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## **A Dynamic Gateway to Information: Electronic Services at the Shanghai Library**

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### ***Abstract:***

*Shanghai Library has developed a service mode of serving the general public, research and sci-tech community, and policy-makers and legislators since the merging of the Shanghai Library and the Institute of Scientific and Technical Information of Shanghai (ISTIS) in 1995. The new Shanghai Library works to combine the function of a traditional library with a virtual system, making progress in the application of new technology and service methods in aspects such as integrating and developing information resources, and providing reference services and personalized services, thus extending the library service to the whole society.*

Keywords: Digital Library, Library Services, Virtual Library

### **I. Digital library construction at Shanghai Library**

Among the major cities in China, Shanghai, with its long history of industrial and commercial development, is well known for its combination of the traditional Chinese culture with modern Western culture. And its history of modern library development can be dated back to mid 19<sup>th</sup> century. The Shanghai Library was founded in 1952, and its collection at that time contained the quintessence of the major local libraries collected in the past 100 years. After more than 50 years' development, the Shanghai Library has made great progress in its collection and service scope, and it is ranked as the second largest in China.

In 1996, when the new library was opened, the library shifted its goal to meet the need of global services and online delivery of information resources. Since then, the library has focused its work on the construction of information infrastructure, digitalization of its rare and

special collections, and the collection and distribution of network information resources. After several years' consecutive efforts, the Shanghai Library has made much progress in the information infrastructure construction, digitalization of its information resources, and online administration and service: it has adopted the advanced computerized library administration system; the basic network structure has the capacity for furthering updating and development; the library intranet and extranet environment has been set up, which meet the demand of digital library construction and sharing of resources. Also, the library's various documents and resources have been digitalized, and the digitalization of its special documents, such as the rare ancient books, is on the way. Its service scope has extended from the library to its various branches, even to the Internet. There are 600 computers connected to the library's intranet, among which more than 300 are located in the reading areas. The library's daily online visits have increased from 1,000 in 1997 to the current 20,000, and the number of registered readers has increased from 20,000 in 1995 to the current 300,000. The library has made a breakthrough in constructing a digital library of world class, thus becoming the first Chinese public library that provides integrated digital resource service through Internet for readers all over the world. On the basis of the Shanghai Library entity, including information and services of the central library network system, the Shanghai Library, by associating with other local libraries and information institutions, has established a public service network after 5 years' modernization. In this network, there are services to meet the citizens' needs for general cultural understanding. There are services to deliver specialized documents online or by correspondence. There are also some other information and resource services opened online. At the same time, as the largest information research center in the local area, the Shanghai Library also provides professional reference services for information analysis and research purposes. This service includes helping the industrial and commercial corporations, and scientific research institutions with their specialized questions, and helping government organizations with their policy-making decisions. The virtual services provided by the Shanghai Library have won favorable evaluation from the public and a modern library service framework of "physical resources and virtual network" is shaping up at the Shanghai Library.

## **II. Our service mode**

The service mode of serving the general public, research and sci-tech community, and policy-makers and legislators has been experimented in the last eight years. Serving the public is the library's major duty; serving corporations and the related organizations is an important way of improving the library's research service quality, as well as a way to seek for new service target. If a library can fulfill the obligation of serving the public, and at the same time meet the demand of the government, the function of the library will become more and more distinct and powerful.

Given this, Shanghai Library has brought its advantages of being an entity combining library and information institution to full play. On the basis of information service for the public and reference and research services for scientific and technological circles, Shanghai Library has extended its service scope into knowledge navigation, into the fields of social sciences and policy-making of the government. Gradually, a system featured by comprehensive services of information research and policy-making consultation, as well as integration of physical library service with virtual library service has taken its shape at the Shanghai Library.

### **2.1 For the general public**

In a traditional library, the reading of electronic resources and print resources are separate. The resources are disseminated at different corners, which adds to the readers' difficulty in

finding these materials in a short time. In order to integrating the traditional function of a physical library with the information service of a virtual library at a unified interface, the Shanghai Library has made a great step forward in overcoming these disadvantages of a traditional library. By making use of the information infrastructure and broadband library intranet, the Shanghai Library will establish an omnipresent digital information remote access that covers all the service regions, and this remote access integrates online reading, downloading and printing of the library's digital resources, whether they are documents, full-text books, ancient texts, pictures, manuscripts, videos or tapes. In addition, all the reading rooms have computers that are connected to the library intranet. Moreover, in some service zones, the library has installed multimedia terminals connected to the library intranet and Internet, providing the online search of large-scale CD-ROM databases, online databases, multimedia databases, and large-scale electronic reference books from home and abroad, thus meeting the readers' needs of browsing the digital information on the library intranet and connecting with the Internet whenever possible.

