International Research on Permanent Authentic Records in Electronic Systems (InterPARES 2)

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Principal Investigator

Anne J. Gilliland-Swetland
Department of Information Studies, Graduate School of Education & Information Studies
University of California, Los Angeles
Moore Hall, Box 951521
405 Hilgard Avenue
Los Angeles, CA 90095-1521
Phone:(310) 206-4687
Fax: (310) 206-3076
Email:swetland@ucla.edu

Co-PI

Philip B. Eppard
School of Information Science and Policy
University at Albany
Draper Hall, Room 113
135 Western Avenue
Albany, NY 12222
Phone: (518) 442-5110
Fax: (518) 442-5367
Email: pbe40@csc.albany.edu

Co-PI

Michèle V. Cloonan
Graduate School of Library & Information Science
Simmons College
300 The Fenway
Boston, MA 02115-5898
Phone: (617) 521-2806
Fax: (617) 521-3192
Email: michele.cloonan@simmons.edu

Co-PI

Jonathan Furner
Graduate School of Education and Information Studies
University of California, Los Angeles
300 Young Drive North, Mailbox 951520
Los Angeles, CA 90095-1520
Phone: (310) 825-5210

Fax: (310) 206-4460
Email: jfurner@ucla.edu

Co-PI

Howard Besser
Graduate School of Education and Information Studies
University of California, Los Angeles
Moore Hall, Box 951521
405 Hilgard Avenue
Los Angeles, CA 90095-1521
Phone: (212) 992-9399
Email: besser@ucla.edu

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Project Summary

InterPARES 2 is a 5-year project that commenced in February, 2002 as a continuation of the InterPARES Project (1999-2002). InterPARES 2 aims to develop a theoretical understanding of the records generated by interactive, dynamic, and experiential systems, of their process of creation, and of their present and potential use in the government, artistic, and scientific sectors. It is also investigating how the trustworthiness and retrievability of permanent records can be guaranteed as the records move forward through time and across technologies.

Publications and Products

- W. E. Underwood, A formal method for analyzing the authenticity properties of procedures for preserving digital records. Proceedings of 2002 International Conference on Digital Archive Technologies, (ICDAT2002),Academia Sinica, Taipei, Taiwan, Dec 2002, pp. 53-64.

- W. E. Underwood. The Authenticity Property for Archival Information Packages. CCSDS Panel 2 and ISO Archiving Sessions, Houston, Texas, Sept. 30-Oct. 4, 2002.

- Michele Cloonan, Anne Gilliland-Swetland, Richard Marciano, and Kenneth Thibodeau, Findings and Activities of the InterPARES Project, panel session, ASIST Conference, Philadelphia, November, 2002.

- Anne Gilliland-Swetland, Preserving Authenticity Across Time: The Work of the InterPARES Project, presentation, University of Glasgow, Scotland, November 2002.

- Anne Gilliland-Swetland, Testing Our Truths: Identifying the Parameters of the Authentic Electronic Record, American Archivist, 2003.

- Kevin L. Glick, "Electronic Records in Manuscripts Collections," New England Archivists Spring Meeting, Boston, April 2003.

- Philip Eppard, "Preserving Authentic Electronic Records and the InterPARES Project," New England Archivists Spring Meeting, Boston, April 2003.

- W. E. Underwood, "A Cure for Obsolescence: Separating Data from Technology" E-Archiving for Posterity, Leuven, Belgium, June 26, 2003.

Project Impact

InterPARES 2 research is relevant to many disciplines, including the geosciences, space science, chemistry, biophysics, computer science, information science, archival science, graphic arts and design, film, dance, music, and public policy. The research contributes directly to concerns and developments within those disciplines that relate to design and use of digital creation, recording and recordkeeping technologies. InterPARES 2 researchers are drawn from these disciplines and have been active in integrating the work of InterPARES 2 into their own areas through presentations and teaching activities. It is too early in the project, however, to point to immediate tangible contributions.

Graduate research assistants are employed by InterPARES 2 researchers at several of the participating research sites internationally, funded either by the institutions themselves or by the research agencies from which funding has been received. In the United States, five masters or doctoral students have been involved in InterPARES research over the past year. These students are integrally involved in the development of research instruments, collection and analysis of data, and presentation and publication of research. InterPARES 2 researchers have also been involved in educational workshops for members of their own communities.

