Report of the Metadata Access to Digital Collections Task Force

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The charge of this Task Force evolved from an assignment given to Todd Chavez, Acting Director of Technology & Technical Services, which was to “work with the Head of Cataloging to develop a plan to strengthen the output of metadata needed for digital and electronic collections.” This assignment grew out of a concern by Derrie Perez, Interim Dean of the USF Library System, that there is increased fragmentation of the USF Libraries collections, with electronic and digital collections accessed by means other than the online catalog, WebLUIIS.

The Task Force was recruited using the USF Libraries distribution list. Members include individuals from the following units/departments at USF: Tom Miller, Acquisitions Department; Susan Heron, Charles Gordon, Jim Michael, and Sue Vastine from the Cataloging Department; Walter Rowe from the USF Libraries Digitization Services Unit (LDSU); Ilene Frank, Reference Department, Tampa Library; Linda McRae, Visual Resources Librarian from the College of Visual and Performing Arts (CVPA); and Ardis Hanson, the de la Parte Institute Research Library.

The charge requested that the Task Force:

1. Define and describe our current policy and practice vis-à-vis metadata for digital and electronic collections. Relate those policies and practices to national and/or international standards.
2. Examine the issue of access fragmentation as it pertains to our collections. Is fragmentation evident? If yes, what are the ramifications to both technical and public services? If not, how can we ensure that it does not emerge?
3. Make recommendations as to future directions designed to minimize or eliminate fragmentation. Relate these recommendations to our current organisational structure and staff. Make recommendations regarding future requirements for organisational structure and staffing.
4. Ensure that responses to all of the above are firmly rooted in the professional literature, including citations to central works.
5. Submit an initial draft of the report to the Head of Cataloging and to the Acting Director of Technology & Technical Services and to the Council of Library Directors by 30 August 2003, followed by a period of review and a final plan by October 2003.

Since the design of the organization affects the operation of the group and the design of the group and larger organization affects the work of the individual, this report will examine USF Libraries Digital Collections from its foundation, its overall strategy, and structure of the current system. This model will allow a fuller picture of the current environment of digital collections within USF and its Libraries.
EXECUTIVE SUMMARY & RECOMMENDATIONS

Digital collections involve not only the initial investment of time and money, but also commit USF to perpetual maintenance and migration costs. Many of the processes established to handle various electronic and digital collections at the University of South Florida Libraries were developed independently, over time, by various individuals, and by various initiatives. A review of these processes indicates fragmentation at the levels of process, procedure, and outcomes. The need to quickly provide access to proprietary electronic resources resulted in the lists created by USF Virtual Library project. These lists, never meant to replace the catalog, ended up being the de facto catalog of the proprietary electronic resources. In addition, departments within the USF Libraries created their own websites to make their collections accessible. However, a single integrated source for library resources is critical. The current literature strongly supports this position as articles repeatedly iterate the importance of standard library practices for descriptive cataloging, classification, subject analysis, and the use of authorities to assist users in the location of materials critical to their research. Therefore, the Task Force on Metadata Access to Digital Collections recommends that all proprietary, leased, or owned resources of the USF Libraries, regardless of format, are accessible - at least at the collection level - via the online catalog as its primary gateway.

Further, it is vital that ongoing quality, process, and improvement reviews become part of the everyday culture of the USF Libraries. More thoughtful, integrated decisions in the implementation of technology and collection initiatives by departments and USF Libraries-wide committees are essential.

With more interdepartmental and inter-library coordination and administrative review, implementation problems could be ameliorated and work groups and committees routinely re-charged and re-tasked.

- Although the CPC does meet monthly and includes public services representatives, the Metadata Subcommittee of the Cataloging Policies Committee (CPC) has not been active since the mid-nineties when the Subcommittee had been judged to have met its original charges. Once the relationship between the e-resource and its corresponding print item was identified and a process established for form and content of record, the Metadata Subcommittee was left without a purpose, especially in the light of an announcement of a new LMS for the state university libraries which stopped further work on SGML.

- The recent implementation of SFX illustrates the need for a formalized decision-making process. The implementation would have been less problem-prone with a clearer examination of the impact of this technology vis à vis the catalog and the Serials Solution electronic journals.

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2 Ibid. “...determine the feasibility of enhancing electronic collections by adding metadata to the online catalog; decide how to catalog current electronic collections journal titles and holdings and internet links; establish minimum standards for records used by the USF Libraries; determine how SGML will work within the NOTIS environment; and create a cataloging standards manual for the USF Libraries.”

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list. Essential staff involvement earlier in the implementation and additional skills training for staff could have provided a smoother transition.

- The lack of a well-defined relationship between the Tampa Library and CVPA digital collections has not served either well. Both libraries provide access to digital images via a digital display system, however, prior to this Task Force, there was no integration between the two libraries as far as sharing records, authorities, or technical information. The CVPA Library has been more assertive in pursuing a joint venture, as evidenced from their recommendations provided in an earlier document to the Dean of the USF Library System concerning integrating digital image collections. The USF Libraries have not been unwilling to work with the CVPA staff, but have struggled with how to begin. A model should be developed for this kind of relationship between the USF Libraries and other USF entities with digital content.

The gap between the purchase or development and acquisitions and cataloging of digital resources and their deployment in the LMS remains less that optimally defined. For the LMS to be the primary source for access to vendor and resource information, a thorough review of the work flow processes of the technical services (cataloging and acquisitions staffs and electronic resources librarian), public services, and special collections departments will be required. With an integrated “one-stop shopping” point for USF Libraries resources, it will be critical to determine what kinds of information the public services staff require to perform their instructional and reference assignments, what work flows need to happen to ensure that current and succinct information is provided to cataloging and acquisitions staff to ensure current and appropriate bibliographic and authority records, and what information is critical to specific user groups to access specialized collections.

Formal usability testing measures to identify end users’ issues and problems will become more important as the USF Libraries provide more resources and services online and as the library world moves closer to a more analytic and relational view of the role of the online catalog. This assessment methodology would focus on intellectual concerns as well as purely mechanical concerns and involve reference and cataloging librarians as well as input from the Technology Department of the USF Library system.

Collection development policies depend upon the library’s mission and purpose. For example, the Tampa Library and the CVPA Library serve different constituents and have differing missions. The CVPA Library’s primary mission is to support classroom teaching in the arts and humanities, consequently collection development centers on a limited format (primarily images) and a limited content (primarily art, architecture, and cultural objects) served to a particular group of users. In so far as the Tampa Library collects in all disciplines, there is an overlap in content, but in terms of the way clients are served, Tampa has a broader mission. Although CVPA has taken on the responsibility of providing direct support for courses on a semester-by-semester basis, the USF Libraries, as a group, have not provided this type of support in terms of images.

In addition to user support for specialized collections, such as the CVPA, there is a need to support the particular vocabularies of the collections among the USF Libraries. For example, the CVPA’s focus requires the use of a vocabulary for art and architecture; the de la Parte Institute focus on behavioral health services research requires its own unique terms. However, except for the use of MeSH (medical
subject headings), there is no accommodation for vocabularies unique to other disciplines. For the USF Library System libraries to provide direct course and/or research support and additional thesauri would require another look at their workflow and competencies as well as a review of their missions.

The challenge for library administration is in reallocating staff for the appropriate handling of digital resources. Having a single individual in place to facilitate long-term planning and coordination for the handling of digital resources among intra and interlibrary units would help end fragmentation of library collections. At present the LDSU, Acquisitions, Cataloging, Public Services, and the webpage designers essentially work independently of each other. In addition, there is little interaction between Technical Services, Technology, Reference, and Collection Management. As tools and resources are shared among several libraries on campus, it is even more imperative that there be a single individual responsible for proposing policy, overseeing the process, and coordinating the activities of all units involved from acquisition through technical services to public services, providing a single decision point.

A coordinator for the USF digital collections would have a strong cataloging background, be conversant with the implications of technology used by the USF Libraries to digitize and display electronic content, and have some public services experience. This individual would be a librarian. Job responsibilities would be to track incoming projects, convene a work group to plan the approach, create the time table, establish access points, choose the thesaurus, resolve authority control between disparate controlled vocabularies, oversee the end product (bibliographic and authority records), document each project, and chair the CPC Metadata Subcommittee. As part of its charge, the Metadata Subcommittee would assist this position with determining the expected audience for a collection and recommending the appropriate thesaurus and optimal access points. In addition, this position could call on additional staff as appropriate for the collection involved. All decisions would be documented and made available to library staff. A cataloging archivist position should be established to handle the original cataloging necessary for these collections, relieving the coordinator for planning duties. In addition, since the magnitude of change required to provide adequate access to existing digital collections is so large, two OPS staff should be hired to work exclusively on these enhancements with the senior LTA for e-resources until the workload is of a more manageable proportion. The OPS positions may range from professional staff to library school students, depending upon scope and depth of work required. Subject expertise would be as important as experience with applying thesauri. Further, hiring OPS would allow flexibility as different subjects were handled. All grant proposals for creating digital resources should include funding for OPS help in creating appropriate catalog records in the LMS for collections.

Finally, although all positions involved in the cataloging of digital materials should be line positions in the Cataloging Department, staff may not need to physically reside there. However, their work product (cataloging, classification, and metadata) should be supervised by one of the professional staff in the Cataloging Department.
LIST OF RECOMMENDATIONS

LMS

1. Make the LMS the gateway for all proprietary, leased, or owned resources of the USF Libraries, regardless of format, or place of residence.
2. Catalog existing USF digital collections in the LMS as to primary format (journals as journals, books as books, images as images, etc.)
   a. Reevaluate individual monograph/series records for the electronic book collections in Special Collections
      i. Center for Urban Transportation Research Publications (297 titles)
      ii. City of Tampa Archives Collection (6 titles)
      iii. City, County, and Regional Histories E-Book Collection (16 titles)
      iv. Early Printed Works (1 title)
      v. Latino Tampa Periodicals Collection (3 titles)
   b. Using one each of the digitized image and map collections, create prototypes to establish standards for future collections in the LMS
3. Standardize all name and subject headings (access points) for USF digital (image and print) collections as they are added to the LMS.
4. Identify “missing” electronic resources, such as internet reference tools, specific websites, and government document serials, to include in the LMS.
5. Establish a top-level record in the catalog based on (1) author/artist/creator name and/or (2) LC subject heading that will provide a direct link to the images in the digital display system.

IMAGE COLLECTIONS

6. Share digital collections, cataloging tools, digital asset management systems, staff, and training between the Tampa Library and the CVPA Visual Resources Library.
7. Plan for multiple collections in LUNA by purchasing the Apex license.
8. Implement recommendations of the Subcommittee on Digital Images (Appendix 1).

STAFFING

9. Establish a new cataloging position that will be responsible for the oversight, planning, and accessibility of digital collections in the LMS.
10. Create an additional permanent archivist position in Cataloging.
11. Hire OPS catalogers immediately to clear out the current backlog of electronic resources not yet represented in the LMS.
12. Assign all USF Library system positions involved in the cataloging of digital materials as line positions in the Cataloging Department, supervised by one of the professional staff in the Department.

