

# Describing a Framework for Applying the OAIS Reference Model to Distributed Digital Preservation

Project Briefing  
Matt Schultz and Martin Halbert  
(Educopia Institute)

## Statement of Purpose

The Educopia Institute and the National Digital Stewardship Alliance seek to convene a working group with the broader digital preservation community to develop an approach for implementing the OAIS Reference Model and the derived Trustworthy Repository Auditing & Certification metrics (TRAC) in a distributed digital preservation (DDP) environment.

To foster innovation, interoperability, and mutual understanding, the digital preservation field needs a conceptual framework that acknowledges the contributions of OAIS and the various metrics derived from that model. Such a framework would articulate a common set of terms, and describe an extended implementation of the OAIS functional areas for a variety of alliances, systems, and strategies that comprise distributed preservation activities.

Distributed approaches are distinct from centralized repositories, and they often use technological and organizational *alignments* to preserve digital content. OAIS is frequently interpreted in terms of centralized repositories. As the field of digital preservation continues to evolve, institutions need expanded vocabularies and models to help them understand OAIS in both centralized *and* decentralized repository environments.

*Describing a Framework for Applying the OAIS Reference Model to Distributed Digital Preservation* would accomplish the following aims:

1. Describe the roles and responsibilities at institutions which are working to replicate and preserve digital information in an organizationally distributed environment;
2. Provide a common vocabulary and set of recommendations for trustworthy interoperable systems development; and
3. Inform administrative and technical practices between groups that seek to collaboratively preserve digital information using distributed mechanisms.

This work will synthesize the findings of a variety of current DDP initiatives and provide a solid foundation upon which new preservation activities may build and innovate. It will offer a viable and formalized extension of the standard OAIS-derived central preservation repository system for institutions seeking to replicate their collections and distribute them organizationally for preservation purposes.

# Describing a Framework for Applying the OAIS Reference Model to Distributed Digital Preservation

## Activities Proposed

We propose to *Describe a Framework for Applying the OAIS Reference Model to Distributed Digital Preservation* through the following steps:

**Research & Outreach.** In 2011 the Distributed Framework Coordinator (Matt Schultz), in conjunction with various NDSA Working Group participants and contributors from the broader digital preservation community, will perform a gap analysis between OAIS Section 6: Archive Interoperability and various known DDP uses cases to produce a two-to-five page white paper. This white paper will be drafted in wiki format for collaborative purposes and cover the following items:

1. Problem Statement
2. Background
3. Current Trends & Practices
4. Current Challenges
5. Recommendations

In parallel with the drafting of this white paper the Distributed Framework Coordinator in partnership with various core contributors will begin collaboratively identifying upcoming digital preservation conferences, events, and relevant practitioners/groups to engage with.

Core contributors to this collaborative work will then seek opportunities at one or more of these events to form recommendations and garner feedback on the white paper findings. These events will be key opportunities to solidify Collaborative Teams to begin drafting a final framework for submission to the Consultative Committee for Space Data Systems (CCSDS) in a form similar to the OAIS supplemental *Producer-Archive Interface Methodology Abstract Standard (PAIMAS)*. See here: [public.ccsds.org/publications/archive/651x0m1.pdf](http://public.ccsds.org/publications/archive/651x0m1.pdf).

**Production.** In 2011-2012, the Distributed Framework Coordinator in partnership with various Collaborative Teams will help lead the effort to draft a semi-final Framework. This work will be accomplished through a combination of event-hosted meetings and virtual collaboration (video/teleconferences, wikis, listservs, Google Docs, etc.). The Collaborative Teams will aim to synthesize the Framework and make it available for public comment, likely no later than September 2012. At the close of the public comment period, the Distributed Framework Coordinator and the Collaborative Teams will finalize the framework for submission to the Consultative Committee for Space Data Systems (CCSDS) for consideration as a supplemental abstract standard.

**Dissemination.** In 2012, upon completion of the Framework and throughout its phase of consideration by the CCSDS, the document will be broadly promoted through targeted announcements on listservs, blogs, and newsletters. Its authors will produce at least one peer-reviewed article on the process of creating the Framework. The team will host a meeting on Distributed Digital Preservation that will highlight existing efforts and encourage the development of new distributed digital preservation efforts.