From Open Annotations to W3C Web Annotations (and the impact on IIIF Presentation API 3.0)

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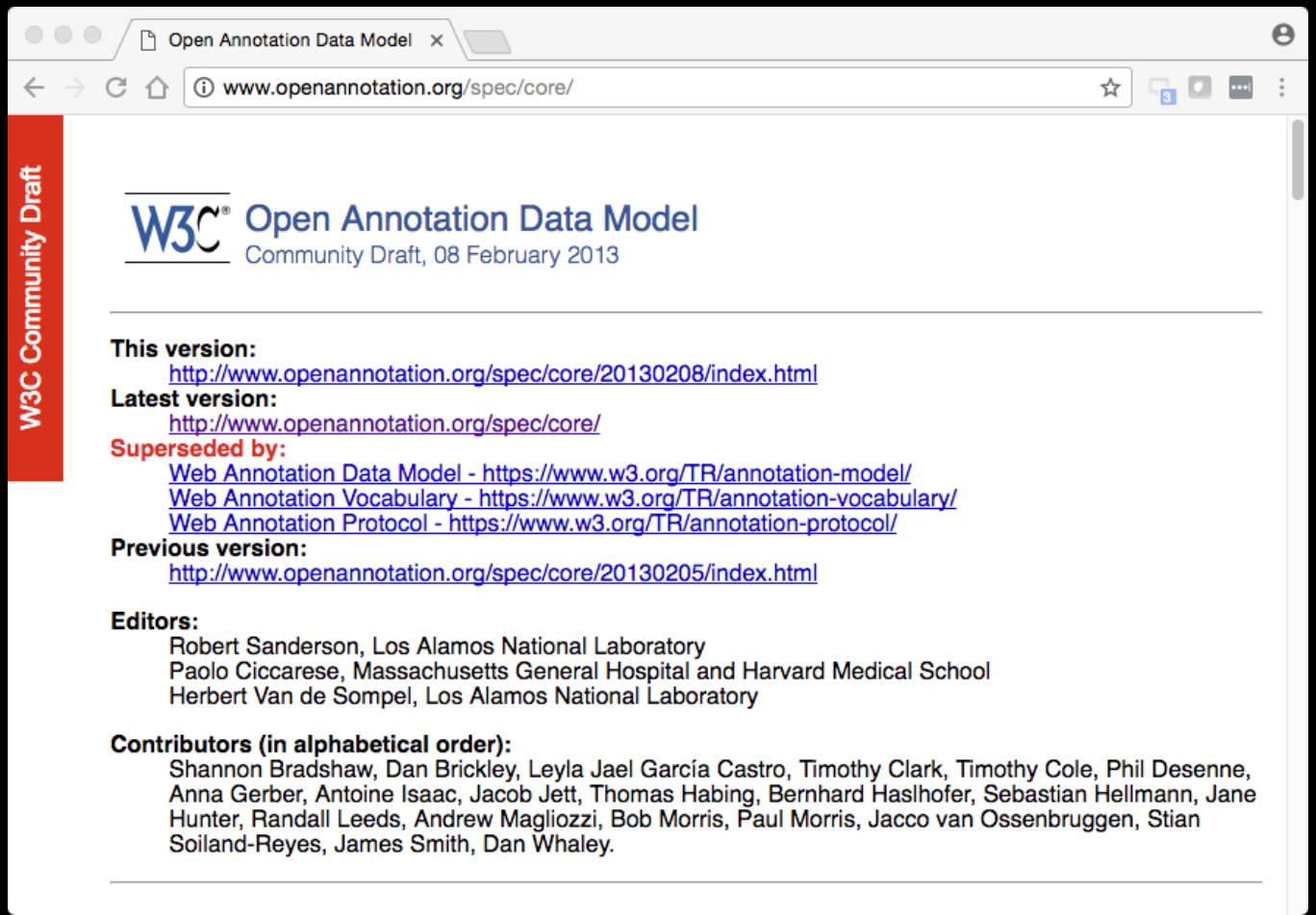
(errors belong to Simeon though)

