

Cataloging for the 21st Century □ Course 5

Digital Project Planning & Management Basics

Trainee Manual

Prepared by
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California State University, Northridge

For
The Library of Congress
And the
Association for Library Collections & Technical Services

Library of Congress □ Cataloger's Learning Workshop
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(1) Instructor Manual -- (2) Trainee Manual

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OUTCOME EVALUATION AND ASSESSMENT

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HANDOUT: STEPS FOR DEVELOPING A PLAN FOR DIGITAL PROJECTS

COMMON ABBREVIATIONS

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Cataloging for the 21st Century**Course 5: Digital Project Planning and Management Basics****Date Place**

Instructor:

- Name and affiliation

Schedule

Day 1	<i>Sessions / Topics</i>
8:00-8:30	Registration
8:30-9:00	Getting started; Introductions, Orientation and Background
9:00-10:30	<p>1. Introduction to Digital Project Planning & Management</p> <p>Review the goal of the course</p> <ul style="list-style-type: none"> ○ Collaboration within an organization and Partners with outside institutions ○ Team building and communication skills ○ Creating a business plan and writing a grant ○ Managing a digital project ○ Assessment <p>2. Team building and Communication Skills</p> <ul style="list-style-type: none"> ○ Brainstorming techniques ○ Listening and persuasion skills ○ “Getting to Yes”
10:30-10:45	Break
10:30-12:00	<u>Exercise 1</u> : Based on the scenario assigned to the group, discuss the issues (5 “w”s) for developing a digital project. Use the brainstorming and communication skills discussed in the presentation
12:00-1:30	Lunch
1:30-3:00	<p>3. Making Your Case: Creating the Business Plan</p> <ul style="list-style-type: none"> • Understanding the connection between the institution’s missions and goals and the goals of the digital project • Examine the long term benefits and costs for the creation and sustaining of a digital project
3:00-3:15	Break
3:15-4:45	<u>Exercise 2</u> : Based on scenario assigned to the group, discuss the issues of writing a grant and implementing a project
4:45-5:00	Conclusion of Day 1

Day 2	<i>Sessions / Topics</i>
8:30-9:00	Review previous day; answer any questions
9:00-10:30	4. Planning and Grant writing <ul style="list-style-type: none"> ○ Overview of the steps of planning a digital project ○ Examining the information needed to write a successful grant
10:30-10:45	Break
10:30-12:00	5. Project Management <ul style="list-style-type: none"> ○ Overview of the steps of implementing a digital project ○ Examining the tasks involving a digital project
12:00-1:30	Lunch
1:30-3:00	<u>Exercise 3</u> : Based on scenario assigned to the group, discuss the issues of writing a grant and implementing a project
3:00-3:15	Break
3:15-4:45	6. Assessment <ul style="list-style-type: none"> ○ Quantitative and Qualitative measures of success ○ Understand the aspects of quality (wayfinding principles): functionality, usability, and accessibility <u>Exercise 4</u> : Consider what criteria will be used to measure “success” and how to build in the quality and features to reach the goals
4:45-5:00	Conclusion of Day 2

References

Digitization Projects: General

Hughes, Lorna M. (2004). *Digitizing collections: strategic issues for the information manager*. London: Facet.

Institute of Museum and Library Services. *NLG project planning: a tutorial*.
http://www.ims.gov/project_planning/

Kenney, Anne R. and Oya Y. Rieger. (2000). *Moving theory into practice: digital imaging for libraries and archives*. Mountain View, CA: Research Libraries Group, Inc.
----- *Moving theory into practice: digital imaging tutorial*. Cornell, NY: Cornell University, 2003. Available at: <http://www.library.cornell.edu/preservation/tutorial/index.html>

NISO Framework Advisory Group. (2004). *A framework of guidance for building good digital collections*. 2nd ed. Bethesda, MD. National Information Standards Organization.
Available from: <http://www.niso.org/framework/Framework2.html>

Sitts, Maxine K. (2000). *Handbook for digital projects: a management tool for preservation and access*. Andover, MA.: Northeast Document Conservation Center.
<http://www.nedcc.org/digital/dighome.htm> (PDF versions)

Washington State Library. *Digital best practices*. <http://digitalwa.statelib.wa.gov/best.htm>

Digital Imaging

Colet, Linda Serenson. *Guides to quality in visual resource imaging. 1. Planning an imaging project*. <http://www.rlg.org/visguides/visguide1.html>

Lee, Stuart D. *Digital imaging: a practical handbook*. New York: Neal-Schuman, 2001.

Trant, Jennifer. (2004). *Image retrieval benchmark database service: needs assessment and preliminary development plan*. CLIR Resources. Available at:
<http://www.clir.org/pubs/reports/trant04>

Team Building

Curzon, Susan Carol. (2005). *Managing change*. Rev. ed. New York: Neal-Schuman.

Fischer, Roger and William Ury. (1991). *Getting to yes*. Rev. ed. Boston: Houghton Mifflin.

Metadata

- Baca, Murtha. *Introduction to metadata* (3rd ed). Los Angeles, Getty Research Institute. In process.
- Caplan, Priscilla. (2003). *Metadata fundamentals for all libraries*. Chicago: American Library Association.
- CDL Digital Library Services Advisory Group. (August 2006). *CDL guidelines for digital objects* Version 2.0. Available at: <http://www.cdlib.org/inside/diglib/guidelines>
- Cole, Timothy W. and Muriel Foulonneau. (2007). *Using the Open Archives Initiative protocol for metadata harvesting*. Westport, Conn.: Libraries Unlimited.
- Haynes, David. *Metadata for information management and retrieval*. (2004). London: Facet Publishing.
- Hillmann, Diane I. and Elaine L. Westbrocks (eds.). (2004). *Metadata in practice*. Chicago: American Library Association.
- Intner, Sheila and Susan S. Lazinger and Jean Weihs. (2006). *Metadata and its impact on libraries*. Westport, Conn.: Libraries Unlimited.
- Taylor, Arlene G. (2004). *The organization of information*. 2nd ed. Westport, Conn.: Libraries Unlimited.
- Understanding metadata*. (2004). NISO Press. Available at: <http://www.niso.org/standards/resources/UnderstandingMetadata.pdf>

Project Management & Workflow

- Conway, Paul. *Production tracking*. Available at: <http://ahds.ac.uk/creating/information-papers/checklist/index.htm>
- Noerr, Peter. *Digital library tool kit*. (2003) 3rd Edition Available at: <http://www.sun.com/products-n-solutions/edu/whitepapers/digitaltoolkit.html>
- Technical Advisory Service for Images. *An Introduction to making digital image archives*. <http://www.tasi.ac.uk/advice/overview.html>

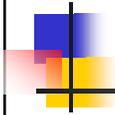
Assessment

Covey, Denise Troll. (2002). *Usage and usability assessment: library practices and concerns*. CLIR.

California Digital Library. *Assessment*. Available at: <http://www.cdlib.org/inside/assess/index>

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Digital Project Planning & Management Basics



Section 1 Introduction: Background, Goals, and Course Outline

Course design: Mary S. Woodley, CSU Northridge



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Cat21 Series Objectives



- To equip catalogers to deal with new types of resources and to recognize their unique characteristics
- To equip catalogers to evaluate competing approaches to and standards for providing access to resources
- To equip catalogers to think creatively and work collaboratively with others inside and outside their home institutions
- To ensure that catalogers have a broad enough understanding of the current environment to be able to make their local efforts compatible and interoperable with other efforts
- To prepare catalogers to be comfortable with ambiguity and being less than perfect
- To enable practicing catalogers to put themselves into the emerging digital information environment and to continue to play a significant role in shaping library services



2



Workshop Goals

- Learn basic steps in planning a digital project
- Review grant writing for digital projects
- Understand basic management issues
- Explore assessment goals and tools for measuring success



3



Workshop Objectives

- Create a project management roadmap
- Understand needed for collaboration and team building (for both intra- and inter-agency collaboration)
- Learn the skills need to develop a work plan and grant writing
- Develop criteria for assessment and selection of tools to measure success of a digital project



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Outline for this Workshop

- Section 1: Introduction
- Section 2: Team Building and Planning
- Section 3: Development of a Business Plan or Making your Case
- Section 4: Planning and Grant Writing
- Section 5: Project Management Issues
- Section 6: Evaluation & Assessment or How to Measure Success



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Why Digitize?

- Provide better access
- Added value to resources
- Preserve fragile materials
- Support educational and research activities
- Fulfill strategic mission and goals of institution



6



Types of Digital Projects

- Special and Archival collections
- Reformatting content from other non-print resources
- Born digital projects
- Digitization projects in a consortium



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Define the Project : Who, What, When

- Who is the audience?
 - Primary audience?
 - Secondary audience?
- What is digitized?
 - What should/could be digitized?
 - Priorities?
 - Who decides the priorities?



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Define the Project : How and How Much

- How much do you digitize?
 - All or representative samples?
- When will the project start?
- What is the timeline?
- How will the project workload be supported?
- Long-term plans (sustainability)



Steps in the Process

- Identify the key players
- Conduct an “information audit”
- Have a clear idea of management’s vision
- Create a planning team who will be responsible for research, planning and writing the grant

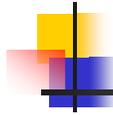
Collaboration and Team Building

- Negotiation skills
- Listening and coaching
- Influencing and persuasion skills
- Group decision-making
- Appropriate technology tools

Grant Writing and Work Plan Development

Grant writing and development of a feasible work plan includes:

- Realistic expectations
- Identification of grants and agencies
- Writing a successful grant proposal



Plans for Assessing the Success of the Digital Project

1. Steps to follow
2. Requirements / criteria for measuring success
3. Evaluation tools and techniques
 - Choosing the right tool
 - Knowing how and when to design a local tool

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Digital Project Planning & Management Basics

Section 2: Team Building and Planning



1

Goals of the Teambuilding Section

- Understand the process for team building
- Learn how to effectively plan and develop ideas through the team
- Learn how to effectively negotiate when parties disagree
- Understand the importance of building consensus -- working together towards the same goals



2

Cooperation, Collaboration & Partnerships

Success of projects depends on developing a core team of stakeholders

Stakeholders may be part of the institution, parent institution, or partners in the project



3

Potential Stakeholders / Team Members

- Digital project director
- Grant writer(s)
- Curators
- Project manager
- Specialist in metadata creation
- Specialist in scanning standards
- Conversion specialist
- Hardware / software developer or procurer
- Web page / interface developer
- Marketing and promoter of project
- Staff responsible for the tasks of implementation
- Assessment specialist



4

Staffing

Every project will vary

**Not shown on this page:
Heritage Network mem
of partnership**

Project Staff

Project Director: Tony Gardner, *Curator of Special Collections and Archives*

Project Manager: Robert Marshall, *Head archivist*

Metadata Librarian: Mary Woodley, *Librarian*

Project Archivist: Charlie Bosch

Project Technician: Diane DeBla

Metadata Specialists: Richard Gordon, *Librarian*
Adita Letter, *Librarian*
Sally Mendelsohn, *Admin. Support Asst.*
Lori Sanchez, *Librarian*
Jana Walkowitz, *Librarian*
Anne Zindman, *Librarian*

Library Administration

Dean: Susan C. Carson

Associate Dean: Susan Parker

Project Publicity: Cindy Vondeloh, *Director of Development*
Joylyn Dunham, *Development Assistant*

Systems Administrator: Eric Willis

Web Designer: Hai-Ling Tang, *Library Assistant*



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THE DIGITAL GUTENBERG PROJECT





Digital Gutenberg Images Introduction

The Book before Gutenberg

Johann Gutenberg

The Printing of the Bible

The Spread of Printing

The Appearance of the Bible

Anatomy of a Page

The Ransom Center Copy

Selected Passages

Digital Gutenberg Project

Additional Resources

K-12 Educator materials

Now Available on CD-ROM!

In June 2002, the Ransom Center and Image Retrieval Inc. of Carrollton, Texas collaborated on the digitization of the Center's Gutenberg Bible using the I2s Digibook 8000 overhead scanner. The project took less than a week to complete and resulted in nearly 1,300 digital images. For the first time, it is possible for the general public to view all of the pages from the University of Texas copy, including all of the large illuminated letters in volume I and the copious handwritten annotations, as well as other indications of the book's use in religious services. The release of the web images coincides with the installation of the Gutenberg Bible in a new exhibition case, part of the recently remodeled main lobby of the Ransom Center.

Further reproduction of any of the Gutenberg Bible images without the written consent of the Ransom Center is prohibited. Inquiries regarding the availability of higher-resolution digital images for research or publication should be directed to the [Center's staff](#).

