

COMPUTER SYSTEM OF LIBRARY MANAGEMENT AND INFORMATION RETRIEVAL AT THE SHAANXI ASTRONOMICAL OBSERVATORY

Li De-he, Wang Ya-hong, Dang Fa-kuan, Chen Jun, Chen Feng-xiang,
Wang Yu-lian, Xu Qiu-ju
Shaanxi Astronomical Observatory
Academia Sinica

For modern management and full resource sharing among libraries and scientific departments both in Chinese and worldwide observatories, we established the computer system of library management and information retrieval during the period 1984-1987.

The system is composed of ten component sub-systems:

1. Book ordering system. This system can produce orders for books and periodicals, balance accounts, produce statistics as well as claims for outstanding book orders.
2. Book cataloguing system. This system can catalogue books under certain rules while appending new records of books to the databases. It can also produce catalogue cards and produce written reports about the new books.
3. Book retrieval system has the ability to search for a specific book in several ways.
4. Book lending or circulation system. This system is a complete circulation system; including book lending, renewals, waiting lists, and recall of borrowed books.
5. Periodical management system. This system is in charge of processing of periodicals and magazines in the library, including cataloguing, management, and lending.
6. Scientific information retrieval system. One can retrieve scientific information by keywords or in many other ways.
7. Internal material booking system. It can make orders of internal materials, claims for materials outstanding and make exchanges with other observatories and institutions both in or outside the country.
8. Internal material management system. It can do the work that is analogous to that done with books and periodicals.
9. Information relationship system. It handles exchanges of information between institutions.

10. Scientific information network management system. It manages affairs within a certain information network.

The system can handle all of the daily work of a library. It is available for any small and medium library or information department. It is performed on an IBM microcomputer.

Because different libraries have different functions – for example, some may only have book management, some may have only information affairs – we have designed the system to be configured for use by any library. All ten sub-systems can be run independently or any of the parts can run with any other of the parts.

The databases are designed according to the same principle. Based on the different functions in book and information management and for system efficiency, we designed different databases. Different sub-systems can run independently or concurrently. There is no repeated work in establishing databases.

We have arranged many retrieval methods to suit various management and readers' needs. One may retrieve by document name, author, classification code, keywords, publisher, publication place, editor, publication date, etc. It also includes logical and special retrievals. One can search by one criterion or several simultaneously. If the reader or librarian only remembers a few words of the title, the required item can still be retrieved.

Many institutes are interested in this system. There are about forty institutes already using it or preparing to use it. The Chinese Science Academy intends to make it the standard system to be used in institutes of the Academy.