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Metadata Developments (1)

Interoperability across systems, time, and conceptions

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Outline

1. Definitions: metadata, interoperability
2. Three types of interoperability: synchronic, diachronic, and intentional
3. Constructs that help us achieve these types of interoperability: application profiles, change schemas, and conceptual models

Metadata

Information that characterizes another information resource, especially for purposes of documenting, describing, preserving or managing that resource.

InterPARES 2 Glossary

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InterPARES 2 Glossary

The word metadata is used in many different ways, and by many different communities.

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InterPARES 2 Glossary

For example, in the information sciences we design metadata primarily for document retrieval and discovery.

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InterPARES 2 Glossary

And tho' *finding* is a concern for archives, metadata for records and aggregations of records is required first for the presumption of authenticity, and secondarily for retrieval.

Archival Metadata

Authenticity

- Identity
- Integrity
- Form and Content
- Contextual Description

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- Identity
- Integrity
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Identity Metadata:

- Names of persons
- Action or matter
- Dates of creation and transmission
- Expression of archival bond
- Indication of attachments

Archival Metadata

Authenticity

- Identity
- Integrity
- Form and Content
- Contextual Description

Integrity Metadata:

- Name of handling office
- Name of office of primary responsibility (if different from handling office)
- Indication of types of annotations added to the record
- Indication of technical modifications

Archival Description

The creation of an accurate representation of a unit of description and its component parts, if any, by capturing, analyzing, organizing and recording information that serves to identify, manage, locate and explain archival materials and the context and records systems which produced it.

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This is the view from the bluff, the narrative, rather than discrete pieces like names and dates. That is not to say archival description would not use names and dates, but instead is made of names and dates coupled with the archivist's view of body of records and their context.

Interoperability

Interoperability

The ability of one application/system to communicate or work with another.

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Interoperability can happen

(1) at one point in time
- synchronic

(2) through time
-diachronic

(3) and that aligns purposes -intentional

Interoperability

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For example, one recordkeeping system may successfully capture all names (author, writer, originator, and addressee), while another only captures one type of name.

Interoperability

The ability of one application/system to communicate or work with another.

InterPARES 2 Glossary

RK1	RK2
Author	Author
Writer	?
Originator	?
Addressee	?

Interoperability

The ability of one application/system to communicate or work with another.

InterPARES 2 Glossary

RK1	RK2/DC
Author	Creator
Writer	Creator
Originator	Creator
Addressee	Audience?

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(2) through time
-diachronic

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For example, a metadata scheme (or even a classification) could change over time, and we want our permanent preservation system to handle this.

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Application Profiles

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An application profile is not considered complete without documentation that defines the policies and best practices appropriate to the application.

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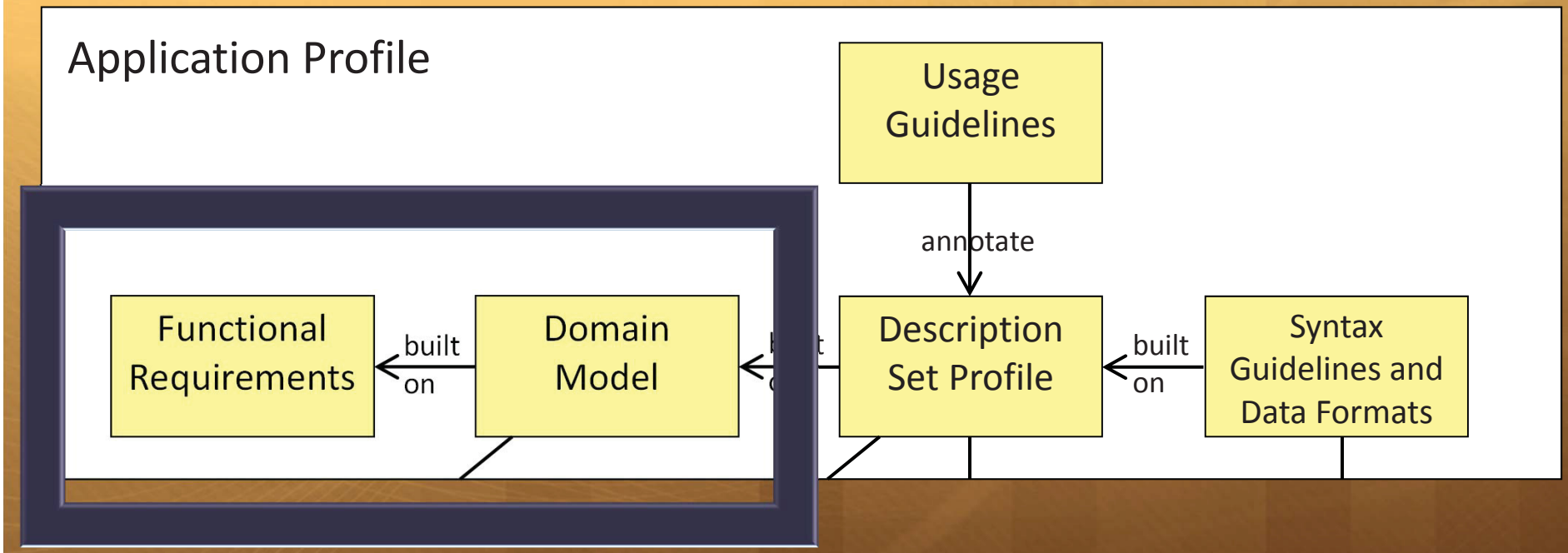
That is, a clear and explicit statement of purpose and functional requirements is published with the metadata.



