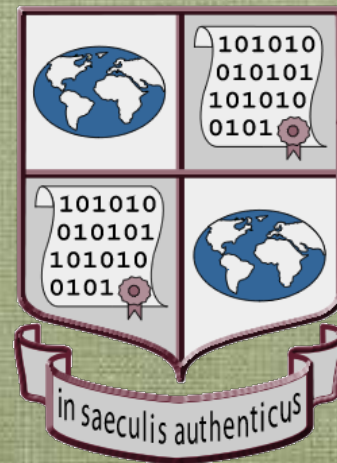
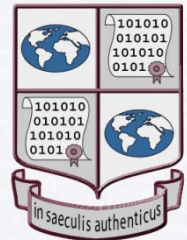


Implementing Research Findings: InterPARES 3



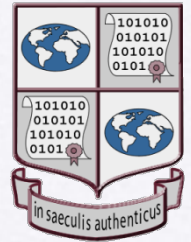
Dr. Luciana Duranti
InterPARES Project Director

The Goal of InterPARES 1 and 2



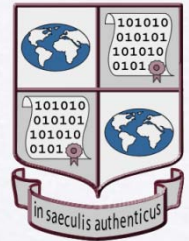
To develop the body of theory and methods necessary to ensure that digital records produced in databases and office systems as well as in dynamic, experiential and interactive systems in the course of artistic, scientific and e-government activities can be created in accurate and reliable form and maintained and preserved in authentic form, both in the long and the short term, for the use of those who created them and of society at large, regardless of technology obsolescence and media fragility.

InterPARES Principles



- Technology cannot determine the solution to the reliable and accurate creation of digital records or to their authentic preservation over the long term: **organizational needs** define the problem and **archival principles** must establish the correctness and adequacy of each technical solution
- Solutions to the digital records challenges are inherently **dynamic** and **specific** to the cultural, disciplinary, administrative and legal situations
- Preservation is a **continuous process that begins with records creation**
- We must be able to **presume records trustworthiness**, till proof to the contrary is established
- We must be able to **infer authenticity** on the basis of the circumstances of records creation, maintenance and preservation

InterPARES Research Activities



- Identification of **what constitutes a record** in each type of system and in each context, and **what record has the force of an original**, based on archival and diplomatics theory and six thousand years of record making and recordkeeping
- Definition of **what a reliable, accurate and authentic record** is in the arts, science, law and administration on the basis of analysis of literature, surveys, interviews
- Development of the requirements for the design of **a trusted record making system, a trusted recordkeeping system and a trusted record preservation system**, on the basis of 42 case studies, and the modeling and diplomatic analysis of the results
- Development of **methods and procedures for the creation, maintenance, appraisal, selection and disposition, and long-term preservation of digital records**, based on archival theory, law, and issues related to organizational culture

InterPARES Final Products



- A **framework of principles guiding the development of policies** for records creating and preserving organizations
- **Guidelines for making and maintaining digital records** for individuals and small communities of practice
- **Guidelines for digital preservation** for archival institutions
- **Authenticity requirements** for records systems
- A **metadata registry** for the registration and analysis of metadata schemas
- Principles and criteria for adoption of **file formats, wrappers, and encoding**
- A **terminology database** including glossary, dictionary and ontologies

Why a Third Phase?



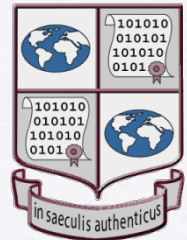
- A study of the effectiveness of workshops and seminars experiences for increasing archivists' skills in digital preservation and their ability to implement these skills in their repositories has shown that very few participants were able to implement the skills once they returned to their work environments (Duff, Wendy M., Amy Marshall, Carrie Limkilde, and Marlene van Ballegooie. "Digital Preservation Education: Educating or Networking?" *The American Archivist*, 69, 1 (2006): 188-212. In the context of ERPANET.)
- Feedback on the outcomes of the two phases of InterPARES from archivists working in institutions smaller than national archives has consistently shown concern about their downward-scalability and their relevance to small and medium sized organizations.

Goal of InterPARES 3



To enable small and medium sized or low resource public and private archival organizations and programs (units within records creating organizations), which are responsible for the digital records resulting from government, business, research, art and entertainment, social and/or community activities, to preserve over the long term authentic records that satisfy the requirements of their stakeholders and society's needs for an adequate record of its past.