Goals, Objectives and Targeted Activities

Literature reviews/bibliographic databases: Reviews of literature relevant to concerns of electronic records, preservation, authenticity, reliability, accuracy, and integrity are ongoing for each research area and web-based analytical bibliographic databases accessible to and updateable by all working group members.

Case studies by focus groups of actual interactive and/or dynamic digital implementations drawn from different levels of e-government, a range of scientific activities, and the digital arts): Two case studies are almost complete and will shortly be delineated through modeling and made available for additional analysis by domain and cross-cutting research groups. Several more are underway or are identified to be conducted in 2004. Researchers have also developed the relevant data gathering instruments as well as a standardized IRB review protocol, and the analytical and reporting frameworks necessary to ensure consistent analysis and reporting of case studies.

Modeling: IDEF0 models developed by 2 precursor research projects developed primarily with government records in mind, have been integrated into a single model and data models and case diagrams are now being constructed to facilitate the subsequent development and evaluation of preservation technologies and processes. These models will be tested against models of each case study and refined. Policy and metadata models will also be developed as overlays.

Description: Activities of the Description workgroup (which works on all aspects of metadata) include the following: 1) warrant analysis -- gathering sources of warrant for recordkeeping metadata in government, science and the arts; analyzing the warrant for rhetorical stance and key domain issues; identifying major metadata initiatives as recognized by those sources of warrant for each domain; and entering bibliographic references and analyses of warrant into a Web-based database being made available online to all the working group researchers. 2) Building an XML schema for schema registry and analysis to analyze the extent to which and how identified schema address reliability, authenticity, preservation concerns. This schema is currently drafted and being refined, including the definitions for each data element and permitted attribute values. The working group is also tracking contiguous developments relating to metadata registries, e.g., ISO metadata standard, and ! one working group member is also a member of the ISO metadata standard development group.

Policy: Activities of the Policy workgroup include drafting an intellectual framework, conducting an ongoing literature review, building comparative charts of policy stances of different countries on various issues, e.g., privacy, licensing and copyright, authentication; and developing instruments for conducting surveys on issues of national and international relevance, e.g., freedom of expression and national security.

Terminology: For the purposes of international and inter-disciplinary collaboration, it is essential to have agreement about key terms used in InterPARES 2. It is also essential that clear definitions of terms of art are available to developers of preservation technologies and tools. The Terminology workgroup, therefore, is developing a dictionary of terms used in the project and their homonyms and synonyms in the disciplines participating in the project. Their work has also included developing a submission protocol for candidate terms and the development of a prototype web-based thesaurus that indicates the hierarchical and other relationships between the terms used in the project.

Area Background

The preservation of electronic records is an emerging field of inquiry that has technological, legal, policy and cultural aspects. The records generated by society in the course of its bureaucratic, research, and creative activities need to be preserved, sometimes permanently, as critical instruments of accountability, as means of protecting individual and institutional rights, as cultural documentation, and as sources of information for future research and study. Physical care of records is not sufficient, however, to ensure their preservation for the protection, perpetuation, and advancement of modern society.

Area References

- Dollar, C. M. Authentic Electronic Records: Strategies for Long-Term Access. Chicago: Cohassets Associates, 1998.

- Gilliland-Swetland, A. J. & Eppard, P. B. (2000). Preserving the authenticity of contingent digital objects: The InterPARES Project. D-Lib Magazine, 6. Available at www.dlib.org/dlib/july00/eppard/07eppard.html

- Rothenberg, J. Ensuring the Longevity of Digital Information. Originally in Scientific American 272 (January 1995) 1: 42-7; Revised February 1999. Available at: www.clir.org/pubs/archives/ensuring.pdf

Potential Related Projects

- Persistent Archives Technology (PAT) and Archivists' Workbench research at the San Diego Supercomputer Center.

- MUSTICA Project at the Institut National de Audiovisuel (INA) and the Institut de Recherche et Coordination Acoustique/Musique (IRCAM).

Project Websites

www.interpares.org
This is the website for the entire InterPARES Project. Final reports and other products from InterPARES 1 can be downloaded in PDF.

www.gseis.ucla.edu/us-interpares/
The U.S. InterPARES website provides information to the digital preservation community about the activities of the American research team participating in InterPARES activities, recent news, reports, and bibliographies related to research on electronic records.