

DIGITAL CURATION

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SYNONYMS

stewardship

DEFINITION

Digital curation is the activity of maintaining and adding value to a trusted body of digital information for current and future use.

SCIENTIFIC FUNDAMENTALS

Left unattended, digital information degrades over time. Even if the information's bits are correctly preserved (a difficult task in itself) the technological context surrounding the bits—the computing platforms, programming languages, applications, file formats, and so forth—will change sufficiently over time until the information is no longer usable. Changes in the information's social context are just as significant. The communities and organizations involved in the information's initial creation and use may attach different values and interpretation to the information over time, or cease to exist altogether. And the passage of time only exacerbates contemporary problems such as establishing the authenticity, quality, and provenance of the information.

Curation is the activity of maintaining a body of information so that it remains usable over time. Curation covers the entire lifecycle of the information, from creation to contemporary use, from archival to reuse. Specific curation activities include: selection and appraisal; capture of metadata and the information's larger technological, scientific, and social contexts; conversion to archival formats; establishment and maintenance of authenticity and provenance; annotation and linkage; provisioning for secure and redundant storage; transformation, migration, and emulation as needed over time; discoverability in contemporary search systems; creation of meaningful access mechanisms; and recontextualization.

Different types of information bring different curation requirements and present different challenges. Information intended for direct human consumption, such as many textual and multimedia documents, may only need to be migrated to new formats as older formats fall out of favor. But data, particularly scientific data, may require significant reprocessing and transformation. For example, climatological observations may need to be periodically recalibrated to support long-term longitudinal studies, a process requiring deep understanding and emulation of the original calibration.

CROSS REFERENCE

PRESERVATION

RECOMMENDED READING

- [1] Neil Beagrie (2006). "Digital Curation for Science, Digital Libraries, and Individuals." *International Journal of Digital Curation* 1(1).
<http://www.ijdc.net/ijdc/article/view/6/5>
- [2] *Trustworthy Repositories Audit & Certification: Criteria and Checklist*. Center for Research Libraries, 2007.
<http://www.crl.edu/PDF/trac.pdf>
- [3] Consultative Committee for Space Data Systems (2002). *Reference Model for an Open Archival Information System (OAIS)*. ISO 14721:2003.
<http://www.ccsds.org/publications/archive/650x0b1.pdf>