

## Introduction

"The Long-Term Preservation of Authentic Records" project, commonly called InterPARES (International Research on Permanent Authentic Records in Electronic Systems), was launched as a result of the growing interest in the findings of the *Preservation of the Integrity of Electronic Records* research project, commonly called the UBC Project, which was carried out at the University of British Columbia's School of Library, Archival and Information Studies from April 1994 to March 1997. The UBC Project defined the requirements for creating, handling, and preserving reliable and authentic *active* electronic records (i.e., records that are used daily by the body producing them in the regular course of business). The UBC Project's researchers, Terry Eastwood and myself, and the project's research assistant, Heather MacNeil, worked in close collaboration with the United States Department of Defense Records Management Task Force to identify requirements for records management application (RMA) software.<sup>1</sup>

The research following the UBC Project had to address the long-term preservation of authentic *inactive* electronic records (i.e., records that are no longer needed for day-to-day business but must be preserved for operational, legal, or historical reasons). The rapid obsolescence of computing technologies was creating difficulties for those concerned with the long-term preservation of documents in digital form. This was especially true for documents that are records, since they serve as indispensable instruments of accountability, a means of protecting individual and corporate rights, and as sources of information for future generations. The preservation of records created in electronic systems was thus posing a critical challenge for present and future archivists.

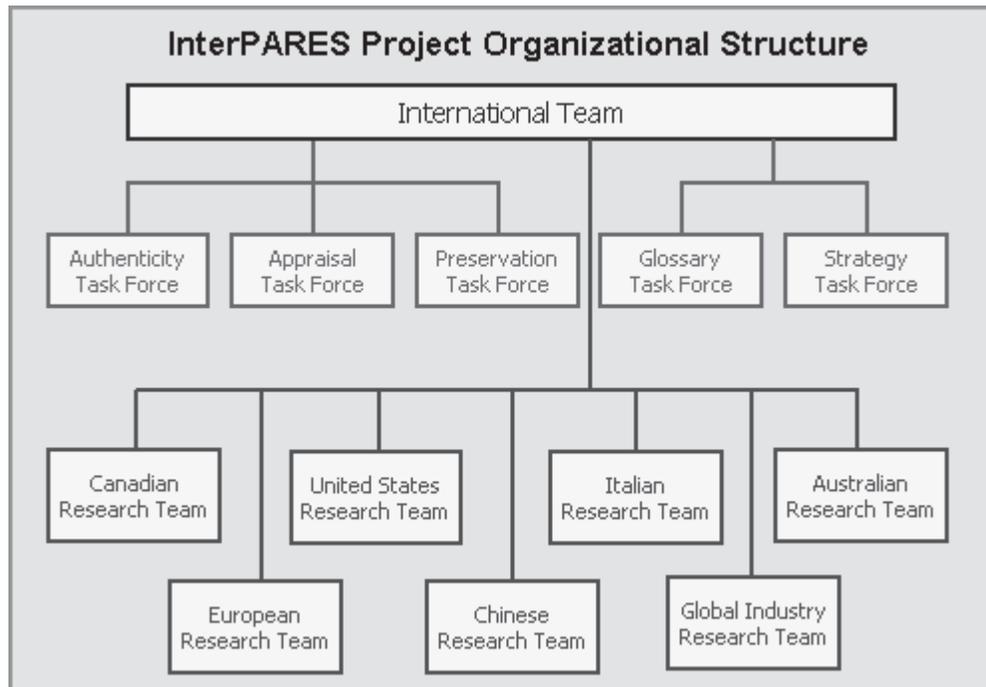
As archival institutions around the world sought to develop strategies to effectively preserve the electronic records created by the governments, corporations, and other organizations that they serve, the potential need to migrate these records across technologies was raising questions related to the records' authenticity. On what basis can electronic records be presumed authentic when they come into archival custody? What steps need to be taken by their preservers to ensure that the means used to ensure their long-term preservation and accessibility do not compromise their authenticity? The immense scope and ubiquity of these and related issues surrounding the long-term preservation of authentic electronic records made evident the need for an interdisciplinary, international approach.

From January 1999 to December 2001, the InterPARES Project, led by myself, sought to address a broad range of questions surrounding the authentic preservation of inactive electronic records. The InterPARES researchers were organized in national and multinational teams for the double purpose of securing funding from separate sources and of acting as research units sharing a common juridical-administrative context, the responsibility of which was to refine the findings of the project—as they were developed—in light of the requirements of their own environment. The latter purpose was especially important in a project whose collaborative international multidisciplinary nature required that the groups formed to investigate the research domains comprise co-investigators of diverse cultural and scholarly backgrounds searching universal solutions to common problems. The teams were: the Australian Research Team, the Canadian Research Team, the Chinese Research Team, the European Research Team, the Global Industry Research Team, the Italian Research Team, and the United States Research Team. To determine the overall direction of the research and steer it as necessary, an International Team