13. Reconstitute the CPC Metadata Subcommittee as an appropriate venue for
   a. discussions on access to electronic resources,
   b. recommendations for prioritization of projects,
   c. recommendations for new policies and procedures to ensure access and implementation,
   d. sharing of tools, resources, and expertise for all image collections on campus.

14. Establish an annual visioning opportunity, such as a half-day retreat, for staff involved in the cataloging of electronic and digital resources.

POLICIES & PROCEDURES

15. Use the LMS to track status of e-resources (e.g., ordering, receipt, cataloging, renewals).

16. Develop a policy to organize e-resources for access based upon identified user patterns, such as subject, format, and other schema currently in use on the USF Libraries webpages.

17. Establish collection names (formal and informal) to increase access, e.g., e-resources by vendor, listing the titles associated with that vendor.

18. Establish policies for use of alternative thesauri to accommodate specialized collections across the USF Libraries and develop procedures for reconciling names and subject terms in LC with names and terms from specialized thesauri in the LMS.


20. Develop crosswalks as needed for cross-collection searching.

21. Use the VRA Core for art, architecture, and cultural objects.

22. Use other appropriate standards for other types of collections.

23. Develop a model for collaborative relationships between the USF Libraries and other university entities with digital content.

OUTCOMES ASSESSMENT

24. Evaluate functionalities of responsibilities and workflow among digitization staff, acquisitions staff, cataloging staff, and the electronic resources librarian.

25. Establish outcome measures for benchmarking use of collections newly added to the LMS. This could include enhanced records, higher visibility for resources (marketing), and user satisfaction information for the continuous quality improvement process required by SACS.
**OVERVIEW OF THIS REPORT**

This report will begin with an overview of why the collections held by the USF Libraries are fragmented and how they are affected by this. Next will follow an examination of how the USF Libraries currently handle the processing and cataloging of digital collections, including current policies, who is handling digital collections, the workflow processes used by each unit/individual, which standards/schema/protocols are the USF Libraries supporting, and conclude with a brief discussion of the ramifications of the current work processes. A literature review will follow, that will include points mentioned in the earlier analysis. Several issues need to be ever present during the review of this report:

- Although the USF Libraries do not have a simple mechanism for identifying all of their digital materials, they have a mandate to link non-digital and digital resources across all holders to create ‘seamless’ retrieval. Currently, fragmentation of resources, as well as staff, is a serious problem.

- The USF Libraries will be migrating to a new LMS, Aleph, within the next eighteen months. It is impossible to accurately predict the impact of the new LMS on current work procedures and processes. The new Windows-based system will typically have a more complex cataloging module, which will slow production time; other features may actually streamline the current process.

- Not only will cataloging of e-resources need to be reevaluated as the USF Libraries migrate to the new system but also in light of standards changes by national and international organizations, such as CONSER.

- The implementation of new technologies, such as SFX, does have an impact on access, as the integrity and completeness of the catalog records play a part in these technologies’ search and retrieval mechanisms. Other technologies, such as EBSCO’s Electronic Journal Services (EJS), will certainly affect the acquisitions, management, and cataloging of electronic and digital resources.

All members of the Task Force agree that the perception of library users and staff is that the USF Libraries digital and electronic collections are “fragmented” in reference to their location or retrievability. Further, this fragmentation of the digital collections influences not only the workflow and resources of both technical services staff and public services staff but also the coordination of the digital and electronic collections. When asked why fragmentation occurs, the following reasons were provided:

1. Digital collections within USF were created at different times by different departments using a variety of formats, standards, and technology, resulting in few common standards for locally developed digital collections.

2. The proprietary digital collections purchased by the USF Libraries were placed on the Virtual Library web pages to provide access to all purchased materials until the items could be added to the online catalog. Lack of cataloging staff and record standards delayed the inclusion of digital materials into the OPAC.
3. Interoperability issues among the various chosen platforms have hindered efforts to exchange and modify data freely.

4. Many competing frameworks describe and access digital collections. Early adopters of certain frameworks were not required to use any standards or to create authorities.

5. No easy mechanism exists to discover which of the existing USF print subscriptions offer free digital access to the item or to activate these subscriptions when revealed.

6. The USF Libraries Digital Collections would benefit from a more unified, coordinated effort among the individuals involved in the handling of the USF digital collections.
DIGITAL COLLECTIONS AND STANDARDS USED BY LIBRARIES AT USF

There are a variety of collections, ranging from e-journals, digital images, streaming video and audio, and e-texts held by libraries at USF.

The USF Libraries, as a system, provide access to:
1. 400 fee-based electronic databases,
2. 13,000 e-journals,
3. 3 clearly identified image collections,
4. Over 40,000 e-text collections, either as NetLibrary titles (31,767) or locally held e-digitized collections (e.g., The de la Parte Institute has 236 electronic books/reports).

The Tampa Library provides access to 139 Special Collections archival collections with finding aids. The following collections are available online:
1. Nine photograph collections
2. Two electronic journals, Sunland Tribune and Tampa Bay History
3. Five electronic book collections
   a. Center for Urban Transportation Research Publications (297 titles)
   b. City of Tampa Archives Collection (6 titles)
   c. City, County, and Regional Histories E-Book Collection (16 titles)
   d. Early Printed Works (1 title)
   e. Latino Tampa Periodicals Collection (3 titles)
   f.

The Poynter Library (St. Petersburg) provides access to online finding aids for its 41 special collections/archives on:
1. 19 local and regional history collections
2. 3 items in Oral History of Modern America collections
3. 1 marine science and ichthyology collection
4. 12 journalism and media collections
5. 2 Literature and Humanities collections
6. 4 USF St. Petersburg Archives

The Cook Library (Sarasota/New College) has finding aids online for its three special collections. However, there are no online aids for its University of South Florida at Sarasota/Manatee Archives.
1. The Ringling Collection
2. The Charles Ringling Estate Collection
3. The Caples Estate Collection

The Shimberg Health Sciences Center Library has no special collections or archival materials currently mounted online.
The Louis de la Parte Florida Mental Health Institute Research Library provides online access to four catalogs:

1. The Institute catalog (IC) provides access to all materials cataloged since 1990 as well ephemeral materials and vertical file materials that will probably not be added to NOTIS but will remain available for our researchers.

2. The video database is streamed video from Institute-owned and created mental health trainings and conferences (see NOTIS AFY2871).

3. The Multicultural Search Engine was created as a subset out of the Institute archive in support of the Multicultural Mental Health Training Program. This collection is available in NOTIS at a piece level. It can be found in NOTIS at a collection level by searching on MULTICULTURAL MENTAL HEALTH TRAINING PROGRAM or MMHTP.

4. The Institute archive (http://www.fmhi.usf.edu/library/archive/archive.html) is primarily a catalog of archival documents, photographs, etc. of the Institute and the mental health movement in the 1970s.

The Institute archive materials are not directly found in NOTIS, however a searchable guide to the collection is cataloged and available in NOTIS (AGT5049).

The CVPA Visual Resources Library provides online access to the following:

1. Slide Collection Database (approximately 50,000 slide records)
2. MDID Digital Image Database (a database of images of art, architecture, and cultural objects)
3. Video/CD Index (database of approximately 500 records of videos and CDs)
4. Print Portfolios (images of student and faculty work from the Print Portfolios 1988-2000)
5. Online Course Material (limited access website of images used to supplement courses taught in the School of Art and Art History)

From an access perspective, standards and the commonality, or mappability, across diverse frameworks is critical. The libraries use a number of structural and descriptive standards in the description of their collections. Structural frameworks include:

1. MARC 21
2. Visual Resources Association (VRA) Core Data 3.0 for all LUNA databases
3. Dublin Core (DC) Metadata Element Set (unqualified), used for description of all of the LDSU non-graphical materials, including journals, books, narratives, transcripts, etc.
4. Encoded Archival Description (EAD), used to present Special Collections guides.
5. GIS has no schema yet (no original data exists).

Recently the USF LDSU was charged to support the Open Archives Initiative’s OAI-PMH (2.0) protocol (www.openarchives.org/OAI/openarchivesprotocol.html).

Authoritative documentation includes AACR2r, LCRI, MARC 21, and the CCO (Cataloging Cultural Objects: A Guide to Describing Cultural Works and Their Images). Subject and name authorities used include the LSCH, MeSH, TGM I and II (graphics/materials), TRIS (transportation), GEMS (education),
the Art & Architecture Thesaurus), ULAN (Union List of Artist Names), TGN (The Getty Thesaurus of Geographic Names), PsycINFO, and the NIDRR disability thesaurus.

Current Work Processes and Their Ramifications

A model, or work process, is a useful way of mapping what one needs or wants to do, based on a prior analysis of that activity. By understanding the need, and the eventual nature and shape of the model(s), one can understand the interdependence of the work areas/functions that are required to provide access. Demas, McDonald, and Lawrence (1995) predicted that there would be “a variety of models and techniques for librarians and scholars to use and adapt in their work towards a more holistic, cooperative approach to (digital) collection building and maintenance.”

The charge to discuss metadata access issues in regards to digital (and electronic) collections is to address all digital and electronic collections of the USF Libraries. Further, trying to gain an understanding of what standards and processes are used to create access is not a condemnation of current standards or processes, it is establishing a total picture of all the units and processes involved in managing all of the USF digital collections.

Access is more than simply adding a collection level record in WebLUIS. Access is also how we get from a digital collection to the supporting print or non-digitized medium that provides the historical, scholarly, or clinical research to the digital collection. For example, Hampton Dunn’s phototouring of Florida collection could also provide a reference to or link into the record for Dunn’s 1974 publication Florida sketches: a delightful tour in text and pictures of some of the most fascinating sights and landmarks of Florida. Another example would be a link between the bibliographic record in WebLUIS for Havercamp’s Rembrandt: the Night Watch and a link to an image of Rembrandt’s Night Watch in the LUNA Collection.

Access is also an examination of how the libraries handle and process digital collections, from the perspectives of acquisitions, search and retrieval functions, reference services, bibliographic instruction, as well as the management and maintenance of collections. It is important to remember that the human resources side (staffing) is impacted not only by volume of work but also by work process and technology. Existing and new tools may offer interoperability options: the transfer of data in one form into another database and reformat the data without additional keying, with minimal editing and with new mapped terms -- providing fuller access with a “work smarter, not harder” mantra.

Currently the following areas within USF and its libraries are handling the creation, purchase, cataloging, or maintenance of digital collections: Special Collections (Tampa Library), the USF Libraries Digitization Services Unit (LDSU), the Acquisitions Department (USF Library System), the Cataloging Department (USF Library System), the de la Parte Institute (FMHI) Research Library, and the College of Visual and Performing Arts (CVPA).