Application Profile Components

As we can see we have functional requirements (retrieval or authenticity or both?) And a domain model archives, open web, museums? What is the purpose, and what is the context?

Working With These Challenges

To date we have drafted both functional requirements and we have begun a domain model of archives based on the Chain of Preservation model.

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To date we have drafted both functional requirements and begun a domain model of archives based on the Chain of Preservation model.

This required us to begin work on three application profiles (APs), one for each link in the chain (creation, keeping, and preservation).

Working With These Challenges

But all of these APs should support the functional requirements.

Working With These Challenges

Functional Requirements

1. Presumption of Authenticity
2. Interoperability
3. Parsimony and Adequacy for Archival Description
4. Retrieval

Working With These Challenges

Functional Requirements

1. Presumption of Authenticity

- Metadata generated from these APs will aid in the presumption of authenticity by account for the minimal set of Benchmark and Baseline requirements translated into metadata properties

Working With These Challenges

Functional Requirements

1. Presumption of Authenticity
2. Interoperability
3. Parsimony and Adequacy for Archival Description
4. Retrieval

Working With These Challenges

Functional Requirements

2. Interoperability

- Two types of interoperability above and beyond the intentional interoperability afforded by the AP

Working With These Challenges

Functional Requirements

2. Interoperability

- Synchronic (semantic)
- Diachronic (temporal)

Working With These Challenges

Functional Requirements

3. Parsimony and Adequacy for Archival Description

Working With These Challenges

Functional Requirements

4. Retrieval
   - Finally, we'll want the right kind of metadata to retrieve these authentic records.

Working With These Challenges

Functional Requirements

3. Parsimony and Adequacy for Archival Description

- Not all metadata will follow the aggregation of records into the preservation system.
- The preserver describes the body of records, and discards redundant metadata.
- However, there has to be enough metadata to do adequate description.
- Ideally no more and no less.

Working With These Challenges

Functional Requirements

Working With These Challenges

Domain Model(s)

Working With These Challenges

Domain Model(s)

Building an AP requires that we also model the entities in the domain.

This has been done in a number of formalisms for archives.

InterPARES has used the IDEFØ formalism to show activities in the chain of preservation.

This is useful, but incomplete for our purposes.

Working With These Challenges

Domain Model(s)

We need to declare explicitly the entities and their relationships (different form the activities – tho' informed by them).

To that end we have begun to model the domains of Records Creation, Keeping, and Preservation.

A draft of this will be forthcoming.

Working With These Challenges

The next steps for metadata work in the context of InterPARES is to continuing to work with all three types of interoperability as we publish our AP for use by small and medium sized organizations.

We will want systems to work together at one time, through time, and with clear articulation of purpose.

Thank you

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