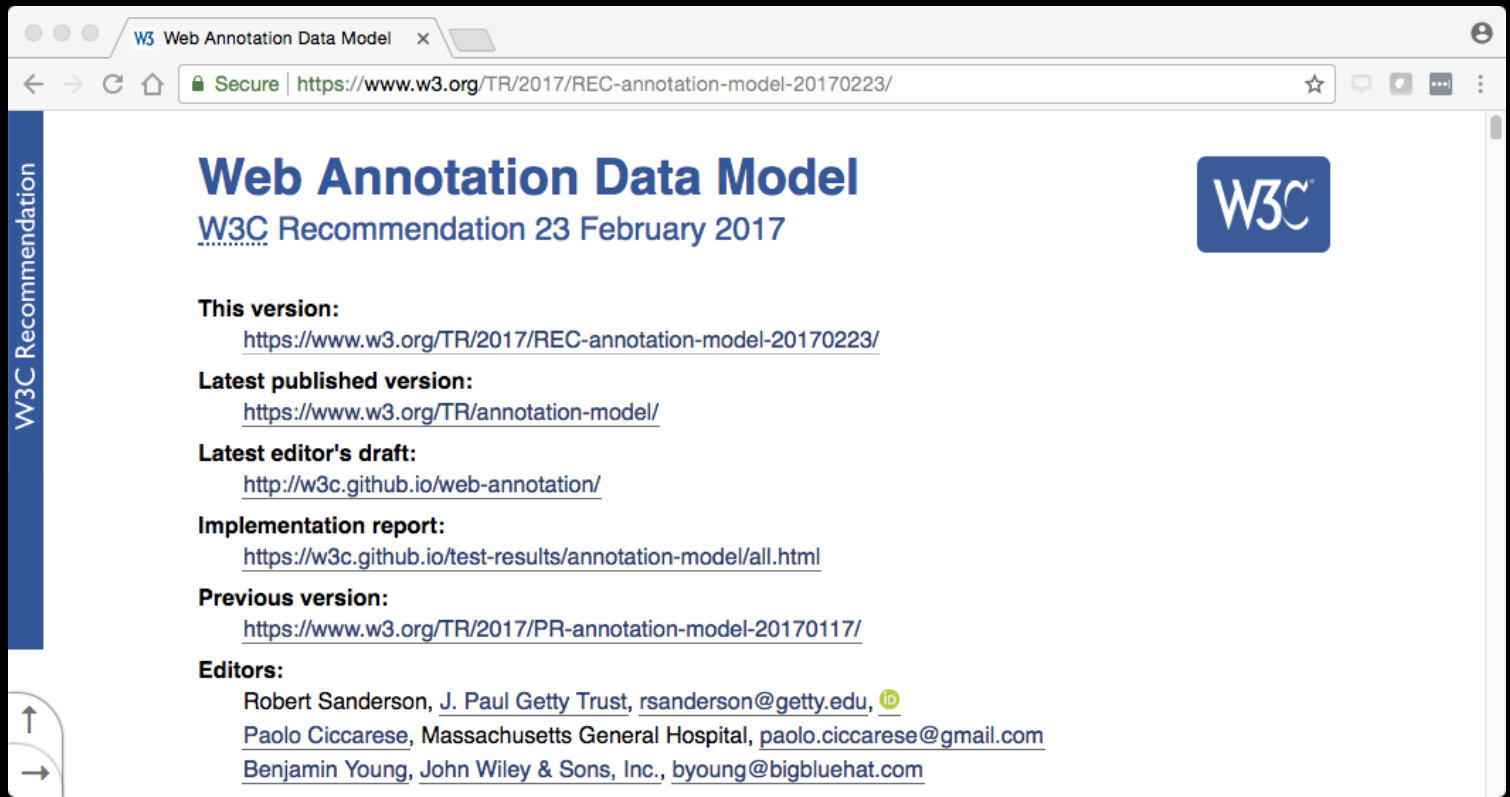
Open Annotation

- W3C “Community Draft” 2013
- Basis for annotations in IIIF Presentation API v2.1 (and prior versions)



