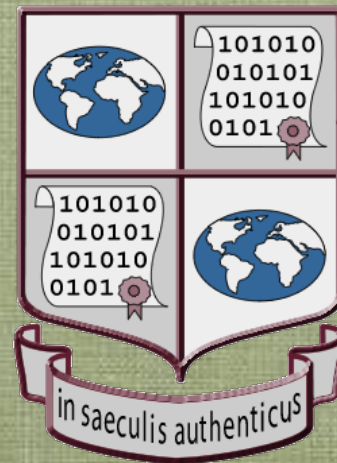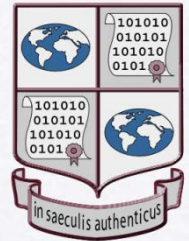# The Three Phases of The InterPARES Project


Dr. Luciana Duranti
InterPARES Project Director

The Goal of InterPARES 1 and 2 (1999-2007)

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.
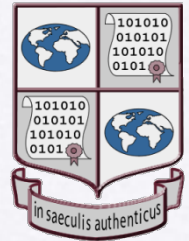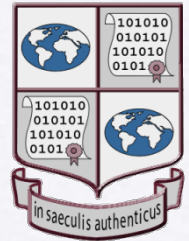
Object of Inquiry: Records

A record is any document created (i.e., made or received and set aside for action or reference) by a physical or organizational person in the course of a practical activity as an instrument and by-product of it. A record is more than:

- **document** is information affixed to a medium in a determined form

- **information** is a message intended for communication across space or time

- **data** is the smallest meaningful piece of information

A **digital record** is a record created (i.e., made or received <u>and</u> set aside for action or reference) in digital form
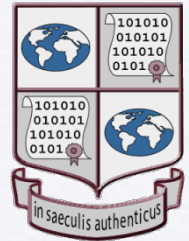
Characteristics of a Digital Record
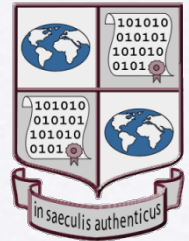
A digital record must:

- have **identifiable administrative and documentary contexts**, through explicit linkages to other records within or outside the digital system; and

- have **five persons** (author, writer, originator, addressee, creator) involved in its creation.

- **participate in or support an action** either procedurally or as part of the decision making process;

- have **stable content** and **fixed form** in order to serve a memorial function, and to be capable of being preserved over time ; and

- present **formal elements, attributes, and digital components**.

Stable Content and Fixed Form

- **Stable Content**: the data and the message in the record are unchanged and unchangeable, meaning that data or message cannot be overwritten, altered, deleted or added to

- **Fixed Form:** the record's binary content is stored so that the message it conveys can be rendered with the same presentation it had on the screen when first saved even if its digital presentation is different

Stable Content and Fixed Form (cont.)

- But, if the same content can be presented on the screen in several different ways in a limited series of possibilities, we may have either different views of **the same stored record** having stable content and fix form (different documentary presentations, e.g. statistical data as a pie chart, a bar chart, or a table, from one digital presentation) or a **several manifested records** with stable content and fixed form derived from the same stored record

- **Bounded Variability**: it occurs if there is no stored **record** but content data, form data and composition data that are quite separate and can only be connected by a query, **and** if changes to the form are limited and controlled by fixed rules, so that the same query or interaction always generates the same result, and we have different views of different subsets of content, due to the intention of the author or to different operating systems or applications

Elements, Attributes, Components

- **Formal Elements**: a constituent part of the record documentary form as **shown on its face** (e.g. date, subject, complimentary clause, signature)—in standards like MoReq 2 called intellectual components

- **Attributes:** the unique characteristics of the records that demonstrate its identity, expressed in properties or metadata

- **Digital Components**: objects that either contain one or more records or are contained in the record and require a specific preservation measure
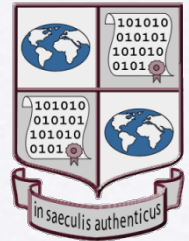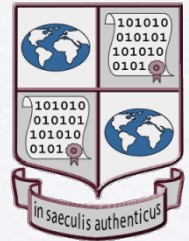
Qualities We Wanted to Protect