Digital Gutenberg Project Team

Phillippe Bayle (I2s), Eric Beggs (HRC), Derek Jenkins (IIRI), Rich Oram (HRC), Olivia Primanis (HRC), Pete Smith (HRC), David Sturgeon (IIRI), Steve Wilson (HRC), Daniel Zmud (HRC)

Digital Gutenberg
Project: team of 9



6



Plan Meetings to Discuss Impacts on Organization

- Impact on institution
 - Impact on staffing
 - Impact on space, equipment, software
 - Impact on workflow / routines
- Impact on relations with other institutions, organizations
- Selection process



Brainstorming

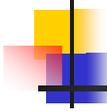
- Effective tool for hearing multiple viewpoints, issues, and general ideas
- Leads to the development of more specific ideas and solutions to issues

Brainstorming Techniques Useful for:

- Supporting institutional SWOT analysis
 - Strengths
 - Weaknesses
 - Opportunities
 - Threats
- Scope and nature of projects
- Selection

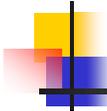
Environment for Brainstorming

- Create a relaxed and non-threatening atmosphere
- Decide if all staff involved or representatives from various departments
- Suggest that if representatives are only participants, that the representative meets with constituents to collect ideas, issues, viewpoints



Brainstorming Rules

- Select a facilitator (sometimes using an outsider has an advantage – facilitator does not have a vested interest in the results, or influences or directs the discussion)
- Write down all comments
 - No evaluation of ideas
 - Everyone has an opportunity to speak
 - Use flip chart, white board or software to record comments



Brainstorming Process

1. Define ideas or problems
 - Rephrase idea to make sure that everyone understands the point; write it down concisely
2. Break down broad issues into smaller issues to be “brainstormed” separately
3. Time limit for each section
4. Select the most important issues



Building a Consensus

Review all ideas presented then refine by:

- Look for items that duplicate each other
- Combine related concepts
- Narrow list down
- Work towards a consensus: find common ground



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“Getting to Yes”*

- Decide issues based on their merit
- Look for options that will lead to mutual gains (win-win)
- Avoid arguing from positions
- Focus on the issues/interests, not the people
- Use objective criteria

*By Roger Fisher, William Fry, Bruce Patton. Harvard Negotiation Project



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Stages Getting to Agreement

1. **Analysis stage**
Gather, organize, consider information from all sides
2. **Planning stage**
Evaluate the information, think of options
3. **Discussion stage**
Communicate interests & options



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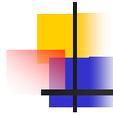


Active Listening Skills

1. Hear the message
2. Interpret the message
3. Evaluate the message
4. Respond to the message



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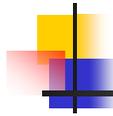


Tips for Effective Listening

- Take notes (locate key points)
- Reflective listening
- Focus on listening
- Build rapport with speaker
- Show respect



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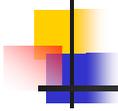


What Blocks Effective Communication?

- Evaluating
- Advise-giving
- One-up-manship
- Diagnosing, prescribing
- Prying
- Warning
- Lecturing
- Shaming
- Withdrawing
- Lack of trust



18



Communication Break Down

Causes

- Competing agendas
- Concern about long-term support
- Partners lack of skill sets to equally share responsibilities
- Partners fear cultural material will be damaged or lost if “loaned” to lead institution



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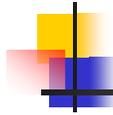


Revisit Decision process

- Start over
- Change management add Sue Curzon’s diagram



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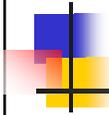


Exercise 1: Learning Objectives

1. Practice brainstorming techniques and negotiation skills
2. Experience working in a team

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Digital Project Planning & Management Basics

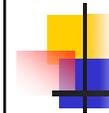


Section 3: Developing the Business Plan or Making Your Case



1

Goals of Section



- Understand the process of developing a business plan and the role of the business plan in the overall planning process
- Learn the components of a business plan



2

Planning Process*

Component	Description
Internal Constraints	Organizational mandates
SWOT analysis	Strengths, Weaknesses, Opportunities and threats
Mission	Institutional purpose & values
Strategic Plan	Within mission, set realistic goals and objectives / activities
Stakeholder analysis	“Entities” who have a stake in the results
Business Plan	General description of implementation
Operating Plan	Specifics of business plan for given period
Vision for success	How the organization will look when plan is implemented

*Based on Bishoff and Allen (2004)



3

Components of a Business Plan

The business plan needs to address the following issues:

- What is the need?
- Who is the target audience?
- How is the digital project the best solution?
- What will be the impact on the institution?



4



Components of a Needs Analysis

- Determine types of data needed
- Collect and analyze data
- Describe how the digital project is a solution



Types of Data Needed

- Who is your target audience?
- How are their needs being meet, or not?
- Where are the gaps in service, in content?
- What audience skill, knowledge, or behavior can be improved?
- Environmental scan of what other projects



How to Find or Discover Data

- Use US Census statistics
- Use Library statistics
 - Size and scope
 - Use statistics
 - Reference desk statistics
 - Published studies
- Surveys
- Focus groups



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Audience & Needs Gap

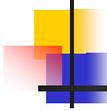
example

The San Fernando Valley, which makes up fully 80 percent of CSUN's service community, is quite diverse ethnically, linguistically, and socio-economically. On the weekends, about 50% of the Library's service requests are by persons who are not affiliated with CSUN such as high school and elementary school students, local historical groups, and individual members of the local business community. [CSUN's] Special Collections and Archives ...contain extensive collections that document the history of the San Fernando Valley through a mixed media of rare illustrated items, drawings, photographs, brochures, pamphlets, maps, official and unofficial reports and studies, personal letters, oral remembrances and related records.

Both the CSUN undergraduate students and the K-12 students seek primary source material about their neighborhood, history of the valley, and history of California missions. It is difficult for them to find reliable information.



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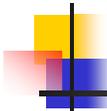


Benefits of Solution

- Describe the solution
- Detail the benefits
- Describe how the solution will close the gap
- Calculate the cost of the solution



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Benefits of Project

example

The San Fernando ... Digital Library opens accessibility to an unlimited number of client and user groups ... including scholars, teachers, students, local historical societies, and members of the community, material otherwise accessible only by on-site visits. The project will:

- Open holdings to a wider audience
- Heighten interest in the historic development of the Valley
- Provide primary source materials for K-14 classroom use
- Link historical collections throughout the Valley



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Why Digitize?

- ✓ to support collection management and preservation
- ✓ to make information and assets more readily available
- ✓ to provide material for educational programs and address curriculum needs
- ✓ to provide material for curators and researchers (internal and external)
- ✓ to eliminate redundant work, and creation of redundant assets (photographs, slides, digital images, etc.)

Presenting your Case

“Selling” the project to internal staff, library administrators, campus administrator or governing boards, all may need to hear different content

Explaining the uneasy part without putting people off:

- Labor
- Time
- System support

Explaining what the project is using the right amount of information:
products developed

Managing expectations

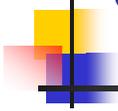
Selling your Project

How does the project help fulfill institutional mission & goals

- ✓ Supports community outreach & public relations
- ✓ Increases user base
- ✓ Increases revenue (through commercial profit but also through donations)
- ✓ Creates more efficient workflow
- ✓ Helps preserve original materials (less wear & tear)
- ✓ Supports educational function of institution

Presenting the Costs to Your Administration

- Include a succinct statement of project goals
- Clearly state which (original) collections will be included
- What equipment is needed
- Staffing—how many, and what skill sets?
- Hidden costs: “marketing,” benefits for new staff members, grant management costs
- In-kind costs (e.g. staff release time)—effect on other projects
- Maintenance—“care and feeding”



Cost benefits

“There are no short-term cost savings to be realized by digitizing collections”

Hughes, Lorna M. (2004). *Digitizing collections: strategic issues for the information manager*. London: Facet. p. 7



Factors to Consider

Every project is unique, costs will vary depending on:

- scope and material of the project
- staff and equipment costs
- database development

Data migration is not a “once-in-a-lifetime” thing, but rather its ongoing



Criteria for Evaluation

- Feasibility
- Legal issues
- Costs / Benefits
- Scope / nature of material



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Categories of Cost

- Operational
 - Hardware/Software
 - Training
- Organizational
 - Release time
 - Space
- Staffing



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Relative Costs

Table 6: Comparative Cost Ratings Based on Overall Average Projections

Digitization Category	Digitizing	Metadata Creation	Other	Overall Costs
Mixed Collections	Higher	Slightly Higher	Lower	Slightly Higher
Single Items	Lower	Slightly Higher	Higher	Higher
Photographs	Slightly Higher	Lower	Average	Lower
Books/Pamphlets	Lower	Lower	Lower	Lower
Re-keyed Text	Lower	Lower	Lower	Lower
OCR	Very Low	Very Low	Very Low	Very Low

NO

OCR to meet ADA standards in more labor intensive than this represents

Puglia



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Reported Cost Ranges

Table 5: Reported Cost Ranges for Various Digitization Processes

Digitization Category	Digitizing	Metadata Creation	Other	Overall Costs
Overall Projections	\$0.25-\$19.80	\$0.75-\$34.65	\$0.45-\$50.20	\$1.85-\$96.45
Adjusted Projections	\$0.25-\$16.65	\$0.75-\$17.25	\$0.45-\$28.15	\$1.85-\$42.45
Mixed Collections	\$3.45-\$16.50	\$2.85-\$17.25	\$4.50-\$21.55	\$3.25-\$40.50
Single Items	\$1.90-\$8.00	\$5.75-\$12.85	\$7.60-\$28.15	\$23.10-\$35.80
Photographs	\$2.30-\$16.65	\$4.85-\$6.45	\$3.35-\$24.65	\$5.20-\$42.45
Books/Pamphlets	\$2.10-\$6.10	\$1.50-\$11.10	\$1.35-\$6.90	\$4.60-\$14.40
Re-keyed Text	\$2.55-\$5.00	\$2.35-\$5.70	Limited Data	Limited Data
OCR	\$0.25-\$3.60	\$0.75-\$2.40	\$0.40-\$2.10	\$1.85-\$7.65

Puglia 1998



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In-House and Outsourcing: Various Combinations

- Permanent staff assigned, equipment purchased, software developed locally
- Temporary staff hired, equipment purchased, software developed locally
- Permanent and temporary staff employed, hardware purchased, software “subscription”
- Scanning and metadata creation performed by vendor

Staffing

- Work that can be outsourced:
 - database development
 - Scanning
 - Transcription of audio (e.g., oral histories)
 - Basic tagging (markup) for TEI, or EAD in XML)
- In-house labor issues:
 - Release time (“in kind”), duties performed by temporary help?
 - Time supported by grant, duties performed by temporary help?
 - New staff hired for project

Labor costs represent the largest percentage of costs in a digital project



Staffing Costs

- Salaries
- Benefits
 - Health
 - Sick Leave
 - Vacation
 - Holidays
- Training
- Attendance at conferences and meetings

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Hardware

- Scanners
 - Slide scanners
 - Flatbed scanners
 - Microfilm/Microfiche scanners
- Digital cameras
- Audio/video conversion
- Server for storage/delivery
- Server for streaming audio/video
- Long-term maintenance/replacement

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Software

- **In-house database development:**
 - Requires skilled programmers
 - How and by whom will the system be updated, enhanced, and maintained?
- **Purchase of an off-the-shelf product:**
 - Is the vendor reliable, responsive, and likely to stay in business?
 - Are funds (and staff liaisons) available for system enhancements, updates, and ongoing technical support?
- **Documentation of decisions made, code written**



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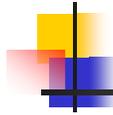


Vendor Selection

- Visit website whose “product” you would want to emulate
- Take note of the solutions the project used to create the digital product
- Make a list of desired features & prioritize them
- Decide what features are necessary and what you may not be able to afford



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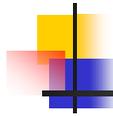


Timeline

- Environmental scan of IT solutions
- Issue RFP
 - Deadline when due
 - Follow up questions
 - Evaluation of responses
- Short-list vendors
 - Site visits
 - Interview current (and past) customers
 - Vendor presentations
- Identify preferred vendor
- Award contract



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Request For Proposal (RFP)

- User requirements
- System or technical requirements
- Functional requirements
- Interoperability with other OS / platforms



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RFP Assessment

- Does the proposed solution meet all the stated requirements?
- To what degree do they meet your ideal solution?
- Contacts and business history
- What support do they provide (e.g., in-house training)?
- Costs/prices clearly delineated
- How well do they communicate with their customer base



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Points to Remember

- Keep the IT solution in sync with the stated goal of business deliverable
- Link the “business case” to the goal
- Keep the stakeholders informed of the process
- Remain flexible -- it’s a dynamic environment



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Collaborative Digitization Project

<http://www.cdpheritage.org/digital/index.cfm>

Website provides information about:

- Digital imaging vendors
- Preservation resources
- Software resources
- Technical resources
- Strategic planning documents
- Project manuals and presentations and more



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Other Useful Web Sites

TechSoup.org
Technology resources for nonprofits
<http://www.techsoup.org/>

Technical Review (MIT)
Articles on technology, broader than digital libraries
<http://www.technologyreview.com/>



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Exercise 2

- Attendees work in teams
- For each team scenario, think about the issues involved
- Goals of exercise:
 - ✓ Practice brainstorming techniques
 - ✓ Discuss the staffing considerations for each scenario
 - ✓ Discuss hardware and software options for metadata creation and presentation
 - ✓ Appoint a spokesperson to report back to the group



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Digital Project Planning & Management Basics

Section 4: Planning and Grant Writing



1

Goals of this Section

- Learn the basics of grant writing
- Understand the connection between planning and grant writing
- Learn how to write an operational or implementation plan



2



Parallels between Planning and Grant Writing

- Clearly articulated goals and objectives
- Succinct description of the content to be digitized and its relevancy to achieving the goals
- Realistic estimates concerning time, costs, staffing and IT
- Knowledge of the appropriate metadata and scanning standards
- Plan for implementation: workflows
- Defined criteria to measure success



3

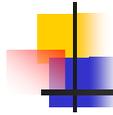


Grant Writing Team

- Who are the key players for writing the grant and their responsibilities?
- What is the role of the Development Officer and a University “Corporation”?
- What is the role of the Library Director/Dean in the process? Technical Services & Cataloging staff?
- Whom can you consult with for feedback about the process?



