new research field. This paper, in an attempt to better work in digital libraries, analyzes various problems concerning intellectual rights in the constructing and functioning of digital libraries and puts forward measures to solve problems aforementioned.

Keywords: digital libraries; intellectual rights; Public Lending Right system; the Information management system of intellectual rights; copyright league

1. Introduction

Intellectual property refers to the legal protection afforded to owners of spiritual wealth created by using knowledge in such fields as science, technology, literature, and art. Digital libraries, the inheritor and developer of traditional libraries, are characterized by the digitalization and sharing of information resources, the computerization of information transmission, and the intelligitization of service. They are not subject to time and space, their users gaining access to reading materials online. Nevertheless, the issue of copyright, comprising mainly the copyright involved in the construction and use of information resources, arises, prompting people to think about solutions. This issue requires us to establish new interests-coordination mechanism.

2. Intellectual property issues in the construction of information resources in digital libraries

Objects of intellectual rights, in the collection, digitalization, and online transmission of information resources and in other aspects like database and computer software, are subject to the infringement of rights. All these aspects should be attached great emphasis to in constructing and serving digital libraries.

2.1 Intellectual property issues in the collection of information resources

In collecting information resources which encompass a large quantity of copyrighted works issued in various carriers, the first intellectual property issue may probably be encountered. Intellectual property issues in purchasing information resources may include: first, duplicates without the authorization of proper parties are purchased; second, authorized software is bought but misused. For instance, the full-text database of newspapers can only be provided to a restricted number of users in a certain local area network according to the agreement

with the publisher. If violated, infringement occurs.

2.2 Duplication Rights in the Digitalization of Documents and Information Resources

The digitalization of documents and information resources, on which other attributes of digital libraries base, is basic to digital libraries. It brings about the change in the form of a work without change in its copyright, and thus should be considered as an act of duplication. That is to say, it should comply with the regulations of duplication rights.

2.3 Copyright Issues in the Development and Use of Databases

The development and use of databases are essential to the construction of information resources in digital libraries. However, due to such attributes of databases as openness and sharing, products in databases are often violated, pirated or tampered with. How to coordinate the relationship among developers, users and copyright holders and how to protect intellectual property of databases in digital libraries should be given due attention.

3. Intellectual property issues in using information resources in digital libraries

3.1 Readers' Rights in using information resources in digital libraries

Digital libraries are characterized by such advantages as abundance of resources, timely updation of information, rapid transmission, easy storage, and the low cost of construction. However, readers, confronted with passwords and client authentication added in constructing digital libraries, are no more able to duplicate works for the purpose of study or research. As for commercial databases, proper right of using is deprived totally. There are some commercial databases, guarded by special technical measures, in which information resources, even if downloaded by paying charges, must be stored in

a specified computer and can only be accessed to with a certain period of time. It is obvious that how to protect the interests of readers in using digital libraries is a problem that needs tackling immediately.

3.2 Interlibrary Loan Issues in Using Digital Libraries

The IFLA Internet Manifesto asserts that freedom of access to information, regardless of medium and frontiers, is a central responsibility of the library and information profession. The ultimate end of the digitalization of information resources is to spread digitalized information via the Internet and thus make it accessible to a wide range of users, which is also an important function of libraries. With the help of the Internet, interlibrary communication becomes possible, resulting in the sharing of special digitalized resources. There is no specific law in China to address the issue of copyright occurring in interlibrary loan or in transmitting information. Internationally, different organizations, standing for different interest groups, offer different opinions on this issue.

Experts in China put forward a compromise solution and they maintain that despite the fact that digital libraries, as cultural institutions, stand for public interest, unrestricted use of other people's creation is unacceptable and that the state should invest in such public service. In a nutshell, this is another aspect where the law has the final say.

4. Solutions to Intellectual Property Issues in Digital Libraries

4.1 Legal Protection

With the development of network technology, online information transmission is incomparable in terms of its speed, its range and its convenience. Intellectual property laws like The Copyright Law should keep up with the times. Therefore, our state should perfect copyright laws not only to protect copyright but to make information fully accessible to the public, referring to relevant literature abroad and taking into account the state of affair at home. The issue of the authorization of, and paying for, online works is a case in point.

