# International Research on Permanent Authentic Records in Electronic Systems (InterPARES): Experiential, Interactive and Dynamic Records

# Milestones Report

October 2002

# 1. Organization of Research

**1.1 Domains:** This second phase of the InterPARES project has been divided into three domains of inquiry, each addressing a specific set of research questions: **(1)** the **first domain** will investigate the nature of the records under examination and the process of their creation; **(2)** the **second domain** will study the concepts of reliability, accuracy and authenticity, as they are understood in the various disciplinary areas involved in the research; **(3)** the **third domain** will test existing appraisal and preservation methods on the records in question and develop and test new ones. The grouping of researchers into **Domain Task Forces** promotes interdisciplinary collaboration where issues of concern are common to different types of activities.

**1.2 Focuses:** As shown by the organizational matrix (see last page), each domain comprises **three focuses**, each addressing a type of records:  **(1)** the records of **artistic activities**, **(2)** of **scientific activities**, and **(3)** of **e-governmental activities**. The simultaneous grouping of researchers into **Focus Task Forces** allows for conducting case studies of records creators in the context of each type of activity, analyzing their records from creation to their ultimate appraisal and preservation by archival institutions or programs.

**1.3 Cross-domain:** Three cross-domain research units have been established, each addressing a key objective common to all domains: **(1)** the **Terminology Research Team** will control the use of terms and related definitions in all areas of the research, thereby ensuring consistency among the various research units while keeping into account disciplinary and cultural differences; **(2)** the **Policy Research Team** will analyze the existing policies and strategies in each domain and focus of inquiry, and distill from the findings and products of the task forces policies, strategies and guidelines for the reliable and accurate creation and maintenance of the records under examination, and for their authentic preservation within the context of each activity and culture generating them; **(3)** the **Description Research Team** will develop guidelines for the intellectual control and archival description of all types of records studied.

**1.4 Working Groups:** The organizational matrix (see last page) is constituted of three domains represented vertically and three focuses represented horizontally, for a total of nine areas. Working groups have been formed within each area, constituted of investigators with diversity of expertise.

**1.5 Roles of research units: (1)** the **primary role of Focus Task Forces** is to gather and analyze case studies and other data of relevance to each type of activity across multiple domains of inquiry; **(2)** the **primary role of Domain Task Forces and Cross-domain Research Teams** is to correlate these findings across focuses and formally address the project's research questions from an interdisciplinary and multicultural perspective;  **(3)** the **primary role of the Working Groups** is to ensure that in the context of the activity of each focus the research questions of each domain will be adequately addressed, as well as to provide input through their chairs to the decisional process that is carried out at the **International Team** workshops.

# 2. Research Activities and Deliverables

**During the first thirty months of the project, the primary research activities will be conducted by the Focus Task Forces, while the domain and cross-domain research units will do background research in preparation for the study of the data gathered by the focuses.**

**A — Focus 1 (Artistic Activities):**

**(1) Main activities and completion dates:**

- Design and conduct of six case studies on digital objects created in the context of the following artistic areas: performance art, theatre, media/online publishing, music, film, photography (June 2004)
- Creation of annotated bibliographies and literature reviews with regard to the concepts of accuracy, reliability and authenticity in artistic activities (June 2004)
- Conceptual analysis of notions of accuracy, reliability and authenticity in artistic activities (June 2004);

- Survey of record creation and preservation processes of individual artists (June 2004);
- Creation of a reporting framework allowing consistency in the presentation of the findings across artistic disciplines (February 2003)
- Design of a protocol for modeling records creation processes (September 2003)

**(2) Students:** Philippe Perron (Doctoral), Peggy Heger, Scott Amort, Greg Myers

**(3) Deliverables:**
- Case study reports and analyses (June 2004)
- Bibliographies and literature reviews (June 2004)
- Survey of individual artists (June 2004)
- Report on conceptual analysis (June 2004)