Objectives



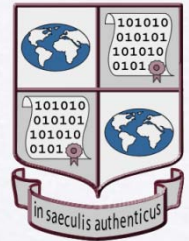
1. To **promote an environment supportive** of the research goal by demonstrating to regulatory and auditing bodies, and policy makers that they ought to embed digital records preservation requirements in any activity that they regulate, audit or control.
2. To collaborate with small and medium sized or low resources archival organizations and programs in the **development of policies, strategies, procedures, and/or plans of actions** for the preservation of the digital materials that they expect to acquire or have already acquired, using the recommendations and products of leading edge research projects.
3. To **assess the applicability of** the recommendations of such projects about **trusted record-making and recordkeeping** to the situations of the small and medium sized or low resources archival organizations or programs selected as test-beds, and in particular the validity of InterPARES statements about the relationship between preservers and the records creators.

Objectives (cont.)



4. To assess the **applicability of these projects' preservation solutions** to the concrete cases identified by the test-bed partners as **needing immediate attention**, both when the records in question are already in their custody and when they still reside with their creator.
5. To refine and further **elaborate the theory and methods**, concepts and principles developed by these research projects on the basis of the results of the above activities.
6. To establish when such theory and methods, concepts and principles **apply across jurisdictions**, regardless of legal/administrative, social and cultural environment; and, **in the situation where they do not apply, to identify why**, and to determine the measures that are required to ensure the preservation of digital records.

Objectives (cont.)

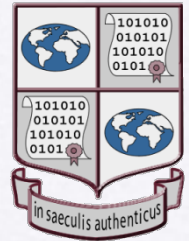


7. To assist small and medium sized or low resources archival organizations or programs in addressing **the legal issues** that have been identified by the relevant research projects as providing obstacles to long term digital preservation, and **additional issues that could be specific to the partner** archival organizations and programs.
8. To formulate models that put into relation the choice of methods and objects of preservation with the **ethical consequences of each choice** for individuals and society, both in general and specifically.
9. To create **evaluation models** capable of measuring the success of the preservation solutions that have been proposed and implemented.
10. To develop **models of preservation costs** for various types of records and archival organizations and programs.

Objectives (cont.)



11. To **develop awareness and educational materials** that can a) **enable the staff** of small and medium sized, or low resources archival organizations and programs to plan for and carry out digital preservation, b) **assist professional associations** in promoting career development of their members, and c) **provide university programs** with content and structure for university courses on digital preservation; and to **identify effective delivery methods**.
12. To **ensure transfer of the body of knowledge** generated by this research—including actual examples and success stories—to appropriate local, national and international stakeholders.
13. To **establish a strong international network of research and education** on digital preservation that is deeply **rooted in the various communities** served by each of its partners, and that integrates academic work with social and community action.



Expected Products

1. **Policies, strategies and procedures** for small archival organizations or programs, and **guidelines** for the records creators whose records fall under their responsibility.
2. **Action plans** for the specific case studies carried out in the course of the project.
3. **Analysis of the validity, applicability or adaptability of action plans** developed in the specific cases studied to different organizations, contexts or countries.
4. **Comparison among the action plans** developed for the preservation of records at different stages in their lifecycle (i.e. planning, creation, use, maintenance, modification, preservation)

Expected Products (cont.)

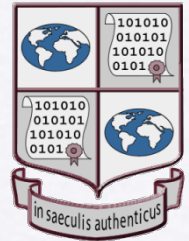


5. **Criteria to determine "most-at-risk" materials** - like a checklist of age (date created, date last accessed), physical carrier, operating system, software used, equipment required and its availability, etc.
6. **Guidelines for addressing digital preservation requirements** that apply to **specific types of records**, but not to other materials.
7. **Evaluation models for assessing the degree of success**, if any, of the chosen preservation action.
8. **Cost-benefit models** for various types of archival organizations or programs and for various kinds of records and/or systems.
9. **Ethical models** that identify and make explicit the consequences for individuals and society of types of preservation measures or lack thereof.

Expected Products (cont.)



10. A dedicated **web site** providing small and medium sized archival organizations world wide with **good practical knowledge**, internationally developed and shared, **concrete examples of successful implementation**, models of preservation costs, of programs evaluation, of ethical preservation behaviors, etc.
11. A refined body of **theoretical and methodological knowledge** on digital preservation, communicated in conference papers, symposia, and refereed publications.
12. **Training and education modules** for archival organizations or programs, professional associations and university programs; and **awareness and education modules for non archivists**, such as IT professionals, vendors, and service providers; human resources and financial managers; doctors, communities of practice, members of the general public, etc.; and **a strategy for delivering them**.
13. **Position papers** directed to **key regulating, auditing and policy making bodies**, advocating the vital need of embedding planned digital preservation in the requirements they issue for the activities they regulate, audit or control.