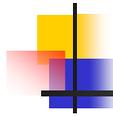
4



Remember! When Applying for a Grant ...

READ THE DIRECTIONS!

MAKE SURE THEY FUND THE TYPE
OF PROJECT YOU ARE PROPOSING!



Proposal Components

Components of a Grant Proposal

- Letter of transmittal
- Title page
- Table of Contents
- Summary/Abstract
- Introduction
- Statement of need
- Goals / outcomes
- Work plan
- Evaluation / Assessment plans
- Budget
- Sustainability
- Marketing



Proposal Summary

Concise statement includes:

- Who you are
- What project you are requesting funds for
- How the project relates to the mission of the organization
- How much funding is required



7



Introduction to Proposal

- Describe the institution and its community
- What is the significance of the content you plan to digitize
- Does your institution have a track record with grants? With digital projects?



8

Example of Library Description

(abbreviated)

The University Library is at the heart of the CSU Northridge (CSUN) campus. The building is 235,000 square feet ... The Library is staffed by 23 full and part-time librarians, 51 technical and research specialists, and 250 student assistants. With over 1.2 million volumes, 3 million microforms ... and an extensive historical of collection of mixed media, rare books and archives ...



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Example of Description of the Wider Community

(abbreviated)

CSU Northridge (CSUN) is a public University, located in the San Fernando Valley, in the north west section of Los Angeles. As the only major university in this area, CSUN also serves the adjacent incorporated and unincorporated urban and rural areas ... The San Fernando Valley is quite ethnically, linguistically, and socio-economically.



10



Statement of Need

- What need will be addressed?
- What is the significance of the project?
- Why the need matches funding institution's mission



11



Audience & Needs Gap

The San Fernando Valley, which makes up fully 80 percent of CSUN's service community, is quite diverse ethnically, linguistically, and socio-economically. On the weekends, about 50% of the Library's service requests are by persons who are not affiliated with CSUN such as high school and elementary school students, local historical groups, and individual members of the local business community. [CSUN's] Special Collections and Archives ...contain extensive collections that document the history of the San Fernando Valley through a mixed media of rare illustrated items, drawings, photographs, brochures, pamphlets, maps, official and unofficial reports and studies, personal letters, oral remembrances and related records.

Both the CSUN undergraduate students and the K-12 students seek primary source material about their neighborhood, history of the valley, and history of California missions. It is difficult for them to find reliable information.



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Example of Solution to Need

“ The goal of the Digital Library is to provide full, open, and equal access to a wide variety of primary research materials about the socio-economic growth and cultural evolution of the Valley, from its earliest foundation, to its explosive growth post World War 2.”



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Goals / Objectives of Project

- How does project meet the mission of the institution?
- How does the project provide a solution to the need stated earlier?
- Who is involved?
- Who is being served?
- Is it realistic or overly ambitious?



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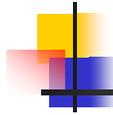
Example of Goal or Objective Statement

“When completed at the end of the first year, the project will have digitized a minimum of 2,400 images and related historical records and textual documentation into the San Fernando Valley History Digital Library.”



Project Work Plan

- What is the quantifiable goal?
- What is the work plan to accomplish project?
 - Timeframe
 - Space
 - Equipment
 - Staffing
 - Software
 - Metadata
- How do the methods compare to other similar projects?

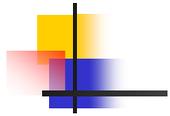
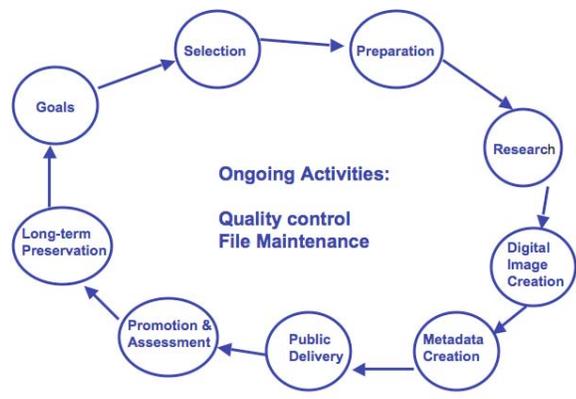


Digital Life Cycle

- Activities surrounding the creation and maintenance of digital objects
 - Sequential
 - Parallel
 - Iterative




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Ongoing Activities:
Quality control
File Maintenance

Digital Life Cycle




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Digitization Issues

- Metadata standards
- Digital standards: imaging and file formats
- Delivery of digitized content
- Rights management
- Preservation



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Example of Standards Statement

The ... Digital Library will conform to [State] *Digital Library. Digital Image Format Standards* (2001) for documents, photographs, graphic material, oral history transcripts, and related items. The [State] *Digital Library. Digital Object Standard: Metadata, Content, and Encoding* (2001) and the guidelines established by Dublin Core will be followed to support retrieval, storage and migration of data resources. *Describing archives : a content standard.* (2004) will guide the library cataloging of finding guides and related indexes to archival collections.



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Standards

Dublin Core Metadata Initiative®
Making it easier to find information.

MODS

LIZARDTECH™
a celartem Company

Cataloguing Cultural Objects
A Guide to Describing Cultural Works and Their Images

METS

XMetaL®

MARC 21

Canon

<ead> Encoded Archival Description

CONTENTdm®
Digital Collection Management Software by DIMeMa, Inc.

AICTS

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Why go to the trouble to follow standards?

Interoperability

Sustainability

With Permission, Murtha Baca

AICTS

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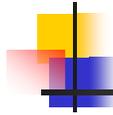
The Use of Metadata Standards Facilitates...

- Data mapping
- Data migration and preservation
- End-user access
- Interoperability
 - participation in union resources
 - OAI harvesting
 - cross-repository searching

Documentation

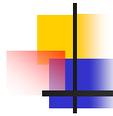
To ensure consistency in the current project and in the future, the project team must develop a suite of documents:

- for workflow
- for cataloguing policies and procedures, data standards, etc.
- for system (e.g. CMS, DAM) usage, data integrity, reports, etc.



Measurable Objectives & Project Actions Timeline

1. Review {number} of historical documents for possible inclusion
2. {number} of documents will be digitized and incorporated into a searchable database that is Internet accessible



Example of a Goal Statement

In the first year, the project will make freely available to the academic community as well as the community at large, 1400 digital objects accompanied by full descriptions. These digital objects will directly support general interest in the fauna of the valley as well as K-12 biology courses. The school district will create 6 curriculum packages based on the digital objects and state curriculum standards.

Project Actions Timeline

Project Month	Action	Steps Taken	Who is responsible
01-03	Hire Project staff; buy equipment	Interview candidates; training	Project director, manager, catalogers
02-11	Scanning and metadata creation	Project Technicians will scan items and add data	Project technicians
12-13	Publicity, Presentations, Post-Grant activities	News Media & Listservs contacted; Official opening; Presentations organized	Development Librarian, Outreach Librarian, Library Director, project staff



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Proposed Project Budget

- a. Salaries & Benefits
- b. Library materials
- c. Operation
- d. Equipment (5k+)
- e. Indirect Costs



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Example of Budget Summary

10. Budget Summary	LSTA (1)	Other funds (2)	In-kind (3)	Total (4)
a. Salaries & Benefits	\$120,945	-----	\$52,275	\$173,220
b. Library Materials	0	-----	0	\$ 5,000
c. Operation	\$ 3,760	-----	0	\$ 6,760
d. Equipment (\$5K+)	0	-----	0	\$ 7,000
e. Total for Objectives	\$124,705	\$15,000	\$52,275	\$191,980
f. Indirect Cost	\$ 12,471			\$ 12,471
g. TOTAL	\$137,176			\$204,451



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Detailed Information Requests

- Contact info
- Budget details with narrative support for budget
- Client needs and project goals
 - Collection
 - Partners
 - Benefits
 - Relationship between Library Service and client group
- Measurable objectives and actions
- Timeline
- Reporting of results
- Marketing and publicity
- Sustainability



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Marketing & Publicity for Completed Project



Grant Resources

- Government
 - Federal
 - State
 - Local
- Corporate and private foundations
- Subject related grants
- General
- Corporate
- Family

Government Agencies: Examples

- IMLS (Institute of Museum and Library Services)
<http://www.imls.gov>
- LSTA (Library Services and Technology Act)
- NEA (National Endowment for the Arts)
<http://www.nea.gov>
- NEH (National Endowment for the Humanities)
<http://www.neh.gov>
- NSF (National Science Foundation)
<http://www.nsf.gov>



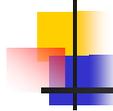
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Why Some Proposals are not Funded

1. Type of project not funded by the awarding agency
2. Application must be in the geographic area
3. Grant proposal poorly written and does not follow the format required by granting agency
4. Proposed budget and timeline are unrealistic
5. Sustainability not addressed
6. No assessment plan articulated
7. Lack of credibility
8. Lack of funds



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Exercise 3

For your scenario, fill out the abbreviated grant application form found in your notebook

Work in groups to wordsmith the document

OUTCOMES? Understand the importance of following directions and the complexity of answering grant questions

Digital Project Planning & Management Basics

Section 5:
Project Management or
Doing the Project



1

Goals of this Section

Understand the issues in managing a digital project:

- Organization of project team and tasks
- Handling the original material
- Increase knowledge about the issues of standards
- Quality control
- Reasons some projects do not achieve their goals



Section 5



2

Process and Workflow

- All projects are different and workflows will vary by project
- Project Manager will need to address and document:
 - Staff and Space
 - Workflow
 - Conversion of resources
 - Storage and display of digital collection
 - Budget and timeline constraints
 - Quality control



Section 5


3

Aspects of a Digital Project



The Management Wheel is a circular diagram with three concentric rings. The innermost ring is green and labeled "GOALS AND DELIVERABLES". The middle ring is orange and contains 12 segments: Management, Selection, Benchmarking, Digitization, Personnel, Quality Control, Finances, Metadata Creation, Image Processing, Systems Building, Space, and Access. The outermost ring is red and contains 12 segments: Management, Selection, Benchmarking, Digitization, Personnel, Quality Control, Finances, Metadata Creation, Image Processing, Systems Building, Space, and Access. Two arrows point from text labels to the "Collections" and "Digitization" segments in the orange ring. The label "institutional resources" points to "Collections", and the label "processes or steps that encompass digital imaging initiatives" points to "Digitization".

Management Wheel: The figure demonstrates the organic nature of digital imaging, with interdependencies connecting goals, resources, and processes.
<http://www.library.cornell.edu/preservation/tutorial/management/management-01.html>



Section 5


4

What is the Project Manager Managing?

- People
- Workflow
- Collection
- Assets (DAM)
- Rights
- Metadata production
- Presentation software



Section 5



5

Ideally, Project Managers Are Not Alone

Teamwork with subject expertise is necessary

- Curatorial expert
- Scanning expert
- Database expert
- Copyright expert
- Web design expert
- Metadata expert



Section 5



6



Selection: Setting Priorities

- What is the value of the item in terms of the goals of the project?
- What is the physical nature and condition of the the original?
- Is the material out of copyright? Does the institution have a deed of gift that allows dissemination



Selection Process:

- Survey collections
- What resources match goals
- Evaluate collections:
 - Cultural or educational value
 - Appropriate for scanning
 - Preservation issues





Value?

- May be defined by the mission or goals of the institution
- Rarity or intrinsic artistic value
- Provides insight or illustrates a subject matter
- Provides content to areas poorly documented
- Added value
 - Display images enhanced
 - Links to related resources

Section 5 9



Common Standards

- *Dublin Core*:
 - metadata for document and image collections; often combined with LC name and subject authorities
- *MODS (Metadata Object Description Standard)*
 - simpler MARC that can be expressed in XML with language (not number) tags
- *EAD (Encoded Archival Description)*
 - standard for structuring find aids for the Web; often combined with DACs and LC name and subject authorities

Section 5 10

Standards Typology

Content Standards	Data Structures	Data Values	Syntax
<ul style="list-style-type: none"> •AACR2 •RDA •CCO •DACS 	<ul style="list-style-type: none"> •MARC •Dublin Core •MODS •VRA Core •CDWA •EAD •ONIX 	<ul style="list-style-type: none"> •LCAF •LCSH •MeSH •TGM •AAT •TGN 	<ul style="list-style-type: none"> •MARC •MARCXML •RDF •METS

Based on slide courtesy of Luiz Mendes



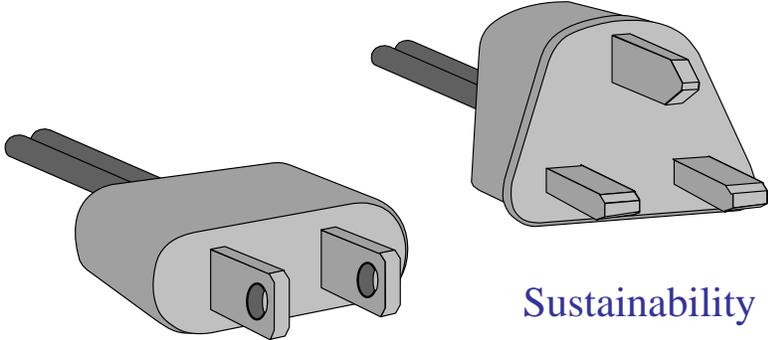
Section 5



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Why go to the trouble to follow standards?

