Annotations Standards for the Open Web Platform: Scholarly Publishing and Libraries

W3C Presentation for
Coalition for Networked Information (CNI)

8 December, 2014
Karen Myers, W3C and
Rob Sanderson, Stanford University

"I don't know who you are.
I don't know your company.
I don't know your company's product.
I don't know what your company stands for.
I don't know your company's customers.
I don't know your company's record.
I don't know your company's reputation.
Now–what was it you wanted to sell me?"

MORAL: Sales start **before** your salesman calls–with business publication advertising.

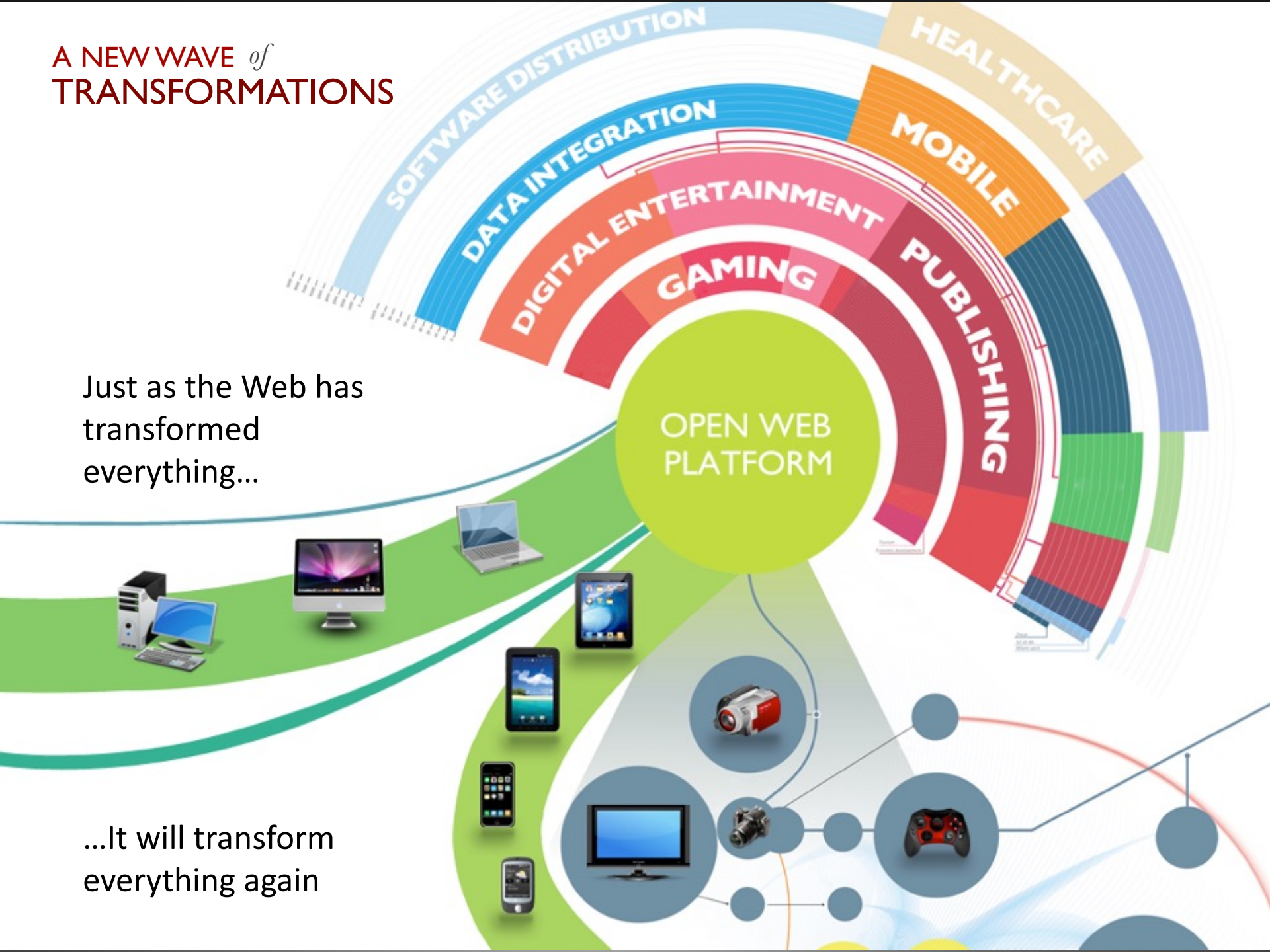
McGRAW-HILL MAGAZINES
BUSINESS • PROFESSIONAL • TECHNICAL

About W3C:
"Leading the Web to its Full Potential"