- **Reliability**: the trustworthiness of a record as a statement of fact. A reliable record is <u>complete</u> and generated according to a <u>controlled procedure</u>

- **Accuracy**: the exactness and correctness of a record content, dependent on the <u>competence</u> of the author and the <u>controls on the process by which data are recorded and transmitted</u> through space (i.e., between persons, systems or applications) and time (i.e., when stored off line, or when the hardware or software used to process, communicate or maintain it is upgraded or replaced)

- **Authenticity**: the trustworthiness of a record as a record. An authentic record is one that has not been tampered with or otherwise corrupted. Authenticity is maintained by protecting a record <u>identity</u> and <u>integrity</u>. It differs from
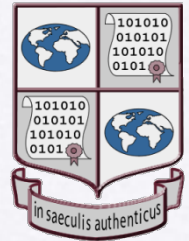
Authentication: a <u>means of declaring authenticity</u> at a point in time

Findings About Digital Records

- They do not exist as physical entities, but are constituted of linked digital components (the "**manifested**" record in its documentary presentation differs from the "**stored**" record in its digital presentation)

- Their original manifestation disappears when they are saved: we **cannot maintain or preserve digital records**, but only the ability to re-produce (from a stored record) or re-create them (from data or non linked digital components)

- It is difficult to identify the final, official, reliable or accurate version

- Technological obsolescence makes them inaccessible in a very short time span

- Intellectual property and privacy rights are hard to protect
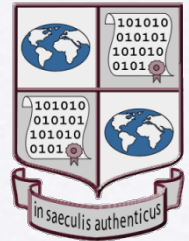
Findings About Digital Records (cont.)

Most systems that should contain records do not, because the entities in them **lack fixed form and stable content**.

- In dynamic systems they depend for their content upon data extracted from a variety of other systems which may have variable instantiations (VanMap-e-government)

- In experiential systems they are intended to incorporate the behaviour of the rendering system and the effects of subjective user's interactions (Cyber-chartography and Manufacturing)

- In interactive systems, each user intervention or input from another system causes a change of content and/or form (Arbo Theatre)
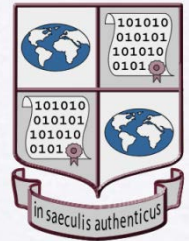
The systems that do contain records, contain bad records, primarily because of **lack of identifiable contexts and relationships** among themselves and with records outside the system
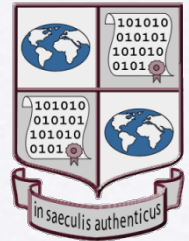
InterPARES Principles

- 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** (see article by myself and Thibodeau and Domain 1 and 3 reports)

- 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 (see Domain 2 report)

- 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 (see Modeling and Description Cross-Domains reports)

- 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 (see Policy Cross-Domain report and Guidelines for Creators and Preservers)

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

Goal of InterPARES 3

To enable small and medium sized 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.

InterPARES 3 Components
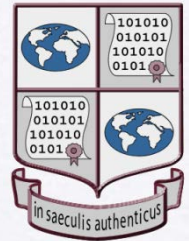
1. **a research component** (development of new knowledge through short-term and long-term projects, including general studies and case studies related to policy, records, or systems);

2. **an education and training component** (in the context of research projects, students apprenticeships, activities credited as part of coursework, etc.; and, with regard to the new knowledge developed, the production of curricula, syllabi, course modules and teaching materials); and

3. **a knowledge-mobilization component** (conference presentations, workshops, seminars, colloquia, policy manuals and other publications, public lectures, etc.) that meets the needs of both academic and community partners.
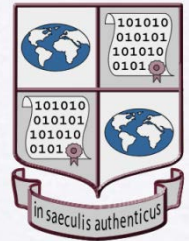
Objectives
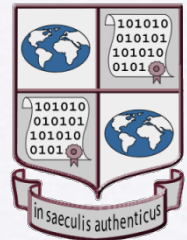
1. #3--To **promote an environment supportive** of IP3 goal by demonstrating to regulatory and auditing bodies, and policy makers that they ought to embed digital records preservation requirements in any activity that they regulate, audit or control

2. #1--To collaborate with small and medium sized 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. #1--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 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. #1--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. #1--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. #1--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. #1--To assist small and medium sized 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. #1--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. #1--To create **evaluation models** capable of measuring the success of the preservation solutions that have been proposed and implemented.