Interoperability



Sustainability

With Permission, Martha Baca



Section 5



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Interoperability

The ability of different types of computers, networks, operating systems, and applications to work together effectively, without prior communication, in order to exchange information in a useful and meaningful manner.

 AICTS  Section 5  13



Metadata Standards: Issues

- Purpose
- Audience
- Best Practices
- Interoperability

 AICTS  Section 5  14



Metadata Definitions

- Data about data
- “Metadata are structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment, and management of the described entities.”
- “Data that characteristics source data, describes their relationships, and supports the discovery and effective use of source data.”
- “Another name for cataloging”



Section 5 15



Functions of Metadata

Metadata can be used for any one or all of the following purposes:

- Resource discovery
 - Potentially can enhance discovery of resource by web crawlers
- Manage a digital resource
- Ownership and authenticity
- Describe the nature of the resource



Section 5 16

Mechanisms for Accessing Metadata

- Embedded HTML
- Embedded XML/RDF
- Repositories
- Record Management Systems
- Analog files (paper or card files)



Section 5



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Metadata Selection Principles

1. Appropriate to the materials, users and intended and future use of digital objects
2. Supports interoperability
3. Allows use of controlled vocabularies
4. Clear statement on terms of use (rights)
5. Supports long-term management
6. Metadata standard itself should have: authority, authenticity, archivability, persistence, & unique identification



Section 5



18



Types of Metadata

- Descriptive
- Administrative
 - Preservation
 - Technical
 - Rights
 - Use
- Structural

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Descriptive Metadata

Metadata that supports the discovery of a digital object

Contains:

- Access points
- Provides links to other digital objects
- Information about the digital object (electronic resource)

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Administrative Metadata

- Metadata used in managing and administering information resources, e.g., location or donor information
- Includes rights and terms & conditions to access information
- Data on the creation and preservation of the digital object

 Section 5  21



Administrative Metadata Includes

- Preservation
 - Records information about formats
- Technical
 - Records information about processes, logs
- Rights
 - Records information about access rights copyright, use

 Section 5  22



Structural Metadata

Defines the digital object's internal organization and is needed for display and navigation of that object.

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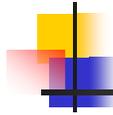
Semantic Interoperability

“The ability to seamlessly search for digital information across heterogeneous distributed databases through a federated search.”

The definitions of the fields * have a standard meaning across multiple implementations and across different metadata schema. The effectiveness of mapping from one database to another, or create crosswalks, is weakened when the interpretation/use of the fields varies.

*aka elements, categories of information

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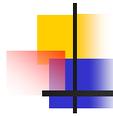


Structural Interoperability

Achieved through agreements about content description standards. For example,

- Controlled vocabularies
 - LCSH
 - AAT
 - NAFL
- Description standards
 - AACR2
 - Best Practices

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Scanning: Formats

1. Finding Aids	1. EAD
2. Photographs and documents	2. TIFFs (masters) JPGs (web)
3. Oral history audio-recordings	3. .wav files or mp3 files
4. Transcripts	4. PDFs
5. Books	5. TEI

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Image Standards

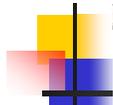
CDL Guidelines for Digital Images
<http://www.cdlib.org/inside/diglib/guidelines/bpgimages/>

- **TIFFS**
 Used for archival masters
 Too large for Web delivery
- **JPGs**
 Standard for Web delivery
 All browsers support
 Compresses (lossy) = loss of information
 Not suitable for archival purposes

JPG2000


Section 5

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Home | Browse | Advanced Search | Preferences | My Favorites | About | Help

Search by keyword:

Oviatt Library Digital Collections

Digital Collections Scanning Standards

[VIEW STANDARDS SUMMARY \(PDF\)](#)

GOALS:

- Objects will be scanned and archival images will be preserved in TIFF format at the same resolution.
- The presentation images used in the Oviatt Library Digital Collections databases will be created by compressing copies of the archival TIFFs, and saving in JPEG format. The JPEG standard has been chosen for its portability and because it can easily be resized as a "thumbnail" image without significant loss of quality.
- The presentation JPEG images should not be so small that they support significant research. Image quality is, however, somewhat reduced by compression and limited by the resolution capabilities of a user's monitor, so standards have been created to accommodate the following considerations:
 - Resolution of presentation images should allow relevant text to be legible.
 - If size or complexity requires that an object be scanned in several parts, the separate images should retain a logical coherence.
 - The file size of the JPEGs and supplementary images should be small enough so that users with telephonic modem connections can access them.

Archived TIFF images scanned between January 2001 and June 15, 2001 were scanned according to the standards of the California Digital Library (CDL): photographs and graphic images at 300 dpi and text at 600 dpi without corrections. However, all new items were included in the project; the scanning guidelines were modified to compensate for the size of the original image, to ensure that detail of smaller images would be viewable in the online JPEG versions. Those specifications marked *CDL indicate derivation from the CDL Guidelines for Digital Images.

TIFF IMAGES (archived)

TIFF images are to be created as follows:

- Original photographs and graphic images larger than 5 x 7 in. will be scanned at 300 dpi and saved as TIFF files with no corrections. (*CDL)
- Original photographs and graphic images 5 x 7 in. or smaller will be scanned at 600 dpi and saved as TIFF files with no corrections. (*CDL)
- Original text items will be scanned at 600 dpi and saved as TIFF files with no corrections. (*CDL) **(EXCEPTION: If the smallest type on the page is 24 points high or larger (for example, posters with large type), scan at 300 dpi.)**
- 35mm slides and negatives will be scanned at 2400 dpi, and saved as TIFF files with no corrections. (See [Creating TIFFs and JPEGs from slides and negatives](#).)
- Digital photographs (scanned using a digital camera) will be saved at their original dpi and saved as TIFF files with no corrections.
- **Color:** Black and white photographs and text (black text on white background, not including discoloration due to aging) are scanned in grayscale. Photographs that are monochromatic but are not black and white (i.e., sepia) are scanned in color. Text items with colored lettering and/or colored background are scanned in color.
- **What if the originals are too big for the scanner?** If the dimensions of the original item prevent it from being scanned all at once, it will be scanned in two parts, then integrated into one archival TIFF file.

24-point type

JPEG IMAGES (used in online database)

JPEG images are to be created as follows:


Section 5

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System Requirements

- Is your system able to support mounting multiple formats: images, streaming audio and video, PDFs?
- Are you developing a platform which you will require support or will use off the shelf software which will require annual fees?
- Hardware: scanners, computers
- Software: imaging and metadata creation

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PREMIS: Fields Pertaining to Objects

- objectIdentifier
- preservationLevel
- objectCategory
- objectCharacteristics
- creatingApplication
- originalName
- Storage
- Environment
- signatureInformation
- relationship
- linkingEventIdentifier
- linkingIntellectual Entity Identifier
- linkingPermission StatementIdentifier

<http://www.oclc.org/research/projects/pmwg/>
  30



PREMIS Fields for ...

<i>Events</i>	<i>Agents</i>	<i>Characteristics</i>
<ul style="list-style-type: none"> •eventIdentifier •eventType •eventDateTime •eventDetail •eventOutcome •eventOutcomeDetail •linkingAgentIdentifier •linkingObjectIdentifier 	<ul style="list-style-type: none"> •agentIdentifier •agentName •agentType 	<ul style="list-style-type: none"> • compositionlevel • fixity • size • format • significantProperties • inhibitors



Section 5



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Controlled Vocabulary for San Fernando Valley History Digital Library and Latino Cultural Heritage Digital Archives

SEE ALSO: METADATA ELEMENTS SUMMARY | CONTENT GUIDELINES

In order to support efficient retrieval of material, certain indexed fields in the metadata records are under authority control, that is, there is standard way to express a subject or topic, personal or corporate name, or location. Use the left button of your mouse to highlight the term you wish to search and copy it into the appropriate box on the search screen.

Below is a summary of which fields are under vocabulary control followed by a copy of the headings from Contentdm. Although the lists linked to this page in the right-hand column are updated at regular intervals, they will not necessarily contain all the terms that have been included in the database.

Field Name	Controlled Vocabulary		
Title	No		
Description	No		
Subject	Yes, Library of Congress Subject Headings	VHistory	VIssues
Topic	Yes	Fixed List	
Keywords	No		
Neighborhood	Yes, Library of Congress Subject Headings or Thesaurus of Geographic Names	VHistory	VIssues
Date	No, ISO standard		
Alternative Dates	Yes, Library of Congress Subject Headings	VHistory	VIssues
Photographer/Author/Interviewee	Yes, Name Authority File	VHistory	VIssues
Donor & Others	Yes, Name Authority File	VHistory	VIssues
Media	Yes, AAT	VHistory	VIssues
Media Measurement	No		
Type	Yes, Dublin Core Types	VHistory	VIssues
Format	Yes, Internet Media Types		
Identifier	No		



Section 5



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Content Guidelines

SEE ALSO: METADATA ELEMENTS SUMMARY | CONTROLLED VOCABULARY

Skip to:	Title Description Subject Topic Keywords Neighborhood Date Alternative dates Photographer/Author/Interviewee	Donors & Others Media Media measurement Type Format Identifier Language Repository Name Collection	Repository number Call number Finding Aid Rights Project name Date digitized Publisher Detailed View Larger View
-----------------	--	--	--

Field Name	Guidelines
Title	<p>Source of Information Label or accompanying material with piece. May be devised by Metadata Catalogers</p> <p>Data Entry Responsibility Metadata Catalogers</p> <p>Content Management Use the title "as is" from label, with the exception of spelling or grammatical errors. When devising a title be succinct, keep it under 10 words when possible. Avoid initial articles. Do not start the title with page enumerations.</p>
Description	<p>Source of Information Supplied by Archivists based on information available, research; Metadata Catalogers</p> <p>Data Entry Responsibility Archivists; Metadata Catalogers</p> <p>Content Management Use Description with piece if available (correct spelling, grammar). Otherwise, Curator writes description. Record information that is available in the following order: Photographer: Natural Word Order. Numbers assigned by Photographer. Donor: Natural Word Order. (If the same, Photographer, Donor: Name). Format of object, measurement (e.g., Black and white photograph, 7 x 5 in.) Measurements are given height x width (AACR rules), height and width are determined by the view (portrait or landscape)</p>
Subject	<p>Source of Information Image as a whole</p> <p>Data Entry Responsibility Metadata Catalogers</p> <p>Content Management Use LCSH terms which are strings that are constructed in a specific order. LCSH strings will be added to the controlled vocabulary. If an appropriate string is not present in the controlled vocabulary, contact subject cataloger. Use spaces and dashes between the main heading and its subdivisions. A semi-colon will automatically be added when using the controlled vocabulary. Use the semi-colon</p>

Why Some Projects Do not Reach Expected Goals

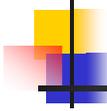
- Poor selection policy
- Unrealistic expectations
- Unclear or fuzzy measures of success
- Poor selection of presentation software
- Poor communication within team
- Poor documentation of process and procedures
- Poor quality control



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Exercise 3

Teams reconvene

Goals of Exercise 3:

- Demonstrate an understanding of implementation issues
- Practice consensus building
- Summarize how the team would answer grant questions

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Digital Project Planning & Management Basics

Section 5: Project Management or Doing the Project



1

Goals of this Section

Understand the issues in managing a digital project:

- Organization of project team and tasks
- Handling the original material
- Increase knowledge about the issues of standards
- Quality control
- Reasons some projects do not achieve their goals



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2

Process and Workflow

- All projects are different and workflows will vary by project
- Project Manager will need to address and document:
 - Staff and Space
 - Workflow
 - Conversion of resources
 - Storage and display of digital collection
 - Budget and timeline constraints
 - Quality control


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3

Aspects of a Digital Project



The diagram is a circular 'Management Wheel' with three concentric rings. The center is a green circle labeled 'GOALS AND DELIVERABLES'. The middle ring is orange and contains 'Technical Capabilities', 'Collections', and 'Personnel'. The outer ring is red and contains 'Management', 'Selection', 'Benchmarking', 'Digitization', 'Quality Control', 'Metadata Creation', 'Image Processing', 'Systems Building', 'Space', 'Finances', 'Access', and 'Time'. Two arrows point from text labels to the 'Collections' and 'Digitization' segments of the wheel.

institutional resources

processes or steps that encompass digital imaging initiatives

Management Wheel: The figure demonstrates the organic nature of digital imaging, with interdependencies connecting goals, resources, and processes.
<http://www.library.cornell.edu/preservation/tutorial/management/management-01.html>


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4

What is the Project Manager Managing?

