

Interpretation and Application of the AMC Format

NANCY A. SAHLI

Abstract: The USMARC Archival and Manuscripts Control (AMC) format is a standard format for the administrative and descriptive control of archives and manuscript materials, primarily in automated systems. This article describes the history of the AMC format's development, as well as the characteristics of its various parts. Information on AMC format implementation and use is provided, covering such topics as functional requirements analysis, information gathering, and system selection/design. The article concludes with recommendations for future action related to the format's ongoing development and use.

About the author: Nancy Sahli is on the staff of the National Historical Publications and Records Commission, where she is archives specialist for technological evaluation. Her undergraduate degree is from Vassar College and her M.A. and Ph.D. degrees in history are from the University of Pennsylvania. Much of her work has focused on archival automation and information systems, and she served as a member of the Society of American Archivists's National Information Systems Task Force. Her most recent book, *MARC for Archives and Manuscripts: The AMC Format*, was published in 1985 by the Society of American Archivists. The views expressed in this article are solely hers and do not represent the official position of the National Historical Publications and Records Commission or the National Archives and Records Administration. This article is a revised version of a paper presented at the 48th annual meeting of the Society of American Archivists, 3 September 1984, Washington, D.C.

EVERYONE REMEMBERS THE BIBLICAL STORY about the Tower of Babel, the highrise of confusion where the carpenters could not talk with the masons because no one spoke the same language. A similar situation occurs when archivists try to describe and communicate information about archives and manuscripts without having a common vocabulary and set of ground rules. The use of computers, which requires conformity and standard techniques, only complicates the situation.

Archivists and manuscript curators who undertake computer applications quickly become aware of the need for standardized formats and procedures. As Lydia Lucas noted in an *American Archivist* article in 1981, "Automation, though it tolerates wide variance in data, does not tolerate idiosyncrasy. . . . Standard formats, where the required elements can be formalized, help encourage precision and accuracy at crucial points."¹ Traditionally, however, archivists *have* been idiosyncratic, and the lack of uniform descriptive standards and practices has been a definite hindrance to automation and information exchange in archives and manuscript repositories. What archivists are coming to realize, however, is that to argue that standard formats are not needed for archives and manuscripts or are impossible to achieve is to relegate archivists to an intellectual and professional backwater.

Because of a general lack of standards for archival description at the time, it was relatively easy for the Library of Congress in 1973 to issue a MARC Format

for Manuscripts that had only a remote relation to archival needs and practices.² Although the introduction to the format acknowledged the assistance of John Knowlton of the library's Manuscript Division and Arline Custer and Harriet Ostroff of the *National Union Catalog of Manuscript Collections*, formal participation of the archival profession in the format's development apparently did not occur. As a result, this format for machine-readable information exchange was best suited for the description of individual manuscript items—the kiss of death as far as archivists were concerned—and enjoyed little use.³ More significantly, however, archivists rejected the format because it was seen as being oriented to library rather than archival practices, from its origination in the Library of Congress to its use of library concepts and terminology. Even the Manuscript Division at the library refused to use it. Meanwhile, the library community embraced the other MARC formats (for books, serials, and other materials) with enthusiasm and used them in creating automated networks for interlibrary loan, shared cataloging, and other applications.

It is hardly surprising that archivists turned away from the MARC formats and library automation activities in order to develop systems that were more in tune with their perceived needs. A variety of in-house systems were initiated at such institutions as the National Archives, the Smithsonian Institution Archives, and the University of Illinois—systems which

¹Lydia Lucas, "Efficient Finding Aids: Developing a System for Control of Archives and Manuscripts," *American Archivist* 44 (Winter 1981): 24–25.

²Library of Congress, MARC Development Office, *Manuscripts: A MARC Format; Specifications for Magnetic Tapes Containing Catalog Records for Single Manuscripts or Manuscript Collections* (Washington, D.C.: Library of Congress, 1973).