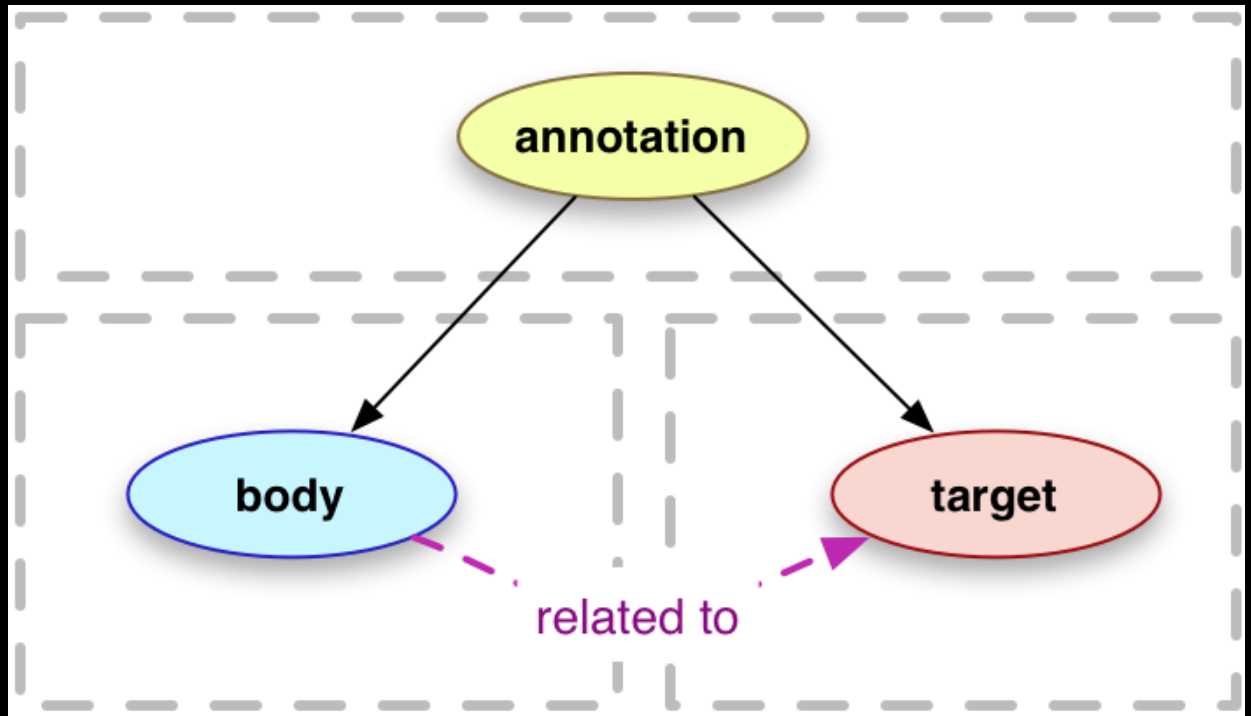
W3C Web Annotation

- Cluster of W3C Recommendations – real standards – released 2017-02



Basic model - no change

- Identical *picture* used in Open Annotation and Web Annotation
- An annotation (resource) has:
  - zero or more bodies (e.g. highlight may have zero)
  - one or more targets
- Same namespace http://www.w3.org/ns/oa# and same suggested `oa:` prefix (in serializations other than JSON-LD)