- People
- Workflow
- Collection
- Assets (DAM)
- Rights
- Metadata production
- Presentation software



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Ideally, Project Managers Are Not Alone

Teamwork with subject expertise is necessary

- Curatorial expert
- Scanning expert
- Database expert
- Copyright expert
- Web design expert
- Metadata expert



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6



Selection: Setting Priorities

- What is the value of the item in terms of the goals of the project?
- What is the physical nature and condition of the the original?
- Is the material out of copyright? Does the institution have a deed of gift that allows dissemination

   7



Selection Process:

- Survey collections
- What resources match goals
- Evaluate collections:
 - Cultural or educational value
 - Appropriate for scanning
 - Preservation issues

   8



Value?

- May be defined by the mission or goals of the institution
- Rarity or intrinsic artistic value
- Provides insight or illustrates a subject matter
- Provides content to areas poorly documented
- Added value

Display images enhanced

Links to related resources



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Common Standards

- *Dublin Core*:
 - metadata for document and image collections; often combined with LC name and subject authorities
- *MODS (Metadata Object Description Standard)*
 - simpler MARC that can be expressed in XML with language (not number) tags
- *EAD (Encoded Archival Description)*
 - standard for structuring find aids for the Web; often combined with DACs and LC name and subject authorities



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Standards Typology

Content Standards	Data Structures	Data Values	Syntax
<ul style="list-style-type: none"> •AACR2 •RDA •CCO •DACS 	<ul style="list-style-type: none"> •MARC •Dublin Core •MODS •VRA Core •CDWA •EAD •ONIX 	<ul style="list-style-type: none"> •LCAF •LCSH •MeSH •TGM •AAT •TGN 	<ul style="list-style-type: none"> •MARC •MARCXML •RDF •METS

Based on slide courtesy of Luiz Mendes



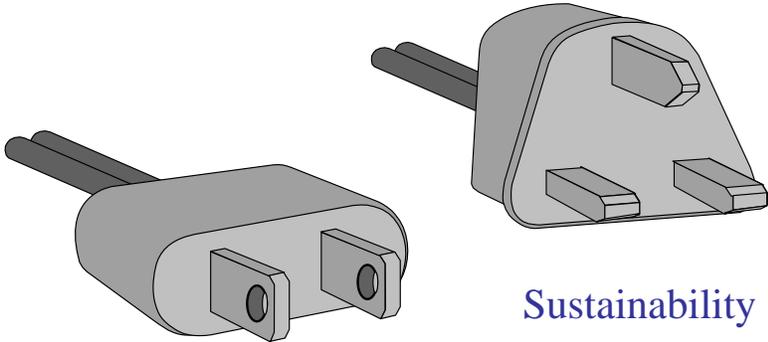
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Why go to the trouble to follow standards?

Interoperability



Sustainability

With Permission, Martha Baca



Section 5



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Interoperability

The ability of different types of computers, networks, operating systems, and applications to work together effectively, without prior communication, in order to exchange information in a useful and meaningful manner.

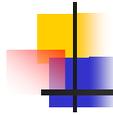
   13



Metadata Standards: Issues

- Purpose
- Audience
- Best Practices
- Interoperability

   14



Metadata Definitions

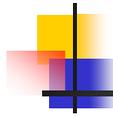
- Data about data
- “Metadata are structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment, and management of the described entities.”
- “Data that characteristics source data, describes their relationships, and supports the discovery and effective use of source data.”
- “Another name for cataloging”



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Functions of Metadata

Metadata can be used for any one or all of the following purposes:

- Resource discovery
 - Potentially can enhance discovery of resource by web crawlers
- Manage a digital resource
- Ownership and authenticity
- Describe the nature of the resource



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Mechanisms for Accessing Metadata

- Embedded HTML
- Embedded XML/RDF
- Repositories
- Record Management Systems
- Analog files (paper or card files)



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Metadata Selection Principles

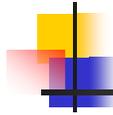
1. Appropriate to the materials, users and intended and future use of digital objects
2. Supports interoperability
3. Allows use of controlled vocabularies
4. Clear statement on terms of use (rights)
5. Supports long-term management
6. Metadata standard itself should have: authority, authenticity, archivability, persistence, & unique identification



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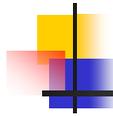
18



Types of Metadata

- Descriptive
- Administrative
 - Preservation
 - Technical
 - Rights
 - Use
- Structural

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Descriptive Metadata

Metadata that supports the discovery of a digital object

Contains:

- Access points
- Provides links to other digital objects
- Information about the digital object (electronic resource)

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Administrative Metadata

- Metadata used in managing and administering information resources, e.g., location or donor information
- Includes rights and terms & conditions to access information
- Data on the creation and preservation of the digital object

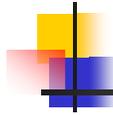
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Administrative Metadata Includes

- Preservation
 - Records information about formats
- Technical
 - Records information about processes, logs
- Rights
 - Records information about access rights
copyright, use

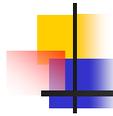
 Section 5  22



Structural Metadata

Defines the digital object's internal organization and is needed for display and navigation of that object.

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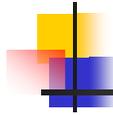
Semantic Interoperability

“The ability to seamlessly search for digital information across heterogeneous distributed databases through a federated search.”

The definitions of the fields * have a standard meaning across multiple implementations and across different metadata schema. The effectiveness of mapping from one database to another, or create crosswalks, is weakened when the interpretation/use of the fields varies.

*aka elements, categories of information

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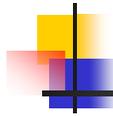


Structural Interoperability

Achieved through agreements about content description standards. For example,

- Controlled vocabularies
 - LCSH
 - AAT
 - NAFL
- Description standards
 - AACR2
 - Best Practices

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Scanning: Formats

1. Finding Aids	1. EAD
2. Photographs and documents	2. TIFFs (masters) JPGs (web)
3. Oral history audio-recordings	3. .wav files or mp3 files
4. Transcripts	4. PDFs
5. Books	5. TEI

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Image Standards

CDL Guidelines for Digital Images
<http://www.cdlib.org/inside/diglib/guidelines/bpgimages/>

- TIFFS
 - Used for archival masters
 - Too large for Web delivery
- JPGs
 - Standard for Web delivery
 - All browsers support
 - Compresses (lossy) = loss of information
 - Not suitable for archival purposes

JPG2000

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Home | browse | advanced search | preferences | my favorites | about | help

search by keyword:

Digital Collections Scanning Standards

[VIEW STANDARDS SUMMARY \(PDF\)](#)

GOALS:

- Objects will be scanned and archival images will be preserved in TIFF format at the same resolution.
- The presentation images used in the Oviatt Library Digital Collections databases will be created by compressing copies of the archival TIFFs, and saving in JPEG format. The JPEG standard has been chosen for its portability and because it can easily be resized as a "thumbnail" image without significant loss of quality.
- The presentation JPEG images should not be so small that they support significant research. Image quality is, however, somewhat reduced by compression and limited by the resolution capabilities of a user's monitor, so standards have been created to accommodate the following considerations:
 - Resolution of presentation images should allow relevant text to be legible.
 - If size or complexity requires that an object be scanned in several parts, the separate images should retain a logical coherence.
 - The file size of the JPEGs and supplementary images should be small enough so that users with telephonic modem connections can access them.

Archived TIFF images scanned between January 2001 and June 15, 2001 were scanned according to the standards of the California Digital Library (CDL): photographs and graphic images at 300 dpi and text at 600 dpi without corrections. However, all new items were included in the project; the scanning guidelines were modified to compensate for the size of the original image, to ensure that detail of smaller images would be viewable in the online JPEG versions. Those specifications marked *CDL indicate derivation from the CDL Guidelines for Digital Images.

TIFF IMAGES (archived)

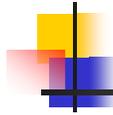
TIFF images are to be created as follows:

- Original photographs and graphic images larger than 5 x 7 in. will be scanned at 300 dpi and saved as TIFF files with no corrections (*CDL).
- Original photographs and graphic images 5 x 7 in. or smaller will be scanned at 600 dpi and saved as TIFF files with no corrections (*CDL).
- Original text items will be scanned at 600 dpi and saved as TIFF files with no corrections. (*CDL) (**EXCEPTION:** If the smallest type on the page is 24 points high or larger (for example, posters with large type), scan at 300 dpi.
- 35mm slides and negatives will be scanned at 2400 dpi, and saved as TIFF files with no corrections. (See [Creating TIFFs and JPEGs from slides and negatives](#).)
- **Digital photographs** (created using a digital camera) will be saved at their original dpi and saved as TIFF files with no corrections.
- **Color:** Black and white photographs and text (black text on white background, not including discoloration due to aging) are scanned in grayscale. Photographs that are monochromatic but are not black and white (i.e., sepia) are scanned in color. Text items with colored lettering and/or colored background are scanned in color.
- **What if the originals are too big for the scanner?** If the dimensions of the original item prevent it from being scanned all at once, it will be scanned in two parts, then integrated into one archival TIFF file.

JPEG IMAGES (used in online database)

JPEG images are to be created as follows:

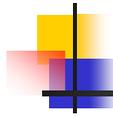
AICTS Section 5  28



System Requirements

- Is your system able to support mounting multiple formats: images, streaming audio and video, PDFs?
- Are you developing a platform which you will require support or will use off the shelf software which will require annual fees?
- Hardware: scanners, computers
- Software: imaging and metadata creation


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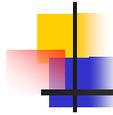


PREMIS: Fields Pertaining to Objects

<ul style="list-style-type: none"> ■ objectIdentifier ■ preservationLevel ■ objectCategory ■ objectCharacteristics ■ creatingApplication ■ originalName ■ Storage ■ Environment 	<ul style="list-style-type: none"> ■ signatureInformation ■ relationship ■ linkingEventIdentifier ■ linkingIntellectual Entity Identifier ■ linkingPermission StatementIdentifier
---	--

<http://www.oclc.org/research/projects/pmwg/>

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PREMIS Fields for ...

<i>Events</i>	<i>Agents</i>	<i>Characteristics</i>
<ul style="list-style-type: none"> •eventIdentifier •eventType •eventDateTime •eventDetail •eventOutcome •eventOutcomeDetail •linkingAgentIdentifier •linkingObjectIdentifier 	<ul style="list-style-type: none"> •agentIdentifier •agentName •agentType 	<ul style="list-style-type: none"> • compositionlevel • fixity • size • format • significantProperties • inhibitors



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Controlled Vocabulary for San Fernando Valley History Digital Library and Latino Cultural Heritage Digital Archives

SEE ALSO: METADATA ELEMENTS SUMMARY | CONTENT GUIDELINES

In order to support efficient retrieval of material, certain indexed fields in the metadata records are under authority control, that is, there is standard way to express a subject or topic, personal or corporate name, or location. Use the left button of your mouse to highlight the term you wish to search and copy it into the appropriate box on the search screen.

Below is a summary of which fields are under vocabulary control followed by a copy of the headings from Contentdm. Although the lists linked to this page in the right-hand column are updated at regular intervals, they will not necessarily contain all the terms that have been included in the database.