³No review of the MARC Format for Manuscripts appeared in the *American Archivist* in 1973, 1974, or 1975; nor was the format mentioned in the journal's "Technical Notes" section. It was, however, listed by Meyer H. Fishbein in his bibliography, "ADP and Archives: Selected Publications on Automatic Data Processing," *American Archivist* 38 (January 1975): 31–42, and in "Writings on Archives, Historical Manuscripts, and Current Records: 1973," *American Archivist* 38 (July 1975): 339–374.

used different hardware, software, and data configurations. During these early days there was little perception of the need to view archival description as part of a wider information environment or of the possible administrative uses of shared data.

One philosophical exception to this pattern was SPINDEX, a series of data base management programs developed at the National Archives in the 1960s and 1970s to deal with archival automation needs. Although SPINDEX's developers originally envisioned the use of a common data format by all of the system's users, individual institutions quickly learned that the programs' flexibility enabled them to create a wide variety of data base designs, formats, and implementations. A big step toward the standardized use of SPINDEX and creation of a national information system for archives and manuscripts came in 1976 when the National Historical Publications and Records Commission (NHPRC) announced plans to develop a SPINDEX data base of information about historical records and manuscripts and the institutions in which they were located.⁴ Conceived as a hierarchical system including repository, collection/record group, series, and lower

levels of control, to emulate the eight-level hierarchy found in the SPINDEX programs, the data base eventually encompassed the NHPRC's *Directory of Archives and Manuscript Repositories* and several state-based survey projects in Washington, New York, Kentucky, and other areas, which used the same field structure or pattern for formatting data.⁵

At the time the NHPRC was beginning to develop its system, some archivists questioned the commission's decision. Concerns ranged from the possibility of duplication of effort with the *National Union Catalog of Manuscript Collections* (NUCMC) to concern that a SPINDEX-based information system could not, because of its inherent technological limitations, provide the kind of flexible, online access that was becoming more and more widespread in the information world. In order to address these concerns and to develop ideas for what a national archives and manuscripts information system should be, the Society of American Archivists formed the National Information Systems Task Force in 1977.⁶

Early on NISTF, as the task force came to be called, perceived that no single system or entity could serve the needs of all archival users. Instead, it

⁴The most detailed discussion of the NHPRC data base concept can be found in *Report on the Conference on Automated Guide Projects, St. Louis, Missouri, July 19–20, 1977* (Atlanta: National Association of State Archives and Records Administrators, 1978). See also Larry J. Hackman, Nancy Sahli, and Dennis A. Burton, "The NHPRC and a Guide to Manuscript and Archival Materials in the United States," *American Archivist* 40 (April 1977): 201–205.

⁵National Historical Publications and Records Commission, *Directory of Archives and Manuscript Repositories in the United States* (Washington, D.C.: NHPRC, 1978). Publications of the state-based survey projects include Washington (State), Division of Archives and Records Management, *Historical Records of Washington State: Guide to Records in State Archives and Its Regional Depositories* (Olympia, Wash.: Washington State Division of Archives and Records Management and Washington State Historical Records Advisory Board, 1981) and Washington (State), Division of Archives and Records Management, *Historical Records of Washington State: Records and Papers Held at Repositories* (Olympia, Wash.: Washington State Historical Records Advisory Board, 1981); a continuing series of county guides produced by the New York Historical Resources Center at Cornell University; and the forthcoming guide to materials surveyed by the Kentucky Guide Project of the Kentucky Department for Libraries and Archives.

⁶See Richard H. Lytle, "A National Information System for Archives and Manuscript Collections," *American Archivist* 43 (Summer 1980): 423–426, and "An Analysis of the Work of the National Information Systems Task Force," *American Archivist* 47 (Fall 1984): 357–365; and David Bearman, "Toward National Information Systems for Archives and Manuscript Repositories," *American Archivist* 45 (Winter 1982): 53–56. NISTF functioned until 1983.

decided that a more appropriate focus would be to establish a format for archival information exchange that could be used with all types of hardware and software and could even be adapted for manual applications. Such a common format would enable information to be exchanged between institutions and needed to be designed to conform to accepted standards in the information world, such as those promulgated by the American National Standards Institute. After investigating the resources needed to develop such a format, the task force decided that the most economical and best approach would be to take an existing format, the MARC Format for Manuscripts, and try to adapt it to meet archival needs.

