Standards: Background Paper

Description Standards: A Framework for Action

DAVID BEARMAN

Abstract: The growing significance of electronic records makes it especially important that archivists be aware of the description data required to document their holdings. Archivists will have to become involved in the development of description standards in order to obtain the documentation required to describe electronic records. The paper proposes a matrix depicting description standards as a way of addressing the practical issues associated with their development and promotion. The author notes the effort required to develop standards, suggests criteria for evaluating standards proposals, and calls for the working group to help archivists understand the need for standards as a necessary basis for subsequent debate and eventual endorsement of specific standards.

About the author: David Bearman is the publisher and editor of Archives and Museum Informatics. *For additional biographical information, see "Members of the Working Group," pp. 534-537. This article has been revised slightly from the paper prepared for the first meeting of the Working Group on 3-4 December 1988.*

AT THE ANNUAL MEETING of the Society of American Archivists (SAA) in 1987, I introduced a motion at the Description Section meeting that called upon the SAA to play a more active role in standards. It passed overwhelmingly, after full discussion, despite many years of suspicion of standards on the part of archivists. This new spirit reflects the growing professionalization of the field. It also reflects a realization that the future of archives is as an information service; as such, we will increasingly be dependent upon automation, an arena in which standards are critical. Although the SAA ultimately did not take up the challenge directly (for fear of competing with another grant proposal it sought at the same time), this informal working group on Archival Description Standards was organized as a direct consequence of that vote. Its charge is to define what action the profession could and should take with respect to description standards. In the following remarks, I hope to provide us with a common framework for action, by defining what a description standard is, distinguishing types of standards that call for different kinds of involvement by the profession, and identifying criteria we can employ to assess the benefit of pursuing any given standardization proposal.

It is critical for us to reach consensus on these points quickly, since we are planning to hold only one additional meeting and we have agreed to hear advocates for a plethora of proposed standards. We need to come to that meeting with an articulated framework or we will not leave with concrete action plans. And we can do neither unless this meeting results in an understanding about the domain, its defining attributes, and evaluative criteria.

In her background paper, Lisa Weber provides a clear explanation of what standards are. I would like to build on that by exploring the sources of archival description data and the types of standards applicable to them.

Description does not begin and end with cataloging; therefore, description standards must extend beyond MARC record structures and library cataloging conventions even if we adopted these. Description encompasses traditional archival repository guides, inventories and registers, indexes to records series, concordances, and even documentary editing. Indeed, description of records takes place at numerous levels of aggregation and has a wide variety of traditional output products. Furthermore, description includes linking records to records schedules, retention regulations, appraisal reports, institutional histories, descriptions of common forms-of-material, and biographical data about individuals as records creators, so it must also involve description of these entities (persons, organizations, retention regulations, etc.) that are the subject of "authority" data.

Sources of Description Data: The Records

What all of these types of descriptions have in common is that archivists create them in the course of documenting holdings. I would like to extend our gaze to actions we might take to foster description standards for electronic records, an arena that should be increasingly important to archivists. In the world of electronic records, description standards may cause databases and documents to "describe themselves." Already, electronic systems require such standard, "self-referential" description data in order to process data packets from other systems. Because there is a growing demand from users for interconnection of electronic information systems in different hardware and software environments, some applications, such as electronic mail systems, already provide a means by which the sending system will transmit standardized "header" and "address" information so a target system can process the packet it receives. Participation of archivists in de-

fining such standards may well be as essential to our ability to describe electronic records in the future as our recognition of the special format of a paper ledger or a daybook is today.

No doubt you are already aware that electronic messages are wrapped in standard electronic "envelopes" in which the destination, time, and source are all encoded as part of a header, but you have probably not given much thought to the potential of such information for archival description. Consider what it would mean to future description practices if we could influence the categories of information that would be encoded in such headers, and assure that data regarding provenance and history of creation and use was included.

Description of data communication packets is only the beginning. Systems could be designed to provide much more detailed description of the form of the records they contain using other standards already in place today. SGML, or Standard Generalized Markup Language is one of a family of encoding standards that "marks up" documents, originally for typesetting, in such a fashion as to describe all the places where we want to use typography to indicate a different function for parts of the text, such as the index, table of contents, headings, subheadings, footnotes, and bibliography. An SGML markup set for a document, therefore, serves to encode its "form-of-material" characteristics. It also permits future users to search named document components. The kinds of formal aspects of documents that are "marked" by markup languages are precisely those that have guided the study of diplomatics, and that enable archivists to distinguish ledgers from daybooks, to return to an earlier example. If archivists become involved in defining these and similar standards, some description of future archival holdings will be done for them by the software that

generated the recorded evidence with which they deal.