Field Name	Controlled Vocabulary
Title	No
Description	No
Subject	Yes, Library of Congress Subject Headings VHistory VIssues
Topic	Yes Fixed List
Keywords	No
Neighborhood	Yes, Library of Congress Subject Headings or Thesaurus of Geographic Names VHistory VIssues
Date	No, ISO standard
Alternative Dates	Yes, Library of Congress Subject Headings VHistory VIssues
Photographer/Author/Interviewee	Yes, Name Authority File VHistory VIssues
Donor & Others	Yes, Name Authority File VHistory VIssues
Media	Yes, AAT VHistory VIssues
Media Measurement	No
Type	Yes, Dublin Core Types VHistory VIssues
Format	Yes, Internet Media Types
Identifier	No



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Content Guidelines

SEE ALSO: METADATA ELEMENTS SUMMARY | CONTROLLED VOCABULARY

Skip to:	Title Description Subject Topic Keywords Neighborhood Date Alternative dates Photographer/Author/Interviewee	Donors & Others Media Media measurement Type Format Identifier Language Repository Name Collection	Repository number Call number Finding Aid Rights Project name Date digitized Publisher Detailed View Larger View
-----------------	--	--	--

Field Name	Guidelines
Title	<p>Source of Information Label or accompanying material with piece. May be devised by Metadata Catalogers</p> <p>Data Entry Responsibility Metadata Catalogers</p> <p>Content Management Use the title "as is" from label, with the exception of spelling or grammatical errors. When devising a title be succinct, keep it under 10 words when possible. Avoid initial articles. Do not start the title with page enumerations.</p>
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Subject	<p>Source of Information Image as a whole</p> <p>Data Entry Responsibility Metadata Catalogers</p> <p>Content Management Use LCSH terms which are strings that are constructed in a specific order. LCSH strings will be added to the controlled vocabulary. If an appropriate string is not present in the controlled vocabulary, contact subject cataloger. Use spaces and dashes between the main heading and its subdivisions. A semi-colon will automatically be added when using the controlled vocabulary. Use the semi-colon</p>

Why Some Projects Do not Reach Expected Goals

- Poor selection policy
- Unrealistic expectations
- Unclear or fuzzy measures of success
- Poor selection of presentation software
- Poor communication within team
- Poor documentation of process and procedures
- Poor quality control



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Exercise 3

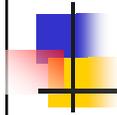
Teams reconvene

Goals of Exercise 3:

- Demonstrate an understanding of implementation issues
- Practice consensus building
- Summarize how the team would answer grant questions

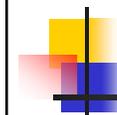
   35

Digital Project Planning & Management Basics



Optional Unit: Specific metadata standards and applications overviews
Addendum to session 4

1



Session Objectives

- Understand standards for
 - Metadadata elements
 - data value standards
 - data content standards and
- Learn about metadata standards developed by specific communities
- Evaluate the efficacy of the standard for a specific community, their strengths and weaknesses
- Explore the adoption of non-traditional standards by libraries

2



Session Outline

- Introduction to basic concepts
- Description of community specific metadata schemes
- Description of specific structural metadata and syntaxes

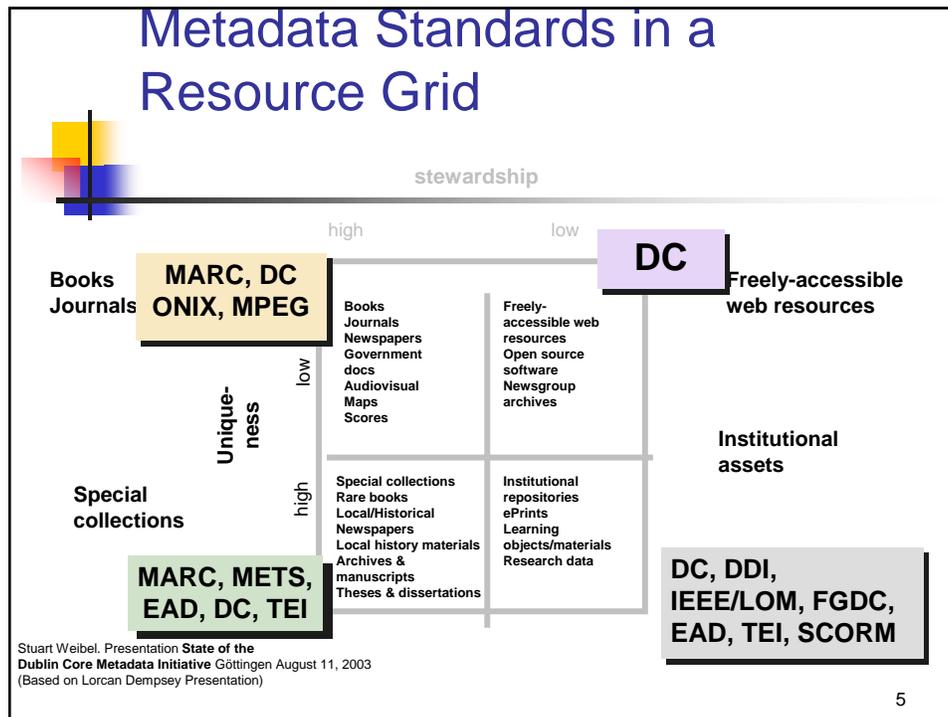
3



Questions to Ask When Selecting a Metadata Standard

- What type of material will be digitized?
- How much information is available?
- Is there a Community of practice developed for this resource type(s)?
- What is the purpose of digital project?
- Did your “Needs Assessment” elicit who will be the audience and how they would use the content?
- Are there pre-existing digital projects with which this one needs to function?
- What Systems options are available?

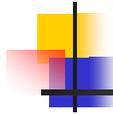
4



Metadata Standards

- Schemas (a.k.a. 'Element Sets')
 - Set of semantic properties, in this context used to describe resources
 - Not the same as "XML schemas" (which has a very precise meaning)
- Syntaxes
 - The structural wrapping around the semantics
 - Essential for moving information around

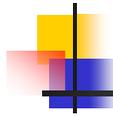
6



Content Standards

- AACR2 functions as the content standard for traditional cataloging
- RDA (the successor to AACR2) aspires to be the content standard for non-MARC metadata
- DACS (Describing Archives: a Content Standard)
- CCO (cataloging Cultural Objects) new standard developed by visual arts and cultural heritage community
- Best practices, Guidelines, Data dictionaries-- less formal content standards

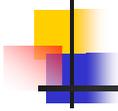
7



Value Standards

- Library of Congress Subject Headings
- Art and Architecture Thesaurus
- Thesaurus of Geographical Names

8



Some Example Schemas

- Dublin Core (<http://dublincore.org>)
 - Simple and Qualified
- MODS (www.loc.gov/standards/mods/)
- VRA 4.0 (<http://www.vraweb.org/projects/vracore4/index.html>)
- IEEE-LOM (<http://ltsc.ieee.org/wg12/>)
- ONIX (<http://www.editeur.org/onix.html>)
- EAD (<http://www.loc.gov/ead/>)
- TEI (<http://www.tei-c.org/>)

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Dublin Core: Simple

- Fifteen elements; one namespace
- Controlled vocabulary values may be expressed, but not the sources of the values
- Minimal standard for OAI-PMH
- Used also as:
 - core element set in some other schemas
 - switching vocabulary for more complex schemas

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Dublin Core Metadata Initiative (DCMI) Origins



- 2nd W3C Conference Chicago (October 1994)
 - Conversations at this conference led to the first meeting at OCLC in Dublin Ohio, hence its name
 - Combination of IT and Librarians

- Workshops began in 1995
 - March 1995, NCSA/OCLC workshop in Dublin, Ohio
 - Identified the need for author generated metadata, a “core”: of common elements to describe Web content to help discovery

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Mission of the DCMI (Original)

“The mission of the Dublin Core Metadata Initiative (DCMI) is to make it easier to find resources using the Internet through the following activities:

- Developing metadata standards for resource discovery across domains
- Defining frameworks for the interoperation of metadata sets
- Facilitating the development of community- or domain-specific metadata sets that work within these frameworks”

Weibel <http://purl.org/dc/workshops/dc8conference/plenary/sld018.htm>

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DCMES Characteristics

- Simplicity
- Supports resource discovery
- All elements are optional/repeatable
- No order of elements prescribed
- Extensible* / Refined*
- Interdisciplinary/International
- Semantic interoperability

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Value

- International and cross-domain
- Increase efficiency of the discovery/retrieval of digital objects
- Provide a framework of elements which will aid the management of information
- Promote collaboration of cultural/educational information as shared “social capital”

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DCMES Principles

- **1:1**

- **Dumb Down**

- **Appropriate Values**

<http://dublincore.org/documents/usageguide/glossary.shtml>

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Dublin Core Metadata Element Set (DCMES) 1996

The 15 Dublin Core elements can be divided into three categories:

CONTENT	INTELLECTUAL PROPERTY	INSTANTATION
Title	Creator	Date
Description	Contributor	Language
Subject	Publisher	Identifier
Relation	Rights	Format
Source		
Coverage		
Type		

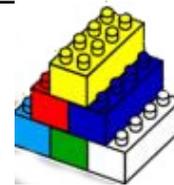
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Ex.: Simple Dublin Core

```
<metadata>
<dc:title>Cataloging cultural objects,</dc:title>
<dc:contributor>Baca, Murtha.</dc:contributor>
<dc:contributor>Harpring, Patricia.</dc:contributor>
<dc:subject>Information organization</dc:subject>
<dc:subject>Metadata</dc:subject>
<dc:subject>Cultural property--Documentation</dc:subject>
<dc:subject>CC135.C37 2006</dc:subject>
<dc:subject>363.6</dc:subject>
<dc:date>2006</dc:date>
<dc:format>396 p.</dc:format>
<dc:type>Text</dc:type>
<dc:identifier>ISBN:0838935648</dc:identifier>
<dc:language>en</dc:language>
<dc:publisher>ALA Editions</dc:publisher>
</metadata>
```

17

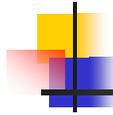
Extensible: Lego Blocks



- Extensible architecture
 - Spectrum of simple to more complex
 - DCMES may be used with other metadata element sets
 - Lego™ Metaphor: Modular building blocks used to develop application profiles of mixed metadata
- Leverage existing thesauri, classification systems, ontologies, local vocabularies

Stuart Weibel. Presentation **State of the Dublin Core Metadata Initiative** Göttingen August 11, 2003

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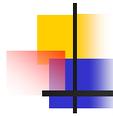


Dublin Core: Qualified



- 'Qualified' includes element refinements and encoding schemes
 - More specific properties
 - Two namespaces
 - Explicit vocabularies
- Additional elements, including 'Audience,' 'InstructionalMethod,' 'RightsHolder' and 'Provenance'

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Qualified Dublin Core

Elements	Element Refinements	
1. Identifier	Abstract	Is referenced by
2. Title	Access rights	Is replaced by
3. Creator	Alternative	Is required by
4. Contributor	Audience	Issued
5. Publisher	Available	Is version of
6. Subject	Bibliographic citation	License
7. Description	Conforms to	Mediator
8. Coverage	Created	Medium
9. Format	Date accepted	Modified
10. Type	Date copyrighted	Provenance
11. Date	Date submitted	References
12. Relation	Education level	Replaces
13. Source	Extent	Requires
14. Rights	Has format	Rights holder
15. Language	Has part	Spatial
	Has version	Table of contents
	Is format of	Temporal
	Is part of	Valid

20

More Dublin Core “Refinements”

Encodings	Types
Box DCMIType DDC IMT ISO3166 ISO639-2 LCC LCSH MESH Period Point RFC1766 RFC3066 TGN UDC URI W3CTDF	Collection Dataset Event Image Interactive Resource Moving Image Physical Object Service Software Sound Still Image Text

21

Ex.: Qualified Dublin Core

```

<metadata>
  <dc:title xml:lang="en">Cataloging cultural objects.</dc:title>
  <dc:contributor>Baca, Murtha.</dc:contributor>
  <dc:contributor>Harpring, Patricia.</dc:contributor>
  <dc:subject xsitype="LCSH">Information
organization</dc:subject>
  <dc:subject xsitype="LCSH">Metadata</dc:subject>
  <dc:subject xsitype="LCSH">Cultural property--
Documentation</dc:subject>
  <dc:subject xsitype="LCC">CC135.C37 2006</dc:subject>
  <dc:subject xsitype="DDC">363.3</dc:subject>
  <dc:date xsitype="W3CDTF">2006</dc:date>
  <dcterms:extent>396 p.</dcterms:extent>
  <dc:type xsitype="DCMIType">Text</dc:type>
  <dc:identifier xsitype="URI">ISBN: 0838935648 </dc:identifier>
  <dc:language xsitype="RFC3066">en</dc:language>
  <dc:publisher>ALA Editions</dc:publisher>
  <dcterms:audience>Catalogers</dcterms:audience>
</metadata>
    
```

22

Lego Model replaced by RDF

Combining element sets using the Resource Description Framework (RDF), Semantic Web

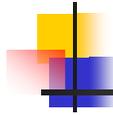
The diagram shows a blue rounded rectangle labeled "Container" containing three yellow boxes, each labeled "Package" with a specific content type: "Dublin Core", "MARC record", and "Indirect Reference". An arrow labeled "URI" points from the "MARC record" package to a separate yellow box labeled "Package Terms and Conditions".

23

Advantages of Dublin Core

- Less rigorous content rules
- Easier to train and implement
- Allows OAI harvesting of metadata
- Supported by digital library products:
 - ContentDM
 - Encompass
 - MetaSource

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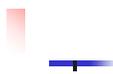


Disadvantages to Dublin Core

- Lack of granularity may not support specific community needs
- Lack of granularity makes its role as a switching language between standards limited
- No fields are required and lack of consistent training can hamper interoperability

25

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.



What is MODS?

Descriptive metadata standard

- Initiative of Network Development and MARC Standards Office at LC
- A derivative of MARC21
 - Documentation refers to MARC definitions for most properties
 - Descriptive metadata encoded in an XML schema
 - Uses textual rather than numeric tags
- Originally designed for library applications, but may be used for others
- Uses XML Schema (METS)

<http://www.loc.gov/standards/mods/>

26



Why *MODS*?