Tim Berners-Lee
WEB INVENTOR AND
W3C DIRECTOR

- Founded 1994; celebrating 20 years
- 407 Members (86 Global Enterprise Members)
- 80+ staff in US (MIT), China (Beihang), France (ERCIM) and Japan (Keio)
- Focus on Web ecosystem: users, developers, browsers, etc.
- Developing new technologies for Open Web Platform that are transforming industries like Mobile, Entertainment, Automotive, Digital Publishing, Web Payments and Manufacturing (Web of Things)
- W3C focuses both on the Open Web, as well as specific industry requirements brought by industry segments

A NEW WAVE *of* TRANSFORMATIONS



Just as the Web has transformed everything…

…It will transform everything again

The Open Web Platform Enables New Experiences for Publishing and Library Communities

Photo outsideonline.com

W3C Mission Statement for Digital Publishing

In collaboration with content creators, publishers, distributors and archivists, W3C is a global forum to develop web technology standards and best practices with the goal to enhance the experiences of discovering, reading and sharing information on the Web so that these experiences become an extension of and enhancement to the offline experience.

IDPF and W3C Collaboration: Digital Publishing Interest Group at W3C

IDPF Focus: Standards for the Book Reading Experience (EPUB)

IDPF/EPUB built on W3C standards

W3C Focus: Standards for General Web Technologies

Advance publishing industry requirements for the Open Web Platform through a focused Digital Publishing Interest Group (IG) and related Working Groups (e.g. HTML, CSS, Web Accessibility, Annotations)

Industry Leadership for Digital Publishing IG

Co-chaired by Markus Gylling (IDPF) and Tzviya Siegman (John Wiley & Sons)

"The **mission** of the **Digital Publishing Interest Group (DPUB IG)**, […] **a forum for experts in the digital publishing ecosystem** […] for technical discussions, gathering use cases and **to better align existing formats and technologies (e.g., EPUB) with the broader Open Web Platform.**"

IDPF and W3C Collaboration: Some of the Digital Publishing Interest Group Participants

