From Analog to Digital: Review and Outlook of the Virtual Library

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Abstract

In recent years, the diversification of the digital environment has led various types and forms of virtual libraries came on stage. While the virtualization of libraries is spreading rapidly, the concept and definition of virtual libraries are not yet well organized. Therefore, this research will organize the phrase and concept of virtual libraries and scrutinize the definition once again. Although imaginary libraries are often used to refer to online libraries or digital libraries, But before the internet age, when people condensed the basic information of a book on one paper catalog cards, and used it for search and archival management, the virtualization of libraries has already begun. Until the 1980s, it remained the predominant means of searching books in libraries. In the 1960s, the Library of Congress developed the MAchine-Readable Cataloging system (MARC). Instead of handwritten paper card, MARC use tapes with bibliographic data. This made it possible to use and exchange bibliographic information using computers. Bibliographic information was no longer available only within libraries, and for more flexible use. In the 1970s, an online library cataloging system (OPAC) without physical carriers such as tapes, was established in the U.S. Since the library catalog is provided online, general users can also easily use it to search books through the Internet. In 1997, the Digital Object Identifier (DOI) system, which organizes and numbers information stored on the Internet, was announced by the International DOI Foundation. In this virtual library, not only the catalog, the documents included in the catalog also no longer have a physical entity. Virtual libraries are becoming more and more abstract and sophisticated. From a cultural public facility, it has become more akin to an information search tool. However, it is inevitable that as books with substance are gradually abstracted, the physical features and the experience of the reader walking around between bookshelves looking for books have been overlooked. As a challenge for future virtual libraries, it is necessary to consider the construction of a virtual space that combines the database of abstractions with the experience of use and visual elements.

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