**B — Focus 2 (Scientific Activities):**

**(1) Main activities and completion dates:**
- Design and conduct of five case studies on digital objects created in the context of the following scientific areas: geospatial systems, space exploration, environmental information systems and computer science (June 2004).
- Creation of annotated bibliographies and literature reviews with regard to the concepts of accuracy, reliability and authenticity in scientific activities (June 2004)
- Conceptual analysis of notions of accuracy, reliability and authenticity in scientific activities (June 2004)
- Survey and analysis of encoding languages developed for non-textual scientific language (May 2003)
- Creation of a reporting framework allowing consistency in the presentation of the findings across the many disciplines involved in scientific activities (June 2004)

**(2) Students:** Tracey Lauriault, Glenn Dingwall, 3 other Master's students

**(3) Deliverables:**
- Case study reports (June 2004)
- Bibliographies and literature reviews (June 2004)
- Survey of encoding languages (May 2003)
- Report on conceptual analysis (June 2004)

**C — Focus 3 (E-governmental Activities):**

**(1) Main activities and completion dates:**
- Design and conduct of four case studies conducted on digital objects created in the context of e-government (June 2004)
- Creation of annotated bibliographies and literature reviews with regard to the concepts of accuracy, reliability and authenticity in e-government (June 2004)
- Conceptual analysis of notions of accuracy, reliability and authenticity in e-government (June 2004)
- Creation of a survey of government websites, which display interactive, dynamic and experiential features (May 2003)
- Development of lifecycle model for the creation, maintenance, use and preservation of records produced by e-government

**(2) Students:** Carolyn Casenas, Tom Anderson, Karen Langley, Linda Nobrega, Andrea Lam, Alan Doyle (Master's students)

**(3) Deliverables:**
- Lifecycle model for the creation, maintenance, use and preservation of records produced by e-government (Draft, June 2004)
- Survey of e-government websites (May 2003)
- Report on conceptual analysis (June 2004)

- Bibliography and Literature review (June 2004)

**D — Domain 1 (Records Creation and Maintenance):**

**(1) Main activities and completion dates:**
- Examine the models of records creation generated by the UBC/U.S. Department of Defense (SSHRC standard grant 1994-97) in the context of the digital objects covered by InterPARES 2 (May 2004)
- Examine the records management standard issued by the US Department of Defense (DoD Standard #5015.2) on the basis of those models and test their validity with respect to the digital objects covered by InterPARES 2 (Duration of the project)
- Study the degree of belief required to make a presumption of authenticity on basis of the requirements for authenticity developed by InterPARES 1 (June 2004)

**(2) Deliverables:**
- Revised record creation model (June 2004)
- Interim Report on DoD standard validity with respect to InterPARES 2 (June 2004)
- Report on degrees of belief/presumption of authenticity (June 2004)

**E — Domain 2 (Authenticity, accuracy, and reliability):**

**(1) Main activities and completion dates:**
- Bibliographic research and literature reviews of the concepts of accuracy, reliability and authenticity in all three focus areas (June 2004)
- Conceptual analysis in all three focus areas using the bibliographic material (June 2004)

**(2) Deliverables:**
- Bibliographies and literature reviews (June 2004)
- Report on conceptual analysis (June 2004)

**F — Domain 3 (Methods of appraisal and preservation):**

**(1) Main activities and completion dates:**
- Development of an integrated activity model for appraisal and preservation based on the InterPARES 1 models (June 2004)
- Development of data model for preservation consistent with the InterPARES 1 preservation model for the purpose of prototyping a preservation system (June 2004)
- Development of walkthroughs: the testing of the new models above by applying them to the case studies completed in InterPARES 1 (June 2004)

**(2) Deliverables:**
- Draft activity model (June 2004)
- Draft data model (June 2004)
- Report on walkthroughs (June 2004)

**G — Policy cross-domain**

**(1) Main activities and completion dates:**
- Conduct literature reviews of existing policies, strategies, guidelines, standards and legislation in each focus group (May 2004)
- Compare examples of focus group policies, procedures and standards from different sample countries by means of a comparative table and develop an intellectual framework by extrapolating similar data (June 2004)
- Locate international instruments that have been developed on freedom of expression, moral rights, privacy, and national security (e.g. UN Charters, Berne Convention on Intellectual Property, OECD and EU Directives on privacy, authentication standards) and consider how they have been or are being implemented individual countries (June 2004)