Sources of Description Data: Databases

Another area of description in which archivists need description standards is the structure and content of data that is used by archival description, but made by non-archivists. Information such as organization charts, biographical data, geographic authority information and records retention regulations, are incorporated into archival description systems by archivists who make use of reference sources published by others. These could more easily be imported into archival systems if archivists develop standards for the data they require.

It is important that we think about these areas of description standards that lie beyond cataloging the records themselves. Electronic records are in a formative stage of development and could be influenced by archivists if we are willing to exercise a leadership role. These opportunities for standardization are examples of kinds of standards that are needed now but have been unnecessary (and would not have been much use) in the paper world. As such they reinforce the timeliness of our consideration of archival description standards and will help our profession see more clearly the roles that archivists may play in the future.

Types of Archival Description Standards

In order to evaluate how best to advance archival description standards, we need a taxonomy of standards that addresses the practical issues associated with their promotion. Let me suggest a simplistic, but potentially useful, 2x2x2 matrix with cells defined by three pairs: "existing:new," "internal to archives:external communities," and
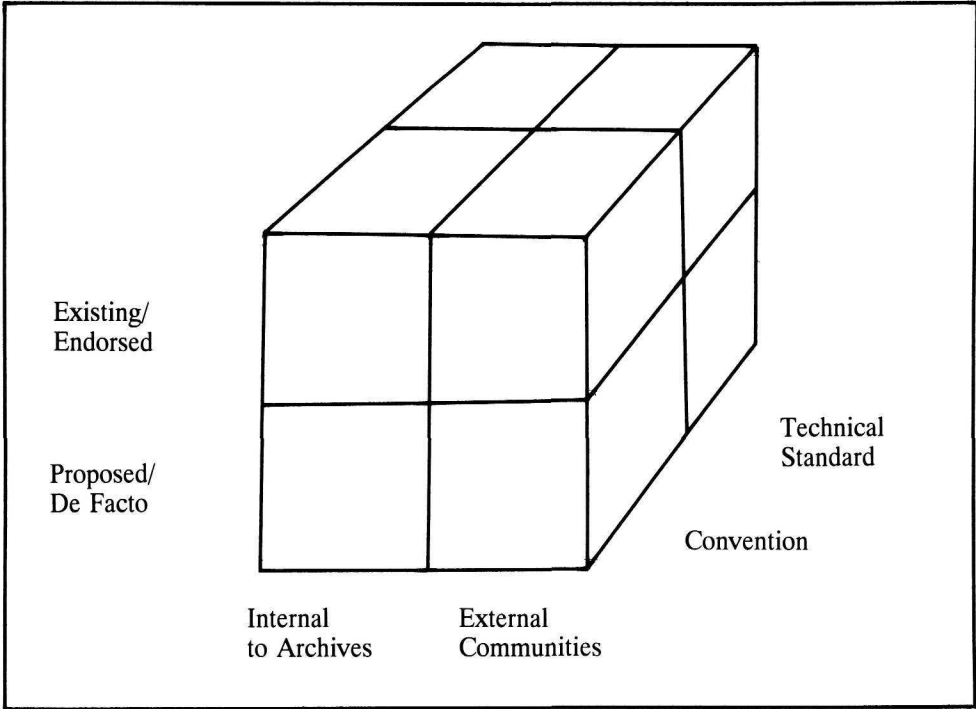
Figure 1: Types of Standards for the Project to Consider.
Editor's note: This matrix preceded, and led to, the one incorporated in the Working Group's report at p. 453.

"convention:technical standard." This yields the matrix shown in Figure 1.

A few examples of each sort of archival description standard are:

Existing, external, technical:
Bibliographic Information Interchange (ISO 2709/ANSI Z39.2)
Message Handling System (CCITT x.400)
Data Descriptive File for Information Interchange (ISO 8211)
Standard Generalized Markup Language (SGML) (ISO 8879/ANSI Z39.59)
USMARC format, including AMC

Existing, external, convention:
AACR 2
ACRL Standard Terminology for US-MARC field 583
LC Descriptive Terms for Graphic Materials: Genre and Physical Characteristics Headings

Art and Architecture Thesaurus (AAT)

Proposed, external, technical:
(Office Document Architecture/Office Document Interchange Format (ODA/ODIF)
Integrated Systems Digital Network (ISDN)
Technical Office Protocol (TOP)

Proposed, external, convention:
ISO Common Command Language
AASLH Common Agenda Data Dictionary
ISO/ANSI Repository Description for Directories

Existing, internal, technical:
none

Existing, internal, convention:
none

Proposed, internal, technical:
Hensen, *Archives, Personal Papers & Manuscripts*, 2nd ed.