Cleaner JSON – mirrored in Presentation 3

- Focus on developer/user friendliness: better documentation, use cases for each feature, and...
- No prefixes, better terms, fewer @ signs
- Stricter definition of values and cardinality
- Downside of improvements... numerous changes in the JSON-LD

```
{
  "@context":".../presentation/2/context.json",


  "@id": "http://ex.org/.../p1-image",
  "@type": "oa:Annotation",
  "motivation": "sc:painting",
  "resource": {
    "@id": "http://ex.org/.../p1.jpg",
    "@type": "dctypes:Image",
    "format": "image/jpeg",
    "service": {
      "@context": ".../image/2/context.json",
      "@id": "http://ex.org/.../p1",
      "profile": ".../image/2/level2.json"
    },
    "height":2000,
    "width":1500
  },
  "on": "http://ex.org/.../p1"
}
```

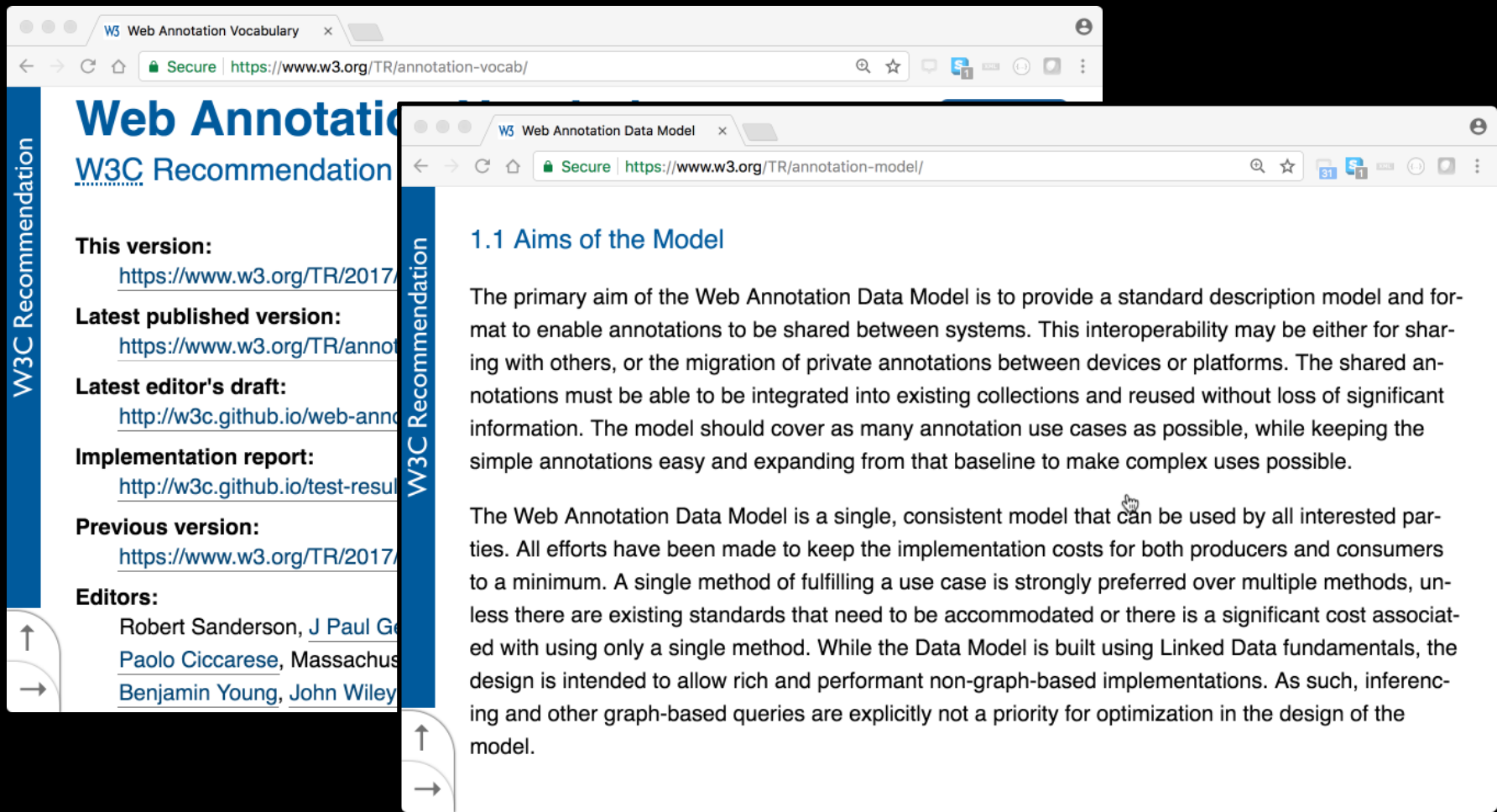
v2 example 5.4

```
{
  "@context": [
    "http://www.w3.org/ns/anno.jsonld",
    ".../presentation/3/context.json"
  ],
  "id": "http://ex.org/.../p1-image",
  "type": "Annotation",
  "motivation": "painting",
  "body": {
    "id": "http://ex.org/.../p1.jpg",
    "type": "Image",
    "format": "image/jpeg",
    "service": {
      "id": "http://ex.org/.../p1",
      "type": "ImageService3",
      "profile": "level2"
    },
    "height":2000,
    "width":1500
  },
  "target": "http://ex.org/.../p1"
}
```

