

Foundations

Nothing Succeeds Like Success: An Approach for Evaluating Digital Preservation Efficacy

Download full text: [Abrams-iPRES-2018-Nothing-succeeds-like-success](#) (PDF, 2018-06-25, 554 KB)

Presented at the *15th International Conference on Digital Preservation (iPRES 2018)*, Boston, September 24-27, 2018

Abstract

Digital preservation encompasses the theory and practice ensuring purposeful future use of digital resources. But how can one tell whether it has been effective or not? The evaluation of preservation efficacy has two dimensions: trustworthiness of managerial programs and systems; and successful use of managed resources. While the former has received extensive attention, the latter has been little investigated. This stems from an insufficiently broad conceptualization of the preservation enterprise, which should be viewed expansively as facilitating meaningful human communication across time and concomitant cultural distance. Communicological analysis leads to a semiotic-phenomenological model for preservation-enabled communication cognizant of the elusive nature of use, which is inherently contingent with respect to time, place, person, and purpose. Preservation success is positioned as an individual, rather than universal value, with a benchmark evaluation of situational verisimilitude, rather than absolute fidelity to an illusory canonical state and information experience. The proposed evaluative approach provides new conceptual clarity to preservation theory and practice, a more rigorous basis for illuminating the limits of preservation efficacy, and a more nuanced means of stating, measuring, and evaluating preservation intentions, expectations, and outcomes.

Citation: Abrams, Stephen (2018), "Nothing succeeds like success: An approach for evaluating digital preservation efficacy," *15th International Conference on Digital Preservation (iPRES 2018)*, Boston, September 24-27

Theorizing Success: Measures for Evaluating Digital Preservation Efficacy

Download full text: [Abrams-JCDL-doctoral-consortium-abstract](#) (PDF, 2018-03-22, 455 KB)

Presented at the *ACM/IEEE Joint Conference on Digital Libraries (JCDL 2018)*, Fort Worth, June 3-6, 2018

Abstract

Digital information is indispensable to contemporary commerce, culture, science, and education. No future understanding of a prior time in the digital age is possible without proactive preservation of our digital heritage. But how can one know whether or not that preservation has been effective? There are two primary assessments of digital preservation efficacy: trustworthiness of managerial systems and programs, and successful use of preserved resources. The first has received extensive treatment in the literature, but the second has been little investigated. This stems from a too narrow conceptualization of the preservation domain as synonymous with data management. Given that the goal of that management is to facilitate future use, and that use is inherently contingent with respect to time, place, person, and purpose, digital preservation should be seen more broadly as facilitating human communication across time. My dissertation asks what measures can meaningfully evaluate the success of such communicative acts. It proposes a communicological theory in which success is evaluated with respect to situational verisimilitude. Evaluation metrics are derived from a semiotic-phenomenological model of preservation-enabled communication and the affordances supported by preserved digital resources. This work contributes new conceptual clarity to the theory and practice of digital preservation, a more rigorous basis for demarcating the limits of preservation efficacy, and a more nuanced means of stating, measuring, and evaluating preservation intentions, expectations, and outcomes.

Citation: Abrams, Stephen (2018), "Theorizing success: Measures for evaluating digital preservation efficacy," *ACM/IEEE Joint Conference on Digital Libraries (JCDL 2018)*, Fort Worth, June 3-6.

The Means Can't Justify the Ends: Criteria and Metrics for Evaluating Digital Preservation Success

Download presentation slides: [Abrams-UCB-i-School-2018-03-09.pptx](#) (PowerPoint, 2018-03-08, 6.6 MB)

Seminar presented at the UC Berkeley School of Information, March 9, 2018

Abstract

During a workshop at the 2006 Joint Conference on Digital Libraries, Clifford Lynch stated that digital preservation was "a metric that's defied measurement." Unfortunately, little progress has made since then. The scholarly literature and professional practice have focused extensively on the trustworthiness of preservation programs and systems, but given little attention to the question of the success of the resulting preservation outcomes. While there is broad consensus in the preservation field about what to do and how to do it, there is no such agreement about effective measures of how well it has actually been done. But without a clear sense of what constitutes success, how can one rationally plan for, expect, measure, or be held accountable for those outcomes?

