Continuity and Transformation in the Role of the Archivist: The Findings of the InterPARES Project


in saeculis authenticus
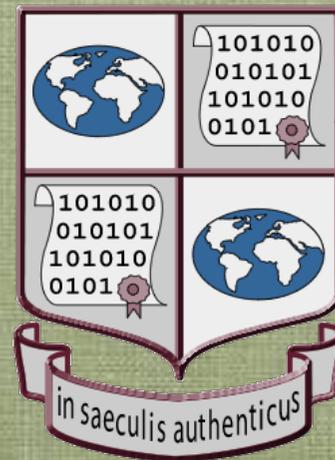
Dr. Luciana Duranti
InterPARES Project Director

InterPARES 1 Goal
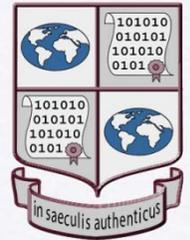
To develop the theoretical and methodological knowledge essential to the permanent preservation of authentic records generated and/or maintained electronically, and, on the basis of this knowledge, to formulate model policies, strategies and standards capable of ensuring that preservation.

What Did We Study?
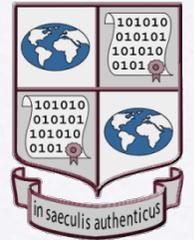
- Mostly textual records born digital in the course of administrative and legal activities

- Databases and document management systems

- Records in inactive or non-current status

- Characteristics of e-records and concept of authenticity

- Activities of appraisal and preservation from the preserver point of view

InterPARES 2 Goal
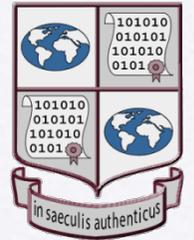
To ensure that the portion of society's recorded memory digitally produced in dynamic, experiential and interactive systems in the course of artistic, scientific and e-government activities can be created in accurate and reliable form and maintained and preserved in authentic form, both in the long and the short term, for the use of those who created it and of society at large, regardless of digital technology obsolescence and media fragility.

What Do We Study?
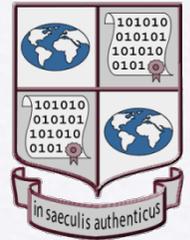
Dynamic entities: they depend for their content upon data extracted from a variety of systems which may have variable instantiations.

Experiential entities: objects whose essence goes beyond the bits constituting it to incorporate the behaviour of the rendering system and the effects of subjective user's interactions.

Interactive entities: objects to which each user intervention or input from another system causes a change of content and/or form.

Live, active materials, followed from creation to preservation, and obsolete inaccessible materials

Approaches taken by both creators and preservers who have concerned themselves with accuracy, reliability and authenticity
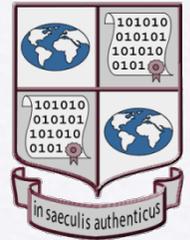
InterPARES 1: 1999-2001
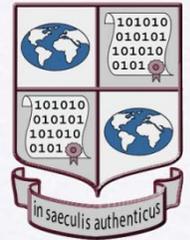
The disciplines involved:

- Archival science

- Diplomatics

- Records management

- Computer science and engineering,

- Jurisprudence

# InterPARES 2: 2002-2006

The disciplines involved:

- Archival science and Records Management

- Diplomatics

- Music theory, composition, performance

- Film theory, production, description; dance and theatre theory

- A variety of hard and social sciences

- Jurisprudence

- Computer science and engineering

InterPARES 1 Methodology

- Theory and methods of diplomatics, archival science and law for the definition of concepts and development of requirements and methods

- Grounded theory for selection of case studies

- Comparative analysis for the study of appraisal and preservation reports

- IDEF0 modeling for the representation and definition of the activities involved in appraisal and preservation

- Chemistry and computer engineering for the study of storage media and of digital preservation technology and technological methods of authentication

# InterPARES 2 Methodological Principles
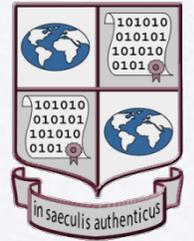
- Interdisciplinarity

- Transferability

- Open Inquiry

- Layered Knowledge Environment

- Multi-method design: surveys, case studies, modeling, prototyping, diplomatic and archival analysis, and text analysis, etc. to address domain and cross-domain research questions

