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
Washington, DC
April 2008
(1) Instructor Manual -- (2) Trainee Manual


Version 1, April 2008
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<td>SELECTIVE BIBLIOGRAPHY</td>
</tr>
</tbody>
</table>
**Cataloging for the 21st Century**

**Course 5: Digital Project Planning and Management Basics**

**Date Place**

Instructor:
- Name and affiliation

**Schedule**

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Sessions / Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:30</td>
<td>Registration</td>
</tr>
<tr>
<td>8:30-9:00</td>
<td>Getting started; Introductions, Orientation and Background</td>
</tr>
</tbody>
</table>
| 9:00-10:30 | 1. Introduction to Digital Project Planning & Management  
• Review the goal of the course  
  o Collaboration within an organization and Partners with outside institutions  
  o Team building and communication skills  
  o Creating a business plan and writing a grant  
  o Managing a digital project  
  o Assessment  

  2. Team building and Communication Skills  
  o Brainstorming techniques  
  o Listening and persuasion skills  
  o “Getting to Yes” |
| 10:30-10:45 | Break |
| 10:30-12:00 | Exercise 1: 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 | 3. Making Your Case: Creating the Business Plan  
• 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 |
<p>| 3:00-3:15 | Break |
| 3:15-4:45 | Exercise 2: 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 |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Session / Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-9:00</td>
<td>Review previous day; answer any questions</td>
</tr>
<tr>
<td>9:00-10:30</td>
<td><strong>4. Planning and Grant writing</strong></td>
</tr>
<tr>
<td></td>
<td>o Overview of the steps of planning a digital project</td>
</tr>
<tr>
<td></td>
<td>o Examining the information needed to write a successful grant</td>
</tr>
<tr>
<td>10:30-10:45</td>
<td>Break</td>
</tr>
<tr>
<td>10:30-12:00</td>
<td><strong>5. Project Management</strong></td>
</tr>
<tr>
<td></td>
<td>o Overview of the steps of implementing a digital project</td>
</tr>
<tr>
<td></td>
<td>o Examining the tasks involving a digital project</td>
</tr>
<tr>
<td>12:00-1:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>1:30-3:00</td>
<td><strong>Exercise 3:</strong> Based on scenario assigned to the group, discuss the issues of writing a grant and implementing a project</td>
</tr>
<tr>
<td>3:00-3:15</td>
<td>Break</td>
</tr>
<tr>
<td>3:15-4:45</td>
<td><strong>6. Assessment</strong></td>
</tr>
<tr>
<td></td>
<td>o Quantitative and Qualitative measures of success</td>
</tr>
<tr>
<td></td>
<td>o Understand the aspects of quality (wayfinding principles): functionality, usability, and accessibility</td>
</tr>
<tr>
<td></td>
<td><strong>Exercise 4:</strong> Consider what criteria will be used to measure “success” and how to build in the quality and features to reach the goals</td>
</tr>
<tr>
<td>4:45-5:00</td>
<td>Conclusion of Day 2</td>
</tr>
</tbody>
</table>
References

**Digitization Projects: General**


Institute of Museum and Library Services. *NLG project planning: a tutorial.*
[http://www.imls.gov/project_planning/](http://www.imls.gov/project_planning/)


**Digital Imaging**


**Team Building**


**Metadata**


**Project Management & Workflow**

Conway, Paul. *Production tracking*. Available at: [http://ahds.ac.uk/creating/information-papers/checklist/index.htm](http://ahds.ac.uk/creating/information-papers/checklist/index.htm)


Technical Advisory Service for Images. *An Introduction to making digital image archives*. [http://www.tasi.ac.uk/advice/overview.html](http://www.tasi.ac.uk/advice/overview.html)
Assessment
Covey, Denise Troll. (2002). *Usage and usability assessment: library practices and concerns.* CLIR.

Digital Project Planning & Management Basics

Section 1
Introduction:
Background, Goals, and Course Outline

Course design: Mary S. Woodley, CSU Northridge

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
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

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
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

Why Digitize?

