

Independent Study in the Organization of Maps and Related Cartographic Materials

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Work Flow

1. Selected un-cataloged cartographic materials will be gathered from the Geosciences library and the Maps collection of the University of Iowa in order to create online records for these materials.
2. Maps will be sub arranged by state and then by series, if applicable.
3. Maps will be searched in the RLIN and/or OCLC databases to determine if good copy exists for the individual titles. These records will be imported to the InfoHawk database and updated appropriately.
4. Bibliographic records for materials for which no existing record could be found will be created.
5. LC classification and cutter numbers will be assigned and marked on those maps that are not part of analyzed serials. Those materials that are part of analyzed serials will be marked with the appropriate call number.
6. Each bibliographic record will be marked so that it will be exported to the national databases when the next loader is run on the InfoHawk database in order to share these records with the larger library community.
7. The maps will be sent through the Preservation/Marking department for processing before being returned to the owning branch library.

Independent Study Product

The outcome of this independent study will be an annotated bibliography based on the attached list of readings. The purpose, goals and objectives will be reviewed to evaluate how they were accomplished; the issues raised while completing the course; and how any challenges were overcome.

Purpose, Goals and Objectives of the Independent Study

1. To understand the bibliographic control of cartographic materials and the issues associated with it.
2. To evaluate the theories and rules involved in cataloging cartographic materials in various formats.
2. To gain a clearer understanding of which aspects of map cataloging needs to be accomplished by a librarian and which can be/should be delegated to a paraprofessional.
3. To understand the issues involved with cataloging a large variety of maps and map series. These include various map formats, including those on paper as well as CD-ROM.
4. To more fully grasp the Library of Congress Classification scheme as it pertains to maps.
5. To better understand the Library of Congress Subject Headings and Authority records as they pertain to cartographic materials.

I am hoping to learn more about how creating online access to materials traditionally accessed only through sketchy paper files will affect library service to patrons. I am also hoping to learn to how best provide the online access, how the bibliographic records will interact with authority records, and to how best set up an environment where patrons can search for cartographic data via indexes already built into the database. My goal is to provide bibliographic access to many of the maps already held by the University of Iowa Libraries in a manner that makes them more readily available to patrons, whether the individual user is on campus or across the nation. I also hope to learn how to manage the workflow for an ongoing effort to keep the cataloging and classification of cartographic materials up-to-date, and to reduce the overall backlog of un-cataloged maps.

Independent Study Summary

After beginning by doing most of the reading and abstracting of the materials included on the accompanying bibliography, the work of describing and cataloging the maps and map series began. The readings included several useful descriptions on where to begin cataloging, and how to approach the task of learning “the language” of maps. I believe that it was best to have read these articles before starting as it made me more familiar with the terms used in cartographic production and description. This method also prepared me for what the records were to look like in addition to the differences in content to the formats I’m more familiar with, e.g.: books and serials.

I feel that I have made significant progress in educating myself in map cataloging, and I think that having learned this complex format will assist me in the future if I find myself in the position where I have to familiarize myself with other complex bibliographic formats. While finishing up the reading and abstracts, I took the time to reflect on the aspects of map librarianship I had explored during the independent study; organization of a cataloging project, workflow issues, staffing issues, as well as the minutiae of doing the cataloging itself, and realized that I had also gained a more thorough understanding of bibliographic and authority control in regardless of format.

Number of readings abstracted:	36
Number of map serials cataloged:	4
Number of map sets cataloged	1
Number of individual maps cataloged:	48

