

Digital Curation at the U.S. Geological Survey

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Outline

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Definition

- Digital curation is the curation, preservation, maintenance, and collection and archiving of digital assets
 - http://en.wikipedia.org/wiki/Digital_curation
- The Digital Curation Centre's current definition of the term is:
 - Digital curation, broadly interpreted, is about **maintaining** and **adding value to**, a trusted body of digital information for **current** and **future use**.



Definition (continued)

- **The e-Science Curation Report (2003) by Lord and Macdonald proposed the following distinctions:**
 - **Curation :** Managing and promoting the use of data from its point of creation, to ensure it is fit for contemporary purpose, and available for discovery and re-use.
 - **Archiving :** A curation activity which ensures that data is properly selected, stored, can be accessed and that its logical and physical integrity is maintained over time, including security and authenticity.
 - **Preservation :** An activity within archiving in which specific items of data are maintained over time so that they can still be accessed and understood through changes in technology.



Scope

- With such a broad definition, where does digital curation happen within an organization?
- The USGS Library has engaged their organization on this issue and is working to define the scope of the library's role.
- Will it include:
 - Institutional repository (published information)?
 - Records (unpublished information)?
 - Data repository (tabular information)?
 - Imagery (graphical information)?



Scope (Continued)

- In its 130 year history, USGS has published:
 - Over 80,000 series publications
 - Over 300,000 topographic maps
 - An untold number of:
 - thematic maps and
 - USGS-authored journal articles
 - USGS also has substantial collections of:
 - Historic photography
 - Aerial imagery
 - Field records, scientific data sets, and
 - One of the largest libraries in the Natural Science in the world



Application

- Many organizations already create and maintain digital collections.
- By example, USGS has a resource called the Publications Warehouse. So, what does it mean to curate publications and not just provide access?
- USGS has initiated processes to:
 - Investigate fail-over and redundant systems
 - Implement persistent links (e.g. Handles)
 - Develop derivative products for access, preservation copies, and archive procedures
 - Contemplate migration to new formats



Application (Continued)

- **USGS is also considering different models for managing digital content:**
 - **Digital Repository software**
 - **Federated repositories, distributed based on scope of collections**
 - **File system management with separate metadata catalog systems**
 - **Integration via metadata harvesting and other “discovery layer” tools**



Considerations

- Digital Curation seems to be a natural extension of the role libraries have played in the past...
- But is your library ready to take on the added responsibilities, new skill sets, and uncertainties of the future of digital content?
- Some specific considerations:
 - Which collections will be included
 - What will be the technical infrastructure
 - What policies are needed to authorize the systems, procedures, etc.
 - How will the system complement the organization's Web site, ECM efforts, etc.



Considerations (Continued)

- Printed collections have always been able to survive benign neglect. Digital collections cannot.
 - [Scholarship in the Digital Age: Information, Infrastructure, and the Internet](#) by Christine L. Borgman
- If you take on the curation of digital content, do so with your eyes open and with the full support of your organization.
- Stay informed about emerging standards (OAIS, XMP, etc.).
- Be ready to adjust your approach and replace components periodically.



Future Directions

- The USGS Library is just starting down this road, but we are excited about the role it gives to the library of the future.
- The effort of digital curation is also paired with efforts for:
 - Migrating library services and transactions online (virtual reference, etc.)
 - Managing access to licensed content (federated search, URL resolvers, etc.)
 - Evaluation of library use patterns (patron feedback, usage statistics, etc.)



Future Directions (Continued)

- The USGS Library is considering their role in supporting access and use to digital information other ways as well:
 - “re-datification” of data expressed in charts, graphs, tables, and other printed forms
 - Data integration (data set storage that would support integration, comparison, and analysis)
 - Mobile devices (Amazon Kindle, Blackberry, iPhone)
 - Mashups and new product development based on aggregation from previously produced materials



Contacts

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 - <http://pubs.usgs.gov/>
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