The radicalism of such a measure should not be underestimated. Imagine, recommending a procedure that would involve archivists talking to librarians, learning about their practices, and even working with them toward the development of a common standard. Yet the advantages of developing a new MARC format were clear. Archives and manuscripts information could be integrated into existing MARC-based bibliographic networks, the costs of developing and maintaining an independent format could be largely avoided, and network users could ultimately obtain information about all types of materials relevant to their needs from a single source. Indeed, the Research Libraries Group's plan to develop an archives and manuscripts module for their MARC-based online system, the Research Libraries Information Network (RLIN), was a key force leading to adoption of the MARC format strategy by NISTF.

Because the development of MARC formats was controlled by the library community, NISTF recognized the importance of not ceding all format decisions to librarians. Cooperation was the

key, and the working group established by NISTF to iron out the details of information and format requirements included representatives from both the archives and library worlds. Likewise, it was agreed that maintenance of the revised format, christened the USMARC Format for Archival and Manuscripts Control (or AMC for short), would be the joint responsibility of the Library of Congress and two advisory bodies, the SAA's Committee on Archival Information Exchange (CAIE) and the American Library Association's Committee on the Representation in Machine-Readable Form of Bibliographic Information (MARBI). Basic to this working relationship was the Library of Congress's agreement to make AMC format changes only with the consent of the SAA and ALA committees.

What then is the AMC format and what are its implications for archival description? At its most elementary level the format is a container for information—a series of labeled pigeonholes—into which data or information about archives and manuscripts may be placed, just as a recipe, another type of format, is a series of pigeonholes of data relating to the preparation of a particular food.

Just as a recipe contains various parts, such as a title, a list of raw ingredients, and narrative details on preparation techniques, so the AMC format, like the other USMARC formats, has different parts, each of which contains a particular kind of data. These include the leader, the record directory, control fields, and variable data fields. Within the general framework of the format the user creates a separate record for each unit (such as a collection or record group) being described. For example, the data base being created by the Research Libraries Information Network contains many different records. Each of them, however, contains similar data fields. It is only the

information in each record that is different.

One of the biggest mistakes that fledgling format users make is trying to understand the leader and record directory elements of the format. Both of these are machine-generated entries that contain general information about the record as a whole and also provide parameters for computer processing of the records. Conceptually they are very hard to understand and are apt to discourage novices from further exploration of the format. Most archivists, however, who are undertaking computer related implementations of the format will be using an existing processing system—an online network such as OCLC or RLIN; a turnkey system, such as Geac or LS2000, in which the vendor provides both equipment and programs; or general MARC application programs, which run in a mini- or micro-computer environment.⁷ Michigan State University, for example, with funding from the NHPRC, is developing a series of MARC-based programs that will run on an IBM PC-XT or compatible equipment. The project is scheduled for completion in mid-1986. All of these systems should generate leader and directory data automatically, with minimum intervention by the user. Those who prefer the challenge of a more individualistic approach may, of course, develop their own software and systems.

In addition to the leader and record directory, each MARC record contains control fields and variable data fields. The control fields provide information about the record's control number, the subrecord map of the directory (another technical term), the date and time of the

latest transaction involving the record, certain physical characteristics of the material being described, and other abbreviated or coded information about the record useful for information retrieval.

Following the control fields is the heart of the format, the seventy-seven variable data fields approved for inclusion in the AMC format (Table 1). Each variable data field consists of two characters called indicators, each of which provides summary information about the content of the rest of the field. Following the indicators, each field contains between one and twenty subfields. Each subfield contains a particular data element, such as a date, a name, or an index term. Many subfields and fields may be repeated within a single record, while others cannot. Each field and subfield has a unique field number, subfield letter or number, and name. Descriptions and examples have been created for all fields, as well as many subfields.

Figure 1 shows the layout of a typical AMC variable data field, 506, which provides information about restrictions on access. Although some fields, such as this one, give individual users considerable latitude in deciding how they want subfield information to appear, other fields require the use of Library of Congress designated codes or standard forms of entry.

