

Metadata and Archival Description Registry and Analysis System (MADRAS)

Anne Gilliland

Department of Information Studies
University of California, Los Angeles

Research Questions (SSHRC)

- What is the role of descriptive schemas and instruments in records creation, control, maintenance, appraisal, preservation, and use in traditional record-keeping systems in the three focus areas?
- What is the role of descriptive schemas and instruments in records creation, control, maintenance, appraisal, preservation, and use in emerging record-keeping systems in digital and web-based environments in the three focus areas? Do new tools need to be developed, and if so, what should they be? If not, should present instruments be broadened, enriched, adapted?
- What is the role of descriptive schemas and instruments in addressing reliability, accuracy and authenticity requirements (including the InterPARES 1 Benchmark and Baseline Authenticity Requirements) concerning the records investigated by InterPARES 2?

Research Questions (SSHRC)

- What is the role of descriptive schemas and instruments in archival processes concerned with the long-term preservation of the records in question?
- Do current interoperable frameworks support the interoperability of descriptive schema and instruments across the three focus areas? If not, what kinds of frameworks are needed?
- What are the implications of the answers to the above questions for traditional archival descriptive standards, systems and strategies? Will they need to be modified to enable archival programs to meet new requirements, or will new ones need to be developed? If so, what should they be?

Research Questions (SSHRC)

- To what extent do existing descriptive schemas and instruments used in the sectors concerned with the focus areas addressed by this project (for example, the geo-spatial data community) support and inform requirements such as those developed by InterPARES 1? Will they need to be modified to enable these sectors to meet these requirements, or will new ones need to be developed? If so, what should they be?
- What is the relationship between the role of descriptive schemas and instruments needed by the creator and those required by the preserver to support the archival processes of appraisal, preservation and dissemination? What tools are needed to support the export/import/exchange of descriptive data between systems?

Research Questions (SSHRC)

- What is the role of descriptive schemas and instruments in rights management and in identifying and tracking records components, versions, expressions, performances, and other manifestations, and derivative works?
- Is it important to be able to relate the record of artistic and scientific activity to the associated expression, performance, product, work, or other manifestation of it, and, if so, in what ways can descriptive activities facilitate it?

NHPRC and NSF Research Questions

The project will formulate and test technological, metadata, and policy models and use these as a basis with and against which to formulate, analyze and test:

- · new and existing methodologies and strategies for ensuring that records created using these systems can be trusted as to their content (that is, are reliable and accurate) and as records (that is, are authentic) while used by the creator;
 - · new and existing methodologies and strategies for selecting records that have to be kept for legal, administrative, social or cultural reasons after they are no longer needed by the creator;
 - · new and existing methodologies and strategies for preserving them in authentic form over the long term; and,
 - · advanced technologies for the implementation of these methodologies in different sectors, and disciplinary and socio-cultural contexts.
- Develop hypotheses of metadata necessary for prototype systems;
 - Develop rules for ongoing description of electronic records

Other Research Questions Surfaced

- Can a vocabulary be created to assist in the identification of different types and functions of metadata?
- What kind of management regime needs to be put in place to ensure the creation and maintenance of trustworthy metadata?
Can metadata associated with the creation and active use of records ever contribute to archival description, particularly in the capture and elucidation of certain kinds of context and fundamental identification and arrangement information relating to the records?
- Should a metadata specification model generated out of InterPARES 2 support a single or multiple worldviews on the activities, roles, responsibilities, and points of engagement with the record?
- Can metadata-based automated tools support any new kinds of roles and capabilities for the description and use of archival electronic records?

Research Design

- InterPARES 2 case studies collected and compiled data on the types and sources of metadata currently being used in real-life settings
- Special case study identified state-of-the-art thinking and practice relating to metadata in news archives.
- Development of a database for analyzing warrant (i.e., the mandate from law, professional best practices, professional literature, and other social sources) requiring the creation and continued maintenance of description and other metadata supporting the accuracy, reliability, authenticity and preservation of records and other record-like objects.
- Development and compilation of a registry to unambiguously describe salient features of relevant extant descriptive and other metadata schemas, element sets, standards and application profiles.

Research Design

- Development of an analytical framework for assessing the extent to which registered items meet the requirements of the InterPARES Benchmark and Baseline Requirements and/or the ISO 23081 Recordkeeping Metadata Standard requirements.
- Development of a metadata specification model and typology indicating what metadata need to be created, how, and by whom at all points within the InterPARES models. These specifications can also form the basis for developing automated tools to assist with the creation, capture, management and preservation of essential metadata for active and preserved records.
- Interfacing with other relevant research and development activities such as the development of the ISO 23081 Standard, the Clever Recordkeeping Metadata Project and the work of the San Diego Supercomputer Center on the development of metadata tools for the automated creation, harvesting, and end-user manipulation of metadata.

Goals of the Metadata and Archival Description Registry and Analysis System (MADRAS)

- a. To support the unambiguous registration of relevant metadata schemas, sets and application profiles;
- b. To support the analysis of registered items against requirements derived from the InterPARES1 Benchmark and Baseline Requirements as well as the ISO 23081 Recordkeeping Metadata Standard, and to make recommendations for how they might be extended or otherwise revised to address the reliability, authenticity and preservation needs of records created within the domain, community or sector to which they pertain.
- c. To provide a standardized framework by which any existing or draft metadata schema or set can be assessed for its ability to address the above mentioned requirements, and which could be adopted by standards-setting bodies in different areas of practice.
- d. To generate analytical data to be provided to the ISO TC46/SC11-WG1 that oversees the development of the Recordkeeping Metadata Standard (ISO 23081).

MADRAS Inputs

- The Benchmark and Baseline Requirements generated by InterPARES 1.
- Requirements derived from an analysis of ISO 23081.
- Metadata schemas and sets identified in the course of the case studies undertaken by the Focus Groups.
- Other relevant Focus-specific metadata schemas and sets identified by Focus Groups or by the Description Group (e.g., GIS metadata standards).
- Archival description rules, sets, and related practices (e.g., ISAD(G)/ISAAR, EAD/EAC/DACS, RAD, and the Australian Series System).

InterPARES 1 Benchmark Requirements

The benchmark requirements identify the record attributes (metadata) that need to be ‘explicitly expressed and inextricably linked’ to a record in order for its identity and integrity to be asserted. The benchmark requirements also identify ‘the kinds of procedural controls over the record’s creation, handling and maintenance that support a presumption of its integrity’. The role of the benchmark requirements is to act as a tool for preservers to use in assessing the authenticity of electronic records. The higher the number, and the greater the degree to which a system meets these requirements, then the stronger the presumption of the authenticity of the electronic records held within it.

InterPARES1 Baseline Requirements

The baseline requirements specify the requirements that must be met in order to produce authentic copies of electronic records from a preservation system. This includes archival descriptive metadata documenting ‘the records juridical-administrative, provenancial, procedural and documentary contexts’, and controls over the records transfer and reproduction processes to ensure the maintenance of the records’ identity and integrity.