InterPARES 3 International Team

Teams: TEAM (Theoretical Elaboration into Archival Management) Canada; Holland and Belgium; Italy; Brazil; Africa; Korea; China; Ireland and United Kingdom; Norway; Sweden; Singapore; Malaysia; Mexico.

Director: Luciana Duranti

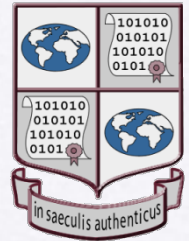
Headquarters: UBC - SLAIS (facilities provided by UBC)

Staff: Project Coordinator, Technological Coordinator, Administrator (salaries paid by SSHRC: the direction and management of the project is a Canadian expense built into TEAM Canada grant application)

Meetings: Once a year, each time hosted by a different country

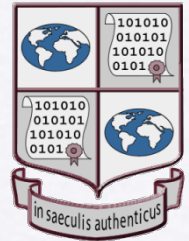
Symposia: Once a year, each time hosted by a different country

Networking: One common Web site with a common public area, and a restricted area including both shared and limited-access spaces, listservs, databases and research documents, working areas, etc.



Partners

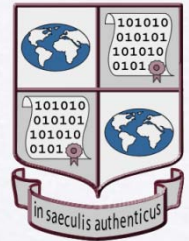
The project partners **jointly define** the research activities as well as the participatory arrangements under which individual researchers and research teams carry out those activities. The partners should continue to develop and refine the research activities and, in addition to strengthening the original alliance, should also **recruit new partners** during the period of the project.



Composition of Each TEAM

- **Director**, principal investigator
- **Co-applicants** (individual academic and professional researchers)
- **Test-bed partners** (organizations that are the locus and subject of the research, the primary stakeholders)
- **Resource partners** (organizations that have an expertise in some part of the research content and share it providing regular input and feedback—they can be from the TEAM's country or foreign)
- **Collaborators** (individuals who have a special expertise in some parts of the research and will be called to contribute to the project as needed)
- **Graduate Research Assistants**

Primary Activities



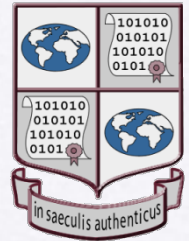
- **a research component** (short-term and long-term projects, action research, etc.);
- **an education and training component** (in the context of research projects, apprenticeships, activities credited as part of coursework, etc.); and
- **a knowledge-mobilization component** (workshops, seminars, colloquia, policy manuals and other publications, public lectures, etc.) that meets the needs of both academic and community partners.

Methodological Principles



The fundamental InterPARES principles are:

- **inter/multi/transdisciplinarity**
- **transferability**
- **open inquiry**
- **multi-method design**
- **layered knowledge environment**



Inter/Multi/Transdisciplinarity

- **Interdisciplinarity** involves the transfer of one or more methods or ideas from a discipline to another
- **Multidisciplinarity** involves the analysis of the same object by many disciplines
- **Transdisciplinarity** involves thinking at the same time within, across and outside disciplines, and beyond all disciplines in order to gain an understanding of present reality, one imperative of which is the unity of knowledge.

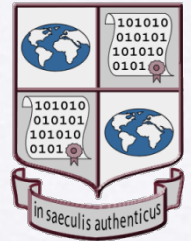
It requires **rigor** in argument, taking into account all existing data, which is the best defense against possible distortions; **openness**, which is the acceptance of the unknown, the unexpected and the unforeseeable; and **tolerance**, which implies acknowledging the right to ideas and truths opposed to our own.

Research Activities 2007-2008



- **General Studies:** Studies conducted by individual TEAMS but to be shared with all TEAMS by posting them on the restricted area of the common website, such as literature reviews, review of research projects websites, etc. Each TEAM can take the initiative for a general study considered important only in its context or can propose a study useful to everybody but not needing everybody's contribution. The Director or the International TEAM can propose a general study to be carried by all TEAMS and relevant to all, such as terminology.
- **Case Studies:** Studies of specific cases in the context of each TEAM. They can be of three types: policy, records, systems.

General Studies Methodology



It should be the most appropriate to the specific study, including surveys, text analyses, databases search, interviews, questionnaires, modelling.

If the study is carried out by all TEAMS and the findings are meant to be complementary and internally consistent, the method must be agreed upon by the International TEAM.

