Preservation Strategies:
Intro to the OAIS Reference Model

Curt Tilmes
NASA

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Overview

• The Reference Model for an Open Archival Information System (OAIS) provides a framework of concepts and terminology for describing the architecture of archives intended for long term preservation of digital information.
• This course model provides a brief introduction.
Relevance to Data Management

- Archives intended for long term preservation have many common requirements, some of which may not be immediately obvious. The OAIS-RM gives a good common understanding of those shared requirements.
- The OAIS-RM also provides a generic high level architecture that depicts an approach to accomplishing those requirements.
- Your system should have analogous components that can map to the RM concepts. The RM terminology is widely used to describe the purpose and use of those components.
OAIS overview

Figure 2-1: Environment Model of an OAIS

Figure 2-2: Obtaining Information from Data
OAIS External data flow

Figure 2-4: OAIS Archive External Data
Information Packaging

• Preservation Description Information:
  • Provenance – Source of Content; Who had custody; History
  • Context – How the Content relates to external information.
  • Reference – Identifiers for the Content
  • Fixity – Protection from alteration or corruption, such as Checksum or Digital Signature

Figure 2-3: Information Package Concepts and Relationships
OAIS Functional Entities

Figure 4-1: OAIS Functional Entities
References and Resources


• Also known as **ISO14721:2003**.

• Draft revision under review: **CCSDS 650.0-P-1.1** (Pink Book) Issue 1.1 August 2009.
Other Relevant Modules

• Data identifiers and locators
• File naming conventions
• Using self-describing data formats
• Recording provenance and context
• Metadata for {discovery; access and use; archiving}