Annotated Bibliography

1. Andrew, Paige G. "Cataloging the Contemporary Printed Atlas." Cataloging & Classification Quarterly 27.1/2 (1999): 147-64.
Abstract: Creating a bibliographic description for a contemporary atlas is more easily understood if one first gives consideration to what an atlas is. This article deals with cartographic atlases as opposed to atlases that focus on other subjects, such as the anatomy of human or other bodies, or on other types such as those about minerals. Of primary consideration is that cartographic atlases are first and foremost a means of displaying graphic information about the Earth or other celestial body's surface and/or subsurface, with the physical nature of the item following in relevance when describing the item in hand. Following the overview of what defines an atlas this paper provides the cataloger who has little or no experience with this format guidelines towards which fields are critical to its proper description and, therefore, its retrieval.
2. ---. "A Survey Technique for Map Collection Retrospective Conversion Projects." Cataloging & Classification Quarterly 27.3/4 (1999): 405-12.
Abstract: Although much has been written about the need for, methodologies, costs, and other aspects of retrospective conversion, little exists in the literature regarding retrospective conversion of cartographic materials, and map collections specifically. Reference is usually made to the need to survey the collection for conversion, but the author was unable to locate a description of a random sampling technique that explains how it is applied and what the outcome was. This article introduces the use of a random sampling technique with a major university map collection. The University of Georgia's Maps Collection was surveyed to ascertain how much of the existing maps card catalog needed updating to an electronic form for use in the local online public access catalog. In addition, the samples pulled from the survey were searched against the OCLC union catalog to determine the proportions of records that could be found in OCLC and loaded into the online catalog, with no cataloging intervention in relation to the degree to which the maps cataloger would have to either adjust existing records or create original records for the online catalog.
3. Armstrong, HelenJane, and Jimmie Lundgren. "Cataloging Aerial Photographs and Other Remote Sensing-Materials." Cataloging & Classification Quarterly 27.1/2 (1999): 165-227.
Abstract: Remote-sensing images are valuable library resources, which provide highly useful information to a variety of library patrons. They are graphic spatial relationships recorded by a device that was not in physical contact with the geographic entity being studied. Effective access and description in the library catalog is necessary so that these images may be found and used. This article discusses characteristics of remote-sensing images and maps: how to identify them; and how to catalog, classify and provide subject access for them. A variety of remote-sensing items and their catalog records are reproduced and discussed, including application of the new Remote-sensing 007 field.

4. Corsaro, James. "Control of Cartographic Materials in Archives." Cataloging & Classification Quarterly 11.3/4 (1990): 213-28.
Abstract: Archival repositories are a major source of cartographic information useful for many kinds of research. The author emphasizes that access to these cartographic resources is an integral part of their availability and is related to the general principals of archival arrangement and description. The automation of archival access using the MARC Format for Archives and Manuscripts Control, it is argued, has created great changes in the archival description process. The author also argues that although there had been a MARC Format for Maps in place for a significant period of time at the writing of this article, this format was not as useful for the description of cartographic archives and archivists had not yet developed the generally accepted standards needed to make these materials accessible to a wide range of users. This article discusses the differences in archival and bibliographic description of maps and suggests some possible options for standards development in the control of cartographic archives.
5. Davis, Harry O., and James S. Chervinko. "Map Cataloging and Classification: The Basic Who, What, and Where." Cataloging & Classification Quarterly 27.1/2 (1999): 9-37.
Abstract: This study explores map cataloging in academic and research libraries, analyzed by four size ranges of map collections. Topics include the locus of map cataloging, the involvement of professionals, paraprofessionals, and students in map cataloging, and perceived adequacy of staffing. Additional topics include the extent and level of MARC records in map catalogs and bibliographic utilities, and classification systems used for map cataloging. Finally, there is an examination of the predominant attributes of map cataloging and the adequacy of current statistics to allow for understanding and improvement of map cataloging.
6. Ercegovac, Zorana. "Minimal Level Cataloging: What Does It Mean for Maps in the Contexts of Card Catalogs, Online Catalogs, and Digital Libraries?" Journal of the American Society for Information Science 49.8 (1998): 706-19.
Abstract: The author examines some of the proposals that deal with the problems of cataloging in two different technological contexts: Printed-card catalogs and online catalogs. She begins with an examination of some of the measures that attempt to deal with the "crisis in cataloging" at the Library of Congress in the 1940s, and then addresses some of the current problems in the era of OPACs. Specifically discussed is the extent to which minimal-level cataloging, as defined in AACR2 and then implemented in the OCLC database, works for maps. The discussion is organized around two main groups of access points: Controlled vocabulary data elements, including name data elements, and free-text data elements. The author closes with a discussion of the prospects that the next generation of online catalogs using the Z39.50 protocol and SGML format might offer to minimal-level cataloging for maps.

