Open Annotation Collaboration
Alpha Data Model Summary

<http://www.openannotation.org/>

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OAC: Alpha Data Model
Rob Sanderson, Herbert Van de Sompel
There are many many different, non-interoperable annotation systems available, both online and desktop based.
The intuitive model is that we have a Source of Content (S-1), which annotates a Target resource (T-1). We add an Annotation node (A-1) that represents the annotation event.

The Source of Content must have some relationship to the Target. By default, it should be somehow 'about' the Target for it to be considered an Annotation.
Properties and relationships can now be attached to the Annotation.

This diagram shows who created the annotation (U-1), when they created it (datetime) and explicitly states what the relationship (called a predicate, P-1) between Content and Target is.
Content and Target are Resources

Note: in the baseline model both Content and Target are resources on the web.

Saw VI (2009)

TOMATOMETER

Consensus: It won't earn the franchise many new fans, but Saw for what has become an intricately grisly annual tradition.

Synopsis: The makers of the Saw films continue to make Rube Goldbergs out of torture devices in this sixth film in the series. SAW VI finds Detective Hoffman (Costas Mandylor) on the investigation, but that won’t stop him from continuing the murderous mayhem.

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Many systems only allow for a string as the content of the Annotation, rather than any resource on the web, even if they allow for many other more advanced features such as digital signatures, robust cross-format locations, annotations on multimedia objects ...
To allow for this common case, we can assign a unique non resolvable URI called a URN.

The text is captured in the oac:body property.

We define a Note class which can be used with either a protocol or non protocol URI, as a hint to the client to not bother dereferencing the URI.
Use Case: Segments of Resources

The target of an Annotation is often a part of a resource, rather than the entire resource.
W3C Media Fragment URIs allow us to create a URI that identifies a segment of a resource for common cases.

e.g:

http://…/foo.jpg#xywh=160,120,320,240

… identifies a 320 by 240 box, at 160,120 in the image foo.jpg
Use Case: Complex Segments

It may be desirable to express a non-rectangular segment of an image, or other complex segment of a resource which cannot be identified using a media fragment.
Complex Segments

In this case, we use a Context node (C-1) with a Segment Description (SD-1). This can be of any format, and will be media dependent for T-1.

Note that the predicate now applies to the Context Node not the Target, as the Context stands for the part of the Target which is of interest.
Use Cases: Number of Targets

A single annotation event may involve multiple targets.

Some Use Cases:

• To comment on multiple regions of an image (e.g., depicting the same thing)

• To comment on multiple images (e.g., depicting the same thing)

• To comment on an image available in multiple formats or resolutions

• To comment on or establish an association between resources
Number of Targets

This is modeled in a very predictable way.

Note that the relationship from the Content applies to all of the Targets.
Although somewhat exotic, multiple content sources also can be modeled.

**Use Cases:**

- Same comment expressed in different formats (txt, MathML)
- Same comment expressed in different media (txt, mp3)
- Same comment later translated to different language, format, media, locations
- Annotation that have multiple, distinct, data sources are 'about' a target
Final: Full Data Model (Alpha Version)

Open Annotation Alpha Data Model (2009-12-01)

<table>
<thead>
<tr>
<th>Node</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>oac:Annotation</td>
</tr>
<tr>
<td>S-1</td>
<td>oac:Content</td>
</tr>
<tr>
<td>T-1 #R-1, T-2</td>
<td>oac:Target</td>
</tr>
<tr>
<td>C-1, C-2</td>
<td>oac:Context</td>
</tr>
<tr>
<td>SD-1</td>
<td>oac:Segment Description</td>
</tr>
<tr>
<td>U-1</td>
<td>foaf:Agent</td>
</tr>
<tr>
<td>t-1, t-2, t-3</td>
<td>Literal: xsd:dateTime</td>
</tr>
<tr>
<td>Trn</td>
<td>oac:Transcription</td>
</tr>
</tbody>
</table>

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