- Locate legislation and ethical codes and identify responsibilities of legal and moral persons in relation to the domains for each focus group (June 2004)

**(2) Students:** 1 Master's student

**(3) Deliverables:**
- Comparative table of policies, strategies, guidelines, and standards to recognize commonalities and differences and to identify gaps (June 2004)
- Literature reviews of existing policies, strategies, guidelines, standards and legislation in each focus group (June 2004)

**H —Description Cross-domain:**

**(1) Main activities and completion dates:**
- Conduct a literature review across all areas contained in each focus area in order to identify authorities addressing the accuracy, reliability, authenticity and preservation of records by means of descriptive and other metadata schema and standards. (duration of project)
- Develop a database registering and describing salient features of relevant extant descriptive and other metadata schema and standards (duration of project)
- Identify the extent to which all metadata schemas and standards identified in the database and through the case studies address the research questions to be addressed by the Description Team (duration of project)

**(2) Students:** 1 Master's student

**(3) Deliverables:**
- Standardized descriptive schema for metadata (December 2006)
- XML-based DTD for a Web-based database that can be made accessible to InterPARES 2 researchers (September 2003)
- Literary warrant analysis document (December 2006)

**I — Terminology Cross-domain:**

**(1) Main activities and completion dates:**
- Develop a glossary of working terms and definitions for the purpose of consistency of communication among researchers, on the basis of lists of ambiguous terms identified by each focus (June 2003)
- Develop the structure of a thesaurus that, for the duration of the project, will incorporate all the terms used in InterPARES 2 and their respective definitions in each of the disciplines or area of study covered by InterPARES 2 (December 2006)

**(2) Students:** 1 master's student

**(3) Deliverables:**
- Glossary of working terms (June 2003)
- Thesaurus of InterPARES 2 terms (December 2006)

# 3. Team integration and cross-fertilization

The inherently collaborative research structure represented by the organizational matrix ensures that researchers with diverse expertise work together throughout the project. The face-to-face tangible collaboration among researchers and research units will occur at **weeklong semi-annual international workshops** in February and September. Between these workshops, research units will interact through the project on-line forum and through ad hoc face-to-face meetings. The value of having all of the researchers together for weeklong workshops cannot be overstated. From experience, we know that frequent international workshops supported by on-line researchers' forum are effective tools to ensure the integration of team members and research activities. The International Team (the chairs of all research unites and of the national and multinational teams, plus the project director), which has the function of

steering all research activities, will meet for three-day workshops in June and December.  Advisory Board members are expected to attend one International Team workshop per year.

## 4. Project Web site

The planned project website will be managed and hosted by the InterPARES project administration staff. There will be three components to the website: (1) the public site, (2) the secured website and (3) the administrative website. The public site will contain a summary of the project, its goals, methodologies, organization, participants, events, documents, contact information, as well as resources and links. The secured site is available only to InterPARES researchers and will be divided into two parts: a resources section and a discussion and documents forum. The resources section will include a calendar of research activities, deadlines, project publications and events, detailed contact information of researchers, workshop photographs and copies of internal reports. The discussion and documents forum enable the researchers to post documents and reply to messages to all researchers or within individual research units. Through it, researchers are able to communicate within research units when they are not meeting face-to-face. The administrative site will be available only to InterPARES administrative staff. It will allow for the automatic update of specific information in the resources section of the secure website from databases in the InterPARES office.

## 5. Stakeholders

Our approach regarding the various stakeholders in our research has been very inclusive; our group of investigators extends far beyond the academic realm, and features a substantial representation of archival institutions from around the world as well as business and industry. Thus, those institutions and communities with the most at stake in the outcomes of our research have been included as full participants. Even so, we will endeavor to present our research to as wide a range of communities as possible, and solicit public comment on our interim reports and preliminary findings through the website.