7. ---. "Proposed Definitional Conditions As a Basis to Study the Concept of Map Author." Cataloging & Classification Quarterly 10.4 (1990): 19-50.
Abstract: This study describes an empirical project designed to examine the following questions: (a) what constitutes the concept of "map author," and (b) of the responsibility functions appearing in a sample of 178 maps under consideration, which responsibility functions participate significantly in the process of map-making? This exploratory study considered single-sheet maps produced by three U.S publishers after 1981 as found in the OCLC database, retrieved and examined by the author.

8. Kandoian, Nancy A. "Cataloging Early Printed Maps." Cataloging & Classification Quarterly 27.3/4 (1999): 229-57.
Abstract: In the context of machine-readable cataloging for national bibliographic databases, this paper describes the cataloging of monographic early printed maps, whether published separately or extracted from other publications. It deals with description and access to capture the essence of a rare or "antique" map to create a useful surrogate. The step-by-step approach, rather than breaking new ground, integrates rules and guidance from multiple sources, both cataloging tools and supplementary materials, in a narrative fashion, with reference to the sources, their specific rules, and stated policies. Reference is made throughout the text to ten simple catalog records, with MARC 21 tagging, that are appended to the article.

9. Kollen, Christine E. "Work Flow of Map Copy Cataloging at the University of Arizona." Information Bulletin (Western Association of Map Libraries) 21.3 (1990): 143-46.
Abstract: This article focuses on how one library redefined the workflow and map processing procedures, making the system more streamlined. This effort resulted in decreasing the backlog of maps to be cataloged, elimination of unneeded procedures and the redesign of part of the map cataloging subsystem.

10. Lange, Holley R. "Cataloging Maps: Getting Started." Colorado Libraries 25.1 (1999): 40-41.
Abstract: The author gives valuable information on beginning map cataloging, such as listing which resources to examine, defining parts of the bibliographic record as it relates to cartographic materials, and discussion of associations and list-servs available in support of map catalogers.

11. Larsgaard, Mary Lynette. "Cataloging Cartographic Materials on CD-ROM." Cataloging & Classification Quarterly 27.3/4 (1999): 363-74.
Abstract: CD-ROMs are the most frequently seen varieties of digital Geospatial data in map libraries. This article is an overview of how to catalog these CD-ROMs. It is to be used in concert with the Welch and Williams article ["Cataloguing Digital Cartographic Materials"] that immediately precedes it.

12. ---. "Toward a Catalog for the Millennium: Digital Geospatial Metadata and Data in the Alexandria Digital Library." Meridian .16 (1999): 29-36.
Abstract: This article is a brief overview of the digital geospatial data and its presence, with the Alexandria Digital Library as a part of the developments in the field, and is followed by a detailed statement of Alexandria Digital Library's cataloging/metaloging; its history and evolution through a four year period of federal funding and afterwards.

13. McEathron, Scott R. "The Bibliographic Control of Globes: Problems and Solutions." Bulletin (Special Libraries Association, Geography and Map Division) .185 (1997): 28-32.
Abstract: The author denotes the problems facing librarians who classify and catalog globes, pointing out that map classification systems must be adapted when used for globes, to serve their intended purpose. Common cataloging resources often have few examples for cataloging globes so librarians much apply rules intended for other formats. Problems include that for many globes, the lack of bibliographic information supplied by the globemaker make them difficult to identify and catalogue. The author also stresses how important it is that the cataloger supplies a thorough physical description of the globe in such cases. Improved accessibility and accountability for these unique cartographic resources depends on the librarian's willingness to catalog them.
14. ---. "Cataloging of Globes." Cataloging & Classification Quarterly 27.1/2 (1999): 102-12.
Abstract: Globes are a unique cartographic format with special characteristics that need to be considered when providing bibliographic description and access. This article describes the challenges and characteristics of cataloging globes. It provides practical assistance in applying specific MARC 21 fields for globes. Special consideration is given to those fields that are unique to cataloging globes including: physical description areas, title, and subject access.
15. Moore, Barbara N, et al. A Manual of AACR 2 Examples for Cartographic Materials. Lake Crystal, MN: Published for the Minnesota AACR 2 Trainers by Soldier Creek Press, 1985.
Abstract: This is a collection of examples of catalog records for various formats of cartographic materials. There is also discussion of AACR2 rules and how they have been applied in the examples.
16. Moore, Susan M. "Navigating the G Schedule." Cataloging & Classification Quarterly 27.3/4 (1999): 375-84.
Abstract: The author explores the development and use of the Library of Congress Classification G schedule. The organization of the schedule is discussed, as is the application of the schedule to the creation of class numbers. Some weaknesses of the schedule are also discussed.
17. Moore, Susan M., and Lucinda M. Hall. "Map Cataloging: Learning the Basics: Saturday, June 16, 2001; 9:00 Am.-12:30 Pm; San Francisco, California." ALA Annual Conference.
Abstract: Intended to be used in conjunction with a workshop or seminar on map cataloging, this publication clearly illustrates how to go about beginning to catalog a map. The authors take the student through a thorough set of examples and exercises so that the pupil learns the basic and important aspects of map description in relation to the MARC format.