BISG

UNIVERSITY OF ILLINOIS
URBANA-CHAMPAIGN · CHICAGO · SPRINGFIELD

MathJax

Benetech

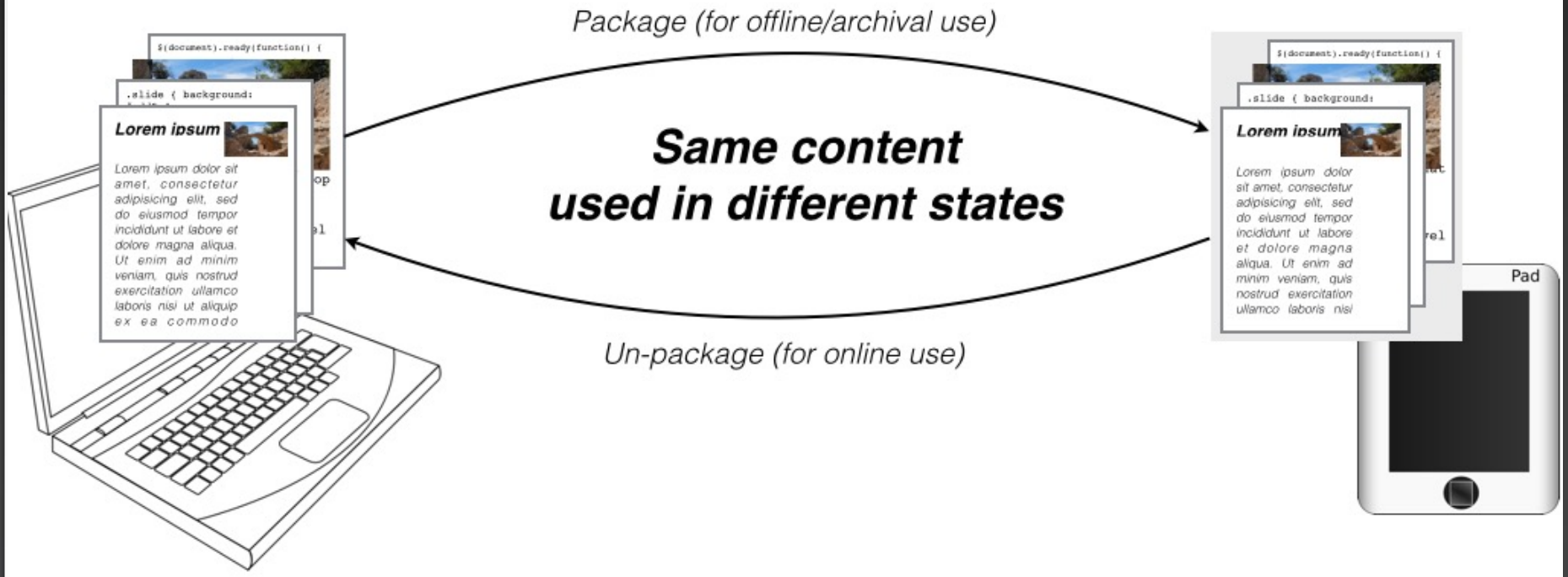
EPUB and the Open Web Platform

- EPUB3 is based on HTML+CSS+SVG+MathML
- EPUB discovery metadata and packaging not yet present in Open Web Platform
- The features requested for future enhancements to EPUB are also needed for core Web content including:
  - Packaging
  - Richer Typography
  - Layout Features
  - Annotation

The Vision: Convergence of EPUB and Web

- Enhance the Open Web Platform to meet the broader spectrum of requirements from the publishing industry
- Publishers benefit from additional on-line opportunities
- Web users benefit from richer digital publications
- Off-line e-reader consumers gain enhanced capabilities when on-line

EPUB/Web Vision: Online and Offline Content



Source: http://w3c.github.io/epubweb/

Everyone Benefits

- Publishers have long experience in ergonomy, typography, complex layout, readability, structure, curatory workflow, …
- Web community continues to innovate on hardware platforms, connectivity, interactivity
- Enhanced tooling can serve multiple audiences
- Consumers have access to publications that combine the skills of both worlds

How Do We Achieve this Vision?

Accelerate Enhancements to Open Web Platform and EPUB3 for EPUB/Web

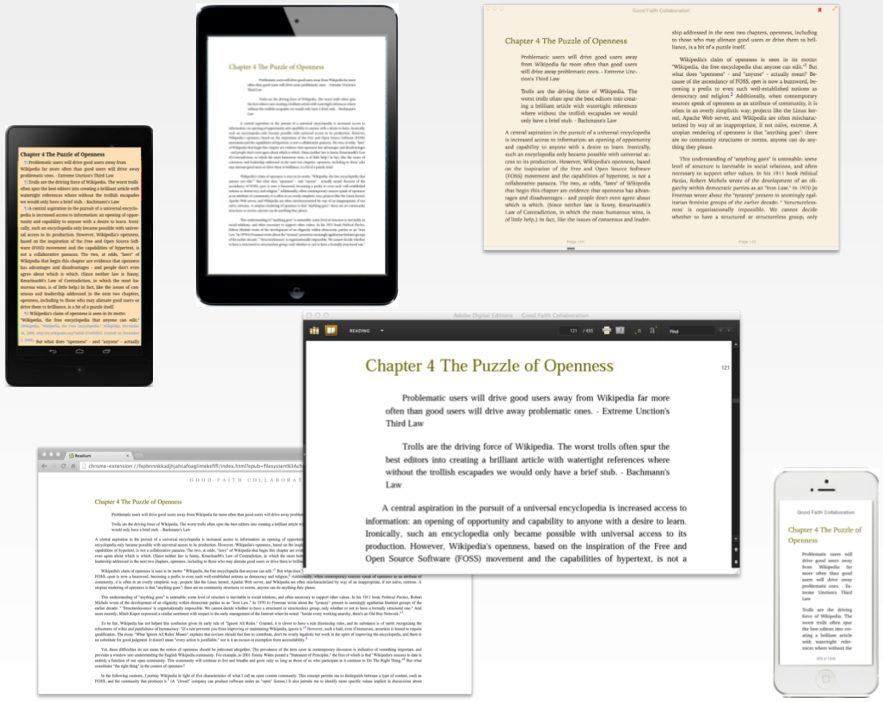
Focus Areas:

1. Expand technical capabilities of the Open Web Platform to enable richer content and creativity for books and journals
2. Leverage reading as a social experience to increase the “buzz” around eBooks and accommodate new modes of reading
3. Advance digital publishing for education
4. Enable and strengthen Web-based business models for publishers

Focus: Advance Digital Publishing for Education

Ensure that the Open Web Platform provides the right technological underpinning for the development of e-textbooks, scholarly journals and other digital learning materials.