v3 example 5.5

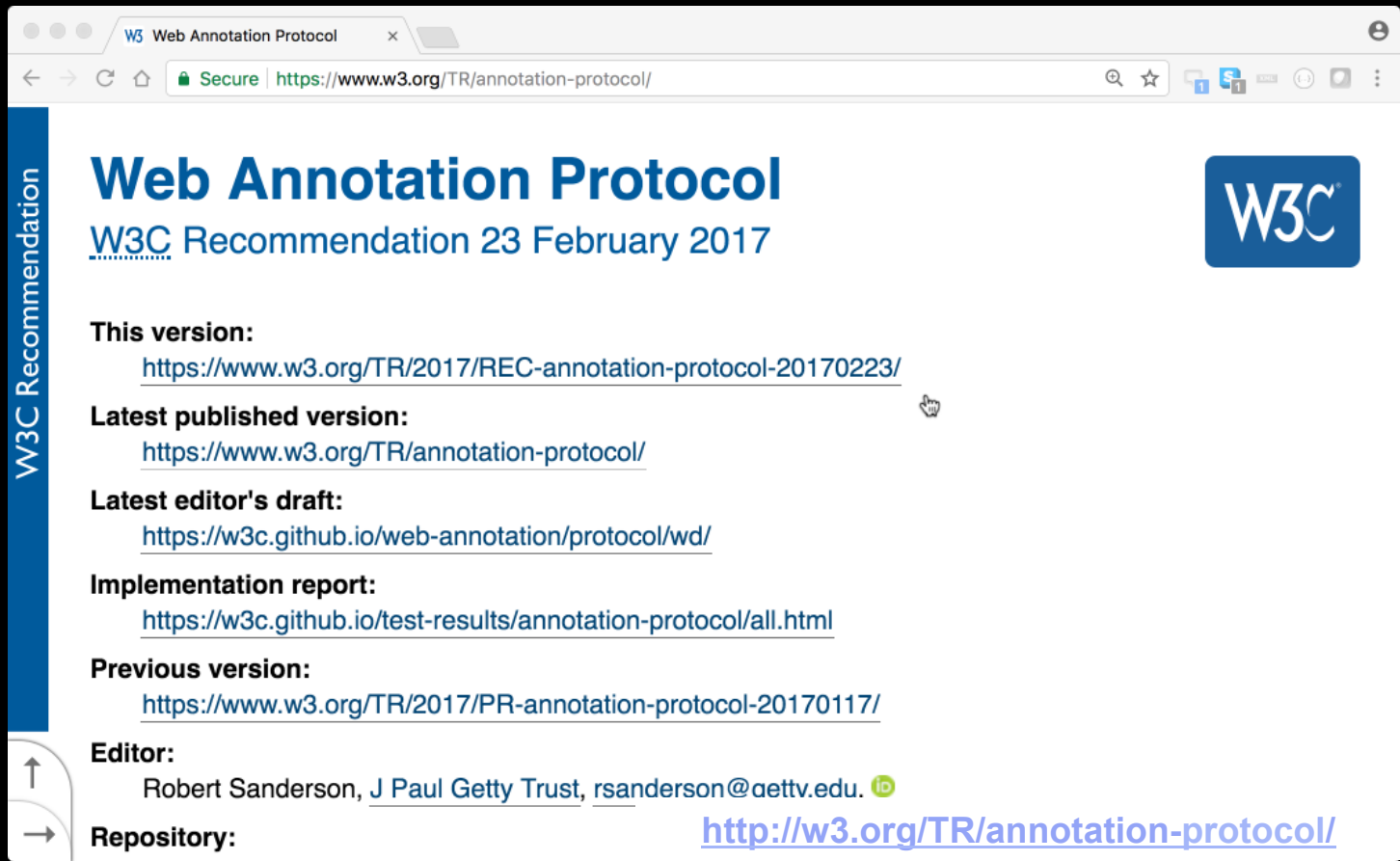
Web Annotation splits Model and Vocabulary