Secondly, the Shanghai Library, by reshuffling its services, has the capacity for providing the public with rich, swift, and all-around digital information services whenever and wherever possible, which meets the readers' demands of digital information reference and makes it possible for the readers to enjoy the service of a traditional library online. By visiting the Shanghai Library's homepage (website: [www.library.sh.cn](http://www.library.sh.cn)), readers can search the dynamic information about the 11 million books, periodicals, newspapers, ancient books in Chinese or in foreign languages, which are housed in the member libraries of the Shanghai Central Library System. At the same time, readers can also receive integrated services of the digital library (website: [www.digilib.sh.cn](http://www.digilib.sh.cn)), which has a capacity of 200 GB, consisting of nine major databases. Moreover, readers, through network, can enjoy the integrated reference and document supply service, as well as remote digital book reading and borrowing service. In 2002, with the backing of a group of experts, computer technology and network facilitates, the Shanghai Library integrated its collections, and established the document supply services. The Shanghai Library has been providing individuals and institutions from home and abroad with coordinated and all-around document supply services, such as the library intranet searching, interlibrary loan and delivery of documents of all types and forms. At the beginning of 2003, the library opened the E-book service, with which readers can register online, and then receive the library's remote electronic book borrowing service. For the swiftness and convenience of E-book services and its adoption of advanced online intellectual property right protection system, more and more readers have come to visit the Shanghai Library website and register online. The whole service system of the Shanghai Library has not only broken through the traditional document service mode, but also brought convenience to the public, thus it is highly appraised by people from various circles.

At the same time, Shanghai Library, on the basis of the central library network, has integrated the specialty resources and services of its branch libraries, and actively provided service for the public to improve their information accomplishment. Shanghai Municipal government attaches great importance to and actively promotes the information construction of the city, and the "Asian-Pacific Inter-Cities Information Forum", cosponsored by Shanghai Municipal government and related UN institutes is held at Shanghai annually. The city's information environment has seen great progress and is now of leading position in China. However, digital divide still exists, especially so in the border areas of the city, in the countryside, among the middle-and-old-aged groups and the low-income families. Even the information knowledge of the whole society awaits improvement. As one of the largest city libraries in the world and an information hub of the area, the Shanghai Library has been actively involved in the information cooperation project, and has done its share in pushing the information

construction of and cooperation between libraries in the Asian-Pacific area. Besides this, to achieve the goal of providing the public with integrated high-level information service at the library's service platform, the Shanghai Library, with the support of the Shanghai Municipal government, led the Shanghai Central Library Project in 2000. In this system, the Shanghai Library functions as the central library, and the libraries of universities, communities and scientific research institutions as the branch libraries. So far, all the urban areas and most of the satellite towns enjoy the service of the central library system, among which is the interlibrary loan of books and periodicals. With one card, readers can enjoy the same public library service in both the urban areas and in the counties. Through the municipal public network platform of the community libraries, readers can also receive the special digital information services provided by the member libraries (website: <http://eservice.digilib.sh.cn/tszy/>) to enrich their lives. These services are about education, entertainment, traveling, law, agricultural technology, medical treatment and health care, folk custom and culture, and about flowers and plants. All this helps radiate the Shanghai Library's resources and services to every corner of the city, and builds up the importance and influence of the Shanghai Library.

## **2.2 For the research community**

With the arrival of knowledge economy, a librarian is no longer a passive person who simply preserves and delivers documents, but a researcher of information, as well as a propeller of knowledge. In one word, the librarian in a network environment should be a "knowledge navigator", and the basic service of a public research library is "knowledge navigation", helping the readers seek knowledge or even directly disseminating knowledge. The "research" property of the Shanghai Library is embodied in its value-added information service and policy-making consultation service. On the foundation of its librarians' research activities, the library conducts information analysis and research, and provides its achievements to the society. In this way, the corporations improve their economic returns, and the government improves its policy-making levels. Since 2000, the Shanghai Library has allocated a large amount of funds and personnel to build up the knowledge repository system platform that caters to the policy-making research service, and the construction of Internet information navigation system based on the digital library.