If an archivist is interested in pursuing the use of the format, what steps should be taken? First, if the prospective user is not already involved in automation, he or she will need to decide whether the initial implementation will be manual or computerized. Did I say manual? I certainly did, for although MARC is an acronym

⁷OCLC, the Online Computer Library Center, began providing online services in 1971 and is the largest bibliographic service in the United States. RLIN is the computer network of the Research Libraries Group, a corporation jointly owned by a number of American research institutions and libraries. Turnkey systems are automation systems which include hardware, software, installation, training, and ongoing support from a single source. Geac is a turnkey system marketed by Geac Computers International, a Canadian firm. LS2000 is being developed and marketed by OCLC.

AMC FORMAT VARIABLE DATA FIELDS

Tag	Field Title	Tag	Field Title
001	Control number	520	Summary, abstract, annotation, scope, etc., note
002	Subrecord map of directory	521	Users/intended audience note
005	Date and time of latest transaction	524	Preferred citation of described materials
007/00	Category of material	530	Additional physical form available note
007/01	Specific material designation	533	Reproduction note
007/02	Original versus reproduction aspect	535	Location of originals/duplicates
007/03	Polarity (microforms)	540	Terms governing use and reproduction
007/04	Dimensions (microforms)	541	Immediate source of acquisition
007/05-08	Reduction ratio	544	Location of associated materials
007/09	Color (microforms)	545	Biographical or historical note
007/10	Emulsion on film (microforms)	546	Language note
007/11	Generation	555	Cumulative index/finding aids note
007/12	Base of film (microforms)	561	Provenance
008/00-05	Date entered on file	562	Copy and version identification
008/06	Type of date code	565	Case file characteristics note
008/07-10	Date 1	580	Linking entry complexity note
008/11-14	Date 2	581	Publications note
008/15-17	Place of publication, production, or execution code	583	Actions
008/18-22	Undefined	584	Accumulation and frequency of use
008/23	Form of reproduction code	59X	Local notes
008/24-34	Undefined	600	Subject added entry — personal name
008/35-37	Language code	610	Subject added entry — corporate name
008/38	Modified record code	611	Subject added entry — conference or meeting
008/39	Cataloging source code	630	Subject added entry — uniform title heading
010	Library of Congress control number	650	Subject added entry — topical heading
035	Local system control number	651	Subject added entry — geographic name
039	Level of bibliographic control and coding detail	655	Genre/form heading
040	Cataloging source	656	Index term — occupation
041	Language code	657	Index term — function
043	Geographic area code	69X	Local subject added entries
045	Chronological code or date/time	700	Added entry — personal name
052	Geographic classification code	710	Added entry — corporate name
066	Character sets present	711	Added entry — conference or meeting
072	Subject category code	730	Added entry — uniform title heading
09X	Local call numbers	740	Added entry — title traced differently
100	Main entry — personal name	752	Added entry — place of publication or production
110	Main entry — corporate name	773	Host item entry
111	Main entry — conference or meeting	851	Location
130	Main entry — uniform title heading	870	Variant personal name
240	Uniform title	871	Variant corporate name
242	Translation of title by cataloging agency	872	Variant conference or meeting name
243	Uniform title, collective	873	Variant uniform title heading
245	Title statement	880	Alternate graphic representation
260	Publication, distribution, etc. (imprint)	886	Foreign MARC information field
300	Physical description		
340	Medium		
351	Organization and arrangement		
500	General note		
502	Dissertation note		
505	Contents note (formatted)		
506	Restrictions on access		
510	Citation note (brief form)/references		

Table 1

for *Machine Readable Cataloging*, the basic principles of designing a descriptive system are not dependent on the technology that will be used for implementation. The content of archival descriptive information is no different whether it is written down by hand, on a typewriter, or entered into a national online system. The important thing is to gather and record the information in a manner that is compatible and consistent. That means isolating individual information elements and arranging them in the same logical order, or field order, in which they appear in the AMC format design. That way, if the decision is made to automate, it will be a simple matter to add field and subfield designators, indicators, and the other embellishments that are part of a machine-readable MARC record.

