

# Information Resources Development in China

**Maosheng Lai**

*Peking University, China*

**Xin Fu**

*University of North Carolina at Chapel Hill, USA*

**Liyang Zhang**

*Baidu.Com Co., Ltd., China*

**Lin Wang**

*Peking University, China*

## INTRODUCTION

In its several thousand years of social progress, China has put continuous effort into cultural development, which to a certain extent contributed to the exploitation and utilization of information resources. This article reviews the history and present situation of China's information resources development (IRD), with the focus on some IRD projects launched since the mid-1990s.

The specific projects that will be introduced include the China Academic Library and Information System, the China Digital Library Project, the construction of the China National Science and Technology Library, the China Online Government Project, and the construction of the National Institute for Information Resources Management. The goal of each project is described and its initial impact is discussed.

## BACKGROUND

Since the founding of the People's Republic of China in 1949, the government has been attaching great importance to information resources development. In 1956, the government set "Marching Towards Science" as the directing principle for the course of information resources management, and made a conscientious plan in information resources development with emphasis on collecting, rearranging, analyzing, indexing, and reporting scientific and technical documents from home and abroad to serve the needs of professionals in various disciplines. By 1987, the scientific and technical information sector alone had already possessed 26,000 foreign periodicals, 6,000 domestic periodicals, 120 million patent manuals, and more than 32 million books. There were 236 abstracting and indexing journals published annually, covering more than 1.2 million documents and articles. Also, there were 2,038 public libraries at the county level and higher, collecting more than 200 million books. There were 745 academic libraries, collecting 250 million books.

There were also more than 4,000 libraries at research institutes (Guan, 1988).

In the late 1980s and early 1990s, however, information resources development was affected by the readjusting of China's economy. Non-profitable libraries and information service institutions suffered from a severe shortage of money for collection development. As a result, information resources development was captured in a severe logjam or even retrogresses. Types of document collections in some libraries dropped by half or even two-thirds (Fu, 1996). Many abstracting and indexing journals stopped publication. But on the other hand, some new abstracting and indexing journals emerged, as did bibliographical databases that catered to market demand.

Under the promotion of the international information technology revolution, China has been experiencing an upsurge in information development since the last decade of the 20th century. Information infrastructure construction keeps a rapid pace in development. The ownership of telephones, cell phones, and computers has been increasing steadily. The overall scale of China's information infrastructure in terms of network capacity ranks first in the world (China Telecommunications, 2003; He, 2004), and the number of users ranks second in the world (CNNIC, 2006a). However, information resources development is lagging far behind. The lack of information, especially Chinese information, in networks and information systems influences the benefit of investment in information technology, which has become a major obstacle not only to China's informationalization drive, but also to the competitiveness of the Chinese economy.

Since the mid-1990s, under the promotion of the tide of information superhighway construction in many countries, information resources development in China entered a new phase. In 1997, the Chinese government constituted the "Draft on China's Informationalization," drawing the outline of China's information infrastructure (Zou, 1997), which includes six elements: information resources, national information network, information technology (IT) applica-

tion, information industry, information professional, and information policy code and standard.

Information resources was set as the primary element among the six, showing the state's emphasis on its development. This also indicated that people once again realized the importance of information resources development. Several years later, the proposal was accepted as a part of China's tenth "five-year plan," which marked that information resources development became the central task of China's informationalization drive. In China's eleventh "five-year plan," several parts mentioned the issue of information resources development and regarded it indispensable. For example, in Chapter 15, developing information resources is listed as a central task of advancing Chinese informationalization, which includes accelerating the construction of national fundamental databases; adjusting information resources structure; and strengthening the development, disposal, dissemination, and utilization of information resources. Information resources development is also mentioned in Chapter 16. In that chapter, several areas of information resources development, such as governmental and geographic domains, are emphasized.

At the forth meeting of General Office of State Council Informationalization Leading Group in 2004, the main agenda was information resources development. After the meeting, the General Office of the State Council together with the General Office of the CPC Central Committee issued the document "Some Suggestions on Strengthening the Work of Information Resources Development and Utilization." Until now, this file is still one of the most authoritative guiding policies of Chinese information resources development. It outlined the guidelines, basic principles, and general tasks of information resources development in the country. It also attached great importance to fostering the information resources market and industry.

The concept "Information Resources Development" used in this item refers to collection, processing, organization, and dissemination of document resources, as well as their digitalization and networking. Factual and data resources ought to be included in the concept. However, China's progress in these aspects is relatively slow. In recent years, people started to realize the importance of factual and data resources development. The departments concerned have started to work out a plan for constructing the National Data Center.

## **MAJOR INITIATIVES IN CHINA'S INFORMATION RESOURCES DEVELOPMENT**

Under the guidance of the policies introduced in the last section, the Chinese government initiated several major information resources development projects to change the

current situation of inconsistency between information resources development and information network construction, as well as to lessen the discrepancy between information resources available and that required by the public.

### **CALIS (China Academic Library and Information System)**

CALIS is an initiative under China's plan to build 100 key universities in the 21st century (named "211 Project" by the Ministry of Education). It aims at constructing a networked information resources sharing system based on the China Education and Research Network (CERNET) so as to parallel the development of a communication network and an information resources network, and provide university faculty and students as well as professionals in research institutions with easy access to a national information service system that is characterized by abundant information resources, advanced technologies, and a convenient service system.

The service system consists of a CALIS national management center, four CALIS national information centers (covering sciences and social sciences, engineering, agricultural science, and medical science respectively), and seven CALIS regional information centers — in Beijing, Shanghai, Nanjing, Guangzhou, Xi'an, Chengdu, Wuhan, and Changchun. The system will be also linked to major information service systems outside China to form China's Academic Library and Information System. The construction of CALIS will greatly increase the amount of information available to academic libraries and also improve their capability in information services (data from [www.calis.edu.cn](http://www.calis.edu.cn)).

### **Digitalization Projects**

The China Digital Library Project was carried out under the coordination of the Ministry of Culture. In July 1997, the National Library of China (then Beijing Library), together with the Shanghai Library and a few other institutions, started the Chinese Pilot Digital Library Project (CPDLP). Later in 1998, the Ministry of Culture formally put forward the proposal of constructing the China Digital Library. A variety of enterprises and organizations — such as China Telecom, the National Library of China, the Chinese Academy of Sciences (CAS), the China Aerospace Industrial Corporation, Peking University, and Tsinghua University — participated in the project.

Together with the second phase of the Chinese National Library construction, the Chinese Digital Library Project was formally initiated at the end of 2004. The investment of the project was about 400 million RMB (US\$40 million). It has 27 sub-projects belonging to four categories: the technical support environment construction, information resources construction, service system construction, and standards

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