

Chapter I

History of Electronic Resources

Dalene Hawthorne

Emporia State University, USA

ABSTRACT

This chapter describes the history of the development and use of electronic resources in libraries in the United States. It provides an overview of the major developments in the field with a focus on library catalogs, electronic databases, e-books and e-serials. The chapter is intended to convey the broad sweep of change that has characterized these electronic resources from the 1960's to the early 2000's, as well as a sense of the underlying issues that remain the same. The author hopes that an understanding of the history of the development and use of these resources may lead to a better understanding of the current environment and provide inspiration for the future.

INTRODUCTION

The library profession recognized the potential of computers to make library resources more accessible early in the development of computer technology. Librarians were often enthusiastic and sometimes early adopters of technology. The use of electronic resources in libraries began with the development of the machine-readable cataloging (MARC) format in the mid-1960's, a full 30 years before the introduction of the World Wide Web and its subsequent ubiquity. Bibliographic databases became available at approximately the same time.

Libraries provided access to data sets such as census and survey data as early as the 1970's. Dur-

ing the microcomputer revolution of the 1980's, libraries acquired software and data on diskettes and offered databases on CD-ROM. Databases on CD-ROM began to contain full text. Search interfaces became more straightforward and simpler to use. Online catalogs became more common, and libraries began to offer them through the pre-World Wide Web Internet.

Tim Berners-Lee created the World Wide Web in 1990. The subsequent development of the Mosaic browser in 1992 led to widespread use of the Web beginning in 1993. The graphical interface and the later development of Web search engines such as Yahoo! made resources on the Internet more accessible to average patrons.

Web-based electronic resources were widely available beginning in the mid-1990's. Libraries offered Web-based catalogs, bibliographic and full-text databases, electronic journals, and eventually electronic books through the Web. Patrons no longer had to go to the library to do a significant amount of their research.

This chapter is intended to convey the broad sweep of change that characterized the development of library electronic resources from the 1960's to the early 2000's as well as a sense of the underlying issues that remain the same. An understanding of the development of library catalogs, databases, electronic serials and electronic books may lead to a fuller understanding of the current environment and provide inspiration for the future.

BACKGROUND

The pursuit of electronic resources by libraries was driven by the core values of library science. It is possible to recognize in Ranganathan's five laws of library science the motivation that drove libraries to incorporate electronic resources into services and collections. Paraphrased to better suit electronic resources, the laws read: resources are for use, every person his or her resource, every resource its user, save the time of the user, and the library is a growing organism (Ranganathan, 1963).

Each technological development in library electronic resources during the 20th century was intended to make access to resources more direct, convenient, and timely for the user. The implementation of electronic resources made the library a growing organism as libraries adapted processes and reorganized staff repeatedly to accommodate the changes inherent in the use of constantly changing technology.

ONLINE CATALOGS

Electronic resources began to dramatically change the way patrons accessed library resources in the mid-1960's. The card catalog, a standard fixture in libraries for a century, faced its demise. One of the major developments during the 1960's was machine-readable cataloging (MARC). The MARC format dramatically changed the way library resources were processed and accessed. The library professionals who created MARC recognized the need for automation and a supporting data standard at a critical juncture in the development of technology, and took the necessary steps and risks to develop one. The flexible and expandable MARC format demonstrated the foresight and vision of those who developed it over 40 years ago.

MACHINE-READABLE CATALOGING

In 1964, the Council on Library Resources commissioned a study about capturing cataloging data in machine-readable form. A report called *The Recording of Library of Congress Bibliographic Data in Machine Form* resulted from the study, and was used as the basis for the first Conference on Machine-Readable Catalog Copy in 1965. Participants at the conference determined the requirements for a machine-readable record and discussed how it might be used in libraries. The Library of Congress' Information Systems Office developed and distributed a report based on this meeting titled *A Proposed Format for a Standardized Machine-Readable Catalog Record* (Avram, 1968).

During a second conference held at the Library of Congress, the MARC Pilot Project was conceived. Planning for the project began in February 1966. The MARC I format was created, codes for place of publication, language, and publisher were developed, computer software was designed,

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/history-electronic-resources/10025

Related Content

Is the Indian Library and Information Science Research Interdisciplinary?: A Case Study Based on the Indian Citation Index Database

Swapan Kumar Patra and Anup Kumar Das (2020). *Handbook of Research on Emerging Trends and Technologies in Library and Information Science* (pp. 169-188).

www.irma-international.org/chapter/is-the-indian-library-and-information-science-research-interdisciplinary/241563

Survey of Information Technologies in the User Environment

(2014). *Information Technology and Collection Management for Library User Environments* (pp. 84-119).

www.irma-international.org/chapter/survey-of-information-technologies-in-the-user-environment/102361

Search Success at the University of Manitoba Libraries Pre- and Post-Summon Implementation

Lisa O'Hara, Pat Nicholls and Karen Keiller (2012). *Planning and Implementing Resource Discovery Tools in Academic Libraries* (pp. 268-287).

www.irma-international.org/chapter/search-success-university-manitoba-libraries/67825

An Introduction to Bibliometrics and Informetrics

Sean Eom (2009). *Author Cocitation Analysis: Quantitative Methods for Mapping the Intellectual Structure of an Academic Discipline* (pp. 1-35).

www.irma-international.org/chapter/introduction-bibliometrics-informetrics/5440

Library Showcase: Ramsey County Roseville Library - Interview with Staff

Lisa Block (2014). *Information Technology and Collection Management for Library User Environments* (pp. 277-278).

www.irma-international.org/chapter/library-showcase/102385