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

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

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?
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
Digital Project Planning & Management Basics

Section 2: Team Building and Planning

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
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

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
Staffing

Every project will vary

Not shown on this page: Heritage Network members of partnership
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

“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
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

Active Listening Skills

1. Hear the message
2. Interpret the message
3. Evaluate the message
4. Respond to the message
**Tips for Effective Listening**

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

**What Blocks Effective Communication?**

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

Revisit Decision process
- Start over
- Change management add Sue Curzon’s diagram
Exercise 1:
Learning Objectives

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

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

*Based on Bishoff and Allen (2004)

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?
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

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.
Benefits of Solution

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

Benefits of Project

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
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”


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

Categories of Cost

- Operational
  - Hardware/Software
  - Training
- Organizational
  - Release time
  - Space
- Staffing
### Relative Costs

Table 6: Comparative Cost Ratings Based on Overall Average Projections

<table>
<thead>
<tr>
<th>Digitization Category</th>
<th>Digitizing</th>
<th>Metadata Creation</th>
<th>Other</th>
<th>Overall Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Collections</td>
<td>Higher</td>
<td>Slightly Higher</td>
<td>Lower</td>
<td>Slightly Higher</td>
</tr>
<tr>
<td>Single Items</td>
<td>Lower</td>
<td>Slightly Higher</td>
<td>Higher</td>
<td>Higher</td>
</tr>
<tr>
<td>Photographs</td>
<td>Slightly Higher</td>
<td>Lower</td>
<td>Average</td>
<td>Lower</td>
</tr>
<tr>
<td>Books/Pamphlets</td>
<td>Lower</td>
<td>Lower</td>
<td>Lower</td>
<td>Lower</td>
</tr>
<tr>
<td>Re-keyed Text</td>
<td>Lower</td>
<td>Lower</td>
<td>Lower</td>
<td>Lower</td>
</tr>
<tr>
<td>OCR</td>
<td>Very Low</td>
<td>Very Low</td>
<td>Very Low</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

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

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### Reported Cost Ranges

Table 5: Reported Cost Ranges for Various Digitization Processes

<table>
<thead>
<tr>
<th>Digitization Category</th>
<th>Digitizing</th>
<th>Metadata Creation</th>
<th>Other</th>
<th>Overall Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Projects</td>
<td>$9.25-$19.80</td>
<td>$0.75-$34.65</td>
<td>$0.45-$50.20</td>
<td>$1.85-$95.85</td>
</tr>
<tr>
<td>Adjusted Projects</td>
<td>$0.25-$16.65</td>
<td>$0.75-$17.25</td>
<td>$0.45-$28.15</td>
<td>$1.85-$42.45</td>
</tr>
<tr>
<td>Mixed Collections</td>
<td>$3.45-$16.50</td>
<td>$2.85-$17.25</td>
<td>$4.50-$21.55</td>
<td>$3.25-$40.50</td>
</tr>
<tr>
<td>Single Items</td>
<td>$1.90-$3.00</td>
<td>$3.75-$12.85</td>
<td>$7.60-$28.15</td>
<td>$23.10-$35.80</td>
</tr>
<tr>
<td>Photographs</td>
<td>$2.30-$16.65</td>
<td>$4.85-$6.45</td>
<td>$3.35-$24.65</td>
<td>$5.00-$42.45</td>
</tr>
<tr>
<td>Books/Pamphlets</td>
<td>$2.10-$6.10</td>
<td>$1.50-$11.10</td>
<td>$1.85-$6.90</td>
<td>$4.60-$14.40</td>
</tr>
<tr>
<td>Re-keyed Text</td>
<td>$2.55-$5.00</td>
<td>$2.35-$5.70</td>
<td>Limited Data</td>
<td>Limited Data</td>
</tr>
<tr>
<td>OCR</td>
<td>$0.25-$3.60</td>
<td>$0.75-$2.40</td>
<td>$0.40-$2.10</td>
<td>$1.85-$7.65</td>
</tr>
</tbody>
</table>

Puglia 1998
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

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
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

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
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

Request For Proposal (RFP)

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

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
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

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/
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

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
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

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?
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

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?
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 collection of mixed media, rare books and archives ...

