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# Research on Copyright of Institutional Knowledge Base

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**Abstract.** Copyright risk is an important practical problem in the process of the construction, service and management of institutional knowledge base. Based on the analysis of the status quo of copyright risk in institutional repositories, this paper makes a deep study on how to effectively control the copyright risk in institutional repositories, and puts forward specific solutions to copyright risk from the perspectives of policy control, protocol control and practice control.

**Keywords:** Institutional knowledge base; Copyright risk; Risk control.

### 1. Introduction

Institutional Repository (IR) is a new mode of knowledge exchange and resource sharing with the development of open access. It aims at the storage of academic resources and the sharing of knowledge information. It relies on an academic institution to collect, store and utilize the digital academic information of its members. Resources provide free and open services for members both inside and outside the organization. As an open free service, it is easy to cause copyright disputes and potential copyright infringement risks in the construction and service of IR. The copyright risk of IR mainly refers to the copyright infringement risk caused by the content of resources and the use of software technology in the process of resource construction, service and management. With the rapid development of IR, under the existing copyright environment, the risk of copyright infringement is becoming increasingly serious, which has become a major practical problem in the process of IR construction, service and management.

### 2. Copyright Risk Analysis of Institutional Knowledge Base

### 2.1 Copyright Risks in the Construction of Institutional Knowledge Base Resources

The inadvertent collection and arrangement of academic knowledge resources in the construction of IR resources can easily lead to the risk of copyright infringement. The ownership status of copyright of IR resources is very complex. According to the subject of rights, it can be divided into three categories: organization, author and third party owner. The construction of IR resources will bring different copyright risks to these three kinds of resources. (1) The risk of infringement of copyright resources of institutions. The resources of copyright ownership mainly come from the work of the members of the organization. The copyright law of our country stipulates that the resources of copyright ownership by the organization include: works of legal person, works of general position (except for other stipulations in the contract, copyright is enjoyed by the author), works of special position (the author only has the right of signature, the organization enjoys copyright, etc.). Other rights. The copyright of these resources belongs to the organization itself, and IR can generally obtain the authorization of the organization itself, which can better avoid copyright disputes. (2) The risk of infringement of copyright resources of authors. The author is the main submitter of IR resources. As long as IR is authorized to submit to the author, it should legally acquire the copyright of resource storage and utilization. Therefore, copyright licensing agreements must be signed with the authors to avoid copyright risks. (3) The risk of infringement of third-party copyright resources. This kind of resource mainly refers to the work that the author transfers the copyright to the publisher's published work, or the work that is produced by the publisher's re-authorization to a third party. Since the author has transferred all or part of the copyright to the publisher, the legal relationship of copyright is very complicated due to the involvement of the publisher. The legitimate storage and use of such resources



by IR should be authorized by the publisher, and the publishing agencies should abide by the policy of archiving works.

### 2.2 Copyright Risks in Institutional Knowledge Base Resource Services

The resource service of IR adopts a way of network dissemination, and the right of network dissemination of information resources is a right parallel to the right of distribution, the right of reproduction and the right of rent. The United States Cross-Century Digital Copyright Act stipulates that the scope of digital works dissemination in libraries is limited to library buildings; the Australian Copyright Law Amendment stipulates that libraries can only provide screen browsing of works for readers; and the European Union Directive on Harmonizing Copyright and Related Rights in the Information Society stipulates that libraries provide readers with digital works. The copyright owner must be authorized to provide works online. Therefore, even if IR owns the copyright of knowledge resources, there are still potential risks in the network dissemination of resource services. Especially because IR is difficult to control the reader's use behavior (such as illegal downloading, modification, dissemination, etc.), it is possible for the library to bear the risk of joint tort liability. In addition to basic services, users can also obtain diversified value-added services from IR, such as academic research results index service, paper citation analysis service, network retrieval and interoperability service. In the process of providing value-added services, IR needs to obtain the resources and content of works by non-exclusive authorization, so as to develop more unique value-added services and avoid copyright disputes.

### 2.3 Copyright Risks in the Use of Institutional Knowledge Base Software

The resource construction and service realization of IR need the support of perfect system software platform. Current IR software includes free open source software and commercial software that needs to be paid to use. Open source software currently has more mature IR software such as Archmi ede, Dspace, CDSware, Eprints, ARNO, OPUS, i-Tor, My-CoRe, etc. Its source code is free and open to the public. Users can use, copy, disseminate, adapt and reuse it at will. It only needs to add the specific logo of the software ownership organization in the prominent position on the front page of the website and establish a link with its website, which generally does not constitute a risk of infringement. Commercial software can only be used at a high cost. Without the permission of the copyright owner, it can not be spread, modified and reused at will, and improper use can easily lead to infringement risk. [5]. Eprints is one of the earliest IR building software tools developed by the University of Southampton, UK. It is also the first IR software to follow the Open Access Protocol (OAI). Dspace is also a free open source IR software with strong flexibility and customization. It is developed jointly by MIT and HP.