Researchers
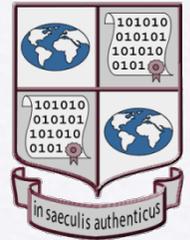
- InterPARES 1:
  13 countries in 4 continents, 60 researchers
  Public and private sector
  Professionals and academics (ratio 80% to 20%)

- InterPARES 2:
  21 countries in 5 continents, 100 researchers
  Public and private sectors
  Academics and professionals (80% to 20%)

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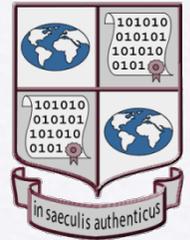
- **record** is any document created (i.e., made or received and set aside for action or reference) by a physical or organizational person in the course of a practical activity as an instrument and by-product of it

- **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

- an **electronic record i**s a record created (i.e., made or received <u>and</u> set aside for action or reference) in electronic form
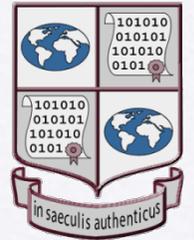
Characteristics of a Record
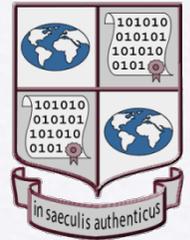
An electronic record must have:

- fixed form and unchangeable content;

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

- an author, an addressee and a writer involved in its creation; and it

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

Template for Analysis

- Documentary Form:
 *Intrinsic and extrinsic elements*

- Annotations

- Contexts
  administrative, provenancial, procedural, documentary, technological

- Medium

Records Attributes
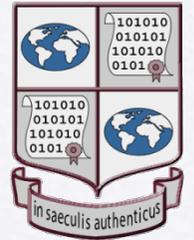
- the defining characteristics of each given record or of a record element in it

- an attribute may manifest itself as one or more elements of form

- attributes that are implicit in other parts of the record manifest themselves as metadata

Digital Components
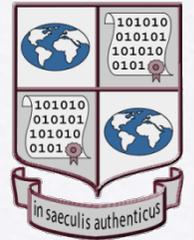
- a digital object that may contain all or part of a record, and/or the related metadata, or more than one record, and that requires specific methods for preservation

- a unit of storage

Additional Concepts
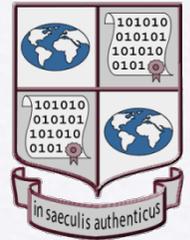
Reliability: the trustworthiness of a record as a statement of fact, that is, its ability to stand for the facts it is about

Authenticity: the trustworthiness of a record as a record, and refers to the fact that a record is what it purports to be and has not been tampered with or otherwise corrupted

Accuracy: the exactness and correctness of content, mostly dependent on the competence of the author and the controls on the process by which data are recorded and transmitted 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)
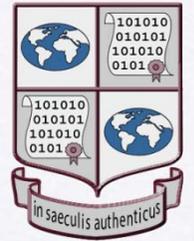
Authentication: a declaration of authenticity, resulting either by the insertion or the addition of an element or a statement to a record
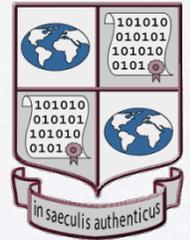
Authenticity
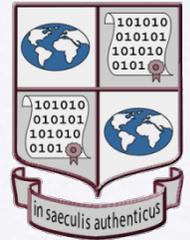
- *Identity* refers to the attributes of a record that uniquely characterize it and distinguish it from other records. These attributes include: the names of the persons concurring in its creation (i.e., author, addressee, writer and originator); its date(s) of creation and transmission; an indication of the matter or action in which it participates; the expression of its relationships with other records; and an indication of any attachment(s)

- *Integrity* is the wholeness and soundness of a record. A record has integrity if it is intact and uncorrupted, that is, if the message that it is meant to communicate in order to achieve its purpose is unaltered. This means that a record's physical integrity, such as the proper number of bit strings, may be compromised, provided that the articulation of the content and its required elements of form remain the same

Appraisal

- Evaluation of authenticity

- Monitoring the records

- Feasibility of preservation

Preservation

It involves the creation of authentic copies of the records of the creator. Their authenticity is guaranteed by:

