Information Resources Development in China

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INTRODUCTION AND BACKGROUND

In its several thousand years of social progress, China has put continuous efforts on cultural development, which to a certain extent contributed to the exploitation and utilization of information resources.

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 the 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. Further, there were 2,038 public libraries at county and higher levels, collecting more than 200 million books. There were 745 academic libraries, collecting 250 million books. There were also more than 4,000 libraries in research institutes (Guan, 1988).

In late 1980s and early 1990s, however, information resources development was affected by the readjusting of China's economy. Non-profit libraries and information service institutions suffered from a severe shortage of money for collection development. As a result, information resources development was captured in severe logjam or even retrogress. Types of document collections in some libraries dropped by a half or even two-thirds (Fu, 1996). Many abstracting and indexing journals stopped publication. On the other hand, some new abstracting and indexing journals emerged, along with bibliographical databases, which 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 telephone, cellar phone, and computer has been increasing steadily. The overall scale of China's information infrastructure in terms of network capacity and number of users now ranks first in the world (China Telecommunications Yearbook, 2003; He, 2004). On the other side, 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 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 resource, national information network, information technology (IT) application, information industry, information professional, and information policy code and standard.

Information resource was set as the primary element among the six, which showed 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.

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 those 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 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, respectively). The system will also be 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).

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 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. Various enterprises and organizations—such as China Telecom, the National Library of China, the Chinese Academy of Sciences, China Aerospace Industrial Corporation, Peking University, and Tsinghua University—participated in the project, called the China Digital Library Project.

As for the achievements of the project, it was expected that some 20 resource databases would be made available on the "China Cultural Information Network," which included the China Medical Science Resource Database, China Tourism Resource Database, China Economic Resource Information Database, among others. The network will become a significant channel of spreading the Chinese culture and strongly support China's project of "rejuvenating the nation through science and education" (Xu, 1999, 2000; Sun, 1999).

Besides the China Digital Library Project, various other digital library projects were also carried out. The construction of the Chinese National Science Digital Library (CSDL) was started in late 2001. The project, as part of the Knowledge Innovation Project of the Chinese Academy of Sciences, aims to build a digital information service system that meets the international developing trends of digital libraries, and caters to the development of the Chinese Academy of Sciences. It should be able to serve the needs of researchers and professionals in information accessing and knowledge innovation when it is finished in three to four years' time (Zhang, 2002).

In China's Taiwan Province, eight digital library initiatives are currently under way, including the construction of a Digital Library and Information Center and building of the Haoran Digital Library at Jiaotong University. Objectives of the initiatives are to promote information exchange among learning and research institutions in Taiwan, and coordinate their purchase of information resources such as databases from foreign countries. Another objective is to promote the research on Chinese culture, especially on Chinese history (Lv, 1999).

There are also digitalization projects other than construction of digital libraries. In January 1999, the Geology Department of the Chinese Academy of Sciences raised to the State Council a proposal on strategies of China's "Digital Globe" development, indicating the importance