A second key in planning for implementation is to acquire the essential format documents. These include two manuals prepared specifically for archival users: *MARC for Archives and Manuscripts: The AMC Format* and *MARC for Archives and Manuscripts: A Compendium of Practice*.⁸ The first of these contains introductory guidelines for format use, the AMC format edited for archival users, and an updated version of the NISTF *Data Elements Dictionary* with cross references to fields and subfields in the format and to Steven L. Hensen's *Archives, Personal Papers, and Manuscripts*. The second volume is a product of the 1984 Conference on the Use of the MARC Format for Archives

and Manuscripts, held at the State Historical Society of Wisconsin with support from the NHPRC. It provides examples of format use and practice from some of the initial AMC users, including RLIN, OCLC, and individual institutions. The Library of Congress's *MARC Formats for Bibliographic Data (MFBD)*, Update 10, the "official" release of the AMC format, contains the full text of the format as well as essential codes and other authority lists.⁹

Materials created by other organizations and individuals can also be of assistance in designing an AMC implementation. These include the Research Libraries Group's *AMC Field Guide*, Walt Crawford's *MARC for Library Use*, and more general MARC literature from the library world. Crawford's book contains a rich bibliography.¹⁰

Third, the need for archivists to have a clear sense of their own descriptive needs is as important as familiarity with MARC itself. We have all heard of the proverbial repository whose finding aid system changes each time there is a new curator of manuscripts. With the AMC format, there is now an opportunity for archivists to take a detailed look not only at their descriptive systems (or lack thereof), but also at the methods used for providing administrative control over materials. It is likely that such evaluation will reveal repetition and redundancy in archival administrative practices and record keeping, with multiple forms and a lot of duplicated effort. Archivists should be

⁸Nancy Sahli, *MARC for Archives and Manuscripts: The AMC Format* (Chicago: Society of American Archivists, 1985) and Max J. Evans and Lisa B. Weber, *MARC for Archives and Manuscripts: A Compendium of Practice* (Madison: State Historical Society of Wisconsin, 1985).

⁹The *MARC Formats for Bibliographic Data (MFBD)* may be ordered either on an ad hoc or subscription basis from the Customer Services Section, Cataloging Distribution Service, Library of Congress, Washington, D.C. 20541. Steven L. Hensen's *Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories, Historical Societies, and Manuscript Libraries* (Washington, D.C.: Library of Congress, 1983) may be ordered from the same source. A catalog listing other MARC-related publications is also available.

¹⁰Research Libraries Group, *AMC Field Guide* (preliminary edition, Stanford, Cal.: Research Libraries Group, 1983; a revised edition is forthcoming). Walt Crawford, *MARC for Library Use: Understanding the USMARC Formats* (White Plains and London: Knowledge Industry Publications, Inc., 1984).

506 RESTRICTIONS ON ACCESS		MARC Formats for Bibliographic Data									
		Repeat-ability					Formats				
506	RESTRICTIONS ON ACCESS	R	*BK	VM	AM	*MP	*MU	SE	DF		
506	RESTRICTIONS ON ACCESS INDICATORS		*BK	VM	AM	*MP	*MU	SE	DF		
	Indicator 1 — Undefined		*BK	VM	AM	*MP	*MU	SE	DF		
	Indicator 2 — Undefined										
	SUBFIELDS	NR	*BK	VM	AM	*MP	*MU	SE	DF		
	#a Terms governing access	R									
	#b Jurisdiction	R									
	#c Physical access provisions	R									
	#d Authorized users	R									
	#3 Materials specified	NR									
	DESCRIPTION		BK	VM	AM	MP	MU	SE	DF		
	This field is used to record information about restrictions imposed on access to the described materials. For published works, this field is used to record information on limited distribution.										
	SUBFIELD CODE #a. "Terms governing access" identifies legal, physical, or procedural restrictions imposed on individuals wishing to see the described materials.		BK	VM	AM	MP	MU	SE	DF		
	SUBFIELD CODE #b. "Jurisdiction" states under what authority the terms governing access are imposed, enforced, and may be appealed.										
	SUBFIELD CODE #c. "Physical access provisions" specifies any arrangements required for physical access (which may change from time to time).										
	SUBFIELD CODE #d. "Authorized users" designates either a class of users or specific individuals (by name or title) to whom the restrictions in subfield #a do not apply.										
	LC PRACTICE: For books and music, restrictions-on-access information is recorded in field 500 (General Note). For maps, this field is used internally but it is not distributed in the Maps MARC Distribution Service.										
EXAMPLES	bb#aClassified.	BK	VM			MP	MU	SE	DF		
[506]											