10. #1--To develop **models of preservation costs** for various types of records and archival organizations and programs.

Objectives (cont.)

11. #2--To **develop awareness and educational materials** that can a) enable the staff of small 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. #3--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. #3--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.
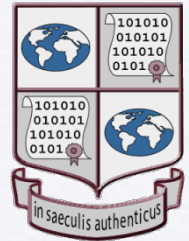
IP 3 Focus for 2007-2008

1. #1--To collaborate with small and medium sized 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.

2. #1--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 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.

IP 3 Focus for 2007-2008 (cont.)
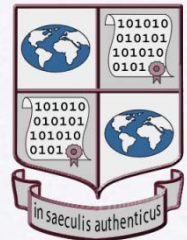
4. #1--To assess the **applicability of these projects' preservation solutions** to the concrete cases identified by the test-bed partners as needing immediate attention, both when the records in question are already in their custody and when they still reside with their creator.

5. #1--To assist small and medium sized 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.

IP 3 Focus for 2007-2008 (cont.)

In the process, we will carry out

- the first part of the second research component (in the context of research projects, students apprenticeships, activities credited as part of coursework, and paid research activities)

- and some of the third research component (conference papers)

InterPARES 3 International Team

Teams: TEAM (Theoretical Elaboration into Archival Management) Canada (including US); Holland and Belgium; Italy; Spain; Ireland and England; Norway; Turkey; Brazil; Africa; Korea; China; Singapore; Malaysia; and Mexico.

Director: Luciana Duranti

Headquarters: UBC - SLAIS (facilities provided by UBC)

Staff: Project Coordinator, Technological Coordinator. The direction and management of the InterPARES 3 project as a whole is a Canadian responsibility built into TEAM Canada grant application.

Summits: 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 common public and restricted areas, and separate public and restricted areas for each TEAM including both shared and limited-access spaces, listservs, databases and research documents, working areas, etc.
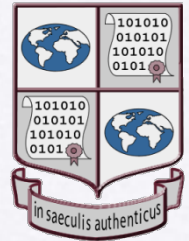
Composition of Each TEAM

- **Director**, principal investigator

- **Co-investigators** (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** (students)
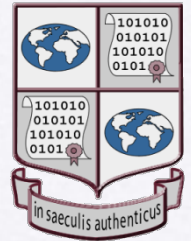
TEAM Canada

Research Project Title:

Theoretical Elaboration into Archival Management (TEAM): Canada.

**Short:** 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
- Canadian Tourism Commission
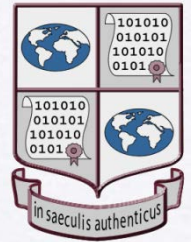
TEAM Canada Resource Partners
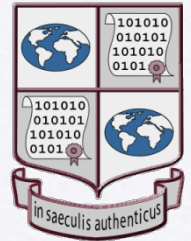
- Archival Association of British Columbia (AABC)
- Association of Canadian Archivists (ACA)
- British Columbia Corporate Information Management Branch (CIMB)
- Canadian Conservation Institute (CCI)
- Canadian Council of Archives (CCA)
- DOCAM Research Alliance (Langlois Foundation)
- Electronic Records 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)
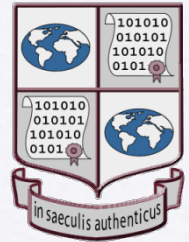
Examples of Case Studies

- **City of Vancouver:** ERDMS Examination & Implementation

- **City of Victoria:** Digitized and Born Digital Building Permits; Scheduling Legacy Files

- **Collaborative University Project (UBC, UVic, SFU):** E-mail Management, Preservation & Access

- **ICBC:** On-line Insurance Manual & Associated E-mail

- **ICBC:** Enterprise-wide Data Acquisition/Distribution System

- **UBC Alma Mater Society:** Web site Preservation & Access

- **Vancouver Police Department:** Accessibility and Autenticity of Tracking Systems (eg. GPS); Preserving Authentic Images

InterPARES Web Site

www.interpares.org