

# European Commission Model Requirements for the Management of Electronic Records (MoReq2) (2008) and InterPARES (1998-2012)

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# MoReq2: Its Purpose

- (1) Purpose: to provide a body of *usable* requirements that will help organizations produce an ERMS (Electronic Records Management System) that will effectively manage ERs.
- (2) MoReq2 is a *user* standard that :
  - (3) Is applicable to a broad community of users
  - (4) Is applicable to existing systems or systems that have not yet been created
  - (5) Has no legal weight
  - (6) Is compliant with existing policies and procedures



# Its Context

- (1) MoReq2 (2008) as an extension of MoReq (2001)
- (2) Collaborative creation
- (3) User Consultation



# Key Features of MoReq2

- (1) Modular
  - 'Core' Mandatory Functional Requirements
  - Optional Modules
  - Non-Functional Requirements
- (2) Testable
- (3) Customizable
  - Chapter Zero






# MoReq2 and InterPARES

- InterPARES is a research project on the trustworthiness of electronic records through creation, maintenance and long term preservation (1998-2012)
- 25 countries in 5 continents are involved and more than 100 researchers at any given time
- Moreq2 reflects in its requirements and in its structure the concepts, principles and methods developed by InterPARES

# InterPARES 1 & 2 Final Products

## Policy Framework

A framework of principles guiding the development of policies for records creating and preserving organizations

 <b>InterPARES 2 Project</b> International Research on Permanent Authentic Records in Electronic Systems	
<b>Title:</b> A Framework of Principles for the Development of Policies, Strategies and Standards for the Long-term Preservation of Digital Records	
<b>Status:</b> Final (public)	
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<b>Author:</b> The InterPARES 2 Project	
<b>Writer(s):</b> Luciana Duranti, Jim Suderman and Malcolm Todd	
<b>Project Unit:</b> Policy Cross-domain	
<b>URL:</b> <a href="http://www.interpares.org/display_file.cfm?doc=ip2/pub/policy_framework_document.pdf">http://www.interpares.org/display_file.cfm?doc=ip2/pub/policy_framework_document.pdf</a>	
<b>Policy Framework, v1.2 (March 2008)</b> L. Duranti, J. Suderman and M. Todd	
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(C3) Record creation and maintenance requirements should be formulated in terms of the purposes the records are to fulfil, rather than in terms of the available or chosen record-making or recordkeeping technologies. (P6) ..... 5	
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# InterPARES 1 & 2 Final Products

## Creator Guidelines

Recommendations for making and maintaining digital materials for individuals and small communities of practice

**InterPARES 2 Project**  
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For more information, visit our Web site at [www.interpares.org](http://www.interpares.org)


**Elements of Preservation**

5 Mg Migration	6 Pr Protection				
8 Md Metadata	9 Bu Backup	10 It Integrity	11 Ac Accuracy	12 Ff Fixed Form	13 Au Authenticity
15 Io Interpretability	16 Aw Awareness	17 Ob Obsolescence	18 Fx Fuxity		
25 Tc Trusted Content	26 Og Organisation	27 Re Reliability	28 At Authentication	29 Sc Stable Context	
34 As Accessibility	37 Id Identity				

# InterPARES 1 & 2 Final Products

## Preserver Guidelines


Recommendations for digital preservation for archival institutions



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For more information, visit our Web site at [www.interpres.org](http://www.interpres.org)

**Elements of Preservation**

5 Mg Migrating	6 Fe Feasibility					
8 Be Benchmark Requirements	9 Id Identifying	10 Pr Preserving	11 Ac Accuracy	12 St Storing	13 Au Authenticity	
15 De Describing	16 Ma Managing	17 Ob Obsolescence	20 Mo Monitoring			
25 Tc Trustworthy	26 Op Outputting	27 Ba Baseline Requirements	28 Ac Acquiring	29 Ap Appraising	30 Tr Transferring	31 Do Documenting

**Pg**  
Preserver Guidelines  
PRESERVING DIGITAL RECORDS:  
GUIDELINES FOR ORGANIZATIONS



# InterPARES 1 & 2 Final Products

## Benchmark and Baseline Requirements

Authenticity requirements for assessing and maintaining the authenticity of digital records

### << REQUIREMENT SET A >>

To support a presumption of authenticity the preserver must obtain evidence that:

#### REQUIREMENT A.1: Expression of Record Attributes and Linkage to Record

The value of the following attributes are explicitly expressed and inextricably linked to every record. These attributes can be distinguished into categories, the first concerning the identity of records, and the second concerning the integrity of records.