## 6. Dissemination

We expect that preliminary results and progress reports will be delivered at the annual conferences of the International Council on Archives, the Association of Canadian Archivists, the Society of American Archivists, as well as academic/scholarly and professional conferences devoted to artistic, scientific and technological research, especially interdisciplinary and international ones.  Several peer-reviewed articles will be published by the researchers in the professional and scholarly journals of their respective disciplines, and in refereed proceedings of international disciplinary and inter-disciplinary and multi-disciplinary conferences.  Given the length and complexity of the project, we do not expect to have many findings, methodological or theoretical, worth publishing in peer-reviewed venues before the fifth year of the project.  Therefore, we cannot promise to publish more than 6-8 articles in the first 30 months of the project.  Several findings will be best disseminated by means other than articles in peer-reviewed journals, such as electronic choreographies and other performances, art exhibitions, and prototype specifications.  As our current research project builds on the findings of InterPARES 1, we have noted in the list below, which only includes dissemination activities for the year 2002, the dissemination of InterPARES 1 findings.

• January 2002, **Project Director**: "The Challenge of Digital Photography and the InterPARES 2 Project," Il Mondo degli Archivi Dossier on "Archivi Fotografici. Photographic archives", Supplemento a Il Mondo degli Archivi Anno X Nuova Serie numero 1/2002, pp. 72-76. Also in Italian, "La sfida sulle fotografie digitali e il Progetto InterPARES 2, pp. 4-7.  (InterPARES 2); **Project Director**: Conference of Business and Industry Archives in Trieste, Italy (InterPARES 1); **Project Director**: Seminar on InterPARES 1 findings in Naples, Italy; **Project Director**: Seminar for Italian Public Administration in Rome, Italy (InterPARES 1)

• March 2002, **Heather MacNeil**: San Diego Supercomputer Centre, La Jolla, California. Presentation on the findings of the InterPARES 1 Project to members of the Archivist Advisory Committee for the San Diego Supercomputer Centre Collection-Based Persistent Archives and Archivists Workbench Projects; **Project Director**: Seminar hosted by State Archives of Mantua on findings of InterPARES 1 for archivists; **Project Director**: Seminar hosted by University Ca' Foscari of Venice on findings of InterPARES 1 for the university faculty members at large.

• May 2002, **Yvette Hackett, Ken Thibodeau, Bill Underwood**: Presentation of research at annual meeting of Association of Canadian Archivists - one whole session on InterPARES 1; **Project Director**: Seminar hosted by State Archives of Rome on findings of InterPARES 1 for archivists; **Project Director, Ken Thibodeau, Hans**

**Hofman**: DLM Forum in Barcelona, presentation of findings of InterPARES 1to the archival, library, industry and business communities; **Heather MacNeil**: Genoa, Italy.  Workshop on Findings of InterPARES 1 and UBC Project for records managers; **Heather MacNeil**: Dobbiaco Italy.  Presentation of the findings of the Authenticity Task Force at the International Conference on Preservation of the Documentary Heritage (InterPARES 1)

• June 2002, **Researchers**: Symposium on InterPARES 1 findings in Washington D.C.

• July 2002, **Terry Eastwood**: International Council on Archives Annual Meeting, Committee on Appraisal (InterPARES 1); **Project Director**: One day seminar in Padua, Italy on InterPARES research for archival graduate students from all Italian schools (InterPARES 1)

• August 2002, **Heather MacNeil**: Presentation of the findings of the Authenticity Task Force at the annual meeting of the Society of American Archivists InterPARES 1); **Brent Lee**:  "The Challenges of Preserving Digital Music Sources," 17th International Congress of the International Musicological Society (InterPARES 1); **Phil Eppard, Anne Gilliland-Swetland, Michele Cloonan**: Presentation of research at annual meeting of Society of American Archivists - one session on InterPARES (InterPARES 2); **Heather MacNeil**:  Gottenberg, Sweden. Keynote address on the findings of InterPARES at the 50th Anniversary of the Swedish Association of Archivists (InterPARES 1)

• September 2002, **Heather MacNeil**: Presentation of the findings of the Authenticity Task Force and Preservation Task Force at the Managing Electronic Records Conference, sponsored by Cohassets Associates, in Chicago, Illinois (InterPARES 1)