Organization history, appraisal records as used in RLIN

Proposed, internal, conventions:

Form of material and function vocabularies

Canadian Fonds Level Description Guidelines

This list should startle us into thinking harder about criteria we would use to evaluate which standards efforts should engage us. We have nothing in place internally, and a very thin list of "proposed" internal standards. What is unstated, but reflected in the accounting is the substantial levels of effort that are involved when any community decides to develop and maintain standards.

Effort Required to Develop Standards

External standards in this list are maintained or under development by the International Organization for Standardization, the American National Standards Institute, the National Information Standards Organization, the Institute of Electrical & Electronic Engineers, the Association for Computing Machinery, the American Library Association, the Library of Congress, and a variety of professional associations outside of archives. Existing technical standards had an average gestation period of more than four years. Many of the externally maintained conventions have been changed continuously during their lifetime, some as often as twice a year. Substantial part-time effort is required on the parts of all those who represent voting members in these various committees.

One of the reasons why so much effort is involved is that consensus is hard to reach. Many interests are contending and each needs to be understood by the others. But another cause is that these issues are extremely complex, and that very tiny technical differences often spell success and failure. The activity can be engrossing for

a few people who find such details intriguing, but it will always be difficult to involve large numbers of people. Thus we are talking about a small number of archivists, heavily committed in a large number of different settings, even if we decide only to play a role in maintaining existing standards. One of the issues we must address in our final recommendations will be how we, as a profession, can best allocate our standardization resources.

Criteria for Evaluating Standards Proposals

The costs to the profession of devoting large numbers of its best people to standards efforts would certainly be acceptable if the standards resulted in substantially better practice and savings through information sharing or self-referential documentation systems, but unfortunately results can only be achieved if there is widespread understanding of the standards on the part of archivists. Creating such acceptance of a standard, and training the profession to employ the standard so as to achieve consistent results, is a momentous undertaking that will be undermined quickly if too many standards are introduced too rapidly. This is especially true because most archivists do not get formal training in archives but are expected to learn on the job or through occasional continuing-education experiences.

To begin, we should try asking the following questions about every proposed standard:

● Are there existing standards we could adopt, but haven't? Must we try to develop new ones?

● Does the proposed arena of description actually require a standard? What, precisely, will it achieve and at what cost?

● Could the results be achieved by modification of an existing standard? If so, which is the most minimal approach to the same end?

- Can action on this standard be led by someone other than archivists? If so, how can we get it on their agenda?
- Is the area sufficiently ready? Can we surmise what a standard would look like?

In addition, there are a number of political and technical questions that must be addressed:

- How does the proposed standard fit into the ISO/OSI framework? What mechanisms besides the Committee on Archival Information Exchange can SAA afford? In other similar professional organizations, the expense for participating in standards efforts is borne by the employer of the designated representative. Such enlightened self-interest is not a problem for larger organizations, but the archival community has few, if any, actors willing to play this role.
- How will individuals who formally represent the SAA be held accountable for their actions on standards bodies? Where will discussions of standards issues take place: at meetings? in journals? on appointed committees?
- What options for involvement can we identify? In addition to participating in some standards efforts, we could be sponsoring them. On the other hand we could participate minimally in some efforts by appointing liaisons, monitoring formal actions, and/or reporting on standards developments to the archival profession.

Conclusion

Before the second meeting of the Working Group we will need to present a coherent case to the profession, explaining what standards can be, what role they could play, what potentials we see, and what realities we recognize. We need to spell out a framework in which we can debate standards proposals and consider organized action. And we need to examine the role this self-selected group can play. In doing these tasks, we must be guided by the broadest sense of what description standards are and could be, the most rigorous recognition of the types of standards and the costs of realizing them, and the willingness to move effectively in the most promising directions rather than be torn in many directions at once by worthy, but unpromising, proposals. Especially, I hope that we can think about arenas for standards and mechanisms to assure legitimacy before entertaining a rash of efforts already under way, representing the interests and needs of an interest group within the profession.

This agenda will keep us focused. It will also require hard decisions. We are evaluating areas for prospective profession-wide investment, not judging the quality of specific standards proposed by our colleagues. Because we lack the mandate that would make endorsement meaningful, this group should aim to clarify the issues and define the process for standards development rather than advocate the adoption of particular standards. If we do our work well, more archivists will understand the reasons for description standards. More archivists will appreciate the varieties of such standards and the reasons for adopting standards at the levels of information systems, data structures, data content, and data values. And more will appreciate that standards are not static rules for technicians but the living practices of professions.