18. Parker, Velma. "Cataloging Map Series and Serials." Cataloging & Classification Quarterly 27.1/2 (1999): 65-101.
Abstract: This article defines and outlines the characteristics of map series, map sets, map serials, maps in multiple editions and multi-sheet single maps. Brief instructions on sources of information and general methodology used in gathering information prior to creating the entry are presented. The different methods that may be used for cataloguing series and serials are explored. There is also a brief section on cataloguing bi- and multilingual works in a bilingual environment. For each relevant area of description, instructions and examples are given to illustrate problems. Sections on analysis (including multi-level cataloguing).
19. ---. "MARC Tags for Cataloging Cartographic Materials." Cataloging & Classification Quarterly 27.1/2 (1999): 5-8.
Abstract: This is a table of those MARC fields most frequently used when cataloguing cartographic materials. The table gives fields both for monographs and for serials.
20. ---. "Multilevel Cataloging/Description for Cartographic Materials." Information Bulletin (Western Association of Map Libraries) 21.2 (1990): 86-96.
Abstract: The author discusses the multi-level description of cartographic series in terms of parent and child records. This sort of analysis for large series or sets of maps would give better access to fuller information about a given libraries holdings and the information on the maps themselves. This type of cataloging uses more resources, but the long-term benefits in access are worth the extra effort, especially in those libraries that use an automated system.
21. Prescott, Dorothy F. "Early Maps With or in Printed Publications." Cataloging & Classification Quarterly 27.3/4 (1999): 285-301.
Abstract: This article identifies the types of publications containing maps and the need for access to maps contained in them. The emphasis is on older maps; the comments are opposite for cataloging of current maps. The needs of map users are discussed, identifying the points of access that are critical to successful map retrieval. Main entry for maps is discussed. Various categories of associated map and book items are identified, and suggestions made, with USMARC examples, as to how these maps might be treated by the cataloger.
22. Rhoads, James B. "Conservation of Cartographic Materials." Information Bulletin (Western Association of Map Libraries) 23.3 (1992): 163-67.
Abstract: Presented at the WAML Fall Conference, September 19, 1991, this article discusses this history and services of the Cartographic and Architectural Branch of the National Archives. The author discusses how practices and attitudes toward the conservation of cartographic materials have changed since the mid-1950s.