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<sup>1</sup> For a description of the UBC Project, see Luciana Duranti and Heather MacNeil, "The Protection of the Integrity of Electronic Records: An Overview of the UBC-MAS Research Project," *Archivaria* 42 (Fall 1996): 45–67. The results of the UBC Project were substantially incorporated into the *Design Criteria Standard for Electronic Records Management Software Applications (DoD 5015.2-STD)*, promulgated by the U.S. Department of Defense. Links to the findings of the UBC Project and to the DoD standard can be found on the Web site of the InterPARES Project, at <<http://www.interpares.org/UBCProject/index.htm>>: "The Preservation of the Integrity of Electronic Records," and "U.S. Department of Defense 5015.2 Standard."

was created comprising representatives of all the research units and all the participating institutions, and chaired by myself. The International Team met three times each year for the duration of the project. This face-to-face exchange of views and discussion of research findings promoted a highly collaborative research process, allowing for the findings to be the truly integrated results of a common effort, products profoundly shared and believed in by all InterPARES researchers.



The stated goal of the InterPARES Project was to develop the theoretical and methodological knowledge essential to the permanent preservation of electronically generated records and, on the basis of this knowledge, to formulate model strategies, policies, and standards capable of ensuring their preservation. To meet this goal, the research was organized into four domains of inquiry; a corresponding task force was formed to address the research questions specific to each domain.

The objective of Domain 1 was to identify the conceptual requirements for preserving authentic electronic records, and sought to identify the elements of electronic records that are necessary to maintain their authenticity over time. The original research questions to be addressed by the Authenticity Task Force, chaired by Heather MacNeil, were:

- What are the elements that all electronic records share?
- What are the elements that allow us to differentiate between different types of electronic records?
- Which of those elements will permit us to verify their authenticity over time?
- Are these elements for verifying authenticity over time the same as those that permit us to verify their authenticity in time (i.e. at the point at which they are originally used)?
- Can those elements be removed from where they are currently found to a place where they can more easily be preserved and still maintain the same validity?

Domain 2 was concerned with the appraisal of authentic electronic records. The Appraisal Task Force, chaired by Terry Eastwood, sought to determine whether or not the evaluation of

electronic records for permanent preservation should be based on theoretical criteria different from those applied to traditional records. Specific research questions originally included:

- What is the influence of digital technology on appraisal criteria?
- In what ways does appraisal differ depending on the type of systems prevalent in each phase of computing?
- How do the media and physical form of the records influence appraisal?
- How do retrievability, intelligibility, functionality, and research needs influence appraisal?
- Does the life cycle of electronic records differ from that for traditional records?
- When in the course of their existence should electronic records be appraised?
- Should electronic records be appraised more than once in the course of their existence and, if so, when?
- How are electronic records scheduled?
- Who should be responsible for appraising electronic records?
- What are the appraisal criteria and methods for authentic electronic records?

Domain 3 focused on records preservation. The Preservation Task Force, chaired by Ken Thibodeau, sought to identify the procedures and resources necessary for the long-term preservation of authentic electronic records, all the while considering the conceptual requirements for authenticity articulated by the Authenticity Task Force as well as the conclusions of the Appraisal Task Force. The research questions were:

- What methods, procedures, and rules of long-term preservation are in use or being developed?
  - Which of these meet the conceptual requirements for authenticity identified in Domain 1?
  - Which methods of long-term preservation need to be developed?
  - Which of these methods are required or subject to standards, regulations, and guidelines in specific industry or institutional settings?
- What are the procedural methods of authentication for preserved electronic records?
  - In what way can archival description be a method of authentication for electronic records?
  - In what way can appraisal and acquisition/accession reports be constructed to allow for the authentication of electronic records?
  - What are the procedures for certifying electronic records when they cross technical boundaries (e.g., refreshing, copying, migrating) to preserve their authenticity?
- What are the technical methods of authentication for preserved electronic records?
- What are the principles and criteria for media and storage management that are required for the preservation of authentic electronic records?
- What are the responsibilities for the long-term preservation of authentic electronic records?

Domain 4 was devoted to the articulation of a framework for developing policies, strategies, and standards for the long-term preservation of authentic electronic records. The Strategy Task Force, chaired by myself as project director, sought to develop such a framework, recognizing that effective organizational policies, strategies, and standards derive from the recognition that each cultural, juridical, and organizational environment has its own needs. An important aspect of the research within Domain 4 was the contextualization of the findings for each of the participating jurisdictions. The research questions for Domain 4 were:

- What principles should guide the formulation of policies, strategies, and standards related to the long-term preservation of authentic electronic records?
- What should be the criteria for developing national policies, strategies, and standards?
- What should be the criteria for developing organizational policies, strategies, and standards?

In addition to these four task forces, a Glossary Committee, chaired by Ken Hannigan, was struck to control the use of specialized vocabulary within the project.

