Research on Digital Library Construction in Mega Data Era

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Abstract: The huge data resources and information services in the era of mega data have laid a good foundation for the construction of digital library, and made the construction of digital library enter a brand-new era. From relying on paper media before, libraries can build digital libraries with the help of computer networks. Digital library must restructure, strengthen resource construction and use advanced science and technology to turn challenges into opportunities. Only in this way can the long-term and healthy development of digital library be realized. In the era of mega data, using mega data technology, according to user access records and other data information, we can not only predict the possible failures of library service management system, but also analyze and explore the knowledge structure of technicians, so as to take countermeasures and ensure the healthy and stable operation of the service system. This paper will analyze the construction of digital library under the background of mega data era by studying the characteristics and meanings of mega data era.

1. Introduction

With the continuous development of science and technology, information technology is widely used, the world has entered the era of mega data. The arrival of the era of mega data has an impact on all industries and fields of society, and library work is no exception [1]. The widespread application of computer network not only facilitates our work and life, but also puts forward higher requirements for our social construction. With the advent of the era of mega data, people can rely on the Internet to query information all over the world without leaving home, so our production and life are more convenient and fast [2]. In the context of the current information society, mega data has achieved great development and penetrated into all aspects of social and economic life, which has a great impact on social and economic life [3]. Mega data, also known as massive data, specifically refers to the application of new data processing mode, with strong decision-making power and insight to improve data processing efficiency and reduce human investment [4]. In this context, more and more people are concerned about the survival and development of the traditional digital library. Whether it will be replaced by network resource developers is a hot topic at present. Digital library must restructure, strengthen resource construction, and use advanced science and technology to turn challenges into opportunities. Only in this way can we realize the long-term and healthy development of Digital Library [5].

With the continuous development of Internet technology, information technology in society is also developing. The application of computer technology in life has brought great convenience to people's daily work, and improved the level of data information sharing to a certain extent [6]. Based on the era of mega data, it is very important to strengthen the construction of digital library, which can not only meet the actual needs of readers, but also provide better services for readers [7]. Under the background of mega data era, huge information resources and data have laid a solid foundation for the development of Digital Library and promoted the development of Digital Library [8]. In the era of mega data, the use of mega data technology, according to user access records and other data information, can not only predict the possible failures of the library service management system, but also analyze and explore the knowledge structure of technical personnel, so as to take countermeasures to ensure the healthy and stable operation of the service system [9]. This paper gives some suggestions for the main problems faced by the construction of Digital Library in the era of mega data, hoping to promote the development of Digital Library in a better direction.

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2. The demand and challenge of Digital Library Construction in the era of mega data

2.1. The demand of Digital Library Construction

Digital library is a new product of contemporary computer and Internet technology, which belongs to an information resource organization mode. The arrival of mega data era provides strong technical support for promoting the construction of digital library. However, due to the new changes in library functions and scientific research methods, the construction of digital libraries in China is facing many new challenges in the era of mega data. On the whole, digital library is a new organizational form of library. Therefore, no matter from which aspect, the digital library is in a different state from the traditional library. Of course, they have the same function and essence, and digital library is a new form of traditional library development. Under the background of mega data promotion, the related functions of digital libraries are applied internationally. The current situation of digital library construction can no longer meet users' e-reading needs, and the trusted resources provided for users are decreasing. However, users in the knowledge age are more willing to give priority to accessing the network resources found in the digital environment, which requires that China's digital libraries should continuously develop and utilize mega data in the construction process, and gradually connect with international digital libraries.

2.2. Problems in the construction of Digital Library

From database to mega data, the whole process of digital library is just a simple evolution of technology, but there are essential differences between them. The emergence of mega data has completely changed the traditional library data management mode, which has brought great changes in many aspects such as data collection and data processing. The rapid development of computer technology and communication technology has accelerated the pace of digital library construction in China, realized the digitalization of information resources and collections, constructed a new retrieval platform, and preliminarily completed the construction of digital library with characteristic databases. However, in the process of digital library construction, there exists the phenomenon of homogeneity with physical library resources, and the phenomenon of unreasonable structure of resource construction appears. There are many resources in the digital library, including not only literature resources and network resources, but also user information and service information for users. With the advent of the era of mega data, digital libraries can further select and exploit massive data in the process of development and construction, which enriches the collection contents. However, compared with traditional libraries, digital libraries need to spend a lot of operating costs and investment costs under the application of this information technology platform [10]. Data mining will become the main business of digital library in the era of mega data, and the development level of this business directly determines the development of digital library in the era of mega data. However, in the digital library based on database, the data mode is designed in advance, and the data is mainly generated in use. However, it is difficult to determine the mode of mega data in advance, which can only be determined after the data appears, and with the increasing amount of data, its mode will change constantly.