Many of the USF Libraries/Departments have written policies and procedures for the handling and cataloging of electronic materials. In Appendix 2 are the processes used by the Acquisitions and Cataloging departments of the USF Library System, the LDSU, the de la Parte Institute, and the CVPA.
Reviewing the workflow process for materials handled by the Acquisitions and the Cataloging Departments of the USF Library System brought to light the need to include the Electronic Resources Librarian in several discussions, since part of that job is to update access, as well as content, information. An area in which the electronic resources librarian was involved was the examination of the impact of changing serial vendors from Divine/Rowecom to EBSCO. The Electronic Resources Librarian, the Electronic Resources Cataloger, and the senior Acquisitions LTA reviewed EBSCO’s EJS (Electronic Journals Service). Although their determination was that it would not help with the metadata process, they felt it might be useful in setting up the electronic access to titles that USF receives as part of the paper subscription price. Even though EJS provides a list of USF’s electronic access journals, library staff will still need to register the titles with the publisher and complete any license agreements. The group suggests that EJS also may be useful as a management tool and have some role in USF’s implementation of SFX. According to the enhanced features version that USF has purchased, EJS’s list management tools can be matched against content obtained from SFX to ensure accuracy and currency specific to the USF holdings. Lists can be modified locally and uploaded to EJS for real-time updates, including local holdings indicators, user authentication notes, journal registration status, etc. This may offer additional management options with the new LMS since NOTIS is not currently used as a tickler or management tool in the management of electronic resources.

In addition, another work process review revealed that appropriate training for library staff may be assumed or “just-in-time.” For example, the senior archivist in the LDSU had been given an assignment to provide subject headings for materials, but he had received no training or review for this new task. A cataloging librarian is currently working with the archivist on the theory and use of Library of Congress Subject Headings (LSCH) and the Electronic Resources Cataloger will be reviewing the content of the records.

The current process for electronic theses and dissertations will change significantly as FCLA takes over the primary responsibility for this task. In July, two test batches were sent to FCLA, which prepared bibliographic records based on the title submission pages created by the students. When notified, the ETD cataloger (currently Sue Vastine) reviews the record, makes any needed changes, creates authority records when necessary, and uploads the records to OCLC. Truncated classification numbers are assigned for statistical purposes, but since the abstract and keywords are now part of the record, only locally assigned headings are used to indicate thesis or dissertation and name of college and department. Additional LCSH headings are no longer assigned.

The de la Parte Institute Library follows many of the same procedures as the Library System’s Cataloging Department for its print and digital collections. In addition, the Institute Library is able to avail itself of the expertise in the LS Cataloging Department. Further, as a member of the Cataloging Policy Committee (CPC), issues and requests are discussed and solutions are often found for issues or needs unique to the Institute Library. For only its locally maintained catalogs on the Institute website, additional subject headings are added from the PsycINFO and the NIDRR thesauri.

The CVPA Visual Resources Library has established procedures for acquiring, cataloging, digitizing, and uploading images to the web (See Appendix 2). The CVPA VR Library uses MDID as the digital display system and IRIS as its cataloging utility. LC Authorities, Getty Vocabularies, the Grove
Dictionary of Art, ICONCLASS, and other online tools are used for vocabulary control and descriptive cataloging. Unfortunately, none of these resources is represented in the LMS at this time.

Many of the current work processes among the libraries are essentially sound; however, before this Task Force, the processes for handling digital collections had not been seriously reviewed. In addition, it appears that there has been less than optimal communication or coordination between the LDSU and the Cataloging department, as well as with the electronic resources librarian, and the Acquisitions department.

None of these processes indicates an interaction with Public Services as part of an informational pathway. At this time, reference librarians note problems with records for collections and individual items as end users report difficulties finding particular items. The original plan for handling digitized resources (USF Libraries Digitization Project Group, 1998) predicated an oversight committee, which would recommend thesauri and access points; this committee was never activated.
The emergence of technology to create, store, and access digital content has created a number of problems for those individuals and institutions who organize information. Not only are there issues of how to describe and/or access the content, but there are also issues of where such content is stored, and how it is displayed. Nowhere is this more evident than in academic library collections.

Academic libraries have purchased electronic collections (on floppy disks, CD-ROMs, and tape) since the early days of computers and networks. As technology advanced, networked applications that ran from CD towers or distant mainframes became ubiquitous. The move from mainframes to client-server applications spawned a new generation of resources, which exploded with the adolescence of the Internet. When academic librarians began to organize the Internet’s digital resources on webpages, however, there was little interest in cataloging these resources into a university or community college library catalog, since traditionally libraries did not catalog ephemera, particularly items seen as digital ephemera. However, by 1998, with the number of internet resources by established vendors and scholarly institutions rising, guidelines for collecting and describing these resources were being seen in library literature (Walters, Demas, Stewart, Weintraub, 1998).

However, by not cataloging (local and remote) individual webpages and websites, scholars and library staff had additional difficulty finding, using, and recommending in-house resources. In a recent White Paper for the Association of Research Libraries (ARL) Task Force on Special Collections (2003), the authors noted the following barriers to access and the consequences of these barriers. Uncataloged and underprocessed collections are inaccessible to the scholarly community, hindering research and research results, even at the local level. These collections often depend upon long-time staff as the primary access and as the “experts” on using them; when the staff member is not available, a collection is often not used or is not used as effectively as it could be, if it were adequately described and accessible with finding aids or guides attached to a record. In addition, special collections, in either a retrospective conversion or digital conversion, often are not cataloged by professional staff, resulting in misleading, incomplete, or even erroneous access points. Further, non-standard finding aids and guides are generally underutilized, if the researchers even know that they exist. Although the emphasis of this report was on special collections, many of these points are valid for other digital resources.

Other findings of the ARL Task Force were: unprocessed collections often result in purchasing duplicates already owned and staff issues become more critical in the digital environment as there is ever-increasing interest in accessing all collections remotely.

The online catalog describes and provides access to a highly selective, quality-controlled collection, providing added value. The principles and standardized practices that guide the process (e.g., AACR and LC Rule Interpretations) ensure access points that are appropriate and relevant to the user. Aided by the use of authoritative thesauri created and maintained by other authoritative bodies, such as the Library of Congress, the Getty, and the National Library of Medicine, the catalog can integrate discipline-based searches as well as establish emerging terms. Finally, a catalog provides an understanding of “cause and effect” in the information retrieval process, allowing the user to understand keywords and causal relations (subject, name, title), that is, keyword matching and the
semantic relations between words expressed in queries and documents (Khoo, Myaeng, & Oddy, 2001). Until the explosion of online resources, the catalog reigned as the primary point of access for library collections.

Metadata, an ambiguous concept, has traveled from its first use in the 1960s into the literature on database management systems (DBMS) in the 1980s to the library and information science literature in the 1990s. The DBMS literature used the term “metadata” to describe the information that documented the characteristics of information contained within databases. Therefore, in the DBMS environment, the computer was the setting for both the information described and the descriptive data³, very analogous to the online catalog, which in itself describes information contained within the library and within its resources. In the world of library cataloging, “bibliographic data” or “cataloging data”, which predate the electronic environment, are still the terms used for descriptive data, even after the migration to MAchine Readable Cataloging (MARC) formats. Since MARC is a “common framework for the development of bibliographic systems that access, transfer, and manipulate metadata information across multiple databases across multiple carriers in a way that provides meaningful information to the user” which can also “… describe the attributes of a resource; characterize its relationships; support its discovery, management, and effective use; and exist in an electronic environment” (Velluci, 2000), the Task Force considers MARC a descriptive and structural metadata framework. Therefore, for the purposes of this report, the term “metadata” is applied to data for all types of resources, incorporating statements of both functionality and environment.

As USF moves toward its goal of becoming an ARL library, it is important to consider fragmentation of resources from a scholar’s perspective. Treadwell (1999) suggests that researchers have a distinct set of needs. They need the ability to:

1. Search across multiple collections in multiple locations. Bibliographic records allow researchers to search at the level of basic information, but the records are not consistent or provide the level of information needed depending upon format.
2. Search in a heterogeneous collection, i.e., search for multiple formats in a centralized resource.
3. Drill down into individual collections and documents for more detailed information.
4. Search both the metadata and the object, and
5. Obtain or manipulate the file contents.

If metadata is focused solely on electronic resources, there is a danger that access to the richness of resources available to USF will be further segmented at the very time the literature stresses the

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³ “The metadata contained in the data dictionary can be employed to provide views of data for the specialized tools that constitute the database-design workbench. Discussion centers on the role of data dictionary systems in the integration of tools.” (Navathe & Kirshcberg, 1986) and “Commercially available data dictionary systems are generally stand-alone solutions designed for use with specific database management systems (DBMS) and cannot support other applications. However, if information resources are to be properly managed, an organization’s data dictionary system must serve as a comprehensive repository of metadata. Metadata are all data descriptions that are accessed by different users and software packages within the organization.” (Marti, 1984).
importance of a seamless continuum of information organization. Without a broader perspective of both resources and information organization by all stakeholders, segmentation is perpetuated.

In reality, however, most metadata schemes do not accomplish all of these functions. Not only do many metadata sets have difficulty in expressing relationships, many schemes concentrate more on recall (resource discovery and retrieval) than on relevance (detailed descriptions that act as surrogates for the object). For example, the range of metadata includes descriptive (content, or “bibliographic” description, including subject access, and possibly content ratings or evaluation information), administrative (terms and conditions of use, provenance, processing, transactions, and object interrelationships) and structural (information that makes the object usable, for example, to enable page turning in an electronic book). Most metadata schemes now advocate authority control as a way to enhance information seeking and retrieval and to increase interoperability between disparate data providers (Rush, 1998).

Traditionally, the purpose of authority control has been to bring consistency to library catalogs. The authority control process is directed at the major access points (names, titles, and subjects) contained in the bibliographic records, ensuring uniqueness and consistency in content and form with a network of linkages for variant and related headings in the catalog. The functions of the catalog, finding, collocating, evaluating, and locating, first defined by Cutter more than a century ago, have recently been reaffirmed by the International Federation of Library Associations and Institutions (IFLA) Study Group on the Functional Requirements for Bibliographic Records (FRBR), which translated these functions into “user tasks” (Heron & Gordon, 2003). The FRBR model suggests that catalogs should support the following four basic user tasks of location, identification, selection, and acquisition. (IFLA, 1998, p.90). Authority control supports these tasks by a number of mechanisms, such as the use of unique and consistent headings, the use of variant names, collocation, the provision of access points that could influence the user’s selection, and with a unique identifier.

These practices help ensure the integrity of local library catalogs and contribute to the success of shared cataloging on a national level. However, an international perspective creates new challenges - geographic, language, and cultural bias - when attempting to implement international authority control and international bibliographic data transfer (Jonsson, 2003; Chan & Zeng, 2002; Borgman, 1997; Tillett, 1996; Bourdon, 1994). Issues surrounding multilingual systems are primarily management, linguistic/semantic, and technology-related. Hudon (1997) suggests that the focus should be on maintaining the conceptual and structural integrity of the language as the terms/phrases cross platforms or online translating engines.4

Another emerging international issue is the use of classification which is suitable, not only for shelf-arrangement, but for information retrieval. In most European countries and many other countries outside of the United States, classification is used as a language independent indexing tool (Jun, 2003).

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4 According to Hudon (1997), there are three issues with multilingual systems:
1. that of stretching a language to make it fit a foreign conceptual structure to the point where it becomes barely recognizable to its own speakers;
2. that of transferring a whole conceptual structure from one culture to another whether it is appropriate or not; and
3. that of translating literally terms from the source language into meaningless expressions in the target language, etc.
Borgman (1997) suggests that to operate effectively in the international arena, each library must think globally while acting locally. This is certainly true with the use of metadata among the USF Libraries because of the multiple schemes and structures involved.

