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# ARCHIVAL INFORMATICS

## TECHNICAL REPORT

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PART 2 of  
ARCHIVAL INFORMATICS NEWSLETTER & TECHNICAL REPORT  
Volume 1, #3 Fall, 1987

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### FUNCTIONAL REQUIREMENTS

#### FOR

### COLLECTIONS MANAGEMENT SYSTEMS

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The Archival Informatics Technical Report (ISSN 0894-0266) is part two of the quarterly publication series, Archival Informatics Newsletter & Technical Reports. The Archival Informatics Newsletter (ISSN 0892-2179), part one of the series, contains short articles and reviews on matters of current interest in the archives and museum communities.

Subscriptions to the Archival Informatics Newsletter, together with the quarterly Archival Informatics Technical Report, are US\$160 p.a., in the USA and Canada, US\$180 p.a. overseas airmail.

Subscriptions to the Archival Informatics Newsletter alone are US\$24 pre-paid in the USA, US\$30 prepaid in Canada and abroad, and US\$40 if billed, worldwide.

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Functional Requirements for Collections Management Systems.

Vol.1 #3, Fall 1987, US\$45.

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FOR COLLECTIONS MANAGEMENT SYSTEMS

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## INTRODUCTION

Contemporary archives and museums maintain collections which number in the tens or hundreds of thousands of items. As their relatively small staffs struggle with the demands imposed by their stewardship over this heritage, cultural repositories seek more effective means to control information concerning the cultural resource for which they are responsible. This study examines the information requirements of a system for managing collections in any cultural repository, whether that system is ultimately automated or not. The discussion is intended to make professionals more aware of the informational requirements of the many activities which comprise collections management, and to identify for systems designers, and those evaluating automated systems, the underlying functions which support the collections management process.

The premise of this discussion is that the functional requirements for an information system are a reflection of the business requirements of an organization. As such, we find that the functional requirements of archival and museum collections management systems reflect the (common) activities of managing collections, not the (unique) characteristics of the items in their care. Underlying commonalities between museums, archives, and libraries, and even zoos, aquaria and botanical gardens, are more compelling in understanding these functional requirements than are the differences. The key to identifying these commonalities is to understand the **procedures** which characterize collections management as practiced in these institutions and to trace a series of **actions** which take place in the life-cycle of collected objects.

Collections management information systems are not the only types of information systems required by cultural repositories. Personnel management (staff and volunteer), financial management (accounting and development), and even retail sales systems have a place in such organizations. While it would be desirable to have information from these other systems available for collections management and to have collections management data reported into these other systems at certain points, the

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specific degree of integration which is desirable is an implementation issue beyond the scope of this report. There has even been some confusion, in the literature of archival and museum automation, between collections management systems and information retrieval systems. This report does make a distinction because information retrieval systems have a large and discrete set of functional requirements which deserve to be treated in a separate monograph. Therefore, it addresses only facilities that support curatorial description and information retrieval for collections management purposes, and stops short of defining functional requirements for "online catalog" systems which support research on collections.

This report also recognizes that functional requirements are not the only requirements to be considered in the definition of (or implementation of) an information system. Technical and performance requirements (how big, how fast, how many, with what security and what degree of user assistance) are equally important. Other elements also come into play, including cost, timing, the nature of support, staff abilities and documentation. These topics are critical in any discussion of the acquisition of technology based solutions to information needs, and readers who plan to acquire software or hardware are urged to carefully read, and follow, a rigorous approach to systems selection.<sup>1</sup> However, functional requirements must come first in the process of defining needs, since the importance of any given technical requirement can only be assessed in light of the functions to which it will contribute.

This report takes the life-cycle of cultural objects as its organizing principle. Chapter I addresses why cultural objects have a common life-cycle and the sources of commonality and divergence in the information requirements of cultural repositories. In Chapter II, a data model of a collections information system is introduced and the central organizing concept of collections management systems, actions, is discussed. Chapter III examines collections management in the context of other information

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<sup>1</sup> Edwin M. Cortez, Proposals and Contracts for Library Automation: Guidelines for Preparing RFP's, Studio City, CA, Pacific Information, 1987, also Taylor, Gigi, "The Request for Proposal: Suggested Components", AAM Program Sourcebook, Washington, DC, AAM, 1987 p.325-35. Archival Informatics Technical Report vol.1 #4, Winter 1987 will be devoted entirely to the issue of technical specifications and acquisition of automated systems for archives and museums.

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systems which support the management of cultural repositories. The study then looks at the concept of management in detail, and explores the functional requirements of time, space, funds, personnel and holdings based management. [Chapter IV]. Finally, the report introduces methods for rigorously defining functional requirements for information systems in cultural repositories and discusses the investment required to properly plan the acquisition and implementation of systems. [Chapter V].

Three appendixes provide an opportunity for further study. The first presents a detailed view of the data of collections management systems. Appendix B supplies examples of functional requirements in the format in which they are typically stated in requests-for-proposals for acquiring automated systems. A bibliography of the very recent literature most relevant to defining functional requirements for collections management systems in cultural repositories is provided in Appendix C. Because the process of defining functional requirements is only one step in acquiring and implementing information systems, other phases of the effort are discussed in detail in a companion publication, Archival Informatics Technical Report vol.1 #4., (Winter 1987) entitled Acquiring and Implementing Information Systems for Archives and Museums: Technical Requirements.