##### A.1.a Identity of the record:

- A.1.a.i Names of the persons concurring in the formation of
  - name of author<sup>a</sup>
  - name of writer<sup>b</sup> (if different from the author)
  - name of originator<sup>c</sup> (if different from name of author)
  - name of addressee<sup>d</sup>

##### A.1.a.ii Name of action or matter

##### A.1.a.iii Date(s) of creation and transmission, that is:

- chronological date<sup>e</sup>
- received date<sup>f</sup>
- archival date<sup>g</sup>
- transmission date(s)<sup>h</sup>

##### A.1.a.iv Expression of archival bond<sup>i</sup> (e.g., classification code)

##### A.1.a.v Indication of attachments

##### A.1.b Integrity of the record:

##### A.1.b.i Name of handling office<sup>j</sup>

##### A.1.b.ii Name of office of primary responsibility<sup>k</sup> (if different from the handling office)

##### A.1.b.iii Indication of types of annotations added to the record

##### A.1.b.iv Indication of technical modifications<sup>l</sup>

#### REQUIREMENT A.2: Access Privileges

The creator has defined and effectively implemented access privilege modification, annotation, relocation, and destruction of records.

### << REQUIREMENT SET A (cont) >>

#### REQUIREMENT A.3: Protective Procedures: Loss and Corruption of Records

The creator has established and effectively implemented procedures to prevent, detect, and correct loss or corruption of records.

#### REQUIREMENT A.4: Protective Procedures: Media and Technology

The creator has established and effectively implemented procedures to guarantee the identity and integrity of records against media deterioration and across technological change.

#### REQUIREMENT A.5: Establishment of Documentary Forms

The creator has established the documentary forms of records associated with each process according to the requirements of the juridical system or those of the creator.

#### REQUIREMENT A.6: Authentication of Records

If authentication is required by the juridical system or the needs of the organization, the creator has established specific rules regarding which records must be authenticated, by what means, and by whom.

#### REQUIREMENT A.7: Identification of Authoritative Record

If multiple copies of the same record exist, the creator has established procedures to identify which record is authoritative.

#### REQUIREMENT A.8: Removal and Transfer of Relevant Documentation

If there is a transition of records from active status to semi-active and inactive status, the creator has established and effectively implemented procedures to determine what documentation has to be removed and transferred to the preserver along with the records.

### << REQUIREMENT SET B >>

The preserver should be able to demonstrate that:

**REQUIREMENT B.1: Controls over Records Transfer, Maintenance, and Reproduction**  
The procedures and system(s) used to transfer records to the archival institution or program; maintain them; and reproduce them embody adequate and effective controls to guarantee the records' identity and integrity, and specifically that:

**B.1.a** Unbroken custody of the records is maintained;

**B.1.b** Security and control procedures are implemented and monitored; and

**B.1.c** The content of the record and any required annotations and elements of documentary form remain unchanged after reproduction.

#### REQUIREMENT B.2: Documentation of Reproduction Process and its Effects

The activity of reproduction has been documented, and this documentation includes:

**B.2.a** The date of the records' reproduction and the name of the responsible person;

**B.2.b** The relationship between the records acquired from the creator and the copies produced by the preserver;

**B.2.c** The impact of the reproduction process on their form, content, accessibility and use; and

**B.2.d** In those cases where a copy of a record is known not to fully and faithfully reproduce the elements expressing its identity and integrity, such information has been documented by the preserver, and this documentation is readily accessible to the user.


#### REQUIREMENT B.3: Archival Description

The archival description of the fonds containing the electronic records includes—in addition to information about the records' juridical-administrative, provenancial, procedural, and documentary contexts—information about changes the electronic records of the creator have undergone since they were first created.

