



## ***Open Archives Initiative***

### ***Object Reuse and Exchange***



### **Open Archives Initiative: Production Release of version 1.0 of the Object Reuse and Exchange Specifications**

*Ithaca, NY and Los Alamos, NM, October 17, 2008* – Over the past two years the Open Archives Initiative (OAI), in a project called Object Reuse and Exchange (OAI-ORE), has gathered international experts from the publishing, Web, library, repository, and eScience communities to develop standards for the identification and description of aggregations of Web resources. These standards provide the foundation for applications and services that can visualize, preserve, transfer, summarize, and improve access to the aggregations that people use in their daily Web interaction: including multiple page Web documents, multiple format documents in institutional repositories, scholarly data sets, and online photo and music collections. The OAI-ORE standards leverage the core Web architecture and concepts emerging from related efforts including the semantic Web, linked data, and Atom syndication. As a result, they integrate both with the emerging machine-readable Web, Web 2.0, and the future evolution of networked information.

The production version of the OAI-ORE specifications and implementation documents were released to the public on October 17, 2008. This public release was the culmination of several months of testing and review of initial alpha and beta releases. The participation and feedback from the wider OAI-ORE community, especially the OAI-ORE technical committee, was instrumental to the process leading up to this production release.

The documents in the release describe a data model to introduce aggregations as resources with URIs on the Web. They also detail the machine-readable descriptions of aggregations expressed in the popular Atom syndication format, in RDF/XML, and RDFa. The table of contents page is at <http://www.openarchives.org/ore/toc> and links to the following documents:

- *ORE User Guide Documents*
  - Primer
  - Resource Map Implementation in Atom
  - Resource Map Implementation in RDF/XML
  - Resource Map Implementation in RDFa
  - HTTP Implementation and Multiple Serializations
  - Resource Map Discovery
- *ORE Specification Documents*
  - Abstract Data Model
  - Vocabulary

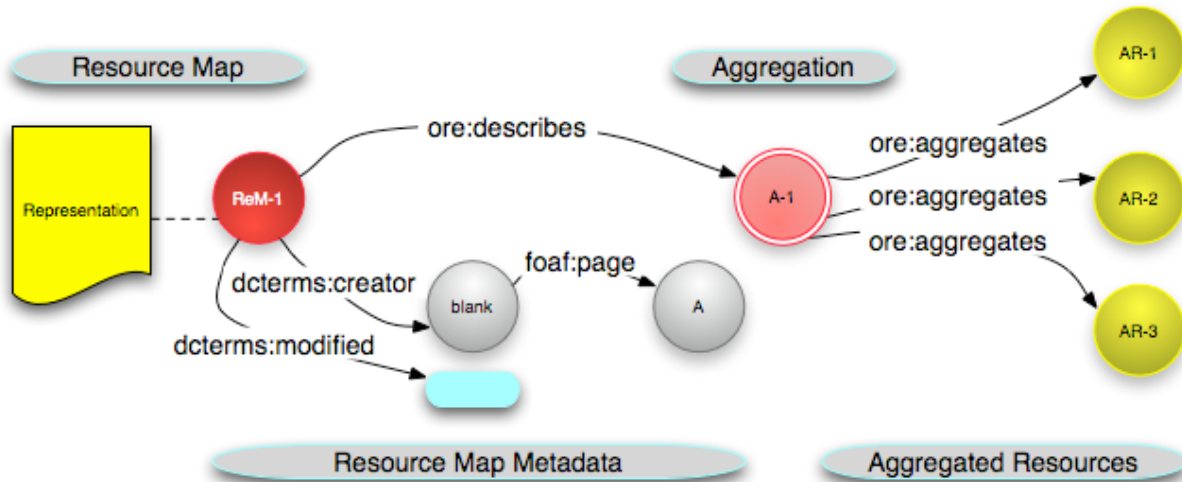
**About the Open Archives Initiative:** The Open Archives Initiative (OAI) develops and promotes interoperability standards that aim to facilitate the efficient dissemination, sharing, and reuse of Web-based content. OAI-ORE work is supported by the Andrew W. Mellon Foundation, Microsoft Corporation, and the National Science Foundation (IIS-0430906, DUE-0840744). More information is available at <http://www.openarchives.org>. Contact: [ore@openarchives.org](mailto:ore@openarchives.org)



# Open Archives Initiative Object Reuse and Exchange



The OAI-ORE specifications are based on the principles of the Architecture of the World Wide Web, the Semantic Web, and the Linked Data effort. The essence of the ORE solution to the resource aggregation problem can be summarized as follows:



- In order to be able to unambiguously refer to an aggregation of Web resources, a new Resource is introduced that stands for a set or collection of other Resources. This new Resource, named an Aggregation, has a URI just like any other Resource on the Web does. But, since an Aggregation is a conceptual construct, it qualifies as a so-called non-document Resource (as commonly used in Semantic Web efforts) that does not have a Representation.
- Following the Linked Data guidelines, another Resource is introduced to make information about the Aggregation available. This new Resource, named a Resource Map, has a URI and it has a machine-readable Representation that provides details about the Aggregation. In essence, a Resource Map expresses which Aggregation it describes (the `ore:describes` relationship), and it lists the resources that are part of the Aggregation (the `ore:aggregates` relationship). But, a Resource Map can also express relationships and properties pertaining to all these Resources, as well as metadata pertaining to the Resource Map itself, e.g. who published it and when it was most recently modified (the `dcterms:creator` and `dcterms:modified` relationships). Resource Maps can be expressed in different formats and ORE explicitly specifies serializations in Atom XML, RDF/XML, and RDFa.
- In order to make ORE work in the HTTP-based Web, both the Aggregation and the Resource Map are assigned HTTP URIs, and the Cool URI for the Semantic Web guidelines are adopted to support discovery of the HTTP URI of a Resource Map given the HTTP URI of an Aggregation.
- ORE also introduces the notion of a Proxy, which is a Resource that stands for an Aggregated Resource in the context of a specific Aggregation. The URI of a Proxy provides a mechanism for denoting a Resource in context, and can be valuable, among others, for expressing provenance and for citing.