METADATA AT USF

Although the MARC bibliographic record is a metadata scheme used most frequently by academic libraries, there are other metadata schemes also in use at USF. These include:

- Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata
- Dublin Core (DC) Metadata Element Set
- Encoded Archival Description (EAD)
- Government Information Locator Service (GILS) MARC21 Formats
- Visual Resources Association (VRA) Core Data

Several of these metadata schemes (MARC and DC) are designed to accommodate information about resources in a wide variety of disciplines, while other schemes (FGDC and VRA) apply to digital information in a specific format or within a specific discipline or domain. All the schema contains a set of defined data elements, describe the entity, and provide access. However, there is no consistency in the number of data elements, the content of the data elements, or the standards used for creating that content. In addition, some of these schemes include resource management and use information, such as data on terms and conditions, administrative uses, content ratings, and provenance.

When reviewing metadata, three areas must be explored: flexibility, interoperability, and extensibility. Flexibility allows the metadata creator (aka cataloger) to include as much or as little detail as desired in the metadata record. Interoperability, as defined by Borgman (1997, p. 231), refers to “the ability of information systems to interact in a useful way on a real-time basis over communications networks.” This has led to the development of crosswalks or mapping one schema to another schema with a focus on transfer architecture and syntax (Wisser, 2003; Chandler & Anderson, 2002; White, 2002). Many of these crosswalks do not address interoperability in terms of the standards used for data content and form (Chan & Zeng, 2002). Finally, extensibility of a schema allows the addition (extension) of data elements and data qualifiers to accommodate specific user needs. Any metadata recommendation by this Task Force or future workgroups or committees will need to consider the impact of their decisions on flexibility, interoperability, and extensibility.

PUBLIC SERVICE PERSPECTIVE

Currently, USF users are faced with a plethora of possibilities of where to look and some have difficulty making appropriate choices. While indexing is available for the actual physical items owned by the USF Libraries and some of the Libraries’ electronic resources, looking for additional kinds of information takes familiarity with the parts and pieces of the USF Libraries electronic resources and how best to exploit them. Identifying indexes for articles, searching the full text of online books,
finding statistical information, identifying all the digital resources produced by the USF Libraries, and locating images are daunting tasks for the uninitiated and even some of our more sophisticated users.

Faced with the USF Libraries web page, here are a few of the things that users have to “know.”

- Listings for electronic journals reside in two places - the OPAC and the SFX listing.
- Many of the databases that index articles have to be searched separately. Which database is most likely to yield results suited to the user’s immediate needs?
- Commercially licensed and locally produced image databases are available. Once the image databases are discovered, it can be difficult to choose among them.
- Electronic theses and dissertations are only available through WebLUIJS. The link to USF ETDs under “collections” leads to information from the USF Graduate School about student responsibilities for completing and submitting electronic documents, but no information is given to finding the ETDs. There is no explanation of the relationship between the ETD collection, the print collection, the Networked Digital Library of Theses and Dissertations (NDLTD), and Digital Dissertations from ProQuest’s UMI. When electronic access is granted or licensed, is there any reason to limit searches to local holdings only?

OTHER ISSUES

How can users discover the digital collections available at USF? In an earlier example in this paper cited the Hampton Dunn Florida postcard collection. Is the collection level record with the title “Hampton Dunn Florida post card collection [electronic resource]” enough? Could more be done to point users to this electronic resource? Should users be able to navigate from the books listed in the OPAC about the Parthenon to images available online through Grove Art to the Bridgeman Art Library - or to the Saskia images available via Luna?

Along the same lines, could the OPAC begin to include records to freely accessible resources such as the more than 2000 electronic books from National Academies Presses? Could the catalog include Cogprints, BioMedCentral, and other open access initiatives? How can we point our users to these kinds of resources?

End users -- and librarians who help them -- dream about a one-stop shop for searches. Stern (2001) discusses a search result done in one place which could include references to full text online material; author searches; journal article subject searches; book catalog searches; citation analyses; ISI related records (citation cluster analysis); movies; WWW sites; visualizations (subject cartographies and concept lines); raw data sets (census information, GIS data) (p.1). We could add “images” to this wish list as well.

If the “fragmentation” problem is solved by bringing together all these resources using well-constructed metadata via one search tool, how can a user select based on immediate needs? Some search tools have already moved in the direction of providing access to wide-ranging types of material and provide some glimpses of the kind of search results that Stern envisions. Google, Questia, and WorldCat are some examples.
• Google’s toolbar allows users to elect to search the web, images, groups (i.e. news groups), directory, and news.

• Questia - a fee-based online library including 45,000 books and 360,000 journal, magazine, and newspaper articles, provides keyword searching - and a group of 3700+ topics aimed at typical term paper assignment. For example, a search on the topic “social work” presents the users with an initial list of books with a link to more books and articles along with a means of limiting the search: “Looking for More Specific Information on Social Work?”. Users can further limit their search by 1) adding specific words or phrases in the box below after the initial search term and 2) selecting formats (books, articles in journals, or articles in newspapers, etc.) by using check boxes.

• WorldCat provides some clearly demarcated format options in the tabbed toolbar on the top of each screen: All; Internet; Books; Visual; Sound; Archival; Computer; Articles; Serials. A search with Mozart as author brings up the context-sensitive, additional choice of “musical score”.

Stern (2001) sees great possibilities in using SFX’s open linking tool to accomplish something in this vein. If we could provide users with this cluster of data, do the records reside in an “online public access catalog” originally developed to provide access to physical items such as books and journals or have we moved out of the realm of “catalog” and into some other model of search engine?

An emerging question in academic and research settings is if libraries can provide the kind of metadata that will result in knowledge discovery. Thomas (2000) in her “The Catalog as Portal to the Internet” traces the catalog from its original purpose as a record of local holdings to a gateway for both local and far-flung resources. Among a whole host of recommendations, Thomas suggests that the catalog should “increase in scope and coverage of materials” and “incorporate features such as reference linking, recommended titles, relevance ranking”. She acknowledges the scope of the task ahead. Along with the development of standards, she suggests that libraries increase collaborative efforts in order to provide timely access to the wealth of information available to our users.

COLLECTIONS

OVERVIEW

Different types of collections may require different approaches when providing access or creating a model, or base, record for a specific collection. For example, Bradshaw and Wagner (2000) advocate customized cataloging for special or targeted collections with an emphasis on subject analysis. They also urge the use of appropriate, more extensive use of notes (especially content and local notes) and added entries. Researchers and scholars are becoming more dependent on fuller cataloging records as travel money diminishes and access to online catalogs provides glimpses of the riches housed within.

Archival collections, whether print or nonprint and including digitized collections, can be accessed through either item level or collection level records. Haynes, Saye, and Kaid (1993) write of designing a computer-searchable database for a collection of archival video and audio recordings. The project
goals include preparing an item-level database and collection-level records for the OCLC Online Union Catalog. An online review of the cataloging practices of universities including University of Oregon and McGill University reveal that collection level records are used. Item level records are time and labor intensive in their creation and the collection level record allows access to material previously not under bibliographic control. At the ARLIS/NA 30th / VRA 20th Joint Conference, Harrington (2002) suggests that “While item-level treatment is very often preferential ... collection level cataloging as a feasible solution in a variety of situations.” She believes the success of collection level cataloging is dependent upon “the full exploitation of the MARC fields, including ample subject heading assignment, a fully fleshed out scope note, and ... a linked online finding aid or database.” Hudson and Holland (2003) describe Backstage, a UK resource discovery project for the performing arts, which “aims to create a single portal for information on performing arts holdings across the UK. Its content will combine directory-style information for individual institutions with more detailed collection level and item level records.” Other projects worthy of review are the Guido Mazzoni Collection at Duke University (scriptorium.lib.duke.edu/mazzoni/) and Wright American Fiction 1851-1875 at Indiana University (www.letrs.indiana.edu/web/w/wright2/).

Access to genre and forms of library materials through LCSH has been a policy at the Library of Congress for over a century. With the arrival of digital materials, there has been an increased awareness of the importance of form and genre to the library community (Miller, 2000). This is particularly evident in the mutability of digital documents. By focusing on the stability of electronic documents at the structural level, Yates & Sumner (1997) postulate that the literary concept of genre may be a way to identify and describe documents whose content may change over time. For example, with rare books, the DCRB (Descriptive Cataloging of Rare Books) Core standard, encourages the use of the index term field (655) that employs genre, form, or physical characteristic terms from standard thesauri (Lundy, 2003).

A collection with a narrow focus or specific intended user group may need access points tailored specifically to the needs of those users, e.g., an archive of ship pictures could be indexed by the name of the ship, date launched, the national registry, the type of ship, the type of locomotion (wind, steam, diesel), the function it served, the captain, the home port, etc. Much of this would depend upon the amount of information known about the photographs and the anticipated user access needs. A collection of scores could include a listing for the first line as well as the first line of the chorus, a heading for the artist who created the cover illustration, a description of the cover illustration, a genre heading for the category of music, etc. Description of this level requires prior planning and the input from public services and the intended user population, which in the case of researchers and scholars may require more granularity and fullness of record.
SERIALS

The recent implementation of SFX illustrated the importance of fullness of record and linking issues among the SFX software, the LMS, and vendor catalogs. Additional issues surrounding type of record and extent of content for the serials are being reexamined at a national and international record, especially with new technologies.

E-BOOKS

There are a number of issues that have not been addressed with e-books, such as classing the books or associating the e-version with its corresponding print version (as done with journals), and the problem with counting e-books as “adds” for collection statistics or for ARL purposes. This Task Force suggests that e-books are an issue for the Metadata Subcommittee to review for policies and procedures to accommodate user issues.

IMAGES

Image collections at USF are diverse in that there are discrete collections digitized by the USF Libraries, the CVPA Visual Resources Library, the branch campus libraries, as well as images housed within the proprietary databases purchased by USF. As mentioned earlier, access, cataloging, and display of content varies across libraries. Access is dependent upon from which entity owns, leases, or licenses the resource, how the resource is established within a database and record, and how the item is displayed upon retrieval. All of these characteristics lead to fragmentation.

To decrease fragmentation and increase interoperability, image collections would benefit from a more uniform approach to collection management -- from collection development to collection presentation. Integration of image collections throughout the USF Libraries and top-level discovery via the OPAC would facilitate access and unify digital collections with other existing library collections. Because images can document the universe of things, apply to any discipline, and capture minute information, e.g. a cathedral, a cloud formation, a micro-organism, a reconstruction of a dinosaur, etc., the metadata needed for discovery can differ from that needed for discovery of a typical bibliographic record. Therefore, it is important to employ systems that can accommodate multiple metadata schema and multiple vocabularies. Neither the LUNA digital display system used by the Tampa Library nor the system used by the CVPA Library currently offers this flexibility. The next version of MDID (used by CVPA) and the Apex version of Luna will both enable cross-collections searching because they can map to numerous metadata schema including MARC, the VRA Core, the Dublin Core, and EAD, all formats which the USF Libraries support.