- Combined in Open Annotation specification
- No direct impact on IIIF but cleaner (model examples all JSON-LD whereas the vocabulary uses Turtle)



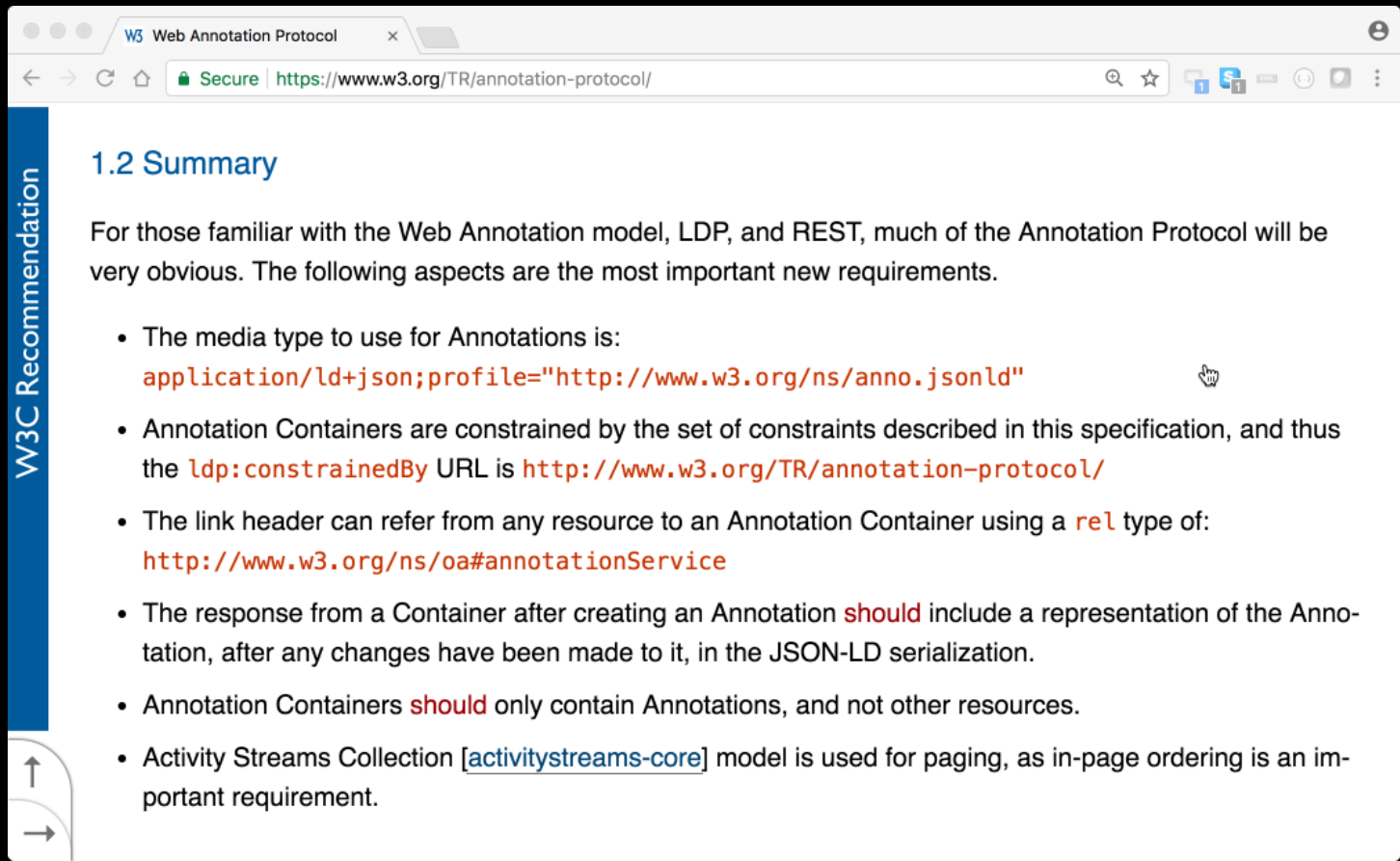
Adds Protocol for Annotations

- Separate “Web Annotation Protocol” specification
- Not included in the Open Annotation specifications
- Describes the rest of REST: create, update and delete



Protocol use in IIIF Presentation 3

5.5 Annotations ... "Annotations MUST have their own http(s) URIs, conveyed in the `id` property. The JSON-LD description of the Annotation SHOULD be returned if the URI is dereferenced, according to the Web Annotation Protocol."



Replaced "Content in RDF" with `TextualBody`

Web Annotation removed defunct "Content in RDF" specification

- Working Draft from 2011 never progressed to a specification. A new Working Group Note was published in 2017 with essentially the same content (better formatting) but is not on a standardization path.
- `ContentAsBase64` and `ContentAsXML` (along with `DoctypeDecl`) are pretty ugly too ;-)

Instead use `TextualBody` which mirrors referenced content:

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno5",
  "type": "Annotation",
  "body": {
    "type" : "TextualBody",