This presentation will focus on work towards measurable metrics for digital preservation. The goal of digital preservation is often stated as ensuring ongoing access to and use of preserved resources. But the assessment of use is a slippery notion, as it is inextricably tied to a particular time, place, person, and manner; one person's success could quite easily be another's failure. Too often the field tacitly assumes that trustworthy means will necessarily lead to successful ends, but those ends should be independently evaluated. Beyond being a problem of appropriate data management, digital preservation should be seen more broadly as a problem of human communication across time, with an understanding that temporal distance implicates concomitant cultural distance. In these terms, the entire preservation enterprise — embracing the production and consumption, as well as management of digital resources — is susceptible to communicological analysis, leading towards a semiotic-phenomenological model for preservation-enabled communication. The granular components of that model can then be used to derive appropriate criteria and metrics for evaluating digital preservation success.

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Citation: Abrams, Stephen (2018), *The Means Can't Quantify the Ends: Criteria and Metrics for Evaluating Digital Preservation Success*, UC Berkeley School of Information, Information Access Seminar, March 9.

A Foundational Framework for Digital Curation: The Sept Domain Model

Download full text: <https://escholarship.org/uc/item/75v3z67n> or [iPRES-2015-Abrams-Sept.pdf](#) (PDF, 2015-11-15, 1.1 MB)

Download presentation slides: [iPRES-2015-Abrams-Foundational-framework-for-digital-curation.pptx](#) (PowerPoint, 2015-11-03, 1.1 MB)

Presented at *iPRES 2015, The 12th International Conference on Preservation of Digital Objects*, Chapel Hill, November 2-6, 2015 ([proceedings](#), pp. 30-37)

Abstract

Digital curation is a complex of actors, policies, practices, and technologies enabling successful consumer engagement with authentic content of interest across space and time. While digital curation is a rapidly maturing field, it still lacks a convincing unified theoretical foundation. A recent internal evaluation by the University of California Curation Center (UC3) of its programmatic activities led quickly to seemingly simple, yet deceptively difficult-to-answer questions. Too many fundamental terms of curation practice remain overloaded and under-formalized, perhaps none more so than "digital object." To address these concerns, UC3 is developing a new model for conceptualizing the curation domain. While drawing freely from many significant prior efforts, the UC3 Sept model also assumes that digital curation is an inherently semiotic activity. Consequently, the model considers curated content with respect to six characteristic dimensions: semantics, syntactics, empirics, pragmatics, diplomatics, and dynamics, which refer respectively to content's underlying abstract meaning or emotional affect, symbolic encoding structures, physical representations, realizing behaviors, evidential authenticity and reliability, and evolution through time. Correspondingly, the model defines an object typology of increasing consumer utility and value: blobs, artifacts, exemplars, products, assets, records, and heirlooms, which are respectively existential, intentional, purposeful, interpretable, useful, trustworthy, and resilient digital objects. Content engagement is modeled in terms of creator, owner, curator, and consumer roles acting within a continuum of concerns for catalyzing, organizing, and pluralizing curated content. Content policy and strategy are modeled in terms of seven high-level imperatives: predilect, collect, protect, introspect, project, connect, and reflect. A consistent, comprehensive, and conceptually parsimonious domain model is important for planning, performing, and evaluating programmatic activities in a rigorous and systematic rather than ad hoc or idiosyncratic manner. The UC3 Sept model can be used to make precise yet concise statements regarding curation intentions, activities, and results.

Categories: Applied computing ~ Digital libraries and archives • Applied computing ~ Enterprise modeling • Information systems ~ Information lifecycle management • Information systems ~ Data management systems

Keywords: digital curation, digital preservation, domain model, content model, object model, semiotics, lifecycle, continuum, planning, strategy

Notes: UC3 welcomes external review and comment. Please leave any comments or suggestions below.

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Citation: Abrams, Stephen (2015), "A foundational framework for digital curation: The Sept domain model," *iPRES 2015, The 12th International Conference on Preservation of Digital Objects*, Chapel Hill, November 2-6.