In addition to mapping metadata, another important aspect of interoperability is in the reconciling of LC authorities with authorities used for various disciplines. The library OPAC is the key to interoperability. All electronic or digital collections should be discovered via the OPAC. Preferably discovery would place the user in the appropriate collection at the appropriate result for the search, e.g. a search on Rembrandt in the OPAC would give the user the option to select images which would
place her in the image database, opened with a display of images of works by Rembrandt. Even better, specific works such as the Night Watch in Luna could be linked to the Night Watch in the bibliographic records.

By defining the most important elements of information needed for discovery for each unique format or discipline, it would be possible to extend a top level search in the OPAC based upon a limited set of metadata. Also by concentrating on elements of information that require controlled vocabularies, it is possible to reconcile LC terminology by including terminology from specialized thesauri in the bib records, e.g., by adding ULAN preferred names as variants in the NOTIS record. Further, for digital images, the CWDA recommends the following fields to map for authority/controlled headings (i.e., Classification; Object/Work Type; Creation-Creator/Role; Subject matter; Materials & techniques.

All of the USF Libraries have some digital image collections and use different cataloging utilities, scanning tools, and different digital display systems. However, the Tampa Library and the CVPA Library have the largest investment in in-house digital image collections. The CVPA Library’s processes and protocols are governed by a policy of rapid acquisition of materials made available in various image formats determined by faculty needs in support of classroom teaching. Image requests are logged into the system, which automatically assigns image numbers, and sets up a system for cataloging, digitizing, and uploading into the digital display system. (See Appendix 2 for process/workflow charts). Both libraries provide access to digital images via a digital display system. The CVPA Library uses MDID; the Tampa Library uses LUNA and access software constructed in-house. MDID and LUNA require downloading client software and access via a password or IP verification; the Tampa Library in-house software allows patron access and search capabilities without a password or IP. All software packages require record inclusion to the library catalog via a separately constructed record.

To create a more unified and integrated system, a serious review of what such a union would entail should ensue. Sharing tools and resources would require careful planning, and a strong commitment to work cooperatively. The Library Systems’ Technical Services and Technology Departments, particularly the Digital Services Unit and the Cataloging Department, would be affected by plans to share tools and resources. Library cataloging staff would require access to the CVPA IRIS server and training on IRIS. CVPA Library staff would require access to NOTIS and training on NOTIS. The LDSU and the CVPA Library staff would need to develop procedures for acquiring, exporting, and importing data, possibly into separate digital display systems (See Appendix 1 for Subcommittee recommendations and the List of Recommendations following Executive Summary at front of document)).

Creating access to the image collections via the library catalog would make the image collections far more valuable and accessible. Questions that need to be examined include whether two separate digital display systems (LUNA and MDID) should be maintained and whether the USF Libraries can support more than two specialized vocabularies (LC and MeSH). If yes, then the foci become 1) can LUNA and MDID link to the OPAC with Exlibris’ Digitool and 2) what effort and commitment will be involved to support reconciliation of specialized authorities with LC authorities.
STREAMING VIDEO AND AUDIO

There is significant interest in the electronic archiving and retrieval of video materials. USF's interest spawns from 1998, when a meritorious application was developed by the USF Libraries at the de la Parte Institute for the Advanced Networking Infrastructure and Research Grant by the National Science Foundation. The purpose of the Institute's meritorious application was to develop a searchable database of on-line video archives capable of being viewed across a number of network bandwidths ranging from 56 kb/sec up to 1Mbit/sec with a target audience of the general public, mental health educators and practitioners, legislators, and network researchers.

Software exists which will scan a video stream for the presence of relevant objects, persons, or settings and will develop a word list based upon conversations on the tape. Although many such programs claim to generate an "index", what they actually generate is a concordance, which has no cross-references, no subentries, and no collocation of terms (Hanson, 2001). A concordance generator scans a file and compares the character strings with an "exclude list" or a "stop list". "Stop words" include articles, prepositions, conjunctions, and common terms. After the files are scanned and the stop words excluded, the final list is presented in an alphabetical order with the reference locator attached. However, these programs do not generate an index file that contains all the important associations between various keywords and the images that make up the video file.

Word lists are not the most reliable mechanism for indexing a specific transaction on a videotape or video file. Words may be taken out of context in the video and result in a given segment being misclassified. The classic example is when a video discussing the economic aspects of the “dinosaurs” of the American auto industry was inadvertently recovered on a search really meant to find videos pertaining to a discussion on the Paleozoic era. The level of artificial intelligence in even the best-automated indexing systems does not approach the simplest analysis by a professional librarian. Currently, it is not realistic to expect artificial intelligence systems to be able to complete a high cognitive function of extracting subtle meaning from the spoken word and setting variables, therefore librarians trained in classifying and indexing digital video are the best at extracting deep meaning from the materials (Kearns, 2003).

NUMERIC AND STATISTICAL DATA

Statistical and numeric information in the public domain could be very useful if it were easy to find and understand. Use of these resources will not become ubiquitous in academia without records that support first the information seeking and retrieval of these resources. Moreover, with the emphasis on information literacy, there is the added component of “quantitative literacy” so users understand data-based knowledge and learning tools, as well as acquiring the necessary expertise to convert statistical information into knowledge (Dippo, 2000). An expanded definition of metadata for statistical and numeric resources encompasses not only format but also intent, i.e., metadata is the information used to interpret, use, and understand the information, describes or documents statistical data (e.g., lifetime of the data, including survey conceptualization to data dissemination), and includes both resources and tools used in the production of the data (e.g., instruments, documentation, coding

schemes (Hert, 2001). A review of federal statistical and numeric resources available in the Tampa Library Government Documents indicate that there are over 20,000 statistical resources available, of which approximately 1500 were electronic in format and delivery.

**Geospatial Data (GIS)**

Acquired GIS data may be treated as maps, media, or books on CD. To apply a schema, the USF Libraries need to become a portal or clearinghouse at the university level and offer original/uniquely themed data along with services (organizer vs. counselor). All geographic/spatial should be described as fully as possible to provide enough information for the user to select the appropriate resource from the OPAC.

**Accessibility**

The Americans with Disabilities Act (ADA) requires covered entities to furnish appropriate auxiliary aids and services to ensure effective communication with individuals with disabilities, unless doing so would result in a fundamental alteration to the program or service or in an undue burden (see 28 C.F.R. 36.303; 28 C.F.R. 35.160) (Kearns, 2003). In addition, the federal government requires accessibility for all federal agencies (and federal grant recipients who create web or digital content) to meet Section 508 of the Rehabilitation Act: Electronic and Information Technology Accessibility Standards (http://www.access-board.gov/508.htm). Auxiliary aids include taped texts, Brailled materials, large print materials, closed captioning, and other methods of making audio and visual media available to people with disabilities.

Kearns (2003) suggests that since low bit-rate video streams at less than 15 frames/sec. make the deciphering of American Sign Language difficult or impossible because of a staccato effect, when digitizing legacy materials, significant staff time must be spent in adding textual material to complement the auditory portion of the video stream to make it ADA compliant. Closed captioning also provides a method for viewers to gain information from a video stream which has audibility problems due to the deterioration of the primary source material and may also provide an avenue for video materials to be used in areas of the library where audio speakers are restricted. Further, audio materials should include accompanying transcripts since a goal of any library attempting to distribute digital media should be to enhance the learning experience of its patrons, irrespective of their abilities. To the extent that a technology disenfranchises any group of patrons, it works against that goal and its use should be reconsidered. For more information concerning accessibility issues, see The World Wide Web Consortium (W3C) site (http://www.w3.org/WAI/).
IN SUMMARY

Digital collections involve not only the initial investment of time and money, but also commit USF to perpetual maintenance and migration costs. Many of the processes established to handle various electronic and digital collections at the University of South Florida Libraries have been developed independently, over time, by various individuals, and by various initiatives, which have resulted in fragmentation at the levels of process, procedure, and outcomes. The current resource lists were never meant to replace the catalog but have become the *de facto* catalog. The current literature strongly supports a *single integrated source for library resources*, iterating the importance of standard library practices for descriptive cataloging, classification, subject analysis, and the use of authorities to assist users in the location of materials critical to their research. **Therefore, the Task Force on Metadata Access to Digital Collections recommends that all proprietary, leased, or owned resources of the USF Libraries, regardless of format, be made accessible at least at the collection level via the online catalog as its primary gateway.**

Policy and procedural review of existing practices indicate a need for an integrated practice for handling e-resources as a common item, much as microfiche, CD-ROMs, and data sets (revolutionary resources in their day) are now seen as quotidian acquisitions. Further, the review indicates that outcome assessment, defined by SACS as continuous quality improvement, needs to be an everyday part of the library’s culture. Ongoing assessment assists in strategic and operational planning. A built-in assessment process can make a case for increases in financing, personnel, or equipment. It also allows staff and administration to measure achievements against goals and assist in the enumeration of goals. When testing new systems or system components, assessment not only stresses the importance of comparison of competing solutions to a problem but really makes such comparative analyses part of the critical review process. Further, it helps to determine whether and where problems exist, or, to assess the success of an attempt to address a problem.

Mission and collaboration are two other major issues determined by this Task Force. The review of the digital collections showed a significant difference between the scope of the mission of the Tampa Library and the CVPA Visual Resources Library in addressing curriculum support for image collections. The review also showed the need to create a collaborative model to address the real sharing, and possible integration, of tools, data, and collections between the Tampa Library and the CVPA Visual Resources Library.

Many of the recommendations of the Task Force emerged from discussions that ranged over functional areas, procedures, and policies but also over the philosophical perspectives of librarianship and the respective departments. However, there were a number of issues identified that need further attention. These issues range from the practical (representation and association of electronic/digital materials with their corresponding print counterparts) to larger issues and trends involving workflow and the library’s place in new technology under consideration by the university (e.g., the process of acquiring to use of an e-item in the catalog, SFX and Blackboard). The Task Force would like to recommend the following issues to be addressed by future committees or work groups:

1. Policies for the representation of e-books in the LMS (e.g. associating e-books with print),
2. Maintenance and portability of electronic and digital resources,
3. Classification of e-resources,
4. Effect of SFX/MetaLIB on the relationships between print collections and e-collections, e.g., retrieval and access of item by format,
5. Cataloging and classing geospatial data and numeric datasets,
6. Workflow process for new technology implementation,
7. Investigate the relationship between the LMS and Blackboard for asset management,
8. Reexamination of mission and ramifications of extended classroom support, such as the support provided by the CVPA VR Library to their students and staff.
9. Staff training and development, and
10. Continuous quality improvement.
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University of Oregon [http://libweb.uoregon.edu/~catdept/home/collectlvl.html]


APPENDIX 1: Recommendations of the Images Subcommittee
Metadata Access to Digital Collections Task Force
Subcommittee on Digital Image Recommendations [August, 2003]

1. Record Content (e.g. fullness of record, compliance with VRA Standards, MARC crosswalks, authorities, etc.)

RECOMMENDATIONS

Collections requirements
Data Structure
- Plan for multiple collections using multi metadata schema
- Develop crosswalks as needed for cross-collection searching
- Use the VRA Core for art, architecture, and cultural objects
- Use other appropriate standards for other types of collections

Cataloging tools
- Use LC Authorities (name and subject headings) across disciplines
- Use discipline-specific authorities for discipline-specific collections, e.g. use the Art and Architecture Thesaurus, the Union List of Artist Names, Thesaurus of Geographic Names for cultural objects
- Develop local authority files to accommodate use of more than one authority

Luna Data Requirements
- Changes to Luna metadata structure and remapping of field data [These changes will bring the USF Luna Collections into compliance with VRA Core]
  - Add View field
  - Remap Saskia data that is currently in the Description field to the View field
  - Remap Saskia data that is currently in the Subject field to the Type field
  - Rename the Type field to Work Type
  - Remap Saskia Creator. Attribution data to the Culture field (This data is in noun form (France) and should be in adjectival form (French) but this can be fixed when the Saskia Collection is cataloged.