Figure 1

MARC Formats for Bibliographic Data		FORMATS					
506	RESTRICTIONS ON ACCESS (Continued)	BK	VM	MP	MU	SE	DF
[506]	EXAMPLES (Continued) bb†aFor official use only.		VM				
[506]	bb†aNot available for distribution in the United States.		VM				
[506]	bb†aRestricted:†d Closed to investigators until 1999.		VM				
[506]	bb†aRestricted: Material extremely fragile; †c Access by appointment only.		VM				
[506]	bb†3Office files of Under-Secretary †a No one may examine these records or obtain information from them or copies of them except by written permission †b Secretary of the Treasury or his duly authorized representative †c Kept in remote storage; access requires 24 hours advance notice.					AM	
[506]	bb†dClosed for 30 years except to Federal government employees with a need to know.					AM	
[506]	bb†aFile closed until Jan. 1979.						DF

Source: *MARC Formats for Bibliographic Data* (Washington, D.C.: Library of Congress, 1984).

Figure 1 (Continued)

clear about their information needs before they begin format implementation. Some of the current publications on designing information systems that archivists should find particularly helpful are *All in Order: Information Systems for the Arts* by Mary Van Someren Cok, Richard M. Kesner's *Automation for Archivists and Records Managers: Planning and Implementation Strategies*, and Joseph R. Matthews's *Choosing an Automated Library System: A Planning Guide*.¹¹

Finally, after determining the system requirements for information elements and computer hardware, it is time to start thinking about what the format is to do. Since it is generally not cost-effective or practical for archivists to develop their own computer programs, it will be necessary to evaluate one of the existing networks, turnkey systems, or software packages. Before reaching a decision, questions should be asked about cost, maintenance, user assistance, the layout of screen displays used for data entry and retrieval, and the kinds of hard copy products, such as reports, that can be generated by the system. Joining a network such as RLIN, for example, may be only a partial solution, because a stand-alone computer may still be needed for routine word processing and certain administrative functions. Other factors that should be considered include the ability of staff to adapt psychologically to the use of a standard format and automated techniques, the need to develop procedures for quality control of format data, education and training needs prior to and during implementation, and even

such mundane matters as whether a repository's wiring system can handle computer equipment without a major overhaul.

It is also wise to talk with people at institutions that are implementing the AMC format. Some of these are listed in *MARC for Archives and Manuscripts: A Compendium of Practice*. Quite a few repositories and organizations, with varying prior levels of automation experience, are already using the format and are creating the basis for future implementation by the rest of the archival community.

Members of the Research Libraries Group, such as Yale, Cornell, and Stanford universities and the Hoover Institution, have been working as a consortium to design and test RLIN's implementation of the AMC format. Other RLIN participants include the National Archives, several state archives, and a host of research libraries. The Library of Congress's Manuscript Division and NUCMC have undertaken the planning steps essential for format implementation. OCLC is implementing the format both through its regular online network and through its LS2000 turnkey system. At the Smithsonian Institution, MIT, and other locations, the integrated MARC-based Geac turnkey system is being used. Format-based software and in-house systems for archival applications have been or are being developed by a number of organizations, including Automated Information Reference, Inc., (AIRS), Michigan State University, the Chicago Historical Society, Western Carolina

¹¹Mary Van Someren Cok, *All in Order: Information Systems for the Arts, Including the National Standard for Arts Information Exchange* (Washington, D.C.: National Assembly of State Arts Agencies, 1981), especially 63-100; Richard M. Kesner, *Automation for Archivists and Records Managers: Planning and Implementation Strategies* (Chicago: American Library Association, 1984); and Joseph R. Matthews, *Choosing an Automated Library System: A Planning Guide* (Chicago: American Library Association, 1980). See also Matthews's *A Reader on Choosing an Automated Library System* (Chicago: American Library Association, 1983). These are only a few of the many helpful works available in this field.