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.
Statement of Need

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

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.
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.”

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?
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

Digital Project Planning & Management Basics
Digitization Issues

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

Example of Standards Statement

Why go to the trouble to follow standards?

Interoperability

Sustainability

With Permission, Murtha Baca
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

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

## Proposed Project Budget

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

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

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
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](http://www.imls.gov)
- LSTA (Library Services and Technology Act)
- NEA (National Endowment for the Arts)
  [http://www.nea.gov](http://www.nea.gov)
- NEH (National Endowment for the Humanities)
  [http://www.neh.gov](http://www.neh.gov)
- NSF (National Science Foundation)

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
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

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 - Project Management

**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

**Aspects of a Digital Project**

Management Wheel: The figure demonstrates the organic nature of digital imaging, with interdependencies connecting goals, resources, and processes. 

What is the Project Manager Managing?

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

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
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 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

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
## Standards Typology

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<thead>
<tr>
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<th>Data Structures</th>
<th>Data Values</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>• AACR2</td>
<td>• MARC</td>
<td>• LCAF</td>
<td>• MARC</td>
</tr>
<tr>
<td>• RDA</td>
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<td>• LCSH</td>
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</tr>
<tr>
<td></td>
<td>• CDWA</td>
<td>• AAT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• EAD</td>
<td>• TGN</td>
<td></td>
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<tr>
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Based on slide courtesy of Luiz Mendes

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## Why go to the trouble to follow standards?

- **Interoperability**
- **Sustainability**

With Permission, Murtha Baca
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.

Metadata Standards: Issues

- Purpose
- Audience
- Best Practices
- Interoperability
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”

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
Mechanisms for Accessing Metadata

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

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
**Types of Metadata**

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

**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)
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

Includes:

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

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

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
Structural Interoperability

Achieved through agreements about content description standards. For example,

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

Scanning: Formats

1. Finding Aids
2. Photographs and documents
3. Oral history audio-recordings
4. Transcripts
5. Books

1. EAD
2. TIFFs (masters)
   JPGs (web)
3. .wav files or mp3 files
4. PDFs
5. TEI
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

Digital Collections Imaging Standards

Digital Image Standards for AIC and ALICE

- Digital images will be used and archived images will be preserved.
- The present document is based on the AIC/ALICE Digital Collections Imaging Standards, which were developed by a group of digital imaging professionals and approved by the AIC Board of Directors. The standards are intended to provide guidance on the selection of digital image formats and archival strategies for digital collections.

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- 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

PREMIS: Fields Pertaining to Objects

- objectIdentifier
- preservationLevel
- objectCategory
- objectCharacteristics
- creatingApplication
- originalName
- Storage
- Environment

- signatureInformation
- relationship
- linkingEventIdentifier
- linkingIntellectualEntityIdentifier
- linkingPermissionStatementIdentifier

http://www.oclc.org/research/projects/pmwg/
PREMIS Fields for ...

**Events**
- eventIdentifier
- eventType
- eventDateTime
- eventDetail
- eventOutcome
- eventOutcomeDetail
- linkingAgentIdentifier
- linkingObjectIdentifier

**Agents**
- agentIdentifier
- agentName
- agentType

**Characteristics**
- compositionLevel
- fixity
- size
- format
- significantProperties
- inhibitors
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
Exercise 3

Teams reconvene

Goals of Exercise 3:

- Demonstrate an understanding of implementation issues
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Digital Project Planning & Management Basics

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Digital Collections Scanning Standards

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</tr>
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Digital Image Project Planning & Management Basics

Section 6 - Outcome Evaluation and Assessment

Trainee Manual

Section 5
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Digital Project Planning & Management Basics

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

Session Objectives

- Understand standards for
  - Metadata 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
Session Outline

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

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?
Metadata Standards in a Resource Grid

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
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

Value Standards

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

- Dublin Core ([http://dublincore.org](http://dublincore.org))
  - Simple and Qualified
- MODS ([www.loc.gov/standards/mods/](http://www.loc.gov/standards/mods/))
- ONIX ([http://www.editeur.org/onix.html](http://www.editeur.org/onix.html))
- EAD ([http://www.loc.gov/ead/](http://www.loc.gov/ead/))