On the one hand, the library, by means of digital digest, translation, summary, bulletins and reports, pays close attention to the development of consulting organizations, research institutions, and universities at home and abroad, and provides the information to government organizations and specialized institutions according to their situations. On the other hand, to cater to the needs of people from high social levels, the Shanghai Library has collaborated with the senior reference librarians from the local universities and research institutions, as well as those from Hong Kong, Macao, and Singapore, to establish the "United Knowledge Navigation Station". The reference librarians working at the station have been providing specialized research institutions and corporations with digitalized reference services on subjects such as social sciences, linguistics, religion, biology, medicine, agriculture, computer, engineering, chemistry and industry, education, psychology, etc. (website: <http://eservice.digilib.sh.cn/>). So far, the knowledge navigation station of the Shanghai Library has been well received by people from all walks of life, especially by those from specialized fields.

Another case in point is the library's service for EXPO 2010 to be held at Shanghai. To promote and study EXPO, and to provide information support for the successful putting on of EXPO 2010, the Shanghai Library, with the support the Shanghai Municipal Government and related organizations, established Information Center of Shanghai EXPO (website:

<http://eservice.digilib.sh.cn/exposition/index.asp>) in March 2003. This center functions to carry out EXPO information research, collect, collate EXPO information resources, thus building up the EXPO document depository. It also functions to serve the public with various information products. The Shanghai Library, through the services at different levels, not only extends its service, but also improves its service levels.

### **3. Our Development Strategies and Prospects**

The development strategies of our digital library are: (1) turning the passive information provision into active knowledge navigation; (2) incorporating the traditional library function with network medium; (3) making progress in the application of new technology and service methods in aspects such as integrating and developing information resources, and providing personalized services; (4) extending the library service to every household.

In the following are the detailed things the Shanghai Library has to do:

3.1 Integrating resources, and establishing a knowledge navigation system with high technical contents and with Shanghai Library characteristics.

- Build up the digitalized special collections, and continue the protective arrangement and digitalization of specialty collections and local documents.
- Further develop the valuable resources such as genealogy in a planned and focused way.
- Increase the purchase of foreign network information resource and make it an integrating part of the library's digitalized collections.
- Arrange and catalogue the information on the Internet, especially the Chinese language resources.
- Build up the knowledge repository on the basis of resource integration, and provide the knowledge navigation service.

3.2 Integrating services to meet the readers' demands of online information reference and to achieve the online fulfillment of the functions of a traditional library.

- Train a group of professionals to offer readers navigation services, and integrated services.
- Take advantage of the technology and resource to develop our network service mode.
- Extend all the library's services (from the traditional book borrowing, returning and reserving to advanced electronic text delivering, research reference and theme-related specialty service) to every household by means various network service.

3.3 Building the Shanghai Library into a knowledge portal for the citizen's life long learning.

- Build the library's services on the basis of the advanced network facilitates and the digital library system.
- Rely on the library's information resource, stored social resource and well-organized knowledge navigation system to help readers make use of and acquire information.
- Combine the digital library construction with the functions of traditional libraries.

- Build the digital library of Shanghai Library into a center for the local and national libraries, and an access point for readers to visit the network of libraries in China and in the world. In one word, build the digital library of Shanghai Library into a library that breaks through the limit of time and space.

**3.4 Meeting the international standards in the application and development of digital library technology.**

- Pay close attention to the worldwide latest development of digital library technology and conduct research.
- Turn our own technology into personalized products to serve for all walks of life at home and abroad.

#### **4. Conclusion**

To face the challenge of the new age, Shanghai Library is now working to build it up into a World-class Metropolitan Library. In the past few years, great changes have taken place in the library, especially in the digitalization and reorganization of its resources and services; while compared to the advanced libraries in the world, the distance is obvious. We would like to extend our gratitude to all those who have been generously supporting the development of the Shanghai Library and to continue to learn from our colleagues all over the world.

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