Digital Collection Risk Management

- Digital Disaster Mitigation
- Technical Risks
- Determining Security Threats
- Programmatic and Policy Risks and Threats to Digital Collections
Potential Digital Disaster Risks

- Fire
- Flooding
- Windstorms
- Smoke Damage
- Leaks
- Bomb Threats and Terrorism
Specific Digital Disaster Risks

- Media Failure
- Network Failure
- Hard Drive Crash
- Legacy Software Failure
- No Backups
- Power Surges and Outages
- Employee Errors and Manipulation
NEDCC Survey Findings – Disaster Planning

• None of the individual institutions surveyed has a digital disaster plan
• None had incorporated digital production, content, or storage into their existing disaster plans
Steps to Protecting Your Files

• Prioritizing
• Planning
• Funding
• Staffing and Partnerships
• Policies – Back-up, Monitoring, and Preservation
• Refreshing and Migration Plans
Three Major Risk Categories

• Risks associated with the general collection (institutional; infrastructure)

• Risks associated with the data file format (internal structural elements)

• Risks associated with the file format conversion process (software issues)

  – *Risk Management of Digital Information*, CLIR
General Security Concerns for Digital Materials

- Visitor Access Controlled?
- Key Control?
- Password Control?
- Laptop and Equipment Secured?
- Access to Confidential Data Controlled?
- Information System Activity Monitoring?
- Security Officer/Staff Security Training?
- Employee Record Security and Access?
Determining Risk from Security Threats

- Existing Controls?
- Likelihood of Occurrence?
- Impact Severity?
- Risk Level?
Risk Examples from the Field
Digital Preservation Survey Project

- NEDCC Project, funded by IMLS National Leadership Grant
- 2005 web survey of digital preservation practices
- July 2005 Colloquium of Digital Experts
- Initial Digital Preservation Readiness Site Surveys, January-June 2006; Second Phase January-June 2007
NEDCC Project Overview

• Status of digital collections in cultural heritage institutions
• How are digital collections ‘valued’ & options for prioritizing digital preservation activities
• Develop guidelines and tools to assist administrators/staff in planning for management, maintenance and preservation of digital resources
• Partnered with MCN, American Institute for Conservation, Center for Research Libraries, Heritage Preservation
• Primary focus was to develop tools for assessing preservation needs of museums’ digital collections
2005 Online Survey Results

- Online survey conducted Spring 2005, 169 responses, 12.5% return rate
- 33.1%--academic libraries; 14.5% archives; 9% art museums; 7.8% public libraries; 24.7% other
- Policies—Generally lack specific digital collection policies, or staff responsible for information policy
2005 Survey Results – Digital Preservation

• Who’s responsible—66% institutions no one is responsible for digital preservation activities
• Continuing education—84% supported CE activities for digital preservation
• Preservation solutions—
  • 78% networked hard drives;
  • 65% removable magnetic media;
  • data is stored in-house
• Cause for concern: 30% have been backed up one time or not at all
Digital vs. Traditional Surveys

- Traditional Preservation Survey
  - Building Condition
  - Collection Condition
  - Preservation Policies

- Digital Surveys
  - Institutional Profile
  - Digital Collection Administration and Management
  - Digital Selection and Acquisition
  - Access Issues
  - Digital Preservation
  - Rights Issues
Pilot Digital Survey Institutions

- Academic Research Library (2)
- State Historical Society (2)
- Major Metropolitan Art Museum
- Contemporary Art Museum
- Historical Museum
- Urban Public Library
- Small, Specialized Academic Library
- Collaborative Academic (2) and a State Institution with Established Digital Preservation Programs
Key Findings -- Mission

• Most institutions still at “Digital Project” vs. “Digital Program” stage

• Few have coordinated institutional approach to their digital initiative, especially in the areas of:
  – Standards (Imaging, Metadata)
  – Quality Control
  – Access
  – Promotion
  – Digital Preservation
Key Findings – Digital Preservation

• Issue is *just* coming to the forefront
• Education is important before institutions start “doing” digital preservation
• Preservation/Conservation Staff are generally not directly involved in many of the digital initiatives
• DAM: Some projects see DAM as solution to digital preservation issues.
Key Findings – Digital Preservation 2

- CD/DVD major storage media; moving to servers
- Data on CD/DVD—lengthy periods between refreshing
- Quality control of master images – inconsistent at best
- Most institutions still believe back-up is digital preservation
Digital Preservation—Collaborative Programs

- Collaborative programs demonstrated ability to implement long term digital preservation solutions.
- Formal agreements are required for preservation collaboratives, governance issues must be addressed.
- Ongoing development of the software—development of Version 2.0; development of format migration by software provider.
- Staffing—Sufficient level of staffing as service develops is important.
- Financial sustainability—Development of a business model to support the collaborative’s program was critical.
Other Key Findings

• Management: Organizations with the strongest digital programs have strong administrative and board awareness and support.

• Standards: A general lack of formal, cross-institutional standards and best practices.

• Documentation: Written policies & documented practices lacking, except for the collaboratives.

• Evaluation: Across all institutions, digital project evaluation focused on interface, technology, etc. not on usefulness of digital materials to the user.
New Developments

• Variety of long term preservation solutions—dark archive, light archive, dim archive and continuous access.

• Issues of born digital aren’t being addressed by most institutions—Don’t recognize when they have a born digital object.

• Contemporary art museum presented most innovative approach
  – Address installation issues
  – Frequent reinstallation of the art and interaction with the artist/creator and curator to address ‘preservation issues’
  – Team approach
  – Address issue of format migration, software obsolescence, as well as intellectual knowledge required to maintain the art for future installation over long period of time.
Next Steps

• NEDCC publishing information on survey trends and written tools, plus links to sample reports.
• Training of additional surveyors; additional pilot surveys to be scheduled.
• Move toward CAP or PAG models.
• NEDCC “Stewardship of Digital Assets” and “Persistence of Memory” Workshop Series and Conferences
For More Information

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