

Digital Curation: making the most of it

Europeana Space Conference Berlin 2016

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Digital Curation Certificate Program in Museum Studies

Johns Hopkins University

about me

- US National Archives & Records Administration, 1988-98
- US Institute of Museum & Library Services, 1998-2011
- University College London School of Information, 2011-13;
Humboldt University School of Library and Information
Science, 2013-14
- Johns Hopkins University Digital Curation program,
2014-present

Overview

- Historical Perspective
- Integration into Education
- Soft Infrastructure/Curriculum Framework
- Integrating Research into Practice

Origins of Digital Curation in the U.S.: National Information Infrastructure Task Force

Created by President Bill Clinton, headed by Vice-President Al Gore, 1993

- Strategy to expand knowledge and promote global e-commerce through advanced IT





Blue Ribbon Advisory Panel on Cyberinfrastructure

10 years later:

Predicted that cyberinfrastructure will become as fundamental as

- laboratories and instrumentation
- classroom instruction, and
- the system of conferences and journals for dissemination of research outcomes.

*--Revolutionizing Science and Engineering
Through Cyberinfrastructure (2003)*

“Cyberinfrastructure”

“Research environments that support advanced data acquisition, data storage, data management, data integration, data mining, data visualization and other computing and information processing services distributed over the internet beyond the scope of a single institution.”

-- NSF Blue Ribbon Task Force Report, 2003

Advisory Panel Recommendations

Increase NSF funding by \$1 billion for

- basic and applied research on cyberinfrastructure with investment in data repositories and digital libraries
- “well curated data repositories” and
- better ways to organize and manage large repositories through software infrastructure and the development of standards to ensure interoperability through automated techniques to allow data to be “self-documenting and discoverable.”

(no funding for implementation or education)



“Digital Curation” in the U.K.

Meanwhile...

Task Force convened by the Joint Information Systems Committee (JISC) to discuss the “feasibility and potential benefits of a strategic approach to the preservation and reuse of primary research data, focused on the expertise required to perform essential tasks.” 2002

(no mandate for research)

Digital Curation Centre established 2003

(no funding for graduate education)

Digital Curation in the U.S.: Curriculum Development Grants



Support for graduate education in digital curation through grants to schools of library and information science, 2003-



Laura Bush 21st Century Librarian Program
(no funding for museum professional development)

2016: Digital Curation in Museum Studies



M.A. in Museum Studies & Graduate Certificate in Digital Curation

First digital curation certificate in a U.S. museum studies program
2 years old

JHU MA in Museum Studies

- Launched 2008
- Mostly online:
 - 9 online courses
 - 1 onsite seminar (US and abroad:
London, Berlin, Barcelona)
- 500+ graduates

<http://advanced.jhu.edu/academics/graduate-degree-programs/museum-studies/>



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Graduate Certificate in Digital Curation

- Launched 2014 with dual option
- 6 courses: 5 core + 1 elective
- Online with one on-site internship
- Currently about 60 students



<http://advanced.jhu.edu/academics/certificate-programs/digital-curation-certificate/>



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Digital Curation Curriculum

6 courses: 3 basic and 3 customized

Common Courses:

1. Digital Preservation
2. Foundations of Digital Curation
3. Managing Digital Information in Museums

based on standards and principles of interoperability

Customized Courses:

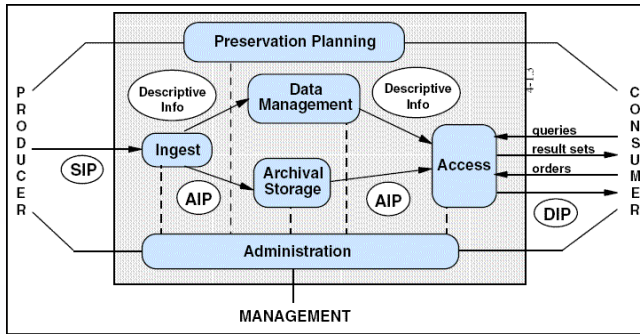
4. Internship —15-week course, 120 hours onsite
5. Elective OR 2nd Internship
6. Research paper – builds on internship

Digital Curation:

“the planning and management of digital assets over their full lifetime, from conceptualization through active use **and presentation** to long-term preservation in a repository for future re-use.”