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
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

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”

DCMES Characteristics

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

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”
DCMES Principles

- 1:1
- Dumb Down
- Appropriate Values

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

Dublin Core Metadata Element Set (DCMES) 1996

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

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>INTELLECTUAL PROPERTY</th>
<th>INSTANTIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Creator</td>
<td>Date</td>
</tr>
<tr>
<td>Description</td>
<td>Contributor</td>
<td>Language</td>
</tr>
<tr>
<td>Subject</td>
<td>Publisher</td>
<td>Identifier</td>
</tr>
<tr>
<td>Relation</td>
<td>Rights</td>
<td>Format</td>
</tr>
<tr>
<td>Source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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:language>en</dc:language>
<dc:publisher>ALA Editions</dc:publisher>
</metadata>

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

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’

<table>
<thead>
<tr>
<th>Elements</th>
<th>Element Refinements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifier</td>
<td>Abstract</td>
</tr>
<tr>
<td>Title</td>
<td>Access rights</td>
</tr>
<tr>
<td>Creator</td>
<td>Alternative</td>
</tr>
<tr>
<td>Contributor</td>
<td>Audience</td>
</tr>
<tr>
<td>Publisher</td>
<td>Available</td>
</tr>
<tr>
<td>Subject</td>
<td>Bibliographic citation</td>
</tr>
<tr>
<td>Description</td>
<td>Conforms to</td>
</tr>
<tr>
<td>Coverage</td>
<td>Created</td>
</tr>
<tr>
<td>Format</td>
<td>Date accepted</td>
</tr>
<tr>
<td>Type</td>
<td>Date copyrighted</td>
</tr>
<tr>
<td>Date</td>
<td>Date submitted</td>
</tr>
<tr>
<td>Relation</td>
<td>Education level</td>
</tr>
<tr>
<td>Source</td>
<td>Extent</td>
</tr>
<tr>
<td>Rights</td>
<td>Has format</td>
</tr>
<tr>
<td>Language</td>
<td>Has part</td>
</tr>
<tr>
<td></td>
<td>Has version</td>
</tr>
<tr>
<td></td>
<td>Is format of</td>
</tr>
<tr>
<td></td>
<td>Is part of</td>
</tr>
</tbody>
</table>

1. Identifier
2. Title
3. Creator
4. Contributor
5. Publisher
6. Subject
7. Description
8. Coverage
9. Format
10. Type
11. Date
12. Relation
13. Source
14. Rights
15. Language

Is referenced by
Is replaced by
Is required by
Issued
Is version of
License
Mediator
Medium
Modified
Provenance
References
Replaces
Requires
Rights holder
Spatial
Table of contents
Temporal
Valid
## More Dublin Core

### “Refinements”

<table>
<thead>
<tr>
<th>Encodings</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box</td>
<td>Collection</td>
</tr>
<tr>
<td>DCMIType</td>
<td>Dataset</td>
</tr>
<tr>
<td>DDC</td>
<td>Event</td>
</tr>
<tr>
<td>IMT</td>
<td>Image</td>
</tr>
<tr>
<td>ISO3166</td>
<td>Interactive Resource</td>
</tr>
<tr>
<td>ISO639-2</td>
<td>Moving Image</td>
</tr>
<tr>
<td>LCC</td>
<td>Physical Object</td>
</tr>
<tr>
<td>LCSH</td>
<td>Service</td>
</tr>
<tr>
<td>MESH</td>
<td>Software</td>
</tr>
<tr>
<td>Period</td>
<td>Sound</td>
</tr>
<tr>
<td>Point</td>
<td>Still Image</td>
</tr>
<tr>
<td>RFC1766</td>
<td>Text</td>
</tr>
<tr>
<td>RFC3066</td>
<td></td>
</tr>
<tr>
<td>TGN</td>
<td></td>
</tr>
<tr>
<td>UDC</td>
<td></td>
</tr>
<tr>
<td>URI</td>
<td></td>
</tr>
<tr>
<td>W3CTDF</td>
<td></td>
</tr>
</tbody>
</table>