- Changes to Luna display
  - Title and Creator should appear in the thumbnail display. (In the Saskia Collection, the Creator name does not appear in the thumbnail display.)

2. System-wide issues (current version we own vs. latest version)

RECOMMENDATIONS

- Digital Display System

Because the Library has already invested heavily in time and money on Luna Insight, we recommend staying with Luna Insight as a digital display system and upgrading when possible to the Apex version that will permit multiple collections and multiple metadata

- User Access
Where digital collections use a separate data structure, e.g. for Luna images, consider developing a top level record in the catalog based on (1) artist name and/or (2) LC subject headings that will provide a link to the image collections in the catalog.

3. Data Sharing (collaborations between the USF Library and the CVPA Visual Resources Library)

RECOMMENDATIONS

➢ Images and Image Data

We recommend that the Library and the CVPA Visual Resources Library collaborate by sharing digital collections, cataloging tools, staff and training. To accomplish this, we recommend sharing the following:

✓ Digital images (locally derived, commercial, subscription)
✓ Cataloging utilites (IRIS application using Filemaker database software)
✓ Descriptive standards and authorities (see cataloging tools above)
✓ Staff expertise (catalogers from both libraries)

➢ Digital display systems

FOR DISCUSSION: Can one system serve multiple purposes? Can subscription databases purchased by the Library be made accessible in two separate systems on campus? Currently the Library uses Luna Insight for its Saskia Art History Collection and plans to use it for selected local image collections. The CVPA Visual Resources Library plans to use the Madison Digital Image Database because it is free and it is designed for classroom support.

ISSUE: Three sources of image data are needed for classroom support—locally derived images copied from printed materials, commercially purchased images such as those in the Saskia collection, and images from subscription databases such as the AMICO collection, and possibly in the future, the ArtStor collection. All three sources for images can be made available on Luna but how good is Luna in support of classroom teaching? How easy is it for faculty to select images, download data for lectures, and archive lectures for student study?

ISSUE: While MDID is well designed to support classroom teaching, can subscription databases purchased by the Library be made available on MDID? Will vendors permit two separate digital display systems. While Saskia has agreed to permit use of its images in both systems, will this be the case with vendors of subscription databases?

ISSUE: If Luna proved satisfactory as a classroom teaching tool, can the library provide the additional support needed to create the Luna derivatives and upload the data to support classroom teaching?

4. Staffing and/or training issues

RECOMMENDATIONS

➢ Training

✓ Training on IRIS
✓ Training on various online tools and controlled vocabularies
✓ Training on LC Subject Headings
✓ Training on Luna [contingent on whether Luna is a shared system]
Additional Staffing

- 2 digital image catalogers: one specialty in the sciences, one in the humanities
- 1 digital technician

5. Timeline and/or phasing needed to accomplish objectives

RECOMMENDATIONS

- Construct a strategy within the next six months for seamless collaboration between the Library and the CVPA Visual Resources Library for sharing digital collections, cataloging tools, staff and training.
- Develop an evaluation tool for LUNA as a teaching tool within six months.

6. Possible funding initiatives or creative use of graduate assistants, fieldwork, etc.

RECOMMENDATIONS

- Use LIS TAs
- Offer fieldwork opportunities to LIS students
- Take advantage of granting opportunities, e.g. IMLS, NEH
- Share staff, software, hardware, etc.
APPENDIX 2: Procedures, Policies, and Processes of the USF Libraries

1. USF Library System & Tampa Library
   a. Copy Cataloging Procedure for Online Resources (Electronic Journals) rev. 5/12/2003 (provided by Jim Michael)
   b. Electronic Thesis/Dissertation Procedure (provided by Sue Vastine)
   c. Digital & Electronic Collections Inventory (June 24, 2003)
   d. Acquisitions workflow process (pulled--currently under review by another committee)
2. de la Parte Institute (FMHI)
   a. Cataloging a Book
3. College of Visual and Performing Arts (CVPA)
   a. Cataloging and Image Delivery Tools
   b. Flowchart: Slides/Digital Images
   c. Work, Image, and Creator Record Displays
Copy Cataloging Procedure for Online Resources (Electronic Journals)
rev. 5/12/2003 (provided by Jim Michael)

Preparation of paper copy and processing slips.

Prepare a paper print of and introductory screen for each title. Preferably include:
ISSN
Title
Coverage (vols. available)
Staple an “Online Resource Processing Slip” to it, stapling in the upper right corner.
Date and initial the processing slip.

OCLC searching, updating, & exporting.
Search OCLC using “sca ti” search for each title.
   Look for titles with “(Online)” at the end of the title.
   Check the format (s) and the source.
Apply the constant data for the appropriate subscription group. Fields added to the record may include:
   Tickler field: e.g., 035: :à (FTS)JSTOR onl-American antiquity
   Location code: e.g., 049: :à FHME
   Note: e.g., 530: :à Online version of the print publication.
   Note: e.g., 550: :à Digitized and made available by: JSTOR.
   Corporate added entry: e.g., 710:2 :à JSTOR (Organization)
   URL hyperlink: e.g. 856:40: |z JSTOR: |u
http://www.jstor.org/journals/00027316.html

Edit other fields as necessary, such as:
   Uniform title (130 field): usually need to change to 730 field if the qualifier is JUST the word “Online”.
   Mode of access (538 field): may need to add, or change.
   System requirements (538 field): may need to add, or change.
   URL links: may need to delete inappropriate ones
Reformat the screens. Recheck changes. (F2)
Update record (u, F11)
Check the “OCLC updated” box on the processing slip
Export the record (xpo, F11)
Write the OCLC number on the Online Resource Processing Slip, check “exported”

III. WinONI upload to Notis.
   Open WinONI.
   Click on OK, wait for records to be transferred to Notis.

IV Notis editing/revision:
Search Notis, by title, for the record exported from OCLC.
   Study the index screen (search results)
     If the title is a new one to the USF system (never owned in any other format
before), mark the processing slip as: NEW title.
If the title already exists in another USF library, in print or some other
format, mark the processing slip as: NEW electronic title. And check
which partitions already have records for the title in another format.
Write the Notis number on the Online Resource Processing Slip.
Write the name of the subscription group in the comments box. E.g., JSTOR.
Cataloger checklist:
Examine the bibliographic record (F6):
Is the bib record in the correct format?
Is an ISSN (022 field) present? If the subscription group uses the print
ISSN for the electronic, that is entered in 022 |a. If the group gets
a different ISSN for the electronic, enter the eISSN in the 022 |a,
and add the print ISSN in 022 |y.
Example: 022: ; |a 0123-7890 |y 0987-3210 (print)
Is an Addl. physical formats note (530 field) present?
Is a Mode of access (538 field) present?
Is a System requirements (538 field present)?
Has the Uniform title (130 field) been changed to a 730 field? (Do not
change the field tag to 730 if the parentheses at the end contain
anything more than “Online”. E.g. (New York, N.Y. : Online)
Is an Addl. physical formats entry (776 field) present?
Is the URL link (856 field) that you added in OCLC editing present?
Display the LUIS-like screen (either long or brief). Try to open
the e-journal page from the hyperlink. If the page won’t open
there is something wrong with the hyperlink.
Examine the copy holdings screen (F5):
Change the “status” from “a” to “h”
Change the copy statement status from “21” to “2L”
Enter two coded notes after the copy statement: |a rest |a prox These
will cause the notes:
Online access restricted to USF students, faculty & staff
Commercial ISP? see: www.lib.usf.edu/virtual/help/proxy.html
to be displayed in LUIS and WebLUIS.
If this is a “NEW electronic” title, also add the coded note: |a aao0
This will display in LUIS as: THIS TITLE ALSO AVAILABLE
IN OTHER FORMATS—SEE RESULTS LIST Do not add this
coded note, if the title is a “NEW” title (not available in print or
other formats)
Create a volume holdings record (MHLD) by entering the command
“child” in the home position.
Cut the tickler (035 field) from the bibliographic record (that was
exported with the record from OCLC), and paste it into the
MHLD.
Enter the volumes available (coverage) in 899 fields. Use appropriate
punctuation to reflect gaps and non-gap breaks.
Invoke CLARR, and verify all headings and tags in the bibliographic record.

41
Correct incorrect headings and tags as necessary.

5. Making changes to print (or other format) version records in the SA, SD, SF partitions.
   Add a tickler (035 field) to the MHLD. E.g., 035: |a (FTS) ScienceDirect print-African antiquity
   Add the following coded notes to each copy statement: |a aaf |a rest |a prox These will display in LUIS as:
   THIS TITLE ALSO AVAILABLE IN AN ONLINE VERSION—SEE LINKS
   Online access restricted to USF students, faculty & staff
   Commercial ISP? see: www.lib.usf.edu/virtual/help/proxy.html
   Add an Additional physical formats note (530 field) with a text describing the online version. E.g., 530: |a Online version available: |b ScienceDirect.
   If electronic versions are available from multiple sources, follow the pattern:
   530: |a Online versions available: |b ScienceDirect; |b Ingenta.
   Add a URL link (856 field) like the one added to the online version record, but with 2nd indicator “1”.
   E.g., 856:41: |z ScienceDirect: |u http://www.jstor.org/journals/00027316.html
   Be sure that the electronic and print versions are listed together on the index screen (search results list) If differences exist, ask the ER cataloger for assistance.
   If the “SM” box is checked on the processing slip, send a note to Health Sciences (Lee Ann Howlett) to make additions to the SM print version record.

II Statistics. Mark the statistics boxes at the bottom of the processing slip.
   1. Indicate how many titles are represented by the slip.
   2. Indicate whether they are subscription or free resources.
   3. Indicate how many other records were modified (print version records in SF, SA, or SD)
   4. Indicate the type of online resource: E-journal, E-database, etc.
   5. Indicate whether or not the listing for the resource on the Virtual Library page has been added/checked.