--adapted from Digital Curation Centre

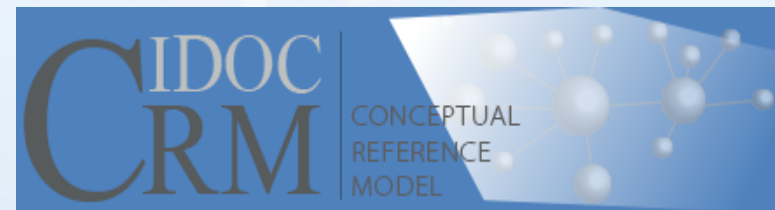
Digital Curation Models



OAIS Reference Model



Digital Curation Life Cycle Model

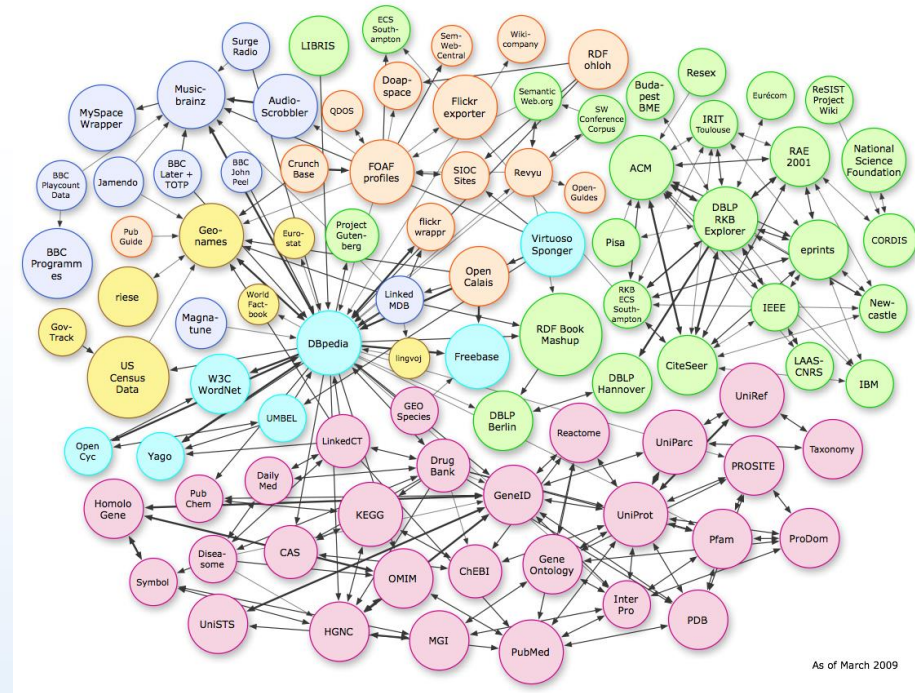


Conceptual Reference Model

Protocols for Interoperability

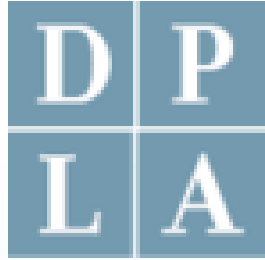


Open Archives Initiative-Protocol
for Metadata Harvesting (OAI-
PMH)