    "value" : "<p>j'adore !</p>",
    "format" : "text/html",
    "language" : "fr"
  },
  "target": "http://example.org/photo1"
}
```

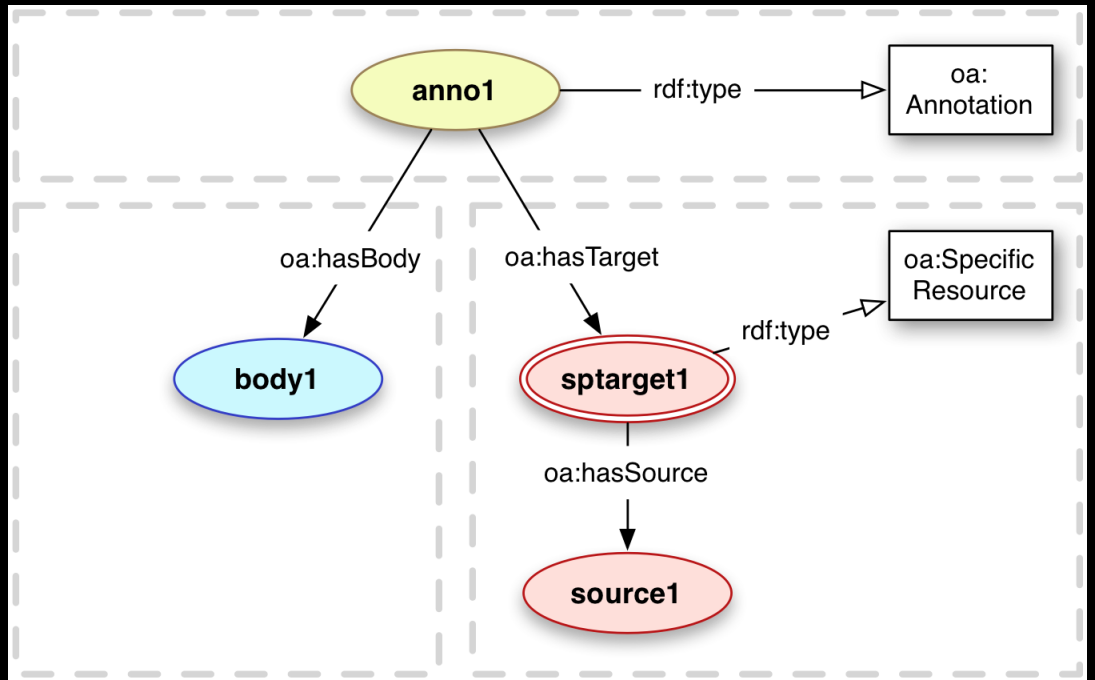
Adds `bodyValue` shortcut (hack)

The `bodyValue` shortcut provides a very compact syntax for the simplest case of a single string body, but it is explicitly NOT RECOMMENDED for use

- and hence... not used in IIIF!
- goes against evolving principle of regularity – feedback from client developers is that we should have regularly formatted JSON-LD, avoiding multiple forms

Specific Resources

- Model largely the same – provides the ability to contextualize, or select part of, the body or target resource in the annotation
  - Now recommended pattern for fragments, instead of direct `#xywh=` URIs
  - Added `purpose` as way of associating a `Motivation` with a Specific Resource
  - More selectors and selector refinement by chaining



Selectors rather than direct fragments?

It is RECOMMENDED to use FragmentSelector as a consistent method compatible with other means of describing SpecificResources, rather than using the IRI with a fragment directly. Consuming applications SHOULD be aware of both. [Web Annotation, Fragment Selector]