• October 2002, **Project Director and Terry Eastwood**: Two Presentations on research at International Conference on Appraisal in Salamanca, Spain (InterPARES 1 and 2); **Heather MacNeil**: Presentation of the findings of the Authenticity Task Force at the Archives and IT Solutions Conference, sponsored by the European Association for the History of Banking, in Istanbul, Turkey (InterPARES 1); **Postdoctoral Fellow**: Presentation, "Technical, institutional, and cultural dimensions of secure electronic archiving: The case of French authentic acts", Information Security Solutions Europe (InterPARES 1 & 2)

• November 2002, **Project Director**: Two Presentations, International Conference on Digital Archives in Rio de Janeiro (InterPARES 1 and 2) **James Turner, Yvette Hackett**: Two Presentations, Association of Moving-Image Archivists (InterPARES 2); **Postdoctoral Fellow**: Seminar, "Le droit confronté aux nouvelles technologies de l'écrit", École nationale de la magistrature, Paris (InterPARES 1); **Postdoctoral Fellow**: Training seminar, "Signature et archivage électronique", Association des professionels de l'information et de la documentation (InterPARES 1 & 2)

# 7. Student training
Student research assistants are hired and assigned to researchers on a *pro-term* basis. Nineteen research assistants each year will be involved in a wide variety of tasks. In the first half of the project, research assistants will work on case studies, conduct surveys and prepare annotated bibliographies, assist in the development and testing of models, and assist in the analysis of case study data.  Most research assistants are master's students in their second year of study.  This means that we can provide the names of the 19 students hired in the first year; however, we cannot do the same for the following years at this stage.

One postdoctoral fellow, Jean-François Blanchette, will work full-time on the project for its duration; the responsibilities of the postdoctoral fellow include developing and conducting some case studies, participating fully in the analysis of all case study data and development of prototypes, presenting findings at national and international projects, assisting in the training and supervision of research assistants.

# 8. Management Structure

**(a) Project Director** — The Director is responsible for the intellectual and administrative direction of the InterPARES 2 Project research, for chairing the International Team, chairing the Terminology Cross-domain Research Team, coordinating intellectual activities and ensuring consistency throughout the research.  In addition, she is responsible for the following tasks: (a) the formal acceptance of new researchers; (b) the exercise of

disciplinary actions, when necessary; (c) the selection of the Advisory Board members and the communication to them of the research progress; (d) the supervision of the Project Coordinator and the Post Doctoral Fellow.

**(b) International Team — Members:** Project Director, and the chairs of all working groups, cross-domain research teams and national and multinational teams. Ex-officio non-voting members are the Project Coordinator, the Technical Coordinator and the Postdoctoral Fellow. **Purpose:** (a) approves the Organizational policy and monitors its implementation; (b) monitors the progress of the research, future project plans, associated milestones and deliverables for the research work of the InterPARES 2 Project; (c) decides on any change to the original research description and subsequent work plan; (d) arbitrates on any conflict within the project or negotiates a solution to such conflicts; (e) reports on the research activities and findings of research units or national/multinational team, reviews, discusses and reconciles them with the work presented by other members; (f) decides on dissemination activities; (g) assigns tasks and responsibilities to research units.

**(c) Advisory Board — Members**: Chris Hurley, Archivist, New Zealand National Archives; John McDonald, Consultant on Electronic Records, Canada; S. Timothy Maloney, Director, Music Division, National Library of Canada; Isabelle de Lamberterie, Directrice de recherche, CNRS-CECOJI, France; Donald Sawyer, Head, NASA/Science Office of Standards and Technology, USA. **Purpose**: reviews all aspects of the project throughout its duration and offers criticisms and suggestions. Each member of the Advisory Board will meet with the International Team at a research workshop of his/her choice once per year.