Linked Open Data

Platforms for Data Sharing



Digital Public Library of America



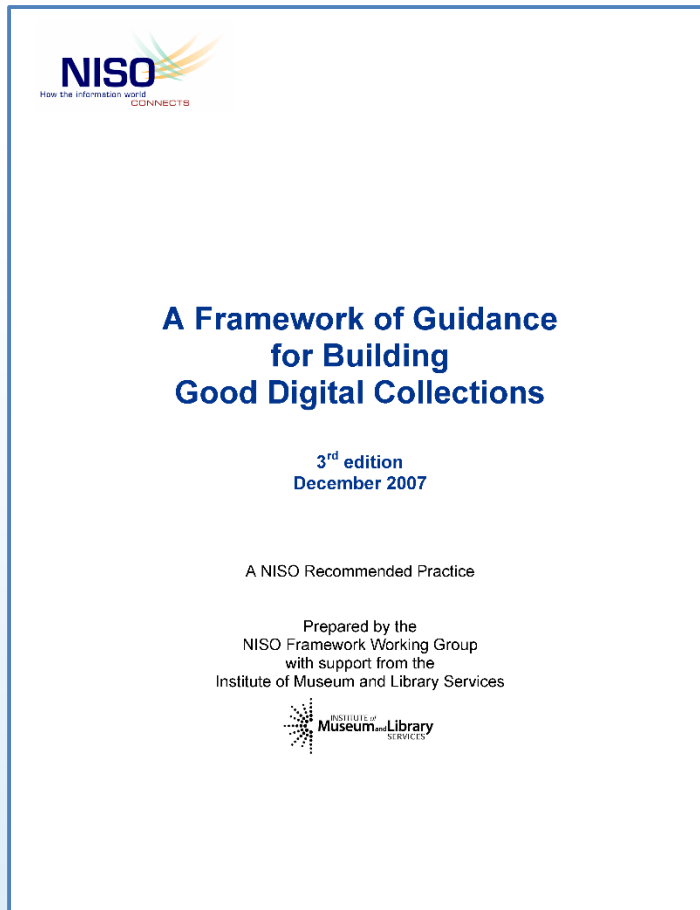
think culture



american art
COLLABORATIVE

Google Arts & Culture

Guidance



A Framework of Guidance for Building Good Digital Collections

Principles of good practice for creating:

- Collections
- Objects
- Metadata
- Projects

Metadata Schemas



Encoded Archival Des

Biodiversity
Information
Standards
TDWG



PRESERVATION METADATA
MAINTENANCE ACTIVITY



Metadata Encoding & Transmission Standard

Official Web Site



Metadata Object Description Schema

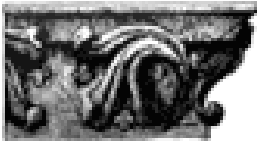
Official Web Site



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Controlled Vocabularies



Art & Architecture Thesaurus



Union List of Artist Names

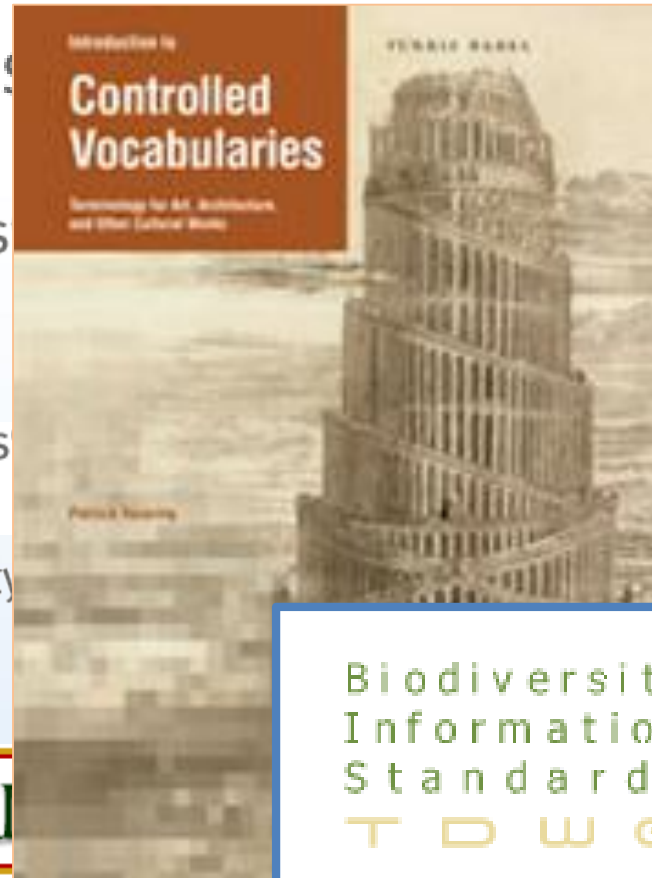


Getty Thesaurus of Geographic Names



Cultural Objects Name Authority

LIBRARY OF CONGRESS AUTHORITY

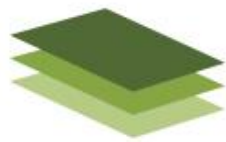


Biodiversity
Information
Standards
T D W G

Tools and Services

AUDIT AND CERTIFICATION OF TRUSTWORTHY DIGITAL REPOSITORIES

TRAC Checklist



DMPTool

Guidance and Resources for your Data Management Plan

DuraCloud



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Open-Source Software

The logo for Archivematica, featuring a stylized orange '@' symbol followed by the word 'archivematica' in a white serif font, all contained within a blue rectangular background.

<https://www.archivematica.org/en/>

The logo for BitCurator, with the word 'BitCurator' in a black sans-serif font. The letter 'o' is replaced by a red circular icon containing a white play button symbol.

