



## **Interoperable Annotation: Perspectives from the Open Annotation Collaboration**

**CNI Fall 2009 Task Force Meeting**

Annotating is a pervasive element of scholarly practice for both the humanist and the scientist. It is a method by which scholars organize existing knowledge and facilitate the creation and sharing of new knowledge. It is used by individual scholars when reading as an aid to memory, to add commentary, and to classify. It can facilitate shared editing, scholarly collaboration, and pedagogy. Over time annotations can have scholarly value in their own right. Yet scholars remain dissatisfied with the options available for annotating digital resources. Scholars wanting to annotate have to learn different annotation clients for different content repositories, have no easy way to integrate annotations made on different systems or created by colleagues using other tools, and are often limited to simplistic and constrained models of annotation.

### **Guiding Principles**

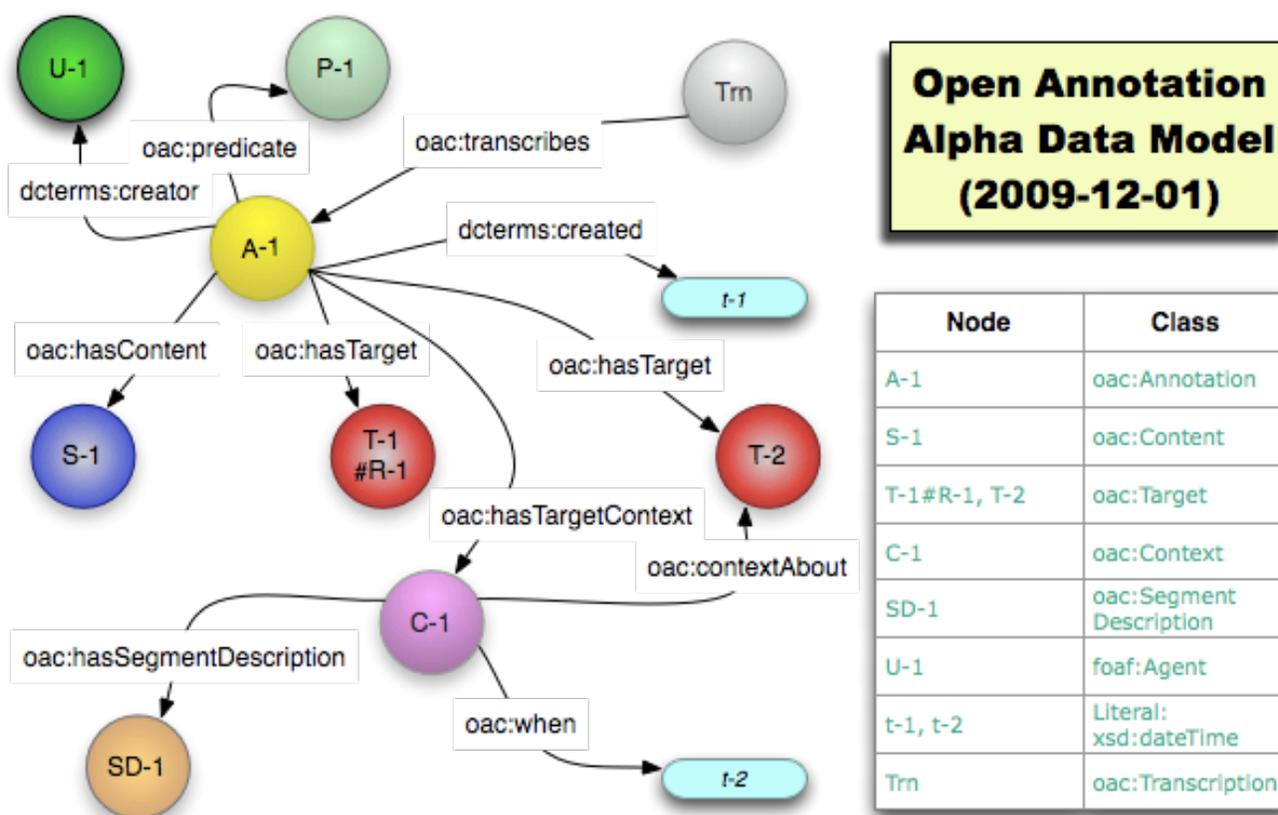
1. The effort focuses on interoperability to allow sharing between clients and applications.
2. The interoperability approach is based on the architecture of the World Wide Web.
3. An Annotation is an event at a moment in time, with Content/Source and Target.
4. The Content and Target of an Annotation can be of any media type and format.
5. Annotation, Content and Target can have different authorship, and time of creation.
6. Annotation, Content and Target should be identified by HTTP URIs.
7. Content and Target must be able to be parts or segments of resources.
8. The model must support multiple Contents and Targets of the Annotation.
9. Measures to prevent misinterpretation of changing resources, such as timestamps and fixity information for Contents and Targets, must be leveraged.
10. Descriptions of Annotations should be published to the web, and then aggregated by possibly multiple systems, rather than published with a protocol to a single server.

### **Threads of Research: Success to Date**

1. Interoperability and Data Modeling (Los Alamos National Laboratory)
  - Alpha Data Model
  - End-to-End Demonstrator for Model and Architecture
2. Integration of AXE (University of Maryland) and Zotero (George Mason University)
  - Image annotation module integration in pre-release testing
  - Substantial progress towards integration of additional formats
3. Applications and Use Cases (University of Queensland, UIUC)
  - Completed proof-of-concept demo exporting notes from Pliny to Danno
  - Progress towards defining critical use cases and user narratives

## Alpha Data Model

The data model leverages and extends existing research in order to facilitate the guiding principles. An Annotation (A-1) has a creator and created time, as well as an explicit statement of the relationship (P-1) between Content (S-1) and Target (T-1#R-1, T-2). The first target uses the Media Fragments specification from the W3C to encode a segment, and the second uses a Context Node (C-1). The Context node describes the segment within T-2 in the linked SegmentDescription (SD-1). It also records the time at which the target is annotated (t-2). The information is recorded in a serialization known as a Transcription (Trn), which can be dereferenced to retrieve the RDF description of the Annotation event.



### More Information:

<http://www.openannotation.org/>  
<http://groups.google.com/group/oac-discuss>

### Acknowledgements:

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