## 3. Policy Control of Copyright Risk in Institutional Repositories

### 3.1 Strengthen Copyright Policy of Institutional Repositories

It is an important way to solve the risk of IR copyright to strengthen the research of current copyright law and make rational use of existing laws and regulations. Our country's Contract Law, Copyright Law and Regulations on the Protection of Information Network Dissemination Right all have relevant provisions concerning IR copyright, which provide sufficient legal protection for the effective control of IR copyright risk. Strengthening the study of current copyright laws and formulating copyright policies under the environment of institutional repositories are effective measures to protect the copyright of institutional repositories. It not only shows the attitude of IR to solve current copyright problems, but also provides guidelines for users to use IR resources. It also stipulates principles and procedures for dealing with infringement problems, which are effective. It regulates the rights, obligations and responsibilities among copyright owners, libraries and users, and promotes the scientific allocation and legal use of copyright resources in IR. In the process of researching and formulating IR copyright policy, we should strengthen the communication and cooperation between government legislature and relevant industry associations of Libraries in



accordance with the current relevant legal spirit and standards, so that digital resources, including IR, can play the most effective role.

### 3.2 Policy Guidance for Strengthening the Construction of Institutional Repositories

The U.S. government has adopted a mandatory open access policy to solve the copyright problem of IR, thus promoting the development of IR. IR has many functions, such as knowledge sharing, academic dissemination, scientific research evaluation and so on. The development of IR needs strong support from the government in terms of funds, talents, policies and technical standards. As far as the construction of IR in China is concerned, due to the great difference between China and foreign countries, besides providing financial support, the government should formulate copyright laws and regulations in a legislative way that are conducive to the development of IR, combat piracy and infringement, avoid copyright monopoly, and make great efforts to solve copyright problems that restrict the development of IR and create a harmonious society. Intellectual property environment. Government departments should also follow the international common standards and standardize the technical standards in the construction of IR to facilitate data sharing and interoperability.

### 3.3 Promoting Publishers to Adjust Copyright Policies

Publishers'changes and adjustments to copyright policies have a significant impact on the development of IR. At present, many publishers begin to implement open access mode, which is conducive to properly solving the copyright problem of IR. Since June 2004, Elsevier has allowed the final text of papers published in its journals to be stored on the websites of the authors or their institutes without commercial purposes. This is a significant progress in open access, which will greatly promote the open sharing of academic information. As long as the full text of papers can be accessed through the Institute's website, all the servers with OA protocol with the website can find and share these papers. Springer also introduced the Open Choice policy, which allows authors to store their own post-copies in the Institute's knowledge base. In 2005, Creative Commons put forward the Science Commons plan, including data plan, licensing plan and publishing plan. According to the latest information, 92% of journals and 71% of other types of publishing organizations have allowed authors to file themselves [7].

#### 3.4 Adhere to the Policy Guidance of Scientific Research Funding Institutions

At present, some foreign scientific research sponsors have made it a prerequisite for them to receive funding whether the author submits a pre-print or a post-print of the research data to the IR. For example, the Scottish Ministry of Health's Office of Experts requires that "publications created by funded research institutes must submit a final peer-reviewed copy of the work to the IR and be accessible to the public free of charge within six months. [9] "The European Research Advisory Committee (ERAC) requires open access to all EU-supported scientific research results with a sixmonth delay and an optional IR [10] for authors. At present, more and more research sponsors at home and abroad are more and more aware of the great value of academic resources sharing. They need to adopt relaxed policies on the copyright issue of IR, especially to eliminate or reduce the restrictions on the copyright policy of publishers. The open access policy of research funding institutions greatly excludes the possibility that the posterior copies of the supported papers can not be self-archived, and effectively promotes the development and widespread use of IR.

## 4. Protocol Control of Copyright Risk in Institutional Knowledge Base

### 4.1 Storage License Protocol Management

Storage licensing agreement is the core tool of IR copyright interest management, and is the most effective way to solve the infringement risk in the storage and utilization of IR resources. By signing a storage license agreement with the copyright owner and obtaining the authorized license of the copyright owner, IR obtains the right to use and disseminate the stored academic information. In the



process of signing and managing the storage licensing agreement, we should operate in the form of standardized contract text. In the contract, we should specify the specific content of copyright items authorized by the author to exercise IR in order to avoid copyright disputes caused by unknown contract. Storage licensing is qualitatively different from copyright transfer. Storage licensing can only exercise the rights granted within the scope of the contract, but the copyright of intellectual resources still belongs to the Licensor and has no right to sublicense [11]. The main terms of the contract should include at least the types of rights (copyright and information network dissemination right); the nature of rights (generally non-exclusive use right); the space and time range of use (if no copyright transfer occurs, it can be used globally within the validity period of copyright); and the rights and obligations of both parties.