Ex.: Qualified Dublin Core

```xml
<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 xsi:type="LCSH">Information organization</dc:subject>
  <dc:subject xsi:type="LCSH">Metadata</dc:subject>
  <dc:subject xsi:type="LCSH">Cultural property--Documentation</dc:subject>
  <dc:subject xsi:type="LCC">CC135.C37 2006</dc:subject>
  <dc:subject xsi:type="DDC">363.3</dc:subject>
  <dc:date xsi:type="W3CDTF">2006</dc:date>
  <dcterms:extent>396 p.</dcterms:extent>
  <dc:type xsi:type="DCMIType">Text</dc:type>
  <dc:language xsi:type="RFC3066">en</dc:language>
  <dc:publisher>ALA Editions</dc:publisher>
  <dcterms:audience>Catalogers</dcterms:audience>
</metadata>
```
Lego Model replaced by RDF

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

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
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

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/
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

MODS elements

- Subject
- Classification
- Related item
- Identifier
- Location
- Access conditions
- Extension
- Record Info
- Root elements:
  - mods (A single MODS record)
  - modsCollection (A collection of MODS records)

Title Info
Name
Type of resource
Genre
Origin Info
Language
Physical description
Abstract
Table of contents
Target audience
Note
Fields used in Minerva project

- 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)
Advantages of 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

Disadvantages of MODS

- Library-centric
- Not widely adopted by other libraries or other communities
Ex.: MODS

```xml
<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>editor</role>
</name>

<name type="personal">
  <namePart type="family">Harpring, </namePart>
  <namePart type="given">Patricia.</namePart>
  <role>editor</role>
</name>
```

More MODS

```xml
<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>
```
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

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
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

VRA Data Values

- LCSH
- AAT
- TGN
- ULAN
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

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
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

ONIX/MARC Crosswalks

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

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.
Ex.: ONIX

<Title>
<TitleType>01</TitleType>
<TitleText textile = “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>

Ex.: ONIX

<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>
<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>
Ex.: ONIX

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 snap of a book, and one that sorts out - through comments in American and the “Queen’s English” - confounding as it may seem.

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

EAD -- Encoded Archival Description

Encoded Archival Description (EAD)

Official EAD Version 2002 Web Site

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

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/
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 obtrusive.

- 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 Landscape: 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 Features: introductory and advanced teaching materials, presentations, and user case-studies
- TEI History: archive of TEI publications and working papers
- Projects using TEI: features 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 (Forgot your password? contact us for a reminder)
- Ask the Faculty: quick answers to frequently asked questions about the TEI
- TEI Software: pointers to TEI-specific and general 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:

1\textsuperscript{st} 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

2\textsuperscript{nd} 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.

3\textsuperscript{rd} exercise

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

4\textsuperscript{th} 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 1\textsuperscript{st} 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:

1\textsuperscript{st} 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

2\textsuperscript{nd} 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.

3\textsuperscript{rd} exercise

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

4\textsuperscript{th} 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

**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


Team Building and Negotiation

Developing a Plan & Management


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

Selective Bibliography


**Digitization**


**Grants**


**Metadata**


**Project Management & Workflow**

Conway, Paul. *Production tracking*. Available at: [http://ahds.ac.uk/creating/information-papers/checklist/index.htm](http://ahds.ac.uk/creating/information-papers/checklist/index.htm)


**Assessment**

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

### 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:**
   - **a. was extremely valuable**
   - **b. provided enough detail**
   - **c. was current & relevant**
   - **d. was cohesive & logical**
   - **e. was appropriate to my needs**
   - **f. met its stated objectives**

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2. **Presenter:**
   - **a. was knowledgeable**
   - **b. had good presentation skills**
   - **c. encouraged participation**
   - **d. addressed my level of understanding**
   - **e. answered questions directly**
   - **f. was prepared**
   - **g. understood the audience dynamics**

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3. **Presenter:**
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4. **The handouts:**
   - **a. are excellent**
   - **b. followed course content**
   - **c. are valuable for future reference**

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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!