University, Dickinson College, and Gallaudet College.

It is obvious that the USMARC Archival and Manuscripts Control Format is here to stay. It is also obvious that some time is going to elapse before the format will be used by the majority of the profession. This is no cause for concern, however, for the format is complex and carries with it implications for the ways archivists describe and administratively control their holdings, assorted needs for education and outreach relating to its use, and a wide range of possibilities for the use of automated techniques. It also compels archivists to work with a wide range of professionals in the library, information, automation, and user communities. None of this can or should be accomplished overnight.

What then might archivists expect to see as format adoption and implementation progress? There will be continued development of standards for archival description and information formatting. There will also be those in the profession who resist this trend, who see no merit in constructing archival information systems integrated with those being developed for other kinds of information sources, and who feel that traditional archival descriptive and administrative practices should be religiously maintained. New ideas often face opposition. The primary concern, however, should be to ensure that the format and its implementations meet the needs of archivists and users alike.

In order to achieve this archivists need to develop strategies for education and

outreach for AMC format implementation and use directed to both archivists and the users of archives and manuscript materials. Understanding the format, automation, systems analysis, and related concepts are challenges for the profession. Workshops and other short-term offerings may partially fill this need, but only if their participants *immediately* begin to apply the knowledge that they acquire. Self-instruction materials need to be prepared to guide archivists through the basics of format implementation. Similar instructional tools need to be developed for users of archival materials focusing, for example, on information retrieval strategies for use with online systems. The Society of American Archivists's current project, funded by the National Endowment for the Humanities, to develop an archival automation information and education program is designed specifically to meet these needs.

Archivists also need to consider the full range of possibilities for automated applications. Although there is no question that the AMC format is the standard for higher level archival description and information exchange, it may not be a suitable vehicle for providing certain types of administrative and process controls over the life cycle of records. Initial users of the format and of the networks and turnkey systems that have adopted it as a standard are evaluating these questions. The suitability of national networks for providing day-to-day administrative control of records is being evaluated, as are prospects for networking among microcomputers.¹² Modifications to the AMC format have already

¹²For example, see "Historical Society of Wisconsin Joins RLG," *SAA Newsletter* (January 1985): 7; Tom Mills and Kathleen Roe, *Development of LS2000 for Automated Control of Archives* (Albany: New York State Archives, 1984); and David Bearman, "Who About What or From Whence, Why and How: Intellectual Access Approaches to Archives and their Implications for National Archival Information Systems" (Paper presented at the Conference on Archives, Automation and Access, University of Victoria, 1-2 March 1985).

been recommended, and additional changes are likely to occur in the future.¹³

The future of the AMC format depends on the work of many individuals and groups—the Society of American Archivists and its Committee on Archival Information Exchange, the Library of Congress, members of the archival profession, format users, software developers, and a host of others. It

depends on the willingness of the archival profession to adopt standardized methods and procedures, on the availability of computer programs to manipulate formatted data, and on the ability of archivists, librarians, and other information professionals to continue the cooperation that has characterized their initial efforts.

¹³Format users should note that several errors occurring in the Library of Congress's "official" format issuance (MFBD, Update No. 10) have been corrected in the SAA's edition of the format, *MARC for Archives and Manuscripts: The AMC Format*, as a result of discussion between the author and Margaret Patterson of the Network Development and MARC Standards Office of the Library of Congress. MFBD, Update No. 11, available from the Library of Congress, also includes these corrections. Substantive changes have been recommended as a result of the October 1984 meeting of AMC format users in Madison, Wisconsin. Those wishing to propose additional changes should address their concerns to the SAA's Committee on Archival Information Exchange.