# InterPARES 1 & 2 Final Products

## File Format Selection Guidelines

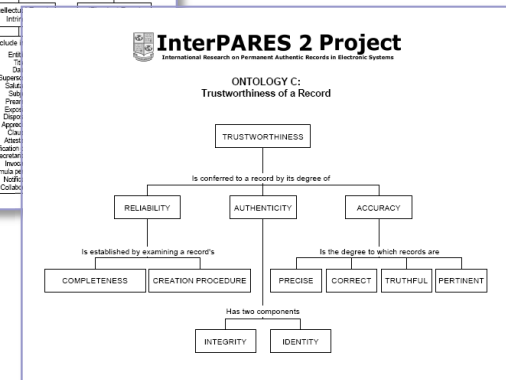
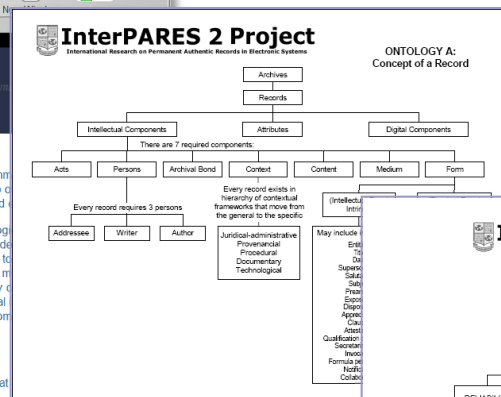
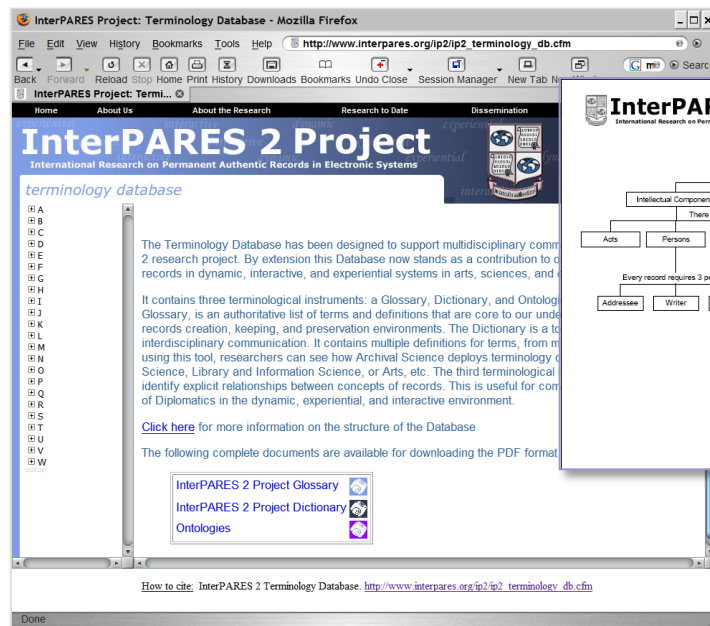
Principles and criteria for adoption of file formats, wrappers and encoding schemes

 <b>InterPARES 2 Project</b> <small>International Research on Permanent Authentic Records in Electronic Systems</small>	
<b>Title:</b> General Study 11 Final Report: Selecting Digital File Formats for Long-Term Preservation	
<b>Status:</b> Final (public)	
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<b>Author:</b> The InterPARES 2 Project	
<b>Writer(s):</b> Evelyn Peters McLeish	
<b>Project Unit:</b> Domain 3 (Methods of Appraisal & Preservation)	
<b>URL:</b> <a href="http://www.interpares.org/display_file.cfm?doc=ip2_file_formats(complete).pdf">http://www.interpares.org/display_file.cfm?doc=ip2_file_formats(complete).pdf</a> [English] <a href="http://www.interpares.org/display_file.cfm?doc=ip2_file_formats_tchiers_numeriques.pdf">http://www.interpares.org/display_file.cfm?doc=ip2_file_formats_tchiers_numeriques.pdf</a> [French]	
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# InterPARES 1 & 2 Final Products