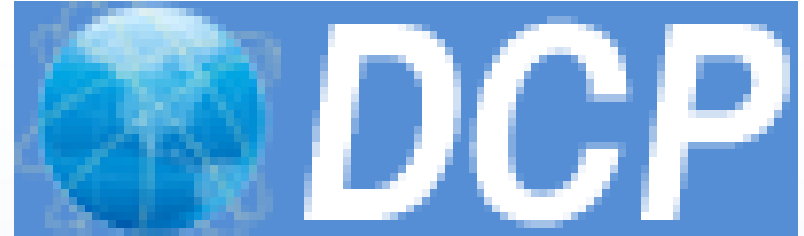
<http://www.bitcurator.net/bitcurator/>

The logo for SpaceSniffer, featuring a grey silhouette of a dachshund dog on the left and the text 'SpaceSniffer' in a large, bold, black sans-serif font on the right, all within a white rectangular background.

http://www.uderzo.it/main_products/space_sniffer/

Capturing Stories as Documentation

- Data Curation Profiles: Getting the Story of the Data
- Artist Interviews: Documenting Significant Properties of New Media Art
- Digital Storytelling



Data Curation Profiles

Customized Courses

- Elective
- Internship
- Research Course

Customized Program: Electives

Added to the Museum Studies Curriculum:

- Managing Analog and Digital Photographs
- Introduction to Archives

Considering:

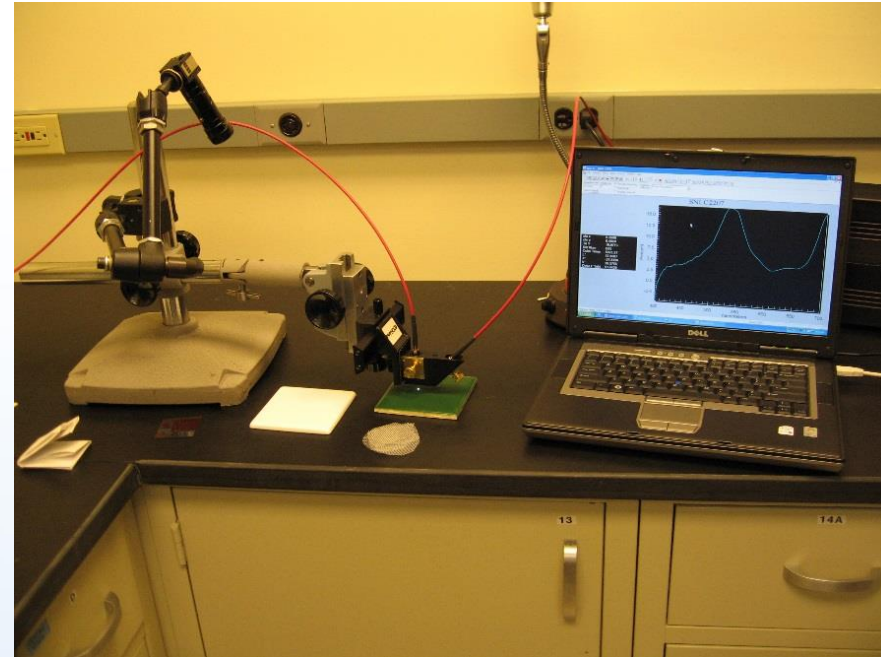
- Provenance Research for Archival Context (LOD)
- Storytelling & Digital Interviews

Internships



Research

- Investigate a problem in digital curation
- Contribute to the emerging research literature
- Create an environment to sustain ongoing research



Credit: Smithsonian Museum Conservation Institute (“Where’s the data?”)

Research

- Digital forensics in archives
- Capturing field archaeology data
- Color settings for imaging artworks