3. Strategies to promote the construction of Digital Library in the era of mega data

3.1. Adjust the information resources construction organization

The construction of digital library needs to preserve a large amount of data and materials, which puts high demands on the hardware system used, which requires that the network hardware system of digital library must be perfect in order to carry a large number of databases and materials. With the continuous development of cloud computing technology, it has been able to provide flexible and expandable data storage services for mega data. Therefore, in the process of digital library construction, cloud computing technology should be applied according to actual needs to solve the problem of digital book construction funds. On the basis of mega data, many new disciplines have been established, and information can be developed and utilized from various large-scale data

gathering centers, thus providing preconditions for creative development of new digital library service projects, which have a positive impact on exerting the functions of educating people and transmitting knowledge of digital libraries. Figure 1 shows the architecture of digital resources in the information ecology.

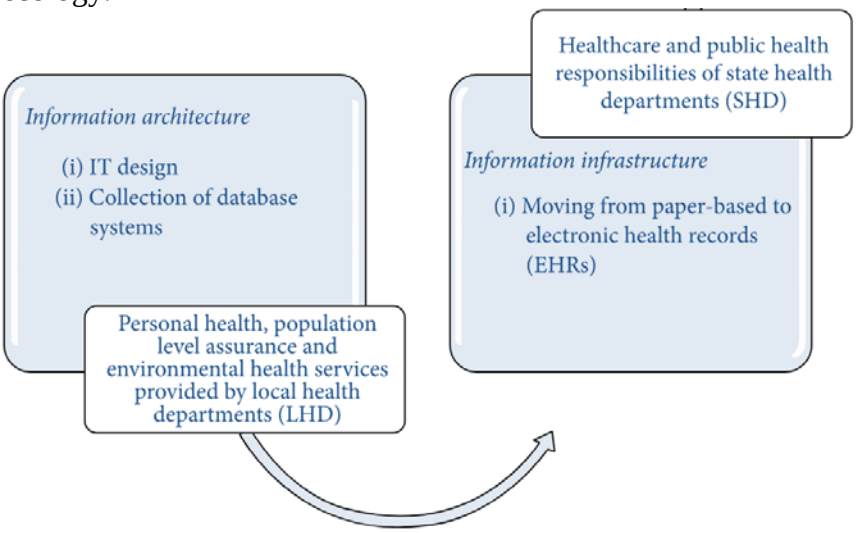

Figure 1 Architecture of Digital Resources under Information Ecology

In view of the large-scale data problems faced by digital library construction in the era of mega data, in fact, there is no need to build all kinds of digital resources, and comprehensive construction of resource categories should be avoided. The management of unstructured data in digital library is relatively deficient. In this case, in the field of future digital library construction, we should start with users' reading needs and habits of obtaining information resources, and provide users with more abundant resources by adjusting the structure of information resources, and support various heterogeneous documents and information archiving, storage and retrieval under multimedia information technology. In the era of mega data, it is necessary not only to record the personal information of book users, borrow books and other materials, but also to analyze the personal preferences of readers, so as to promote the comprehensive development of digital library.

3.2. Developing new digital knowledge service

As far as the digital library under the background of mega data era is concerned, its focus is to provide customers with knowledge-based and intelligent services on the basis of detection and analysis. Under the influence of mega data era, digital library has gradually changed from knowledge concentration to knowledge processing and new knowledge exploration. Under the background of mega data era, its biggest feature is budget. Generally speaking, it is often called intelligence. Through the effective combination of mathematical calculation and data, the conclusions can usually predict the future. Breaking the traditional library service mode, processing and processing massive data with information technology and computer technology, and maximizing the value of data information [11]. Digital library platform based on network technology can integrate Internet technology, high-performance computers and sensors into a virtual but powerful computer. Through the construction of network technology platform, the data core protocol layer is established on the digital resource system, and various service information is collected and solved uniformly at the core protocol layer, so as to realize the collaborative work of cross-platform heterogeneous resources in the heterogeneous environment of digital library.

In the era of mega data, it is proposed to change the service concept, predict and gain insight into the user's behavior according to the existing business needs, filter out useful information from massive data, and expand and transform it, so as to improve the user's service satisfaction. Under the background of today's mega data era, digital libraries can make important research on related works or newspapers and magazines in this field with the theme of users' research needs. The purpose is to understand the research progress of experts in this field. At the same time, through the

application of mega data, they can also predict the future needs, so as to better meet the needs of users for development.

4. Conclusions

Under the background of mega data, in order to ensure the development of libraries to meet the actual needs of modern people, relevant personnel should be aware of the importance and necessity of digital library construction. With the arrival of the era of mega data, the construction of digital library is facing great challenges and opportunities for development. Therefore, in the actual construction process, the digital library should firmly grasp the development opportunities in the era of mega data, and innovate in many aspects such as digital resources construction and platform construction, so as to promote the construction of digital library to meet the needs of the era of mega data. If we want to ensure the healthy and stable development of the library, it is imperative to strengthen the digital construction, which can not only meet the needs of modern social development, but also provide readers with more efficient and high-quality services. Digital library should fully combine with high-tech technologies such as cloud computing technology and constantly innovate digital library, so as to promote the development of digital library in a better direction in the era of mega data. Digital librarians should have strong professional ability, understand mega data technology, and have mega data thinking. Only in this way can digital libraries turn challenges into opportunities in the era of mega data, and then achieve rapid development.

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