- a controlled process of migration of the acquired records to the archives technological environment

- the accurate documentation of any change that the records undergo during such process and every time that the archives technological environment is upgraded

- the implementation and monitoring of privileges concerning the access, use and reproduction of the records within the archives

Preservation (cont.)
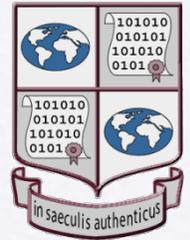
- the establishment of procedures to prevent, discover, and correct loss or corruption of records, as well as

- procedures to guarantee the continuing identity and integrity of the records against media deterioration and across technological changes; and

- if authentication of individual records is required, by the existence of rules determining responsibility for and means of authentication.

Archival Description
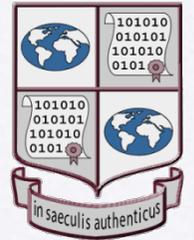
- The authentication function of archival description is a collective attestation of the authenticity of the records of a fonds and of all their interrelationships as made explicit by their administrative, custodial and technological history, the illustration of their scope and content, and the hierarchical representation of the records aggregates

- The unique function of archival description is to provide an historical view of the records and of their becoming while presenting them as a universe in which the individuality of each member is subject to the bond of a common provenance and destination

The Entity We Preserve
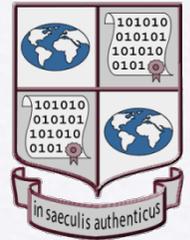
- To trade stability of content and fixity of form with the ability to track changes. Record=last instantiation+log of changes+ metadata

- To think of the record as existing in two modes: record in becoming when the object is accessed to add information to it; record when the object is accessed for use. Record=each instantiation accessed for use+metadata
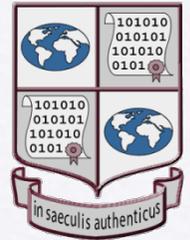
Alternatively
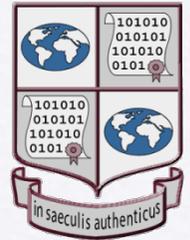
At the end of the transaction:

- Separate data from form and creating environment

- Stabilize data and original metadata

- Describe original form and functionality

- Link all above together

Upon request, re-create the record (copy in the form of original, but still the creator's record)

Concept of the Life-Cycle

Two phases:

1. records are produced, maintained, appraised, monitored, migrated, etc. No matter what is done to them, if it is done in the usual and ordinary course of affairs and for the purposes of those affairs, and if the creator keeps the outcome for further action or reference, the records resulting from any of these process are the records of the creator.

2. records may be re-formatted for the preserver's technological environment, separated in their digital components, re-assembled, migrated, retrieved, re-formatted, made available through cyberspace or on DVD, etc. No matter what is done to them, if it is done for purposes of preservation and dissemination, if the preserver does it as part of its own competence, having no connection with the interest of the creator, and if the resulting material is never used by the creator in the course of its business, the documents involved in these processes are authentic copies of the creators' records

Although technically the re-productions made by the creator are copies, as soon as they participate in further activity and reference they are records in the creator's context.

Role of the Archivist
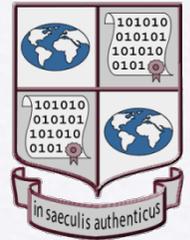
Trusted custodian:

- acts as a neutral third party, i.e., demonstrates that he/she has no stake in the content of the records and no reason to alter records under his/her custody, and that he/she will not allow anybody to alter the records either accidentally or on purpose,

- is equipped with the knowledge and skills necessary to fulfil its responsibilities, which should be acquired through formal education, and

- establishes a trusted preservation system that is capable of ensuring that accurate and authentic copies of the creator's records are acquired and preserved

Points of Principle

- technology cannot determine the solution to the permanent preservation of electronic records

- archival needs must define the problems and archival theory must establish the correctness and adequacy of each technical solution

- solutions to the preservation problem are inherently dynamic, thus ongoing research is vital to enable archivists to deal with the challenges presented by the new information technologies

- such solutions are always specific, thus action plans must be developed by each archival program or institution in relation to the records it acquires in the context of the creators for which it is responsible

InterPARES Web Site

www.interpares.org