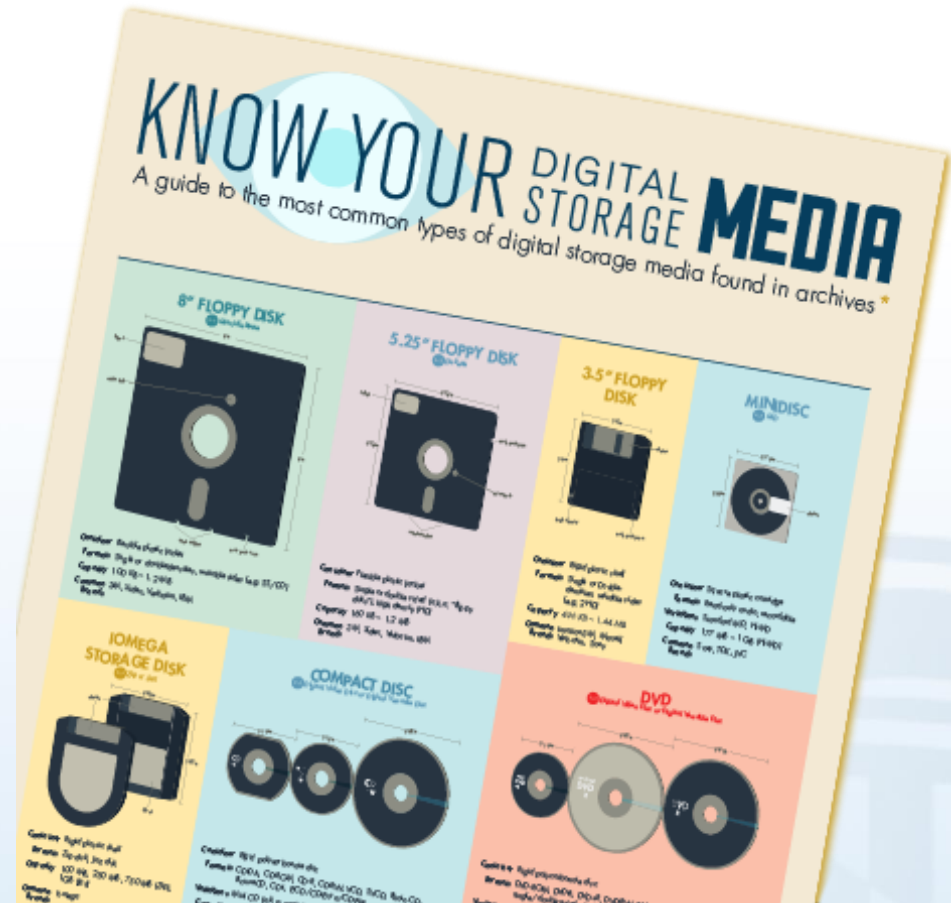
tDAR

the Digital
Archaeological
Record



Digital Forensics in Archives

- Tested software on a quarantine station to investigate removable media found in special collections
- Many more devices found in storage than recorded in database—it's a huge problem!



Credit: the University of Texas at San Antonio

Digital Archaeological Data Collection



Open Context

<https://alexandriaarchive.org/>



the Digital Archaeological
Record <https://www.tdar.org/>

- Investigated barriers and approaches to data capture and publishing of field archaeological data
- Interviewed experts—published literature lags behind development



Field Acquired Information Management
Systems (FAIMS) <https://www.fedarch.org>

Considering Color in Imaging of Artworks



Vermeer, "The Milkmaid."
Rijksmuseum





Vermeer, "Woman Holding a Balance," Using D50 Illumination



Using "cloudy day" illumination

Credit: Julie Goforth

Comparison Chart

Setting/Location	Example	Illuminant Type	Color Temperature
Church	Byz. Icon	Candlelight	1800-2000K
Outside or Daylight lit studio	Vermeer	Daylight	5000-10000K depends on location
Commercial Building	Rothko	Fluorescent	4000K
Art Gallery	Rothko	LED	3000-4500K

Credit: Julie Goforth



Harvard's Rothko mural showing projected light

Recommendation: A scholarly historical image should be preserved as a benchmark alongside a publication quality master--Julie Goforth



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Considering Color in Archival Digital
Images of Works of Art
MARAC 2016 Annapolis

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Integrating Research into Practice: Digital Curation in Art Museums Summit October 2015

Explored potential for collaboration between art museums and graduate education programs, especially for interns and student researchers

Hosted by JHU with support from Samuel H. Kress Foundation



“Gallery Wall”

Credit: Cleveland Museum of Art

http://advanced.jhu.edu/wp-content/uploads/2016/04/digitalCuration_summitReport10_2015.pdf

Digital Curation in Art Museums Summit

Some Findings

- There is no consensus on the definition of digital curation or roles of digital curators
- Preservation of innovative installations should be considered at the time of creation and is the responsibility of the institution
- Many art museums would like to integrate digital curation into their practices



“Gallery Wall”

Credit: Cleveland Museum of Art

Summit Recommendations: Highlights

- Resolve the ambiguity around the definition of digital curation
- Create advocacy strategy with the art museum community
- Highlight stories of innovative and effective practices (awards?)
- Promote the value of internships for the sponsor and the profession
- Identify potential projects for interns and student researchers
- Involve professional associations in all areas

Goal: Create communities of practice and research, integrated with the information infrastructure

Conclusions

- We now have an information (including soft) infrastructure to support innovative use and re-use of cultural heritage assets
- The infrastructure must be sustained and enhanced to ensure future availability of digital assets
- The entire cultural heritage community must be involved
- Museums must take responsibility for all of their digital assets
- Archives (archivists and collections) have an increasingly important role in digital curation



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