New Reading Experiences and Responsive Design on Various Devices



- Growing set of devices for eBooks:
  - diverse eBook readers, tablets, phones, PCs, TVs
- Web focus away from “closed” reading systems to a variety of devices for the same content
- Support reading on the go; transitioning between devices

Task Forces Address: Richer Content, Discovery, STEM Needs

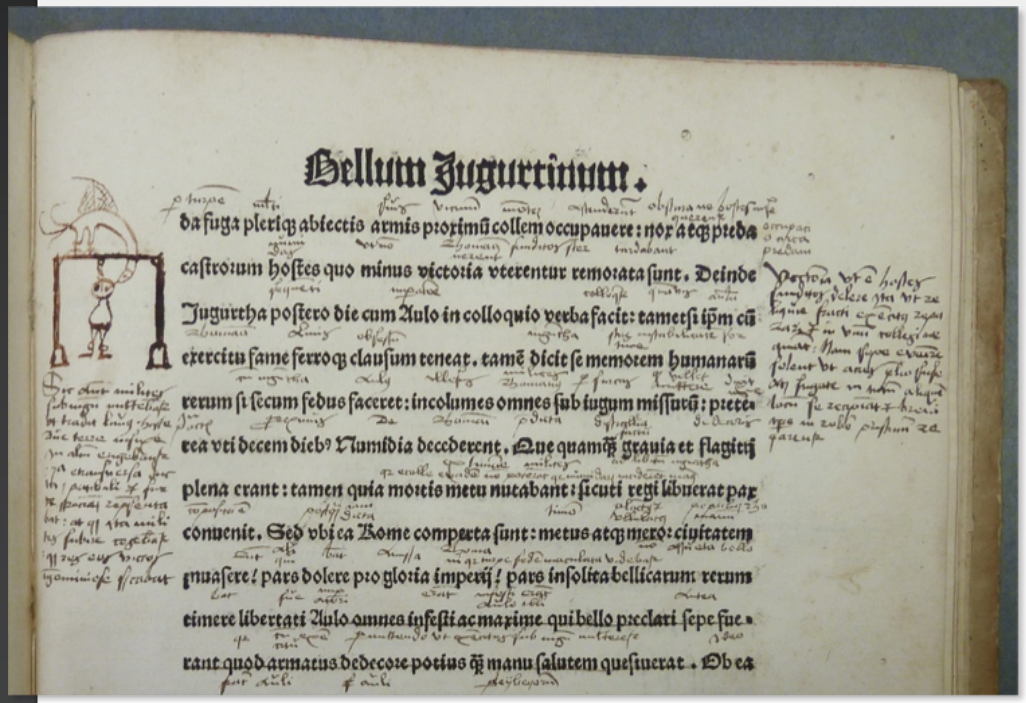
- Layout and Styling
- Content and Mark-up
- Metadata
- STEM
- Accessibility
- Annotations

http://www.w3.org/dpub/IG/wiki/Main_Page

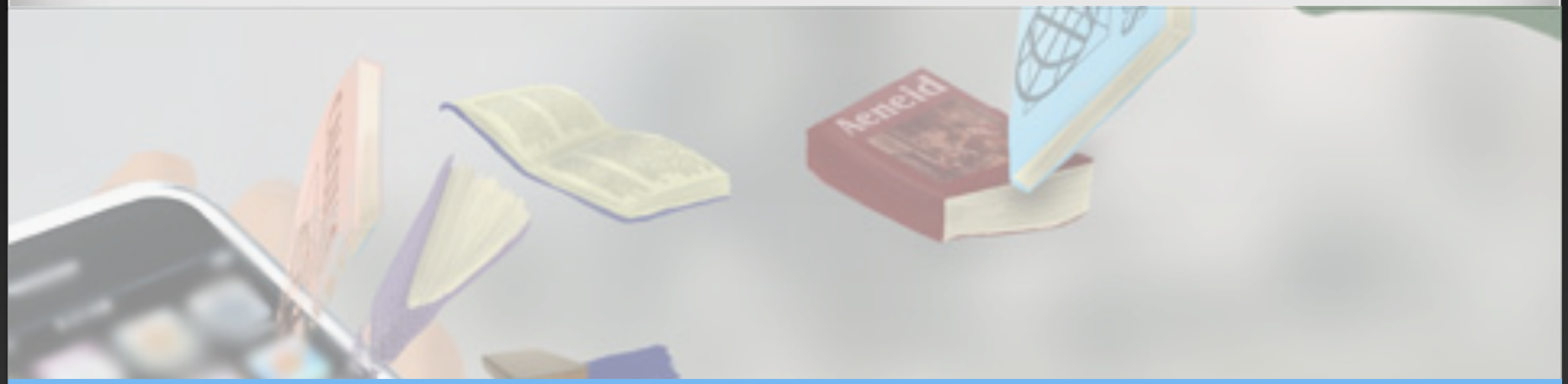
Accessibility

- Accessibility is **REQUIRED** for Educational Books and Libraries. This market is increasing in scope and need worldwide.
- W3C's **Web Accessibility Initiative** develops the guidelines widely regarded as the international standard for Web accessibility.
- The **DPUB IG Accessibility Task Force** will review the documents developed by the Web Accessibility Initiative from a publishing perspective, and provide additions and additional notes wherever appropriate.