- XML (Extensible Markup Language) is the markup for the Web
- Library community need for a element set simpler but compatible with MARC that could be transmitted in XML
- A standardized framework for holding and exchanging metadata: analogous to the MARC record, for reuse of pre-existing information
- Designed for complex digital library objects
- Dublin Core not sufficient; e.g., need to express role of creator
- Provide a more explicit means of expressing different categories of dates in machine-readable forms

27



MODS elements

- Title Info
- Name
- Type of resource
- Genre
- Origin Info
- Language
- Physical description
- Abstract
- Table of contents
- Target audience
- Note
- Subject
- Classification
- Related item
- Identifier
- Location
- Access conditions
- Extension
- Record Info
- Root elements:
 - `mods` (A single MODS record)
 - `modsCollection` (A collection of MODS records)

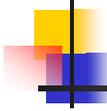
28



The slide features the MINERVA logo at the top, followed by the title "Fields used in Minerva project". Below the title is a list of metadata fields organized into two columns:

- Title
- Alternative title
- Name (structured form)
- Abstract
- Date captured
- Genre (value always "Web site")
- Physical description (file formats)
- Identifier (base URL)
- Language
- Access conditions/rights management
- Subject (keyword or LCSH if possible)

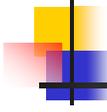
The slide number "30" is located in the bottom right corner.



Advantages *MODS*

- Uses language-based tags; fully uses Unicode character set
- Allows the aggregation of multilingual records
- Elements generally inherit semantics of MARC but does not assume the use of any specific rules for description
- Element set is more compatible with existing descriptions than ONIX or Dublin Core
- Elements particularly applicable to digital resources
- XML schema allows for flexibility and availability of freely available software tools

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Disadvantages of *MODS*

- Library-centric
- Not widely adopted by other libraries or other communities

32

Ex.: MODS

```

<titleInfo>
  <title>Cataloging cultural objects. /</title>
</titleInfo>
<name type="personal">
  <namePart type="family">Baca,</namePart>
  <namePart type="given">Murtha),</namePart>
  <namePart type="date">1951-</namePart>
  <role>
    <roleTerm type="text">editor</roleTerm>
  </role>
</name>
<name type="personal">
  <namePart type="family">Harpring,</namePart>
  <namePart type="given">Patricia.</namePart>
  <role>
    <roleTerm type="text">editor</roleTerm>
  </role>
</name>

```

33

More MODS

```

<typeOfResource>text</typeOfResource>
<genre authority="marc">book</genre>
<originInfo>
  <place>
    <placeTerm authority="marccountry" type="code">ilu</placeTerm>
  </place>
  <place>
    <placeTerm type="text">Chicago</placeTerm>
  </place>
  <publisher>ALA Editions</publisher>
  <dateIssued>2006</dateIssued>
  <issuance>monographic</issuance>
</originInfo>
<language>
  <languageTerm authority="iso639-2b" type="code">eng</languageTerm>
</language>

```

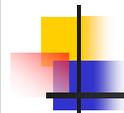
34



VRA Core Categories for Visual Resources

- Developed by the Visual Resources Association, the VRA Standards Committee
- Designed specifically for visual resources
- Viewed as a means to share cataloging of visual materials
- Provides access to digitized images and their description

35



VRA Metadata Elements

- Based on CDWA for category definitions and recommendations for controlled vocabulary
- Two types of elements
 - Work
 - Images
- Like DC, all fields are repeatable
- Unlike DC, all are mandatory if applicable

36



VRA 4.0 Elements

- Work, Collection or Image
- Work Type
- Title
- Measurements
- Material
- Technique
- Agent
- Date
- Subject
- Relation
- Location REFID
- Text REF
- Style/Period
- Agent.Culture / Cultural Context
- Description
- Source
- Rights
- Inscription
- State Edition

37



VRA Data Values

- LCSH
- AAT
- TGN
- ULAN

38



Online Information Exchange (ONIX)

Designed by publishing industry
(American Association of Publishers)
to exchange information about “books”
with wholesalers, retail, e-tail
booksellers.

- Standard for data exchange
- Richer information for online bookstores

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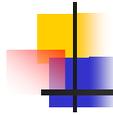


ONIX Integrated with MARC Records?

CC:DA Task on ONIX International
charge with reviewing the standard and
assessing the impact if integrated

<http://www.ala.org/alcts/organization/ccs/ccda/tf-onix1.html>

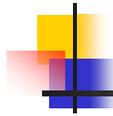
40



Comparison of ONIX & MARC

- ONIX has finer granularity than MARC
- Fields can be mapped from ONIX into UNIMARC, but can not be reconverted
- Each application contains fields that are relevant to only themselves
- ONIX records provide enriching information: reviews, abstracts, TOC, prizes won, credentials of authors

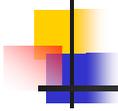
41



ONIX/MARC Crosswalks

- ONIX (1.0) to UNIMARC Crosswalk developed by Library of Congress
<http://lcweb.loc.gov/marc/onix2marc.html>
- Mapping by Bob Pearson (OCLC)
http://222.editeur.org/ONIX_MARC_Mapping_External.doc
- Report by Alan Danskin
<http://bic.org.uk/reporton.doc>

42

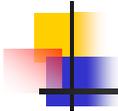


ONIX Metadata Standard

Allows two levels of description:

- Level 2:
 - 235 elements of information in 24 categories
 - Requires XML DTD
- Level 1:
 - Not all the categories, 82 elements
 - Does not require XML DTD

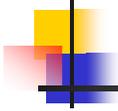
43



ONIX for Books

- Originally devised to simplify the provision of book product information to online retailers (name stood for ONline Information eXchange)
- First version flat XML, second version included hierarchy and elements repeated within 'composites'
- Maintained by Editeur, with the the Book Industry Study Group (New York) and Book Industry Communication (London)
- Includes marketing and shipping oriented information: book jacket blurb and photos, full size and weight info, etc.

44



Ex.: ONIX

```

<Title>
<TitleType>01</TitleType>
<TitleText textcase = "02">British English, A to Zed</TitleText>
</Title>
<Contributor>
<SequenceNumber>1</SequenceNumber>
<ContributorRole>A01</ContributorRole>
<PersonNameInverted>Schur, Norman W</PersonNameInverted>
<BiographicalNote>A Harvard graduate in Latin and Italian literature,
Norman Schur attended the University of Rome and the Sorbonne before
returning to the United States to study law at Harvard and Columbia
Law Schools. Now retired from legal practise, Mr Schur is a fluent
speaker and writer of both British and American
English.</BiographicalNote>
</Contributor>

```

45



Ex.: ONIX

```

<othertext>
<d102>01</d102>
<d104>BRITISH ENGLISH, A TO ZED is the thoroughly updated, revised, and
expanded third edition of Norman Schur's highly acclaimed transatlantic dictionary
for English speakers. First published as BRITISH SELF-TAUGHT and then as
ENGLISH ENGLISH, this collection of Briticisms for Americans, and Americanisms
for the British, is a scholarly yet witty lexicon, combining definitions with
commentary on the most frequently used and some lesser known words and
phrases. Highly readable, it's a snip of a book, and one that sorts out – through
comments in American – the "Queen's English" – confounding as it may
seem.</d104>
</othertext>
<othertext>
<d102>08</d102>
<d104>Norman Schur is without doubt the outstanding authority on the similarities
and differences between British and American English. BRITISH ENGLISH, A TO
ZED attests not only to his expertise, but also to his undiminished powers to inform,
amuse and entertain. – Laurence Urdang, Editor, VERBATIM, The Language
Quarterly, Spring 1988 </d104>
</othertext>

```

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Main Desc.

Ex.: ONIX

<othertext>
<d102>01</d102>
<d104>BRITISH ENGLISH, A TO ZED is the thoroughly updated, revised, and expanded third edition of Norman Schur's highly acclaimed transatlantic dictionary for English speakers. First published as BRITISH SELF-TAUGHT and then as ENGLISH ENGLISH, this collection of Briticisms for Americans, and Americanisms for the British, is a scholarly yet witty lexicon, combining definitions with commentary on the most frequently used and some lesser known words and phrases. Highly readable, it's a snip of a book, and one that sorts out – through comments in America – the “Queen's English” – confounding as it may seem.</d104>
</othertext>
<othertext>
<d102>08</d102>
<d104>Norman Schur is without doubt the outstanding authority on the similarities and differences between British and American English. BRITISH ENGLISH, A TO ZED attests not only to his expertise, but also to his undiminished powers to inform, amuse and entertain. – Laurence Urdang, Editor, VERBATIM, The Language Quarterly, Spring 1988 </d104>
</othertext>

Review

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EAD -- Encoded Archival Description

<ead> Encoded Archival Description, Version 2002

Encoded Archival Description (EAD)

Official EAD Version 2002 Web Site

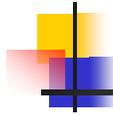
The EAD Document Type Definition (DTD) is a standard for encoding archival finding aids using the Standard Generalized Markup Language (SGML). The standard is maintained in the [Network Development and MARC Standards Office](#) of the Library of Congress (LC) in partnership with the [Society of American Archivists](#).

General Information

- [Development of the EAD DTD](#)
- [Design Principles for Enhancements to EAD](#)
- [EAD Listserv: How to subscribe | List message archive](#)
- [EAD Sites on the World Wide Web](#)
- [Other Sites Related to EAD](#)
- [EAD Working Group Members](#)

<http://www.loc.gov/ead/>

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Learning Object Metadata

- An array of related standards for description of 'learning objects' or 'learning resources'
- Most based on efforts of the IEEE LTSC (Institute of Electrical and Electronics Engineers Learning Technology Standards Committee) and the IMS Global Learning Consortium, inc.
- Tends to be very complex with few implementations outside of government and industry
- One well-documented implementation is CanCore

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NISO Metadata for Images in XML Schema

Technical Metadata for Digital Still Images Standard
Official Web Site

The Library of Congress' Network Development and MARC Standards Office, in partnership with the [NISO Technical Metadata for Digital Still Images Standards Committee](#) and other interested experts, is developing an XML schema for a set of technical data elements required to manage digital image collections. The schema provides a format for interchange and/or storage of the data specified in the NISO Draft Standard [Data Dictionary: Technical Metadata for Digital Still Images](#) (Version 1.2). This schema is currently in draft status and is being referred to as "NISO Metadata for Images in XML (NISO MIX)". MIX is expressed using the [XML schema language](#) of the [World Wide Web Consortium](#). MIX is maintained for NISO by the [Network Development and MARC Standards Office](#) of the Library of Congress with input from users.

This is a DRAFT for review and trial use: Please send comments on draft 0.2 to the MIX Listserv (described below)

XML schema for a set of technical data elements required to manage digital image collections

<http://www.loc.gov/standards/mix/>

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TEI -- Text Encoding Initiative



Text Encoding Initiative

Welcome to the TEI Website

Initially launched in 1987, the TEI is an international and interdisciplinary standard that helps libraries, museums, publishers, and individual scholars represent all kinds of literary and linguistic texts for online research and teaching, using an encoding scheme that is maximally expressive and minimally obsolescent.

News flash!

4th Annual Members Meeting
to be held 22-23 October 2004 at Johns Hopkins University, Baltimore, USA.

In memoriam
Antonio Zampolli, 1937-2003

- **All about the TEI Consortium:** describes the organization and constitution of the TEI Consortium
- **How to participate:** provides information on how projects institutions and individuals can play an active part in development and maintenance of the standard
- **The TEI Guidelines:** the chief deliverable of the TEI project: detailed recommendations for the encoding of all kinds of textual material of all kinds in all languages from all times
- **TEI Tutorials:** introductory and advanced teaching materials, presentations, and user case studies
- **TEI History:** archive of TEI publications and working papers
- **Projects using TEI:** pointers to live TEI applications and systems worldwide
- **Members only area:** links to current TEI activities, draft documents, discussion papers from workgroups, etc. : access restricted to current members only. (Forgotten your password? [contact us for a reminder](#))
- **Just the FAQs:** quick answers to frequently asked questions about the TEI
- **TEI Software:** pointers to TEI specific and generic free software for exploiting the TEI scheme

<http://www.tei-c.org/>

Scenario 1: Collaborative Oral History Project: Pioneers of the Great Plateau

Briefly summarize the issues involved in planning this specific project. Be sure to touch upon:

1st exercise

1. Scope and nature: who, what, where, when, why, how
2. Selection Process, problems with condition of the original material
3. Politics of working in a consortial arrangement

2nd exercise

4. Staffing
5. Hardware/software considerations
6. Standards, conversion issues
7. Creation and maintenance of the digital objects and accompanying metadata

Same three groups: what are the most important 5 issues that the institution will need to resolve? Use the communication techniques discussed earlier. Consider what criteria will be used to measure “success” and how to build in the quality to meet that success.

3rd exercise

Practice writing the typical questions asked on grant applications. See the accompanying sheet.

4th exercise

9. Assessment: how to gauge success. Consider what criteria will be used to measure “success” and how to build in the quality to meet that success

Scenario

Historical Society of [Western State], a member of the Consortia of the Great Plateau, plans to write a grant for \$150,000.00 to fund the creation of a digital archive of the oral histories made of the original pioneers who settled in the Great Plateau at the turn of the century. The Consortia estimates that they have a total of 500 oral histories of the founders of the Plateau, with another 5,000 documents supporting the oral histories (letters, maps, photographs, newspaper clippings from 1900-1933, brochures, postcards). The Consortia consists of the State Historical Society and six historical societies that support the local communities of the Great Plateau. Four historical societies are managed by volunteers who provide access to their materials on a limited basis (weekends and some holidays). The State Historical Society of [Western State] and the Historical Society of Mountain Pass is supported/managed by state and local government. The State Historical Society has 6 paid employees: a director, 2 curators, 2 museum registrars/technicians, and 1 secretary. The Historical Society of Mountain Pass has a director/curator, a secretary, and two assistants who provide guided tours for schools and the general public. The collections of the volunteer historical societies represent about 35% of the total estimated material. The State Historical Society has 40% and the Historical Society of Mountain Pass has the remaining 25% of the material. The original oral histories are a mix of media types and states of preservation. In some cases, only the written transcript remains accessible.