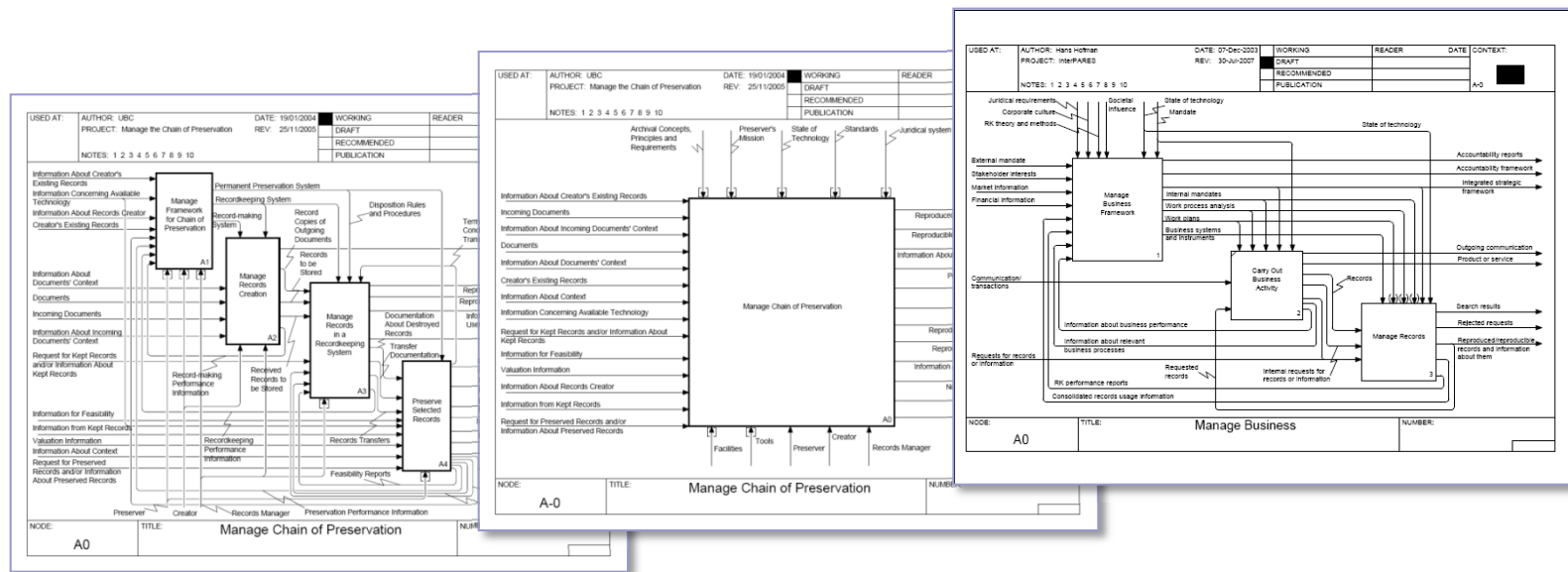
## Terminology Database

Including a glossary, a dictionary and ontologies



# Two Records Management Models

## Business-driven Recordkeeping (BDR) Model(continuum)



# InterPARES 1 & 2 Final Products

## Two books:

Luciana Duranti, ed. *The Long-term Preservation of Authentic Electronic Records: Findings of the InterPARES Project* (San Miniato: Archilab, 2005). Available on line at

<http://www.interpares.org/book/index.cfm>

Luciana Duranti and Randy Preston, eds. *InterPARES 2: Interactive, Dynamic and Experiential Records* (Roma: ANAI, 2008). Available on line at

<http://www.interpares.org/ip2/book.cfm>.



