RELATIONSHIP WITH OTHER STANDARDS OR EFFORTS

(INFORMATIVE)

This annex describes relationships between the OAIS reference model and various other standards or efforts. It includes a brief mapping between some terminology used in various domains and that used in the OAIS reference model.

– *Preserving Digital Information: Report of the Task Force on Archiving of Digital Information* (reference **Error! Reference source not found.**).

This document was the basis for the Preservation Description Information in the OAIS Information Model detailed in **Error! Reference source not found.** of the OAIS Reference Model. The 'Preserving Digital Information Report' did not include the separate information object classes for the Packaging Information and Description Information that have been added in the OAIS Information Model. Therefore, the following PDI class definitions are subsets of those discussed in that paper with some of the information allocated to the new Packaging and Description Objects. The primary difference between the OAIS information model and the information model presented in the 'Preserving Digital Information Report' is:

> Context Information: This information documents the relationships of the Content Data Objects to its environment. This includes why the Content Data Object was created, and how it relates to other Content Data Objects existing elsewhere. The OAIS Reference Model Context Information differs from the definition in the 'preserving Digital Information Report' in that it does not include the information used in associating logical information with physical media. This type of information is assigned to the Packaging Information in the OAIS Reference Model.

– *Z39.50 Profile for Access to Digital Collections* (reference **Error! Reference source not found.**):

This document and related Z39.50 profiles were the basis of the concepts of associated descriptions and Finding Aids discussed in the Descriptive Data and Access sections of the OAIS Reference Model. However, the OAIS Reference Model has generalized these concepts so the detailed protocol definitions in 'the Digital Collections Profile' are no longer applicable.

– IEEE's *Reference Model for Open Storage Systems Interconnection—Mass Storage System Reference Model Version 5* (reference **Error! Reference source not found.**):

This document provides a set of functionalities that fit within the OAIS Archival Storage Functional Entity. However, this functional entity may have greater functionality, including the storage of non-digital physical media and the focus on Long Term Preservation requirements.

– PREMIS Data Dictionary for Preservation Metadata, Version 3.0. [reference ?]

This document is the de-facto standard for preservation metadata, initially developed by a team of experts from memory institutions and repository developers between 2002-2005. It specifies the core metadata that are needed by most preservation repositories to preserve digital objects over the long term. The PREMIS Data Dictionary provides

a data model consisting of the entities that are relevant to the digital preservation process (Objects, Events, Agents, Rights) and the properties (called "semantic units") that describe them. The information PREMIS tells you to record is independent of any particular technology or system and may be used in a variety of contexts and implementations to achieve preservation goals.

PREMIS was developed with OAIS as its context and with the assumption that digital preservation repositories will comply with the functionality and information that OAIS specifies. The OAIS Information Model categories of Representation Information, and Preservation Descriptive Information, including Provenance Information, Context Information, Reference Information, Fixity Information, and Access Rights Information are reflected in concrete, implementable PREMIS "semantic units" that mitigate against the threat of loss and support the functionality of the preservation repository to ensure authenticity, renderability, viability, identity and availability. PREMIS also supplies semantic units that fall into the category of Representation Information and its subcategories of Structural and Semantic Information, including a comprehensive description of hardware and software environments and their relationships needed to render, use or provide other functionality for long-term preservation of digital objects. With its high level of detail, the PREMIS Data Dictionary may be considered a blueprint for the design of metadata in a preservation repository.

Not covered by OAIS but by PREMIS is information recorded about digital objects prior to ingest in the repository. The Rights entity in PREMIS focuses on rights asserted by copyright, license, statute or policy mainly for preservation purposes, although it may be also used to assert access rights, while OAIS supports the latter. Thus, PREMIS provides key pieces of information that cover the whole life-cycle of digital objects, going beyond OAIS' scope of the preservation repository.

The OAIS information model is organized around categories of information, while the PREMIS data model is organized around the core entities Objects, Events, Agents and Rights. In some cases, this difference in approach has resulted in differences in terminology. One example is the categorization of Objects into various levels (Intellectual Entity, Representation, File, Bitstream)

CCSDS Standards provide a concrete implementation of many of the Information Object and Information Package concepts discussed in **Error! Reference source not found.** of the OAIS Reference Model. These standards include:

– *Standard Formatted Data Units—Structure and Construction Rules* (reference **Error! Reference source not found.**).

  This standard provides a mechanism which implements the concept of a Representation Information Network and a platform-independent Information Package.

– *The Data Description Language EAST Specification (CCSD0010)* (reference **Error! Reference source not found.**).

  This standard specifies a language that is appropriate for documenting the structural component of Representation Information of most record-oriented structures.

– *Data Entity Dictionary Specification Language (DEDSL)—Abstract Syntax (CCSD0011)* (reference **Error! Reference source not found.**).

This standard specifies a set of attributes and a notation for describing a portion of the semantics of data entities. This is a mechanism which can be used to provide additional semantics for Representation Information.

– *Data Entity Dictionary Specification Language (DEDSL)—PVL Syntax (CCSD0012)* (reference **Error! Reference source not found.**).

  This standard specifies a set of attributes and a notation for describing a portion of the semantics of data entities. This is a mechanism which can be used to provide additional semantics for Representation Information.

The following terms have, in some organizational contexts, approximate mappings to OAIS terms. However, they are not to be considered as official OAIS replacement terms.

Archives (traditional archives): OAIS or OAIS Archive

Accession (traditional archives): Ingest

Record (traditional archives): ~~Content Data Object~~

Primary Audience (journals): Designated Community