II Place the processing slip in the basket for statistics counting at the end of the month.
I. Retrieve the ETD from the USF ETD collections: Browse.
II. In notis. Clear screen, then type LTSE (space)(space) new (space)b
III. In Clarr choose appropriate template
IV. Copy author, title, department, degree to template.
V. Hit create … problem … hit OK. Change L/Form to 0
VI. Compete the record. In fixed fields Repro=s, RT=a. Fill in 035, 090, 500/4, 856 fields.
VII. Add 006 & 007 fields. Go to end of 1st screen
   1. 006m<F12> TYP=m
      CF/TYP=d, Taud=e (adult)
      2. 007c<F12> SMD=r
         O/R=?
         COLOR=b or c (color) or m (mixed)
         SOUND = no sound
         a=sound
         u=unknown
VIII. Assign subject headings.
IX. Do notis work. Change a to h, make it 001 1L fidb, etd l (call #). Add initials and date. If a print version is added later add these user messages: For electronic version add um=aaof. For print version add um=aat
X. Next day, go into library catalog and call up ETD. Make sure link works.
XI. Check OCLC for author’s name. If conflict use birthdate shown on list. Create authority record if necessary.
XII. Upload record to OCLC. Fix L/FORM=0. Fix 006: [m(8 spaces)d(8 spaces)]
     Get OCLC# and paste to notis record
XIII. Add to statistics tally
**MADC: Digital & Electronic Collections Inventory (June 24, 2003)**

Major digital collections available from the USF Libraries Digital Collections website ([http://www.lib.usf.edu/ldsu/](http://www.lib.usf.edu/ldsu/)) This is not an all-inclusive list, it does not include the many digital samples available from many of the collections.

Legend: DC=Dublin Core

<table>
<thead>
<tr>
<th>Collection</th>
<th>Item Count</th>
<th>Type</th>
<th>Format/Standards</th>
<th>Status/Notes/Future plan</th>
<th>webluis collection-level record?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burgert Brothers Photograph Collection</td>
<td>759</td>
<td>image</td>
<td>DC/website VRA/Luna</td>
<td></td>
<td>Y AGA3612 AHZ9714</td>
</tr>
<tr>
<td>Center for Urban Transportation Research Publications</td>
<td>367</td>
<td>ebook</td>
<td>DC</td>
<td>245 titles online, 22,814 pages</td>
<td>N</td>
</tr>
<tr>
<td>Centro Asturiano Collection (membership records)</td>
<td>5093</td>
<td>image</td>
<td>DC</td>
<td>Scheduled to be duplicated in Luna (VRA Core 3)</td>
<td>Y AHL5915 AHZ9778</td>
</tr>
<tr>
<td>City of Tampa Archives Collection</td>
<td>7</td>
<td>ebook</td>
<td>DC</td>
<td>New collection</td>
<td>N</td>
</tr>
<tr>
<td>City, County, and Regional Histories E-Book Collection</td>
<td>16</td>
<td>ebook</td>
<td>DC</td>
<td></td>
<td>Y AAA5111</td>
</tr>
<tr>
<td></td>
<td>Dunn, Hampton</td>
<td>2835</td>
<td>image</td>
<td>DC</td>
<td>Scheduled to be duplicated in Luna (VRA Core 3)</td>
</tr>
<tr>
<td>---</td>
<td>------------------------</td>
<td>------</td>
<td>---------</td>
<td>----------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Dunn, Hampton Photouring Florida Collection</td>
<td>329</td>
<td>PDF</td>
<td>DC</td>
<td>Create new software to read original ms word files and create new XML coded document using some standard DTD (teilite or some else).</td>
</tr>
<tr>
<td>8</td>
<td>Early Printed Works</td>
<td>1</td>
<td>ebook</td>
<td>DC</td>
<td>New collection, recently added first book.</td>
</tr>
<tr>
<td>9</td>
<td>Ensminger Brothers Photograph Collection</td>
<td>37</td>
<td>image</td>
<td>DC</td>
<td>Scheduled to be duplicated in Luna (VRA Core 3)</td>
</tr>
<tr>
<td>10</td>
<td>Florida Sheet Music</td>
<td>244</td>
<td>image</td>
<td>DC (covers &amp; some E-Books of lyrics)</td>
<td>Currently in organized by title/alphabetically, future plan to separate into individual records.</td>
</tr>
<tr>
<td>11</td>
<td>Florida Slave Narratives</td>
<td>39</td>
<td>pdf</td>
<td>DC</td>
<td>PDF per article</td>
</tr>
<tr>
<td>12</td>
<td>Hillsborough County Marriage Records</td>
<td>2374</td>
<td>image</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Latino Tampa Periodicals Collection</td>
<td>59</td>
<td>ebook</td>
<td>DC</td>
<td>grant project, finished.</td>
</tr>
<tr>
<td>14</td>
<td>Manatee County Public</td>
<td>212</td>
<td>image</td>
<td>DC</td>
<td>Scheduled to be duplicated in Luna (VRA Core 3)</td>
</tr>
</tbody>
</table>
15 Bank of America African-American Musical Heritage (digitized hundreds more) 11 image DC (Samples) Core 3) Pending contract to do entire collection (32,000+)

16 Ringling, Charles. Family. Papers. 243 image DC Scheduled to be duplicated in Luna (VRA Core 3) Y AJC7062

17 Robertson and Fresh Photograph Collection 2942 image DC Scheduled to be duplicated in Luna (VRA Core 3) Y AJB0244

18 Slaymaker, Archibald Glass Plate Negative Collection 104 image DC Scheduled to be duplicated in Luna (VRA Core 3) N

19 Sacred leaves Collection (of 50+) 3 image VRA Scheduled to be duplicated in Luna (VRA Core 3) (printed catalog) AJF6968

20 Stokes Photograph Collection 180 image DC Scheduled to be duplicated in Luna (VRA Core 3) Y AHV1451

21 Sunland Tribune Collection 561 PDF E-Journal, full-text searchable, PDF at article level Create new software to read original ms word files and create new XML coded document using Y ACE2817
<table>
<thead>
<tr>
<th>#</th>
<th>Collection/Project</th>
<th>Item Type</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Theory and Research in Social Education</td>
<td>1032</td>
<td>DJVU</td>
<td>E-Journal, DJVU at the article level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>some standard DTD (teile or some else).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not public yet. External contract, CD-ROM project. Will be available on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>website as well (for some period of time).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>print Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ABC5000</td>
</tr>
<tr>
<td>23</td>
<td>Tampa Bay History Collection</td>
<td>784</td>
<td>PDF</td>
<td>E-Journal, full-text searchable, PDF at article level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Create new software to read original ms word files and create new XML</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>coded document using some standard DTD (teile or some else).</td>
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<td></td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AJC7056</td>
</tr>
<tr>
<td>24</td>
<td>USF Florida Map Collection</td>
<td>22</td>
<td>image</td>
<td>VRA/Luna (only)</td>
</tr>
<tr>
<td></td>
<td>(up to 100 new images already digitized)</td>
<td></td>
<td></td>
<td>new collection</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>25</td>
<td>USF ? Map Collection</td>
<td>(balance of</td>
<td>image</td>
<td>VRA/Luna (only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>usf spcoll</td>
<td></td>
<td>pending new collection that will contain the balance of the usf spcoll</td>
</tr>
<tr>
<td></td>
<td></td>
<td>rare map</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>collection,</td>
<td></td>
<td>rare map collection that is not florida.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>total=130+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>USF Oral History Program</td>
<td>many</td>
<td>Audio/Video</td>
<td>RealMedia, DC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dozens of</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hours of</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>audio and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>video</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Wagner, Francis G., Earl</td>
<td>945</td>
<td>image</td>
<td>DC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Scheduled to be duplicated in Luna (VRA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AJC7065</td>
</tr>
<tr>
<td>Collection</td>
<td>Items</td>
<td>Type</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------</td>
<td>----------</td>
<td>--------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Wehman Photograph Collection</td>
<td>27</td>
<td>image</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td><strong>Scheduled to be duplicated in Luna (VRA Core 3)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lantern Slides Collection</td>
<td>~600</td>
<td>image</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td><strong>Currently suppressed, scanned years ago, scheduled for rescanning with latest equipment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graber Aerial Photograph Collection</td>
<td>thousands</td>
<td>image</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td><strong>Currently suppressed. May be scheduled for new digitization with latest equipment (have dedicated film scanner now)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of the written word collection</td>
<td>~250</td>
<td>image</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td><strong>Currently suppressed, scheduled for re-scanning</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigar labels collection</td>
<td>6,000+</td>
<td>image</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td><strong>Digitization complete, project set aside a while back. Currently being re-evaluated.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Purchased Collections loaded locally into LUNA Insight

<table>
<thead>
<tr>
<th>Collection</th>
<th>Items</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art and Art History (Saskia)</td>
<td>3,762</td>
<td></td>
<td><strong>VRA/Luna (only)</strong></td>
</tr>
</tbody>
</table>

### Purchased Access, available through LUNA Insight client

<table>
<thead>
<tr>
<th>Collection</th>
<th>Items</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amico Library</td>
<td>98,130</td>
<td></td>
<td>The AMICO</td>
</tr>
</tbody>
</table>
Free access, available through LUNA Insight client

<table>
<thead>
<tr>
<th></th>
<th>Collection Name</th>
<th>Count</th>
<th>Status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>David Rumsey Collection</td>
<td>8,823</td>
<td>David Rumsey Collection</td>
<td>N</td>
</tr>
<tr>
<td>35</td>
<td>Estate Virtual Collection</td>
<td></td>
<td>down at time of inventory</td>
<td>N</td>
</tr>
<tr>
<td>36</td>
<td>Hoover Institution Poster Collection</td>
<td></td>
<td>down at time of inventory</td>
<td>N</td>
</tr>
<tr>
<td>37</td>
<td>Japanese Historical Maps</td>
<td>209</td>
<td>David Rumsey Collection</td>
<td>N</td>
</tr>
<tr>
<td>38</td>
<td>MoMA Digital Design Collection</td>
<td>7,544</td>
<td>MoMA Digital Design Collection</td>
<td>N</td>
</tr>
</tbody>
</table>
Tampa Library Special Collections Department archival collections

Approximately 341 collections. 142 are visible, 199 suppressed (as originally ordered by Larry Heilos). As we approach the 2 year anniversary of the launch of the new digital collections website (early October) Larry has agreed that digitization services will begin a EAD project to create at least a minimum EAD for all 341+ collections. At that time all collections will be available through the website. To address Larry's concerns about patrons asking for collections that are in different stages of processing, we will include a significant processing/availability note.

This project will also work in conjunction with the summer project of Paul Camp and Gayle Penner as they review all the collections and update the basic inventories, etc.

109 collection-level records exist for Tampa Library Special Collections Department archival collections, having been created as part of the aforementioned FCLA led EAD grant.
Cataloging a Book

Gift book received from staff member:

1. Search NOTIS for title.
   A. FMHI owns title.

   B. Tampa Library owns title.
      a. Add holding record for FMHI and bar code book. Check call number for proper placement (alphabetical and subject). Add holding to OCLC if less than 5 years old. Check to see if LCSH headings need to be added. Check for FMHI special collections. Add TOC or /and 520 summary. Add to ProCite.

   C. SUS Library owns title.
      a. Derive record. Go to OCLC to add holdings. Add holding record for FMHI and bar code book. Check call number for proper placement (alphabetical and subject). Check to see if LCSH headings need to be added. Check for series. Check authorities. Check for FMHI special collections. Add TOC or /and 520 summary. Add to ProCite.

   D. Title not in NOTIS.
      a. Search OCLC for title.
      b. Record in OCLC - export record, add holding to OCLC, upload record to NOTIS using WINONI software. Add holding record for FMHI and bar code book. Check call number for proper placement (alphabetical and subject). Check to see if LCSH headings need to be added. Check for series. Check authorities. Check for FMHI special collections. Add TOC or /and 520 summary. Add to ProCite.
Visual Resources Library: Cataloging and Image Delivery Tools

Cataloging Utility: IRIS

Image collection cataloging is done in the IRIS Cataloging Utility. Developed at Brown University, IRIS is an application of FileMaker Pro designed to catalog images of visual culture. IRIS is a cooperative project of seven institutions: Brown University, RISD, Roger Williams University, Smith College, Trinity College, University of South Florida, and Wesleyan University. Currently there are twenty-three institutions using IRIS for their cataloging utility.