23. Rockwell, Ken. "Problem Areas in the Descriptive Cataloging of Sheet Maps." Cataloging & Classification Quarterly 27.1/2 (1999): 39-63.
Abstract: This article discusses areas of the bibliographic record where differences from cataloging monographs are commonly encountered in the descriptive cataloging of flat or folded map sheet maps. Major fields in the bibliographic record are treated, such as title proper, main entry, scale, pointing out common misunderstandings and errors, which those unfamiliar with cataloging maps may experience. Hints, guidelines, illustrations, and examples for the resolution of these problems are given.
24. Romero, Lisa, and Nancy L. Romero. "Cataloging Early Atlases: a Reference Source." Cataloging & Classification Quarterly 27.3/4 (1999): 265-84.
Abstract: The cataloging of early atlases presents a multitude of challenges to catalogers. This is true primarily because a cartographic atlas is a collection of maps in "book" form, but also because the item is an early or "rare" item. This article attempts to provide the cataloger with the necessary guidance for cataloging early atlases by reviewing the relevant cataloging sources, discussing the issues relevant to early atlas cataloging, and providing examples of early atlas cataloging. The article is intended to serve as a reference source for those individuals who will be cataloging early atlases.
25. Sherwood, Arlyn. "Enhancing in OCLC's Maps Format: a Participant's View." Cataloging & Classification Quarterly 27.3/4 (1999): 429-41.
Abstract: This article explores one of OCLC's cooperative quality control efforts, the Enhance Program, specifically in the Maps Format. Various aspects of participation in the program, such as the application process, reasons for participation, training, typical experiences, types of changes made to records, and the benefits of participation are discussed. One cataloger's twelve-year experience with Maps Format records forms the basis for a list of the most common changes made to map records in the Enhance Program. The list is offered with the goal of further improving the quality of map cataloging in the creation of OCLC records.
26. Smits, Jan. "Metadata: an Introduction." Cataloging & Classification Quarterly 27.3/4 (1999): 303-20.
Abstract: With the transition from cartographic materials to spatial information the nature and amount of access data for the library field is changing. Besides bibliographic data there exists now a range of metadata, each kind for specific purposes within specific user fields. To define their relation to each other they have been put into a diagram. Through the Resource Description Framework these should all be available through a common interface for Internet-searching. To prevent confusion spatial metadata is defined. Spatial metadata introduces new elements to descriptions with new application possibilities.

27. ---. "Spatial Metadata: An International Survey on Clearinghouses and Infrastructures." Cataloging & Classification Quarterly 27.3/4 (1999): 321-42.
Abstract: Consistency and interoperability are objectives when creating standards for spatial metadata. Besides FGDC-metadata standards some other international standards are in use or will be in use soon. The use of these standards forms the basis for Geospatial data infrastructures (GDI) and clearinghouses. Though most GDIs and clearinghouses are in the planning stage, the contours of regional and a global Geospatial data infrastructure (GGDI) are slowly emerging. Maps should be part of the interfaces, which provide access to the GDIs and clearinghouses.
28. Stibbe, Hugo L. P. "Cataloguing Cartographic Materials in Archives." Cataloging & Classification Quarterly 27.3/4 (1999): 443-63.
Abstract: After a brief review of the history of the development of cataloguing rules for cartographic materials, both within the Anglo-American Cataloguing Rules community and internationally, the author discusses the differences of the cataloguing of this material in archives compared with that in libraries. He states that the cataloguing of this material in archives relates to how the material was created or produced in the context of how it was used. Archival cataloguing (or archival description as archivists prefer to call the process) emphasizes methodology over the material itself. The paper attempts to give a short overview of the methodologies, their development and application. Diagrams and an example are used to illustrate the archival methodology and concludes that cataloguing records and archival description records produced by these methods may co-exist on the same database but that current computer systems developed for library applications have, in general, not developed the capability to display open hierarchically structured linked multilevel descriptions such as required by archival methodology of multilevel description.
29. Studwell, William. "Map Libraries and the Possible Collapse of the Cataloging Process." Information Bulletin (Western Association of Map Libraries) 23.3 (1992): 172-73.
Abstract: This editorial discusses how map librarians can help mitigate the problems associated with the simplification of cataloging. He suggests that being cognizant of the possible collapse of cataloging is the best way to counteract this danger.
30. Tenner, Elka, and Katherine H. Weimer. "Reference Service for Maps: Access and the Catalog Record." Reference & User Services Quarterly 38.2 (1998): 181-86.
Abstract: The premise of the article is that general reference librarians and other non-maps specialists that provide service to collections with a map component need to be aware of the unique aspects of map cataloging in order to provide access to this material. The authors suggest that the standardized descriptive cataloging format, developed for books, is not particularly suited to describe maps. The significant access points used for books are problematic for maps, which are best accessed, according to the article, via subject analysis, both geographical and topical. Geographic information in electronic format could have significant impact on the future of cataloging codes. The authors stress that the combined efforts of reference librarians and cataloging librarians is required to create useful bibliographic records through which library users can access the information provided by these materials.