If the study is specific to one TEAM's context and meant to fulfill a TEAM's individual needs, the method is the TEAM's exclusive decision

If the study is carried out only by one TEAM but is intended to serve the needs of all, the method must be agreed upon by the International TEAM

General Case Study Methodology



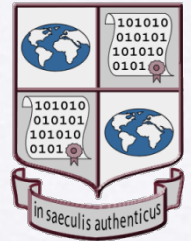
- **Action research**: a set of disciplined, material practices that involve collaborative dialogue, participatory decision making, inclusive democratic deliberation, and the maximal participation and representation of all relevant parties
- Research becomes practical, reflective, pragmatic action-directed toward solving problems in the world
- Research subjects become co-participants and stakeholders in the process of inquiry
- Two examples: Prototype Development and Ethnography

General Case Study Methodology (cont.)



- **Prototype development research method:** a user-centered prototyping approach that allows for exploration of the interplay between theory and practice, advancing the practice, while also offering new insights into theoretical concepts
- Developing a system in a research context can serve as proof-by-demonstration of the underlying theory, while producing an artifact that can form the basis of ongoing and expanded research
- This method comprises three major iterative stages – concept building , system building and system evaluation
- All stages of system development must reflect this focus on the concept that the system is to illustrate

General Case Study Methodology (cont.)



- **Ethnography**: a form of inquiry characterized by the position of the researcher vis-à-vis the phenomena being studied
- The researchers place themselves within an archival environment to gain the cultural perspective of those responsible for records. The creators of records, their users, and archivists form a community of practice - the archival environment - for which social interaction creates meaning and defines values (an expert on organizational culture should be part of the research team)
- The process of ethnographic research includes observation of the environment with **detailed description, extensive interviewing, and analysis of the documents** produced or accumulated in the first two activities

Case Study Methodological Steps



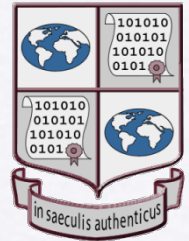
- **Identifying the Problem** -- Initially, each test-bed partner will identify a body of digital material for which a preservation plan has to be developed, be it already in the custody of the partner or not. Alternatively, the partner identifies a policy need, or a system to be designed and implemented. Most test-beds have already done this.
- **Context Data Collection** – Using archival methods, data will be collected about the context and limitations of each test-bed. The instrument intended to support consistency in data collection across all case studies is the “Template for Case Study Contextual Analysis”. These data can be collected from analysis of web sites and of documentation identified or provided by the test-bed, and from interviews.

Case Study Methodology (cont.)



- **Case Data Collection**—Subsequently, using documentation, interviews, diplomatics, modelling, and text analyses, data will be collected either about the specific body of material, its documentary forms, technological constraints, functional or cultural meaning, etc., or about a system requirements or policy needs and constraints.

For diplomatic analysis, a template for analysis was developed. For modelling, we will use IDEFØ (Integrated Definition Function Modeling) modeling software. IDEFØ is a U.S. Information Processing Standard, as described in Publication 183 of the National Institute of Standards and Technology. A function model is a structured representation of the functions, activities and processes within the modeled system or subject area. For an introduction to IDEFØ modeling, see “[Integrated Definition Function Modeling \(IDEFØ\): A Primer.](#)” For more detailed information, <http://www.idef.com>.



Case Study Methodology (cont.)

- **Answering the case studies questions**—On the basis of the case data collected, the members of the case study team will answer the relevant set of “questions for researchers.”

Three sets of questions have been prepared, one for policy case studies, one for records case studies and one for recordkeeping systems case studies

- **Begin thinking about the relevant IP3 Research Questions:**

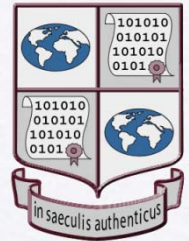
2. How can we adapt the existing knowledge about digital records preservation to the needs and circumstances of small and medium sized archival organizations or programs?

Case Study Methodology (cont.)



3. How and when should these archives or programs prepare themselves for digital preservation?
4. What differentiates the preservation of digital records from that of any other digital entity for which the archives might be responsible?
5. What kinds of digital records, either soon to be preserved by a small or medium sized archival organization or program or already in its custody, are currently most in need of attention, and what are the most urgent issues and problems associated with their creation, management and/or preservation?

Case Study Methodology (cont.)



6. What are the nature and the characteristics of the relationship that each of these archives or programs should establish with the creators of the records for which it is responsible?
7. What kind of policy, strategy and procedures should any such archives or program have in place to be able to control the digital records for which it will be or already is responsible from creation to preservation, and on what factors are these administrative devices dependent (e.g. a specific accountability framework and governance structure)?
8. What action plans may be devised for the long-term preservation of these bodies of records?

Case Study Methodology (cont.)



- **First Iterations: Testing Different Solutions in Different Contexts** -- All TEAM members (co-investigators, collaborators, test-bed and resource partners, students), at the May 2008 Plenary Workshop, will then reflect on the data collected and the information generated by the team of researchers for each case study and will collectively articulate several possible solutions from which individual plans of action will emerge and be tested.