# MoReq2 Required Modules and InterPARES Principles

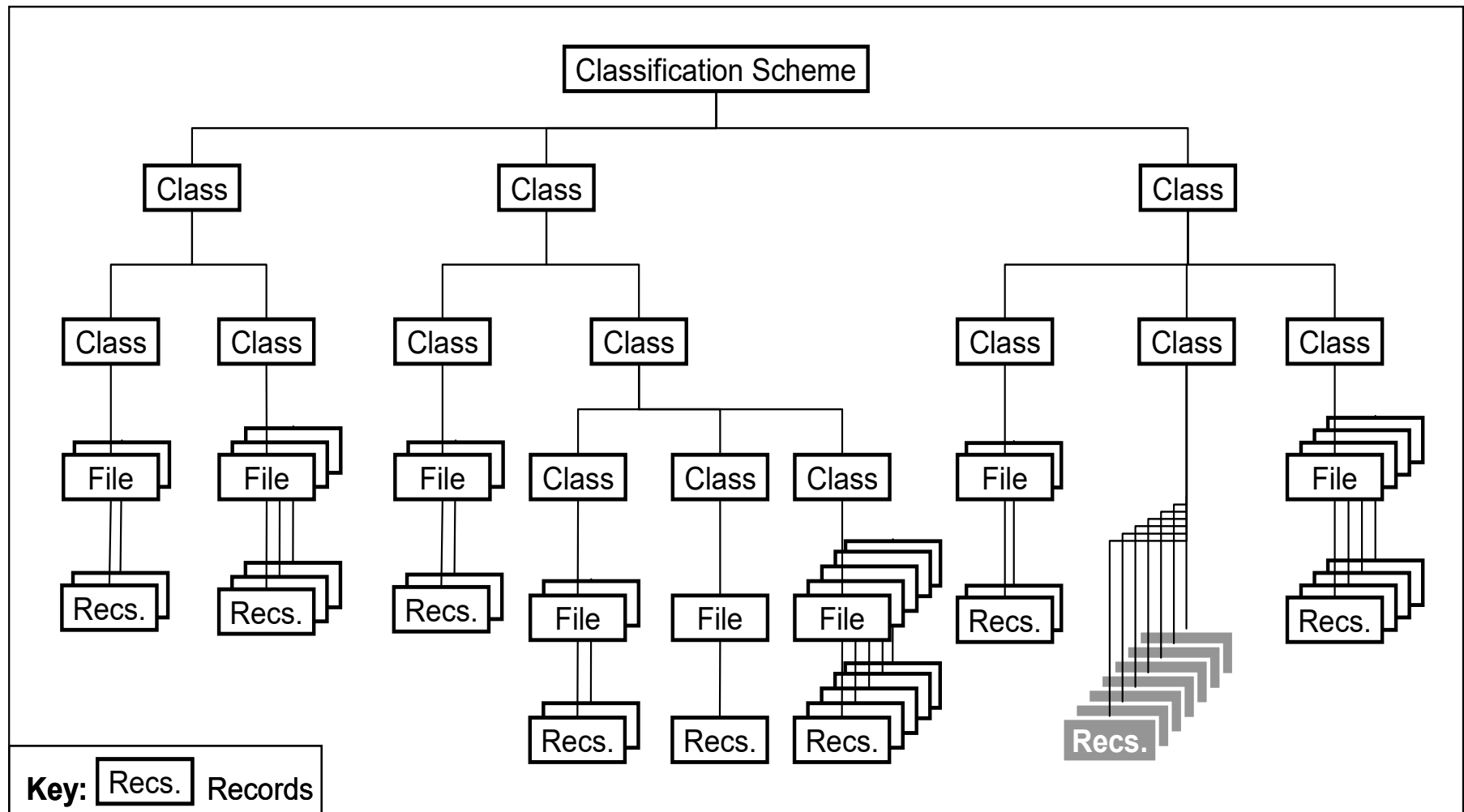
- To generate reliable records, every record-making system should include in its design integrated business and documentary procedures, record metadata schemes, records forms, record-making access privileges
- Every recordkeeping system should include a recordkeeping metadata scheme, a classification scheme, a retention schedule, a registration system, a recordkeeping retrieval system, recordkeeping access privileges and procedures for maintaining accurate and authentic records.

# Classification Scheme

- MoReq2 requires the creation of a classification scheme that is
  - (1) Hierarchical in Structure and,
  - (2) Reflective of business function



# Example Classification Scheme





# Entity Relationship Model

- (1) “Represents a theoretical view of the entities associated with records. An ERMS uses these relationships to produce behaviour equivalent to the structures in the model.” (2.3)
- (2) Any aggregation can contain non-electronic and electronic files

# New Features

- (1) Records can be captured directly into class
- (2) Introduction of the sub-file



# Interoperability

- (1) Interoperability as it exists;
  - Within the ERMS and,
  - Between systems
- (2) Compliance Testing

# Retention and Disposition

## Retention and Disposition Schedules:

- (1) Applicable to any aggregation
- (2) Applicable to record types
- (3) 'Disposal Holds'



# InterPARES and Identity Metadata

- Names of the persons involved in the creation of the digital materials.
- Name of the action or matter
- Documentary form
- Digital presentation
- Date(s) of creation and transmission.
- Expression of documentary context (classification)
- Indication of attachments
- Indication of copyright or other intellectual rights
- Indication of the presence or removal of a digital signature
- Indication of other forms of authentication
- Indication of the draft or version number
- Existence and location of duplicate materials outside the digital system (and indication of authoritative copy)



# InterPARES and Integrity Metadata

- Name of handling person/office
- Name of person or office with primary responsibility for keeping the records
- Indication of annotations added to the records
- Indication of any technical changes to the records or to the application(s) responsible for managing and providing access to them
- Access restriction code
- Access privileges code
- Vital record code
- Planned disposition




# InterPARES and Metadata

- the record-making and recordkeeping systems should be designed to automate, as much as possible, the creation of the identity and integrity metadata both at the point of records creation or modification (e.g., when migrated to a new system or file format), and whenever the aggregations to which the records belong (class, file, volume, or sub-file) are created or modified—every record unit should automatically inherit the metadata of the higher level in the classification at the point of creation as well as whenever there are updates to the metadata of the higher level.