31. Thiry, Christopher J. J. "Cataloging Geologic Sections." Cataloging & Classification Quarterly 27.1/2 (1999): 113-45.
Abstract: In some existing cataloging records, there is evidence of considerable confusion in cataloging graphic representations of geologic measurements. The cataloging of maps in six areas: leader fields in a MARC-formatted record; 0xx fields in a MARC-formatted record; Scale; Physical description; Notes; and Subject headings. This paper describes the use and importance of geologic sections. It also explains why they are to be cataloged in the MARC Map Format, explains why they are called "sections," and defines what is meant by "geologic section." The article also details the rules for cataloging, and demonstrates the proper procedure for cataloging a geologic section.
32. Vick, Nancy J., and Nancy L. Romero. "Cataloging Rare Maps." Cataloging & Classification Quarterly 10.4 (1990): 3-18.
Abstract: The authors begin by asserting that maps have bibliographic characteristics that present unusual challenges to traditional cataloging practices. Rare maps carry these challenges even further by requiring bibliographic descriptions that identify and distinguish the item in hand from any other copies. The authors also discuss that while it has been acknowledged that rare maps should be bibliographically described in a different manner than modern maps, as rare printed texts are described differently than modern texts, the map cataloging community is uncertain about how this should be accomplished. The impetus of the article is to identify some problems unique to the cataloging of rare maps and to discuss the appropriateness of current map cataloging rules for rare maps and the importance of thorough cartobibliographic research.
33. Weimer, Katherine H. "Subject Analysis for Cartographic Materials." Cataloging & Classification Quarterly 27.3/4 (1999): 385-404.
Abstract: Cartographic materials portray subject matter, focused on geographical area, with themes and cartographic forms as other facets of interest to users. Subject headings provide access to geographic areas and subject matter, both of which are significant to reference work and organization of map collections. This article focuses on the Library of Congress subject headings system, and its method of application for cartographic materials. Specific formats--including atlases, views, globes, charts and digital maps--and typical problem areas--such as geographic names, coastlines, boundary maps, ancillary maps, facsimiles, topographic quadrangles, and maps accompanying books--are discussed.

34. Welch, Grace D., and Frank Williams. "Cataloguing Digital Cartographic Materials." Cataloging & Classification Quarterly 27.3/4 (1999): 343-62.
Abstract: Cartographic materials in digital format are now a reality in modern map libraries. Libraries have been reluctant to catalogue this type of material because of the lack of cataloguing rules and the highly technical nature of the information. This paper provides a status report on cataloguing rules for electronic cartographic materials, with particular emphasis on the new fields that have been created in USMARC to accommodate the special requirements for this material. For each part of the bibliographic description, both what current cataloguing rules allow and what is being recommended as part of the revision to Cartographic Materials: A Manual of Interpretation for AACR2 is presented. The paper also looks at what is required to get started and identifies resource tools.
35. Womble, Kathryn. "Retrospective Conversion and Cataloging of a Major Academic Map Collection: the University of Washington Story." Cataloging & Classification Quarterly 27.3/4 (1999): 413-28.
Abstract: This article is intended to provide information to the person faced with an uncataloged map collection. The author describes how various projects to catalog and classify a large existing map collection were completed at the University of Washington Libraries (UW). Project planning, standards, personnel issues and costs are discussed. Information is presented regarding outsourcing map cataloging, utilizing MARCIVE/U.S. Government Printing Office cataloging records and completion of a shelf list conversion project. This article focuses on the cataloging and classification of print maps and aerial photographs; as atlases and electronic mapping products were not included in these projects.
36. Womble, Kathryn, and Mary Lynette Larsgaard. "The Map Cataloging Manual: Autobiography or Leadership Manual?" Meridian (Lawrence, Kan.) .7 (1992): 33-43.
Abstract: The Library of Congress Geography and Map Division (G&M) published the Map Cataloging Manual in March 1991. This article briefly explores the development of map cataloging standards and looks in more depth at the resources used to interpret and apply the standards. It then discusses selected guidelines published in G&M's 1991 manual. The discussion concludes with an exploration of the need to expand cataloging standards and guidelines to include spatial data in all formats.