A Domain Model for Digital Curation

Download presentation slides: [UCB-2015-10-16-Abrams-Domain-model-for-digital-curation.pptx](#) (1.1 MB) or text: [UCB-2015-10-16-Abrams-Domain-model-for-digital-curation.pdf](#) (1.4 MB)

Presented at the Information Access Seminar, UC Berkeley School of Information, October 16, 2015

Abstract

Digital curation is a complex of actors, policies, practices, and technologies enabling successful consumer engagement with authentic content of interest across space and time. Having a clear conceptual model of the curation domain is important for planning, performing, and evaluating curation activities in a formal and systematic, rather than ad hoc and idiosyncratic manner. While the curation and preservation communities have developed a number of useful pragmatic frameworks and rubrics (NAA, OAIS, PREMIS, BRM, etc.), it is not clear how, or indeed, whether, they cohere into a unified and theoretically sound representation of the curation domain. Too many fundamental terms of curation practice still remain overloaded and under-formalized, perhaps none more so than "digital object." This presentation will describe an effort at the UC Curation Center to synthesize and extend existing frameworks into a consistent, comprehensive, and parsimonious domain model for digital curation. The new model's vocabulary highlights important nuanced distinctions between various types of objects. It can also be used to make precise yet concise statements about curation intentions, activities, and outcomes.

Categories: Applied computing ~ Digital libraries and archives • Applied computing ~ Enterprise modeling • Information systems ~ Information lifecycle management • Information systems ~ Data management systems

Keywords: digital curation, digital preservation, domain model, content model, object model, semiotics, lifecycle, continuum, planning, strategy

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Citation: Abrams, Stephen (2015), *A domain Model for Digital Curation*, UC Berkeley School of Information seminar, October 16.

Digital Curation Foundations

Download full text: [UC3-curation-foundations-v2.0.1 \(Draft, 2015-04-24, 802 KB\)](#)

Short bookmark: <http://wiki.ucop.edu/x/go40Cg>

Abstract

Digital curation is a complex of actors, policies, practices, and technologies enabling successful consumer engagement with authentic content of interest across space and time. While digital curation is a rapidly maturing field, it still lacks a convincing unified theoretical foundation. Too many fundamental terms of practice are overloaded and under-formalized. To address this concern, the University of California Curation Center (UC3) has modeled the curation domain to provide a consistent, comprehensive, yet parsimonious conceptual foundation for the planning, implementation, and evaluation of its manifold activities. The UC3 Sept model builds upon, and attempts to consolidate, prior efforts such as Kahn and Wilensky, FRBR, OAIS, NAA performance model, PLM, PREMIS, BRM, and ICO. It also draws upon relevant concepts from cognitive psychology, information science, and semiotic theory. The model considers curated content with respect to six distinct analytical dimensions: semantics, syntactics, empirics, pragmatics, diplomatics, and dynamics, which refer respectively to content's underlying abstract cognitive meaning or emotional affect, symbolic encoding structures, physical representations, realizing behaviors, authenticity, and evolution through time. Correspondingly, there is a hierarchical typology of accumulating content utility: entities, artifacts, articles, products, records, assets, and heirlooms, which are respectively existential, intentional, purposeful, interpretable, reliable, useful, and resilient digital objects. Content engagement is modeled in terms of productive, managerial, and consumptive roles and loci of concerns co-existing within a continuum of originating, organizing, and pluralizing dimensions, which respectively encompass the establishment, imposition of structure upon, and extension of reach and consequence of curated content. Curation strategies are modeled in terms of six high-level imperatives: predict, collect, protect, introspect, project, and connect. A conceptually sound curation domain model is important for ensuring that programmatic planning, implementation, and evaluation activities are pursued in a rigorous and systematic, rather than ad hoc and idiosyncratic manner. The Sept model components and terminology can be used to make precise yet concise statements regarding curation intentions, activities, and results.

Categories: Applied computing ~ Digital libraries and archives • Applied computing ~ Enterprise modeling • Information systems ~ Information lifecycle management • Information systems ~ Data management systems

Keywords: digital curation, digital preservation, domain model, content model, object model, semiotics, lifecycle, continuum, planning, strategy

Notes: While this document is still a work in progress, UC3 welcomes external review and comment. The "Foundational framework" paper above encapsulates the most recent thinking by UC3 on these issues, and incorporates some newer vocabular. Please leave any comments or suggestions below.

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Citation: UC Curation Center (2015), *Digital Curation Foundations*, version 2.0 <<http://wiki.ucop.edu/display/Curation/Foundations>>

Previous versions

[UC3-foundations-v2.0.pdf](#) (2010-02-28, 928 KB)

[UC3-foundations-v1.0.pdf](#) (2010-03-25, 734 KB)