# Metadata

- (1) Chapter 12 and Metadata Model in Appendix 9
- (2) General Requirements:
  - The system should limit the number of metadata fields
  - The system should specify the user at time of capture
  - The system should specify its format, and date
  - Metadata must be searchable
  - Administrators should be able to edit metadata fields when required.
- (3) Aim of the model is to transfer ERs, along with their metadata, between ERMSs without the loss of records management functionality.





# InterPARES and Long Term Preservation

- We cannot preserve electronic records, only our capacity to reproduce them.
- The management of digital records must proceed from a comprehensive understanding of all phases or stages of records' existence, from the time they are generated, through their maintenance by their creator, and during their appraisal, disposition and long-term preservation as authentic memorials of the actions and matters of which they are a part
- All the activities to manage records throughout their existence are linked, as in a chain, and interdependent. If a link in the chain fails, the chain cannot do its job. If certain activities and actions are not undertaken on records, their reliability, identity and integrity (that is, their authenticity), and preservation are imperilled.

# Moreq2 and Long Term Preservation

- (1) MoReq2 begins to 'think' about preservation, introducing:
  - (2) The concept of Record Components (digital entities that either contain one or more records, are contained in the record and require a specific preservation measure, or are used to generate one or more records)
  - (3) Conversion of records to a preservation format at the time of capture, and
  - (4) Components may be migrated to preservation formats





# DLM Forum Responsibilities

- To maintain a viable governance regime for MoReq2 monitoring the translation into the official languages of the EU and the addition of national chapters zero
- To set up and monitor a European conformance testing and certification regime for MoReq2



## DLM Forum Responsibilities (cont.)

- To encourage the use of the MoReq2 XML schema in joint projects for interoperability between records management and archival applications
- To establish strategies for influencing decision-makers to implement ERDMS, e.g. by carrying out cost-benefit analyses



# DLM Forum Certification

Software suppliers seeking MoReq2 compliance certification will need to demonstrate that their software complies with all the mandatory requirements of the core module.

They can choose any combination of optional modules to be tested, and the certification will specify which optional modules have been tested.

This will allow users to choose products that have the combination of features they require for their business needs.



# Moreq2 Certification

The MoReq2 Certificate is a product certificate. ERMS vendors or system integrators usually apply for a MoReq2 certification.

- 1st step: apply to imbus, who will contact you directly to obtain your certification goals, demand of services, and conditions.
- 2nd step: During the preverification phase, imbus verifies whether an applicant complies with all preconditions of a MoReq2 verification by performing selected compliance tests. Together, the applicant and imbus arrange a verification plan for MoReq2 verification.
- 3rd step: According to the verification plan imbus performs all MoReq2 compliance test modules. All results are summarised in a verification report.
- 4th step: If the verification of your ERMS comes to a positive result imbus will confirm the MoReq2 compliance of your ERMS and issue the certificate.



# Moreq2 Web Site

<http://www.moreq2.eu/>



# In the meanwhile, InterPARES...

- Third phase (2007-2012). Goal:  
To **enable small and medium-sized** public and private **organizations and records management 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 create, maintain and 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.





# Expected Products

1. **Policies, strategies and procedures** for small 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. **Criteria to determine “most-at-risk” materials** e.g., checklist of age (date created, date last accessed), physical carrier, operating system, software used, equipment required and its availability, etc.



# Expected Products (cont.)

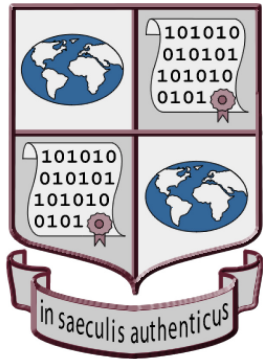
4. **Guidelines for addressing digital preservation requirements** that apply to specific types of records, but not to other materials.
5. **Evaluation models for assessing the degree of success**, if any, of the chosen preservation action.
6. **Cost-benefit models** for various types of archival organizations or programs and for various kinds of records and/or systems.
7. **Ethical models** that identify and make explicit the consequences for individuals and society of types of preservation measures or lack thereof.

# Expected Products (cont.)

8. **Training and education modules** for preservers, 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**.
9. **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.

**So, stay tuned!**

# InterPARES Web Site



[www.interpares.org](http://www.interpares.org)