Digital Image Delivery System: MDID

Developed at James Madison University by programmers, art historians, and librarians, the Madison Digital Image Database is freeware. It has been downloaded by over 200 institutions in the United States and abroad. Twenty-two institutions in the United States are known to be using MDID. Version 2.0 is scheduled to be released in fall 2003. MDID is a multimedia teaching and learning tool that allows instructors to search, retrieve, organize, and teach with digital images and image data. It is comprised of an online content search and lecture creation tool for instructors, an online study tool for students, an in-class presentation application tool for instructors, and an editing interface for catalogers. A subset of data from the IRIS catalog is uploaded to MDID and linked to digital image files via pre-assigned image numbers.

Digital Image Naming Conventions

As images are accessioned into IRIS, they are automatically assigned a number. The number field in the image record is part of the subset of data uploaded to MDID. The same image accession number is used to name the digital image file. In the case of slides, the number is printed on the slide label. In MDID, each image is scanned at three sizes representing three separate digital images for each work. Since each size resides in separate folders, all three sizes have the same filename.

Data Structure

IRIS Cataloging Utility is based on the VRA Core element set. IRIS consists of Source files, Work files, Image files, Authority files, Utility files, and Export files. The files of primary importance to this task force are the Image, Work, and Authority files. There are eighteen Authority files. These files provide data values primarily for the Work and Image records. [see attached sample Work, Image, and Authority records]

Data Values (authority tools)
Most of the authority files draw from several standard controlled vocabularies and thesauri. Each authority record contains documentation for the source of the term. The following is a list of authority files and the controlled vocabularies and standard thesauri used for each IRIS authority file.

**IRIS Authority Files**

**Agent** [people who request or donate additions to the collection]
- Authorities: locally defined; one value list

**Authority** [citations of authoritative sources used in cataloging]
- Authorities: LC

**Country** [names of countries]
- Authorities: LC; TGN; GNS; WFB

**Creation** [artists, architects, and other makers of works]
- Authorities: ULAN; LC; BGMI; GDA; IMDB; APR

**Culture** [cultural groups (geographically based)]
- Authorities: AAT; LC; GDA

**Didactic** [teaching aids such as maps, diagrams, comparative materials, etc.]
- Authorities: locally defined; one value list

**Institution** [institutions contributing work and authority records]
- Authorities: locally defined; one value list

**Material** [materials of which works are composed]
- Authorities: AAT; TGM; LC; OED; GDA

**Period** [periods/styles/groups/movements (chronologically based)]
- Authorities: AAT; LC; GDA

**Region** [state, province, or region names associated with sites]
- Authorities: LC; TGN; GNS; WFB

**Repository** [repositories (museums, etc.) in which art works now reside]
- Authorities: LC; GDA

**Site** [geographic place names of cities, towns, and localities]
- Authorities: LC; TGN; GNS; WFB

**Subject** [terms describing the subject content of the work and image]
- Authorities: LC; AAT; ICONCLASS; TGM1; GDA; BGMI; ICA; IMBD
**Subtype** [terms and phrases for categorizing subject terms]
Authorities: AAT; LC; TGM1; ICONCLASS

**Technique** [techniques employed in creating a work]
Authorities: AAT; TGM1; LC; GDA; OED

**Vendor** [person, institution, or company from which images were acquired]
Authorities: locally derived; one value list

**Viewtype** [standard terminology for describing types of views of works]
Authorities: AAT; TGM1; LC; local list

**Worktype** [terms for describing what a work is]
Authorities: AAT; TGM1; LC; GDA

**URLS for acronyms used above**

AAT [Art and Architecture Thesaurus]
http://www.getty.edu/research/tools/vocabulary/aat/index.html

APR [Artists' Papers Register]
http://www.hmc.gov.uk/artists/

BGMT [Biography and Genealogy Master Index (Gale)]
http://galenet.gale.com/a/acp/db/bgmt/

GDA [Grove Dictionary of Art Online]
http://www.groveart.com/tdaonline/

GNS [GEOnet Names Server]

ICA [Index of Christian Art]
http://ica.princeton.edu

ICONCLASS [Iconclass – iconographic classification system for art]
http://www.iconclass.nl

IMDB [Internet Movie Database]
http://us.imdb.com/

LC [Library of Congress Authorities]
http://authorities.loc.gov/

OED [Oxford English Dictionary]
http://dictionary.oed.com/entrance.dtl

TGM1 [Thesaurus for Graphic Materials I: Subject Terms]
http://lcweb.loc.gov/rr/print/tgm1/

TGM2 [Thesaurus for Graphic Materials II: Genre and Physical CharacteristicTerms]
http://lcweb.loc.gov/rr/print/tgm2/

TGN [Thesaurus of Geographic Names]
http://www.getty.edu/research/tools/vocabulary/tgn/index.html

ULAN [Union List of Artist Names]
http://www.getty.edu/research/tools/vocabulary/ulan/index.html

WFB [World Fact Book]
Procedures for Cataloging in IRIS: Work and Image Records

Cataloging begins in the Source file where a record for the request is logged in; image accession numbers are assigned; and a cataloging worksheet is printed. The worksheet contains the list of accession numbers and information about the source such as vendor assigned numbers, or in the case copy photography, page or plate numbers for each image to be photographed.

From the Source file, the cataloger proceeds to the Works file. Because art image catalogers are cataloging both the work of art depicted in the image and the image itself, the cataloger begins by checking the Works file to see if a record exists for the art work. If the art work has already been documented with a record, the work number is noted on the worksheet beside its respective image number. If no record for the work exists, a record is made. Many of the fields in the work record are controlled fields whose terminology is drawn from one of the many authority files, e.g. for the work type field, the Work Type authority file is consulted and a term from the file is selected.

When all work records have been checked and their numbers noted on the worksheet next to the image numbers, the cataloger proceeds to the image file. By typing in the Source number, the cataloger pulls up the images accessioned under that number. Source information for each image record automatically appears in all of the image records associated with the source number. By entering the work number, information about the work is automatically added to the image record. Information describing the image such as a description of the view and any additional subject terms that would apply to the particular view of the work completes the cataloging for the image record.

Data Content (descriptive cataloger rules)

Currently there are no standard descriptive cataloging rules or guidelines for describing works of art, architecture, and cultural objects equivalent to AACR2r. AACR2r is only nominally useful for cataloging one-of-a-kind, unpublished, non-bibliographic items. For this reason, the Visual Resources Association is developing a cataloging guide, Cataloging Cultural Objects: A Guide to Describing Cultural Works and Their Images. Supported by grants from the Digital Library Federation, The J. Paul Getty Trust, and the Mellon Foundation, the guide is expected to be released in 2004.

The Visual Resources Library uses IRIS help menus and some internal documents to assist the cataloger in descriptive cataloging. Each file in IRIS includes a help screen. The help screens contain data entry instructions for each field in the record.

Image Request: Work Order

- Images are requested by faculty or staff via a work order form
- Source materials and form are submitted to librarian for approval
- Request is checked against collection holdings to avoid duplication

Request Logged into IRIS Database

- Requests are logged into IRIS in batches and a source record number is assigned to the batch
- Image numbers are generated from the Source file
- A worksheet containing source information, accession (image) numbers and type of image processing required is generated from the Source file and is printed

Acquisition: Purchasing/Photocopy

- Commercial images are ordered using an internal form which is sent to the School’s bookkeeper who establishes the purchase order
- When commercial images are received they are checked against the order, given temporary accession number labels, and accompanied by the worksheet, are sent to processing
- Images derived from copy photography are processed in-house – source materials, work order, and IRIS worksheet are sent to processing

Image Processing

- Commercial slides
  Slides are checked against order
  Slides are cleaned, masked if necessary, and mounted
  Slides are labeled with either a temporary or final label
- Commercial digital images
  TIFFs are checked against order
  Originals are archived
  Copies are re-named using the IRIS worksheet assigned numbers
  JPG images for MDID are derived from the TIFFs (three sizes)
  JPG images are compressed using Image Optimizer software
  JPG images are uploaded to folders in the MDID server
- Copy photography slides
  Page or plate numbers are checked against worksheet
  Plates are photographed
  Film is developed at Health Sciences Media Center
  Film is received from HSMC and checked against order
  Film is cut, masked, mounted, and labeled
Copy photography-digital

- Page or plate numbers are checked against worksheet
- Plates are digitized, transferred via firewire to folder on desktop
- Image files are named using the IRIS worksheet assigned numbers
- Images are corrected in Photoshop
- Images are copied to CD and archived
- Images for MDID follow the same procedure as above

Cataloging: Work Records (art, architecture, cultural objects)

- Labeled images, source data, and IRIS worksheet sent to cataloger
- Cataloger checks IRIS Works file for each new work
- If a record for the work is found, its number is noted on the IRIS worksheet - each image number on the worksheet must have a corresponding work number
- If a record for the work is not found in the Works file, a new work record is generated
- Each new work is researched using the source data, online sources, and print sources

Cataloging: Authority Records

- Most of the fields in a work record are controlled fields, derived from terms taken from one of the eighteen IRIS authority files
- If a search in the appropriate authority file does not yield the needed term, standard, generally online sources are checked and a record for the term is created
- Because more than several standard vocabularies and/or thesauri are consulted, the authoritative source is noted in the record for the term to avoid thesauri conflict

Cataloging: Image (Surrogate) Records

- When cataloging in the Works file is completed and all image numbers on the IRIS worksheet have received work numbers, cataloging begins in the Image file
- The cataloger notes the source number at the top of the worksheet and searches the image file by source number. This retrieves all the empty image records that were generated when the request was logged in.
- The cataloger checks the image numbers on the worksheet against the image numbers retrieved. The work number noted on the worksheet is entered into the image record and a subset of the data from the work record appears in the image record.
- The cataloger enters information specific to the image such as a description of the view or additional subject terms that refer specifically to the image and that have not been used to describe the work as a whole
Generating Printed Materials

- When cataloging is completed in the image file, the cataloger may generate various labels and/or reports.
- An acquisition report is sent to the requestor.
- Other types of reports are generated as needed for annual or semi-annual reports of various kinds.
- Slide labels are generated, are attached to the IRIS worksheet, and are sent with other source materials to processing.

Quality Control

- Records in IRIS can't be exported to a digital display system such as Luna or MDID until they have been proofed and approved by a master cataloger (this is built into the IRIS system).
- Labeled slides are also proofed, checked against the original source, and approved for filing.
- In MDID all uploaded data is checked to make sure there are no missing (dropped links to images and to assure all data has been uploaded correctly.

MDID/Luna: Digital Delivery Systems

- For any digital delivery system, a subset of the cataloged record is uploaded and linked in the system by image number. I have not outlined the procedures here for uploading to MDID because the Visual Resources Library is in the process of establishing procedures for MDID uploads.