4.2 Technical Protection

The Internet has become the main means of collecting, processing, utilizing, and transmitting information for the majority of people all over the world. Under such a circumstance, it is especially necessary to strengthen the protection of intellectual property by using modern technological means to prohibit unauthorized visits and illegal use. Methods commonly in use include:

- first, limiting accessibility and setting password to prohibit unauthorized visits and illegal use;

- second, digital watermarking to show that the copyright belongs to the original author;
- third, secure container technology which is at present the most promising technology to protect digital copyright and is well applied to the field of commercial information;
- fourth, setting authentication programs to establish mutual trust between the copyright owner and the user;
- fifth, encryption technology and digital signature technology, which respectively secures information service ensuring the integrity and unity of information and helps the user to confirm the validity of online information;
- sixth, access control which gives the user due access to the information bank and prohibiting others from deleting, tampering with, or copying information documents.

4.3 Establishing Public Lending Right System Formulated by Other Countries

Public Lending Right (PLR) is the right for authors to receive payment for the loans of their books by public libraries. It is first formulated by countries like the UK and the US. According to this system, royalties paid to authors are in proportion to how often a certain work is borrowed by the public. And there is a trend that in the future the right shall apply to other materials like albums, videos, films, and computer software. This system, in fact, is a strong measure to spur authors on to creation and thus to encourage cultural development via economic means. On the other hand, libraries are entitled to use information resources by granting authors a certain amount of compensation, which is a special treatment given by Public Lending Right. Undoubtedly, this system, beneficial to all three parties, can also be applied to the field of royalty in digital libraries in an era of information.

4.4 Establishing Intellectual Property Information Management System

In the process of developing and using digital libraries, people concerned have access to information all over the world, owned by various copyright owners and stored through various media. Some information may be copyrighted, some may have survived copyright protection, and some may be law documents, political documents or factual reports which are not copyrighted. The issue of gaining authorization of multimedia products is impossible without a full knowledge of the actual owner of a work. Besides the management of communication networks, how to establish a reasonable and convenient right administration system is more than urgent, which is

essential to the healthy development of digital libraries.

4.5 Establishing Copyright League

By means of setting up copyright league the purchasing and sharing of various information resources can be coordinated, unified copyright permission and unified payment of royalties can be obtained. And furthermore, it can persuade copyright owners and publishers to relinquish some rights and royalties out of the purpose of widely disseminating knowledge. There is no question that setting up a copyright league is a good move to lower the cost without breaking the law or abusing information resources.

4.6 Elevating the Awareness of the Protection of Intellectual Property

It is a calling of an era of information to build digital libraries. Publicity should be enforced to elevate the awareness of the protection of intellectual property among the builders and users of digital libraries so as to avert infringement of rights. In the first place, they should be equipped with related laws and regulations which define problems like the duration of copyright and how to achieve proper use and what responsibility they should take when infringement occurs. In the second place, both information users and librarians should be indoctrinated with information ethics, which mainly refer to self-restraint and serve as a supplement to laws and regulations.

4.7 Quickening the Building of Professional Talents in Digital Libraries

It is human beings who are the absolute factor in resolving problems. The building and developing of digital libraries makes it urgent to cultivate a batch of integrated professionals who are not only possessed of solid professional knowledge of library and information science but also at home with legal knowledge and com-

puter science. Therefore, to cultivate a team of integrated professionals is fundamental to solve intellectual property issues.

5. Conclusion

The intellect property issues in the construction and use of information resources in digital libraries are, in essence, the application of intellectual property in digital technology and network technology. The purpose of our study of intellectual property issues is to advance the wide spread of knowledge and information and achieve mutual prosperity of social technology and cultural causes, based on the premise that rights are protected against infringement. It is therefore essential that intellectual property and public interests be further coordinated and a complete, effective legal system aimed at protecting intellectual property in digital libraries be established to achieve harmonious development.

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