**(d) Management Committee — Members:** Luciana Duranti, Terry Eastwood, Rick Kopak, John Roeder, Tahra Fung. **Purpose:** The Management Committee advises the Project Director on decisions that imply unexpected or large expenditures, and acts for her in her absence.

|  | FOCUS 1 - Artistic activities | FOCUS 2 - Scientific activities | FOCUS 3 - Governmental activities |
|---|---|---|---|
| **DOMAIN 1**<br>**Records creation & maintenance** | **Working Group 1.1**<br>**Creation and Maintenance of Artistic Records**<br><br>Geoffrey Rockwell (co-chair), Andrew Rodger (co-chair), Martine Cardin, Henry Daniel, Chris Gallagher | **Working Group 1.2**<br>**Creation and Maintenance of Scientific Records**<br><br>Fraser Taylor (chair), Su-Shing Chen, Brad Abbott, Giovanni Paoloni, Barbara Pernici, Du Mei, Guo Siping | **Working Group 1.3**<br>**Creation and Maintenance of E-Government Records**<br><br>Ken Hannigan (chair), Glenn Isaac, Terry Eastwood, Kate Theimer, Leon Stout, Agnes Jonker, Yang Jibo, Wang Hongmin, |
| **DOMAIN 2**<br>**Authenticity, accuracy & reliability** | **Working Group 2.1**<br>**Accuracy, Reliability, Authenticity of Artistic Records**<br><br>John Roeder (co-chair), Brent Lee (co-chair), Ian Lancashire, Marta Braun, Jonathon Furner, Ben Howell Davis, | **Working Group 2.2**<br>**Accuracy, Reliability, Authenticity of Scientific Records**<br><br>Vivek Navale (chair), Graeme Hirst, George Wootton, Adrienne Woods, Wang Lan, Qiu Xiaowei, P.C. | **Working Group 2.3**<br>**Accuracy, Reliability, Authenticity of E-Government Records**<br><br>Philip Eppard (chair), Lynn Tibbit, Margaret Campbell, Shadrack Katuu, Guo Shiping, Zhao Zhongxin, Hao Chenhui, |
| **DOMAIN 3**<br>**Methods of appraisal & preservation** | **Working Group 3.1**<br>**Appraisal and Preservation of Artistic Records**<br><br>Yvette Hackett (chair), James Turner, Keith Hamel, Jesse Read, Sidney Fels, Andrew Schloss, Sally Hubbard, Gigliola Fioravanti, Howard Besser, Isabella Orefice, Ann Butler, Randall Luckow, Micheal Joyce, Mary Ide, Andrea Kalas, Paolo Buonora, Francesco de Melis, Vincenzo de Meo, Arianna Franceschini, Fosca Pizzaroni, Laura Primangeli, Representative of Cineteca di Bologna | **Working Group 3.2**<br>**Appraisal and Preservation of Scientific Records**<br><br>Bill Underwood (co-chair), Babak Hamidzadeh (co-chair), Holger Hoos, Barbara Craig, Michele Cloonan, P.C. Hariharan, Reagan Moore, Yu Lijuan, Rich Lysakowski | **Working Group 3.3.**<br>**Appraisal and Preservation of E-Government Records**<br><br>Richard Marciano (co-chair), Hans Hofman (co-chair), Ken Thibodeau (co-chair), Filip Boudrez, Jean-Stéphen Piché, Margaret Hutchinson, Jim Suderman, Sue McKemmish, Babak Hamidzadeh, Wang Liangcheng, Shelby Sanett, Christine Petillat, Paul Berkman |

## Terminology

Luciana Duranti (chair), James Turner, Ian Lancashire, Jesse Read, Jonathon Furner

## Policy

Sharon Farb (co-chair), Livia Iacovino (co-chair), Hiroya Takeuchi, Ken Hannigan, Adrienne Woods, Maria Guercio, Wang Liangcheng, Guo Siping, Du Mei, Howard Besser, Enrica Massella Ducci Teri

## Description

Anne Gilliland-Swetland (co-chair), Sue McKemmish (co-chair), Rick Kopak, Ken Thibodeau, Bill Underwood, Terry Eastwood, Holger Hoos, Catherine Owen, Hans Hofman, Yang Jibo, Wang Hongmin