

FOREWORD: THE MEANING OF MARC

In recent years the cost of academic libraries has been increasing more rapidly than other costs of education. Because many functions performed in the operation of libraries are highly repetitive and/or clerical in nature the electronic computer has been an obvious candidate for the task of controlling the inflationary conditions. Many of the attempts to apply the computer to library problems did not recognize the size nor complexity of these problems and consequently failed or bogged down badly. One undertaking which has achieved significant results is the MARC development which began with a pilot project involving the Library of Congress and sixteen other libraries and evolved to a weekly service by LC to more than sixty subscribers to the MARC tapes.

MARC was conceived in consequence of an early appreciation by its planners and supporters of the centrality to library automation of machine-readable bibliographic records in a standard format. While the number of libraries now utilizing the MARC tapes on a regular basis is small and may remain so for a while, the system remains important because of its achievement in development of a standard format and because it, both directly and indirectly, is bringing about the accumulation of an increasingly large computer manipulable bibliographic data base. Without such a data base, opportunities to apply new technologies to bibliographic functions would in most cases have to be passed up for reasons of economics.

Here are a couple of examples of such technological application situations:

Outputting bibliographic information from computers has generally been done by means of high-speed line printers. There are a number of relatively permanent limitations of line printers including speed, character set, number and quality of copies, bulkiness of output, and cost. Fortunately just now an alternative to the line printer, computer output microfilming (COM), is experiencing very rapid development.

Even at this early stage, COM units record at rates of ten, twenty, and even thirty thousand lines per minute, which is one to two orders of magnitude faster than line printers. Since many COM units generate characters electronically there is the potential for nearly unlimited increase in character set size. Speed of operation and the small amount of film needed for microform publications insure low first copy cost, inexpensive use copies and permit frequent

republication from updated files. With newly introduced microfilm readers utilizing cassettes, it is possible to produce very compact and convenient book catalogs quickly and at low cost. Already several catalogs of this type are being produced and used, and others certainly will be in the next few years. Without a machine-readable data base this would not be possible.

At the University of Illinois a new type of low cost, on-line interactive terminal is being developed for Plato IV, a computer-based educational system. Plato IV is designed to provide varied education services from a large-scale, time-shared computer to as many as 4,000 students at one time. One of the applications being considered for the system is bibliographic searching. However, until catalog information is in computer-usable form, no bibliographic application will be possible.

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