```
{
  "@context": ".../presentation/2/context.json",


  "@id": "http://ex.org/anno1",
  "@type": "oa:Annotation",
  "motivation": "sc:painting",
  "resource": {
    "@id": "http://ex.org/image.jpg",
    ...
   },
  "on": "http://ex.org/canvas/p1#xywh=0,0,600,900"
}
```

shortened example from v2 segments

```
{
  "@context": [
    "http://www.w3.org/ns/anno.jsonld",
    ".../presentation/3/context.json"
  ],
  "@id": "http://ex.org/anno1",
  "@type": "Annotation",
  "motivation": "painting",
  "body": {
    "@id": "http://ex.org/image.jpg",
    ...
   },
  "target": {
    "source": "http://ex.org/canvas/p1",
    "selector": {
      "type": "FragmentSelector",
      "conformsTo": "...w3.org/TR/media-frags/",
      "value": "xywh=0,0,600,900"
    }
  }
}
```

Not yet decided:
https://github.com/IIIF/api/issues/1338

Annotation Pages and Collections

Web Annotation specification introduces the Annotation Page as part of an Annotation Collection

- Class from Activity Streams (`as:OrderedCollectionPage`)
- Annotation Lists (a Shared Canvas construct) are replaced with Annotation Pages
- In IIIF JSON-LD the `type` changes from `sc:AnnotationList` to `AnnotationPage`

also introduces the Annotation Collection

- Class from Activity Streams (`as:OrderedCollection`) which has Annotation Pages as parts
- Layers (a Shared Canvas construct) are replaced with Annotation Collections
- In IIIF JSON-lD the `type` changes from `sc:Layer` to `AnnotationCollection`

Changes without direct impact on IIIF

- Replaced prov-o ontology features with simpler notions from dcterms
- Selection of bodies: List and Composite were removed as the use cases were deemed too esoteric with no implementations; Choice remains, but is now ordered list (sub-class of `as:OrderedCollection`) rather than a default plus unordered options
- Added additional properties for bodies and targets:
  - `processingLanguage` and `textDirection` for Internationalization
  - `accessibility`, using schema.org description of the accessibilityFeature property.
- Additional properties for the annotation:
  - `audience`, based schema.org's Audience class