InterPARES research was a truly collaborative effort, with the participation of academics from a range of disciplines, working archivists from a number of national archival institutions, and representatives from the global business community. The project was directed by Dr. Luciana Duranti (University of British Columbia), and included the participation of the following individual researchers: Jason Baron (U.S. National Archives and Records Administration), Elisabetta Bidischini (Union for the Chambers of Commerce, Italy), Richard Blake (Public Records Office of the United Kingdom), Sergio Cardarelli (Bank of Italy), Barbara Cartocci (Chamber of Deputies, Italy), Paola Carucci (Central State Archives of Italy), Su-Shing Chen (University of Missouri-Columbia), Chen Wei (Beijing Municipal Archives), Michele Cloonan (University of California at Los Angeles), Barbara Craig (University of Toronto), Fabrizio De Martinis (Sogei), Du Mei (State Archives Administration of China), Terry Eastwood (University of British Columbia), Fynnette Eaton (Smithsonian Institution Archives), Philip Eppard (University at Albany, SUNY), Sharon Farb (University of California at Los Angeles), Vincenzo Festinese (Bank of Italy), Gigliola Fioravanti (Central Office for Archival Properties of Italy), Normand Fortier (National Archives of Canada), Lucilla Garofalo (Central State Archives of Italy), Anne Gilliland-Swetland (University of California at Los Angeles), Linda Giuva (Central State Archives of Italy), Maria Guercio (University of Urbino), Yvette Hackett (National Archives of Canada), Babak Hamidzadeh (University of British Columbia), Ken Hannigan (National Archives of Ireland), P.C. Hariharan (The Johns Hopkins University), Ross Harvey (Curtin University of Technology), Hans Hofman (National Archives of the Netherlands), Torbjorn Hornfeldt (National Archives of Sweden), Peter Horsman (Netherlands Institute for Archival Education and Research), Livia Iacovino (Monash University), Caterina Isabella (Municipal Environment Agency of Rome), Agnes Jonkers (Netherlands Institute for Archival Education and Research), Alexandra Kolega (Central State Archives of Italy), Brent Lee (University of British Columbia), Rich Lysakowski (Collaborative Electronic Notebook Systems Association), John McDonald (National Archives of Canada), Ian Macfarlane (Public Records Office of the United Kingdom), Sue McKemmish (Monash University), Heather MacNeil (University of British Columbia), Roger Maxwell (Public Records Office of the United Kingdom), Mirella Mombelli (Special School of Archivists and Librarians, Italy), Antonella Mule (Central State Archives of Italy), Gianni Paoloni (Special School of Archivists and Librarians, Italy), Christine Petillat (National Archives of France), Tom Quinlan (National Archives of Ireland), Marina Raffaelli (Special School of Archivists and Librarians, Italy), Enrico Rendina (Rome Research Consortium), Bill Rhind (Collaborative Electronic Notebook Systems Association), John Roeder (University of British Columbia), Seamus Ross (University of Glasgow), Claudia Salmini (State Archives of Venice), Maurizio Savoja (State Archives of Milan), Leon Stout (Penn State University), Mario Terranova (Authority for Public Administration Information Technology), Ken Thibodeau (U.S. National Archives and Records Administration), Bill Underwood (Georgia Tech Research Institute), Wai-kwok Wan (Hong Kong Public Records Office), Bruce Walton (National Archives of Canada), and Zhao Zhon Xiu (State Archives of China).

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findings, and the Italian National Archival Association funded one research workshop and an international conference on InterPARES in Cagliari; for the European team, the Open Society Archives of the Soros Foundation in Budapest offered a research workshop and an international seminar; and for the Asian team, the State Archives Administration of China funded a two-day symposium on InterPARES findings in Beijing. External supporters of InterPARES have been the Italian Institute of Culture of Vancouver, that has co-sponsored two symposia on InterPARES in Vancouver, once with the UBC European Institute, and once with the Italian Chamber of Commerce of British Columbia; and the East section of the International Council on Archives (EASTICA), that has sponsored a conference on InterPARES in Hong Kong.

The organization of the InterPARES findings reflects the organization of the project. Part One is devoted to the report of the Authenticity Task Force. Part Two comprises the Appraisal Task Force Report. Part Three is the report of the Preservation Task Force. Part Four includes the report of the Strategy Task Force as well as the reports of the various national and multinational teams. Part Five is the report of the Glossary Committee.

The appendices following the reports include several documents that are in themselves major products of the InterPARES Project, such as the *Template for Analysis*, the *Requirements for Assessing and Maintaining the Authenticity of Electronic Records*, the models of the "Selection" and "Preservation" functions, and some self-contained studies that may be of interest in their own right. Not all the key documents produced by InterPARES researchers in the course of their investigations are included in the InterPARES findings, primarily to contain their volume. However, those that are excluded are electronically published and accessible on the project's Web site, <<http://www.interpares.org>>.

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