This plans of action will include strategy, protocols, functional requirements, procedures, and expected outcome, as needed. The plans will be tested during the summer and the fall, and test results will include performance assessment of the plans against benchmarks and baselines established in extant research.

Case Study Methodology (cont.)



- **Comparison of First Iterations** -- The results of the tests will be shared among all TEAM researchers, and discussed during the November 2008 Plenary Workshop. An assessment of these results will then allow us to reflect on each action, and refine our respective plans of action, also in light of what has been done by the other TEAMS and following directives provided by the International TEAM at its annual Summit in October.
- **Second Iteration: Refining Solutions for Particular Contexts** -- After this assessment, the process will begin another cycle. This second iteration will account for anomalies in the test results, and benefit from the insight gained from a comparison across contexts. In so doing, it will refine our plans and performance measures.

Case Study Methodology (cont.)



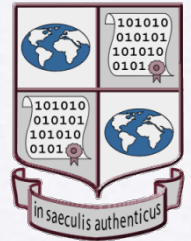
- **Several mini-iterations** will be carried out until a definitive plan of action is agreed upon for each test-bed, implemented and tested again.
- **Comparisons of Second Iterations** – In May 2009, the data will be compared among cohorts – the partner organizations of the same type (e.g., city archives, university archives, communities archives) – to establish what are the critical factors that determine the most appropriate solution for these contexts and whether they are linked to documentary forms, technology, organizational culture or function, or other environmental elements. This comparison will allow us to make statements of a general type and share them with the other TEAMS.

Case Study Methodology (cont.)



- **Comparison and Reconciliation of Results** – At the October 2009 Summit, the International TEAM will review the statements of a general type comparing them across cultures and juridical systems and will reconcile the findings of two years of work. The International TEAM recommendations will be discussed at the November 2009 Plenary Workshop
- **Reflection, Analysis, and Synthesis** -- Throughout the research, the co-investigators and collaborators will reflect on issues and processes and make explicit their assumptions and biases, thereby giving rise to theoretical considerations. The findings, recommendations and products of the case study will be summarized in a Case Study Report, for which a Template was developed.

TEAM Canada Proposed Research



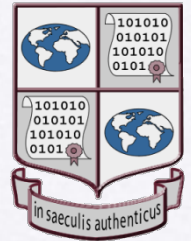
Title:

Theoretical Elaboration into Archival Management (TEAM): Canada.

Subtitle:

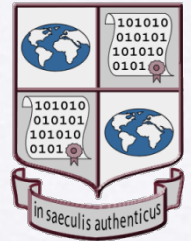
Implementing the Theory of Preservation of Authentic Records in Electronic Systems in Small and Medium-Sized Archival Organizations and Programs.

TEAM Canada Test-Bed Partners

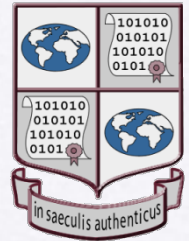


- British Columbia Medical Association Archives
- Belkin Art Gallery Archives
- City of Vancouver Archives
- City of Victoria Archives
- Insurance Corporation of British Columbia Archives
- Museum of Anthropology Archives
- North Vancouver Museum and Archives
- Simon Fraser University Archives
- University of British Columbia Alma Mater Society Archives
- University of British Columbia Archives
- University of Victoria Archives
- Vancouver Police Department

TEAM Canada Resource Partners



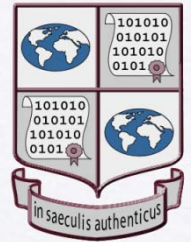
- Archival Association of British Columbia (AABC)
- Association of Canadian Archivists (ACA)
- British Columbia Corporate Information Management Branch (CIMB)
- Canadian Conservation Institute (CCI)
- Canadian Council of Archives (CCA)
- DOCAM Research Alliance (Langlois Foundation)
- Electronic Records Archives (ERA), NARA
- Irving K. Barber Learning Centre, UBC
- Library and Archives Canada (LAC)
- Royal British Columbia Museum (including the BC Archives)
- San Diego Supercomputer Center (SSC)



Examples of Case Studies

- **City of Vancouver:** ERDMS Examination & Implementation
- **City of Victoria:** Digitized and Born Digital Building Permits
- **Collaborative University Project (UBC, UVic, SFU):** E-mail Management, Preservation & Access
- **ICBC:** On-line Insurance Manual & Associated E-mail
- **UBC Alma Mater Society:** Web site Preservation & Access

InterPARES Web Site



www.interpares.org