### 4.2 Management of Copyright Transfer Agreement

Copyright transfer agreements mainly occur between authors and publishers. At present, many professional academic journals at home and abroad usually require authors to sign copyright transfer agreements when submitting contributions, and transfer copyright freely when hiring. Although a few journals do not require authors to transfer copyright, they also require exclusive use of the journal without time restrictions. In order to publish scientific research in time, scientific research is usually forced to transfer all copyright to publishers. This brings great difficulties to the copyright utilization of IR. Because in the case of loss of copyright, the author has no right to re-license IR to disseminate his works. Only after obtaining the permission of the publisher can he store his works in IR. Therefore, the author's behavior of submitting research results to IR must be clearly stipulated in the copyright transfer contract, and at the same time, it must be clearly stipulated that the public should be allowed to exercise the copyright content of the work.

### 4.3 Knowledge Sharing Protocol Management

Knowledge-sharing licensing agreement is a copyright licensing agreement for authors to allow the public to use their works. It is a non-exclusive licensing agreement for free use of copyright owners'works worldwide within the period of effective protection of works. It is an effective way to solve the IR copyright crisis. It contains four basic elements: first, the author only retains the right of signature, other rights are granted to the public to exercise reasonably; second, non-commercial use requires the user not to use the work for commercial purposes; third, prohibition of deduction, that is, without the author's consent, prohibition of adaptation, translation, modification of the work, and Form derivative works; (4) Share in the same way. If the derivative works are deduced into derivative works, the derivative works must also be provided to the public in the same license way as this Agreement for reasonable use [12]. Knowledge sharing licensing agreement provides an effective way for IR to solve copyright problems, which greatly reduces the risk of copyright infringement of IR, and is welcomed by IR builders and users. It can help the creator to decide the extent to which the copyrighted works can be provided to the IR; it can satisfy the needs of different rights subjects through the combination of various rights; it provides a simple authorization and licensing mechanism for the construction of the IR. As long as the author provides authorization for the use, anyone can freely obtain it at any time and place. Take a variety of information resources.

## 5. Copyright Risk Control in the Utilization of Institutional Knowledge Bases

### 5.1 Adhere to the Principle of Rational Use

Reasonable use refers to the legitimate act of using other people's copyright works without the consent of the copyright owner or the payment of remuneration under the conditions prescribed by law. Article 108 of the Copyright Law of the United States stipulates the concept of "reasonable use" and the limitations and exceptions to copyright. China's Copyright Law stipulates 12 cases of reasonable use. This provides a strong legal basis and guarantee for the rational use of information resources by IR. In the process of building IR, we should identify the relevant information resources, distinguish which information belongs to the category of rational use, strive to collect, process and



organize information resources as widely as possible without infringing on the rights and interests of authors, and provide high-quality and efficient services for the personnel of the organization and the public users. Despite the legal basis of "reasonable use", there are still some defects in our country's reality. In judicial practice, our country often narrowly explains copyright restrictions and exceptions, does not clearly stipulate that the interests of all parties must be balanced in the rational use, and relevant provisions are not updated in time, which requires us to build and make use of IR. Attention should be paid to the use.

### 5.2 Strengthen User Rights Management

In view of the diversity of resources, we should establish a digital copyright management mechanism to give different users different access rights. For knowledge resources of universal discipline significance, full open access should be granted; for commercial resources of competitive significance, reasonable use of protection rights should be given.

### **5.3 Encouraging Open Access to Resources**

Open access advocates information resources sharing and free access, and makes full use of the Internet to disseminate and share knowledge and information. In open access, copyright law requires others to specify the source of the original author's work so as to ensure that the author has the right to protect the integrity of his work. Open access adopts the network publishing mode of "author paid publishing, reader free use", and its research results can be obtained and used free of charge through various channels. However, open access still needs to follow the existing copyright protection rules. On the basis of fully respecting the author's personal rights and interests, it is limited to the use of works that the author is willing to provide for free. Open access allows authors to retain copyright and requires them to commit themselves to abide by certain agreements when submitting research results, thus avoiding the occurrence of copyright disputes and clearing up the obstacles of copyright restriction for the construction and management of IR to a certain extent. China should learn from the valuable experience of foreign open access practices, encourage open access to information resources, make more knowledge available free of charge and share, and prepare more knowledge sources for the construction of IR, so as to further promote the sustainable development of IR.

### 6. Concluding Remarks

Under the new information environment, the situation of copyright infringement is becoming more and more serious. Copyright issue runs through the whole process of IR operation, and it is a practical issue that must be paid attention to in the construction and management of IR. Foreign experience on the rescue of IR copyright risk has brought us a lot of useful enlightenment. The United States has accumulated rich experience in solving the problem of IR copyright. Its main practices are as follows: government mandatory open access mode; open source software mode and knowledge sharing licensing agreement mode. These experiences are of great reference value to our country. Our country can strengthen the construction and management of IR from the aspects of copyright policy, copyright agreement and copyright use, and pay attention to the balance of interests of all parties in IR, so as to effectively control and solve the copyright risk of IR.

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