

# Managing Digital Assets: Planning the Digital Future of NIST

## Electronic Resources and Libraries Conference

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# Presentation Overview

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- **Introduction and background**
- **Digital Content Management (DCM) Team**
- **First steps**
- **Developing criteria for evaluating systems**
- **Lessons learned - so far!**
- **What's next?**

# What You Will Take Away

- **Workflow process for planning large, complex project**
- **Process for selecting a digital repository management system**
- **Strength and power of teamwork in completing a process**
- **Collaboration efforts of a diverse team of individuals**
- **Some best practices for planning the digital future**

# National Institute of Standards and Technology (NIST)



- **Non-regulatory federal agency within the U.S. Department of Commerce**
- **Gaithersburg, MD and Boulder, CO campuses**
- **Science and technology research**
- **About 1500 scientists and 1800 guest researchers and post-doctoral students**
- **NIST's Mission**
  - **To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.**

# Information Services Division (ISD)



- **ISD's Mission**

- To support and enhance the research activities of the NIST scientific and technological community through a comprehensive program of knowledge management and superior customer service

- **Organizational structure**

- Research Library and Information Group (EIPG)
- Electronic Information and Publications Group (RLIG)
- Museum and History Program

# Digital Content Management (DCM) Team



- **Assembled in the fall of 2005 to determine how best to manage NIST's digital content**
- **Tasked with developing a plan for managing this content**
- **Asked to make recommendations to ISD Management Team**

# Questions to be Answered



**Why manage digital content?**

**What content should be included?**

**How do the pieces fit together?**



**What training do we need?**

**What are our system evaluation criteria?**

**How do we best manage digital content?**

# DCM Team Challenges

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- **Looking at the big picture and understanding how the pieces fit together**
- **Identifying the technologies that best meet ISD's and NIST's needs**



# First Steps

- **Learn as much as possible through research and reading**
  - **Look at tools other institutions have developed**
- **Determine training needs for planning project**
- **Complete MIT Libraries' institutional repository worksheet**
- **Establish time frame for completion of project**
- **Develop criteria for evaluating digital repository and content management systems**
- **Divide and conquer!**

# Why manage digital content?

- **Increase impact of NIST research**
  - **Increase and improve access to NIST's research output**
  - **Showcase NIST's research output**
  - **Raise visibility and prestige of NIST**
- **Capture and preserve institutional record**

# What content should be included?



- **Base collection**

- NIST-authored publications
- Images of NIST museum collection
- Photo collections, oral histories, and other NIST archival material
- Journal of Research of NIST

- **For future consideration**

- Electronic resources purchased by NIST Research Library

# How will these pieces fit together?



- **NIST Virtual Library (NVL)**
- **NIST Virtual Museum (NVM)**
  - Registrar's Database
  - Photo Gallery
- **New NIST Publications database (NIKE - NIST Integrated Knowledge EditorialNet)**
- **Library's online catalog**
- **System managing purchased content (yet to be implemented)**

# What training is needed?

- **Demos of digital content management software**
- **Visits to nearby research institutions implementing digital repositories**
- **Courses related to managing digital content**
- **Collaboration with other federal agencies**
- **Self study – reading and research**

# What are our system evaluation criteria?



- **Evaluation criteria were developed for the following**
  - **Content to include in digital library**
  - **Digital repository management software**
  - **Metadata standards**
  - **Interface and search applications**
  - **Web content management system (CMS)**

# What are our system evaluation criteria? (cont'd)



- **Process for developing criteria**
  - **Create criteria lists for evaluating systems and application features**
  - **Form DCM team sub-groups to develop specific criteria lists**
  - **What are the “must have” features versus the “nice to haves”**

# How do we best manage digital content?



- **Yet to be answered.....**
- **Selection of digital repository management software and content management software is still under review**
- **How pieces fit together now may be very different in the future**



# Digital Repository Management Systems



- **aDORe**
  - Developed by the LANL Digital Library Research & Prototyping Team
  - Open-source software similar to Fedora
- **CERN Document Server**
  - Dissemination of scientific results in high-energy physics
- **Digital Commons**
  - Commercial product (ProQuest)
  - Includes manuscript submission and review system
- **DSpace**
  - Jointly developed by MIT Libraries and Hewlett-Packard Labs
  - Open source “out-of-the” box software

# Digital Repository Management Systems



- **EPrints**

- Dedicated to supporting open access to research
- Promotes author/institution self archiving

- **Fedora**

- Most extensible digital repository system
- Behavior of object is managed in Fedora

- **Greenstone**

- Produced by the New Zealand Digital Library Project
- Open source software; easy installation

**NOTE:** Identification of commercial entities in this presentation is not intended to imply recommendation or endorsement by the National Institute of Standards and Technology.

# Collaboration and Teamwork



- **Task requirements are too complex for a single individual to handle**
- **Draws on the skills and talents from across the organization**
- **Learning and growth experience for team members**

# DCM Team Operations

- **Team leader schedules meetings and facilitates discussions**
- **Formation of sub-teams**
  - **Digital Repository Management Software**
  - **Web CMS**
  - **Options for managing purchased content (i.e., LOCKSS)**
- **Meetings held as needed**
- **Decision-making by consensus**

# Team Discussions

- **Debating the best digital content management systems**
- **Developing consensus on final system evaluation criteria**
- **Understanding and working within our IT environment**
- **Viewing and discussing demos of various systems**
- **Meeting with other federal agencies planning similar projects**

# Where We Are Now?

- **Good understanding of the “big picture”**
- **Investigations and research coming to a close**
- **Finalizing system evaluation criteria lists**
- **Weigh options against criteria and make recommendations**

# Lessons Learned (so far)

- Takes some time to understand and grasp the big picture
- Divorce the project goal from the technology
- “Divide and conquer” strategy works well
- Manage larger project by creating smaller projects with short deadlines

# What's Next?

- **Write proposal with recommendations**
- **Meet with and present proposal to ISD Management**
- **Implement Management's decisions**
  - **Upgrade current Web CMS or move to new CMS**
  - **Implement digital repository management software**
- **Fit the pieces together!**



# Questions?

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