Team members: select someone to serve as spokesperson for the team and one to record the decisions (may rotate for each exercise). Each team member will be given a role (random selection -- a slip will be in the notebook): administrator, systems director, curator, and cataloger)

Scenario 2: Charles Dickens collection

Briefly summarize the issues involved in planning this specific project. Be sure to touch upon:

1st exercise

1. Scope and nature: who, what, where, when, why, how
2. Selection Process, problems with condition of the original material
3. Politics of working in a consortial arrangement

2nd exercise

4. Staffing
5. Hardware/software considerations
6. Standards, conversion issues
7. Creation and maintenance of the digital objects and accompanying metadata

Same three groups: what are the most important 5 issues that the institution will need to resolve? Use the communication techniques discussed earlier. Consider what criteria will be used to measure “success” and how to build in the quality to meet that success.

3rd exercise

Practice writing the typical questions asked on grant applications. See the accompanying sheet.

4th exercise

8. Assessment: how to gauge success. Consider what criteria will be used to measure “success” and how to build in the quality to meet that success

Scenario

University of Midwest is a private mid-sized university who received 5 years ago a major archival gift from the endowed chair of the English Department. The archives include her extensive collection of works by Charles Dickens and works based on the original works. The collection includes 1st editions of the books, some newspaper clippings in album of the serialization as the novels first appeared, subsequent materials adapted by others based on the works of Charles Dickens: scores to songs, musical scores, children’s editions, prints (illustrations), as well as modern books on tape, film versions of the novels (reel-to-reel, videos and DVDs), three dimensional objects (glass figurines, music boxes...). The collection also includes scholarly and popular works about Charles Dickens and his works. The University plans to digitize much of the work for which there a few originals. The intention is to develop curriculum packages that would support K-12 education as well the University courses on nineteenth-century literature. The Special Collections curator has a reading room supervisor and one staff member to help process material. The University has a Systems Librarian and a web developer on staff. Technical Services has 3 professional catalogers and 15 paraprofessionals in cataloging, acquisitions and processing. They are excited about the project but are worried about the impact on the workflow. They do not have a backlog and hope to maintain that trend.

Team members: select someone to serve as spokesperson for the team and one to record the decisions (may rotate for each exercise). Each team member will be given a role (random selection--a slip will be in the notebook): administrator, systems director, curator, cataloger)

Scenario 3: Digitization of Local Newspapers

Briefly summarize the issues involved in planning this specific project. Be sure to touch upon:

1st exercise

1. Scope and nature: who, what, where, when, why, how
2. Selection Process, problems with condition of the original material
3. Politics of working in a consortial arrangement

2nd exercise

4. Staffing
5. Hardware/software considerations
6. Standards, conversion issues
7. Creation and maintenance of the digital objects and accompanying metadata

Same three groups: what are the most important 5 issues that the institution will need to resolve? Use the communication techniques discussed earlier. Consider what criteria will be used to measure “success” and how to build in the quality to meet that success.

3rd exercise

Practice writing the typical questions asked on grant applications. See the accompanying sheet.

4th exercise

9. Assessment: how to gauge success. Consider what criteria will be used to measure “success” and how to build in the quality to meet that success.

Scenario

The University of the Northeast is an ARL library with a significant microfilm collection of local neighborhood newspapers that are a rich primary resource for history, political science, urban studies, geography, economics, and population studies. The University has become aware that two other colleges in the state have similar collections that complement their holdings. In all they have 5,000 reels of microfilm. The collection dates from the period of the American Revolution up to 1965 at which point most of the regional newspapers were absorbed by large newspaper conglomerates or just faded away. The intention is to provide access to this primary resource for curriculum needs of K-12 as well as higher education and researchers. The University of the Northeast has 1 systems librarian and 3 programmers on staff; however, they are also responsible for all the open labs on campus. Their Technical Services department is in the process of reorganizing after migrating to a new ILS. The other 2 colleges only have 1 systems librarian each. Their Technical Services departments only have 2 professional librarians and 12 paraprofessionals in cataloging and acquisitions. Librarians and staff at U.N. feel that they can absorb the project with the new ILS making their current work more efficient.

Team members: select someone to serve as spokesperson for the team and one to record the decisions (may rotate for each exercise). Each team member will be given a role (random selection -- a slip will be in the notebook): administrator, systems director, “curator,” and cataloger)

Steps for Developing a Plan for Digital Projects

Analysis

Mission

 Mission statement of Institution

Strategic Plan

 Goals and objectives of Institution

 Ongoing

 Short-term

Internal Constraints

 Library mandates

 Library limitations (staff, budget, space)

SWOT analysis (Strengths – Weaknesses – Opportunities – Threats)

Planning

Stakeholder analysis

 Faculty and students, K-12

 Librarians and library staff

 Institution

 Wider community (environmental scan)

Business Plan

 Assumptions

 Needs analysis

 Benefits and solutions

 Actions that tie project to the mission and strategic plan

 Impact analysis: costs; personnel, hardware/software, space; processing

 Marketing

 Sustainability

 Timelines

Implementation

Plan of Operation

 Details of workflow for each project: documentation

 Training

 Selection

 Copyright

 Donor restrictions

 Privacy issues

 Value

 Preparation

 Digitization

 Metadata creation

 Web page support

Contextualization

Added value

Condition

Evaluation

Vision for success

 Measure of success

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Common Abbreviations

AACR2

Anglo-American Cataloging Rules, Version 2

AAT

Art and Architecture Thesaurus

ADA

Americans with Disabilities Act

CCO

Cataloging Cultural Objects

CDWA

Categories for the Description of Works of Art

DACS

Describing Archives: A Content Standard

DC

Dublin Core Metadata Standard

DCMI

Dublin Core Metadata Initiative

EAD

Encoded Archival Descriptions

LCAF

Library of Congress Authority File

LCSH

Library of Congress Subject Headings

MARC

MAchine-Readable Cataloging

MeSH

Medical Subject Headings

METS

Metadata Encoding and Transmission Standard

MODS
Metadata Object Description Schema

ONIX
ONline Information exchange

RDA
Resource Description and Access

RDF
Resource Description Framework

TGM
Thesaurus of Graphical Materials

TGN
Thesaurus of Geographical Names

Selective Bibliography

General

Hughes, Lorna M. (2004). *Digitizing collections: strategic issues for the information manager*. London: Facet.

Institute of Museum and Library Services . *NLG project planning: a tutorial*.
http://www.ims.gov/project_planning/

NISO Framework Advisory Group. (2004). *A framework of guidance for building good digital collections*. 2nd ed. Bethesda, MD. National Information Standards Organization. Available from: <http://www.niso.org/framework/Framework2.html>

Sitts, Maxine K. (2000). *Handbook for digital projects: a management tool for preservation and access*. Andover, Mass.: Northeast Document Conservation Center. <http://www.nedcc.org/digital/dighome.htm> (PDF versions)

Washington State Library. *Digital best practices*.
<http://digitalwa.statelib.wa.gov/best.htm>

Team Building and Negotiation

Developing a Plan & Management

Bishoff, Liz and Nancy Allen. (2004). *Business planning for cultural heritage institutions*. Washington, DC: Council on Library and Information Resources.

Copyright

Copyright Information Center (Cornell University). Available at:
<http://www.copyright.cornell.edu>

Minow, Mary. Library Digitization Projects and Copyright. Available at:
<http://www.llrx.com/features/digitization.htm>

Costs

Puglia, Steven. Costs of Digital Imaging Projects. *RLG DigiNews* (Oct. 15, 1999) v. 3, no. 5 <http://www.rlg.org/preserv/diginews/diginews3-5.html>

Tanner, Simon and Joanne Lomax Smith. *Digitisation: How much does it really cost?* Conference paper. <http://heds.herts.ac.uk/resources/papersI.html>

Miller, Joanne. *Cost of Digital Image Distribution. Chapter 2, The cost of creating digital images and metadata by museums.*
<http://sunsite.berkeley.edu/Imaging/Databases/1998mellon>

RLG Worksheet for Estimating Digital Reformatting Costs
<http://www.rlg.org/preserv/RLGWorksheet.pdf>

Digitization

Lee, Stuart D. *Digital imaging: a practical handbook*. New York: Neal-Schuman, 2001.

Guides to Quality in Visual Resource Imaging. 1. Planning an Imaging Project by Linda Serenson Colet. <http://www.rlg.org/visguides/visguide1.html>

Kenney, Anne R. and Oya Y. Rieger. *Moving theory into practice: digital imaging for libraries and archives*. Mountain View, CA: Research Libraries Group, Inc. 2000.

----- *Moving theory into practice: digital imaging tutorial*. Cornell, NY: Cornell University, 2003. Available at:
<http://www.library.cornell.edu/preservation/tutorial/index.html>

Trant, Jennifer. (2004). *Image retrieval benchmark database service: needs assessment and preliminary development plan*. CLIR Resources. Available at:
<http://www.clir.org/pubs/reports/trant04>

Grants

Gerding, Stephanie K. and Pamela H. MacKellar. *Grants for libraries: a how-to-do-it manual*. New York: Neal-Schuman, 2006.

Metadata

Baca, Murtha. (2000) *Introduction to metadata*. Los Angeles: J. Paul Getty Trust. 2nd ed. Available at:
http://www.getty.edu/research/conducting_research/standards/intrometadata/index.html (Version 3 projected fall 2007)

Caplan, Priscilla. (2003). *Metadata fundamentals for all libraries*. Chicago: American Library Association.

CDL Digital Library Services Advisory Group. (August 2006). *CDL Guidelines for Digital Objects* Version 2.0. Available at:
<http://www.cdlib.org/inside/diglib/guidelines>

Understanding Metadata. (2004). NISO Press. Available at:
<http://www.niso.org/standards/resources/UnderstandingMetadata.pdf>

Project Management & Workflow

Conway, Paul. *Production tracking*. Available at: <http://ahds.ac.uk/creating/information-papers/checklist/index.htm>

Noerr, Peter. *Digital Library Tool Kit*. (2003) 3rd Edition Available at:
<http://www.sun.com/products-n-solutions/edu/whitepapers/digitaltoolkit.html>

Technical Advisory Service for Images. *An Introduction to Making Digital Image Archives*. <http://www.tasi.ac.uk/advice/overview.html>

Assessment

Covey, Denise Troll. (2002). *Usage and Usability Assessment: Library Practices and Concerns*. CLIR.

California Digital Library. *Assessment*. Available at:
<http://www.cdlib.org/inside/assess/index>

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Evaluation Form

Digital Project Planning & Management Basics

Your evaluation of this workshop is very important to the future development of this course and other similar courses. Your honest, candid answers to the following questions will assist us in providing quality programs.

Please rate the following aspects of today's workshop by checking the box that best reflects your evaluation:

1. The overall content of the workshop:

	5	4	3	2	1	
a. was extremely valuable						was of little value
b. provided enough detail						was too general
c. was current & relevant						was outdated
d. was cohesive & logical						was fragmented/difficult to follow
e. was appropriate to my needs						was not at all appropriate
f. met its stated objectives						did not meet objectives

2. Presenter:

	5	4	3	2	1	
a. was knowledgeable						was unsure of the material
b. had good presentation skills						had poor presentation skills
c. encouraged participation						discouraged participation
d. addressed my level of understanding						did not consider my level
e. answered questions directly						did not answer questions
f. was prepared						was not prepared
g. understood the audience dynamics						ignored audience dynamics

3. Presenter:

	5	4	3	2	1	
a. was knowledgeable						was unsure of the material
b. had good presentation skills						had poor presentation skills
c. encouraged participation						discouraged participation
d. addressed my level of understanding						did not consider my level
e. answered questions directly						did not answer questions
f. was prepared						was not prepared
g. understood the audience dynamics						ignored audience dynamics

4. The handouts:

	5	4	3	2	1	
a. are excellent						are poor
b. followed course content						are disjointed/out of sequence
c. are valuable for future reference						are of no value

5. The PowerPoint slides:

- a. were clear and easy to read
- b. were well organized
- c. illustrated concepts clearly
- d. covered an appropriate amount of information
- e. were visually effective
- f. were enhanced by and supported the presenter's remarks

5	4	3	2	1

- were hard to read
- were poorly organized
- were confusing
- contained too much or not enough information
- were not effective
- were poorly related to the presenter's remarks

Please give the following information about yourself:

- 6. Your level of knowledge in the subject of this workshop before today: expert 5 4 3 2 1 novice
- 7. Your level of experience in the subject of this workshop before today: very experienced 5 4 3 2 1 beginner
- 8. Other comments:

Comments on specific sessions:

THANK YOU!