Annotations: Individual, Social, Educational



- Annotations belong to the traditions of reading
- Annotations can be private; can also be shared among friends, colleagues, …
  - classroom usage in education
  - sharing notes among friends on a new publication
- Annotations can be text, drawings, different types of media



Update: W3C Annotations Standards Work

A Brief History of Web Annotation

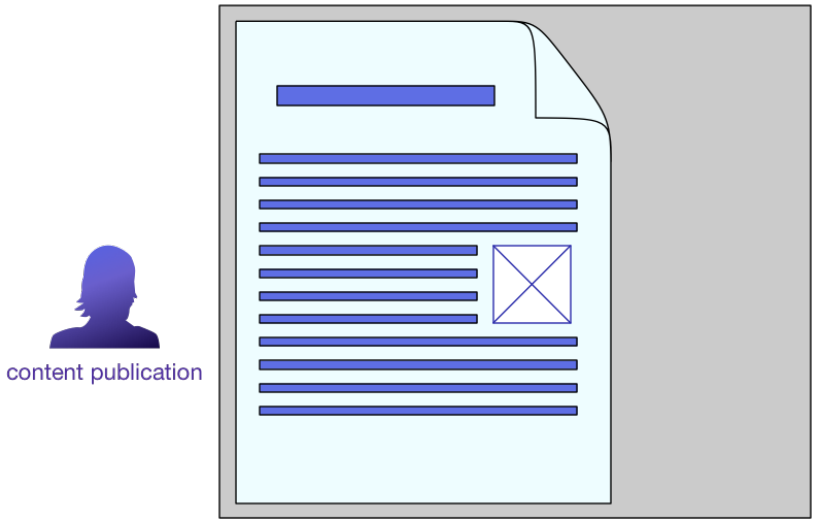
- **1993:** Andreesen adds & removes annotations from Mosaic
- **2001:** W3C Annotea protocol attempts to revive annotation
- **2009:** Google Sidewiki (discontinued 2011)
  Annotation Ontology & Open Annotation Collaboration
- **2011:** AO and OAC meet and create:
  W3C Open Annotation Community Group
  Currently 5th largest of 183 groups (140 participants)

Web Annotation

- **2012:** CG face to face (Boston, Chicago)
  2 drafts published
- **2013:** Dissemination events
  OA in EPUB work with IDPF
- **2014:** W3C Annotation Workshop
  Working group chartered in September

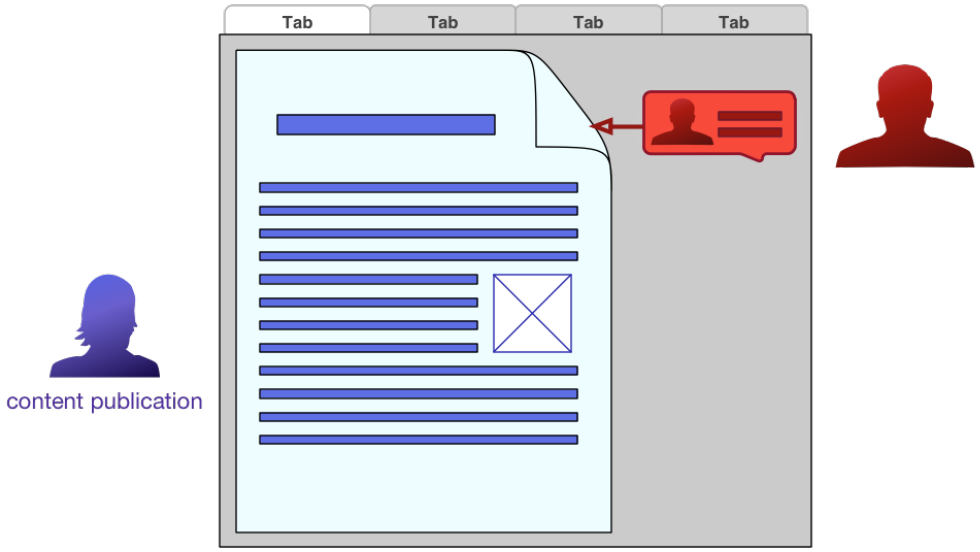
http://www.w3.org/annotation/

Web Annotation Ecosystem



hat tip: Doug Schepers;
http://www.w3.org/annotation/diagrams/annotation-architecture.svg

Web Annotation Ecosystem



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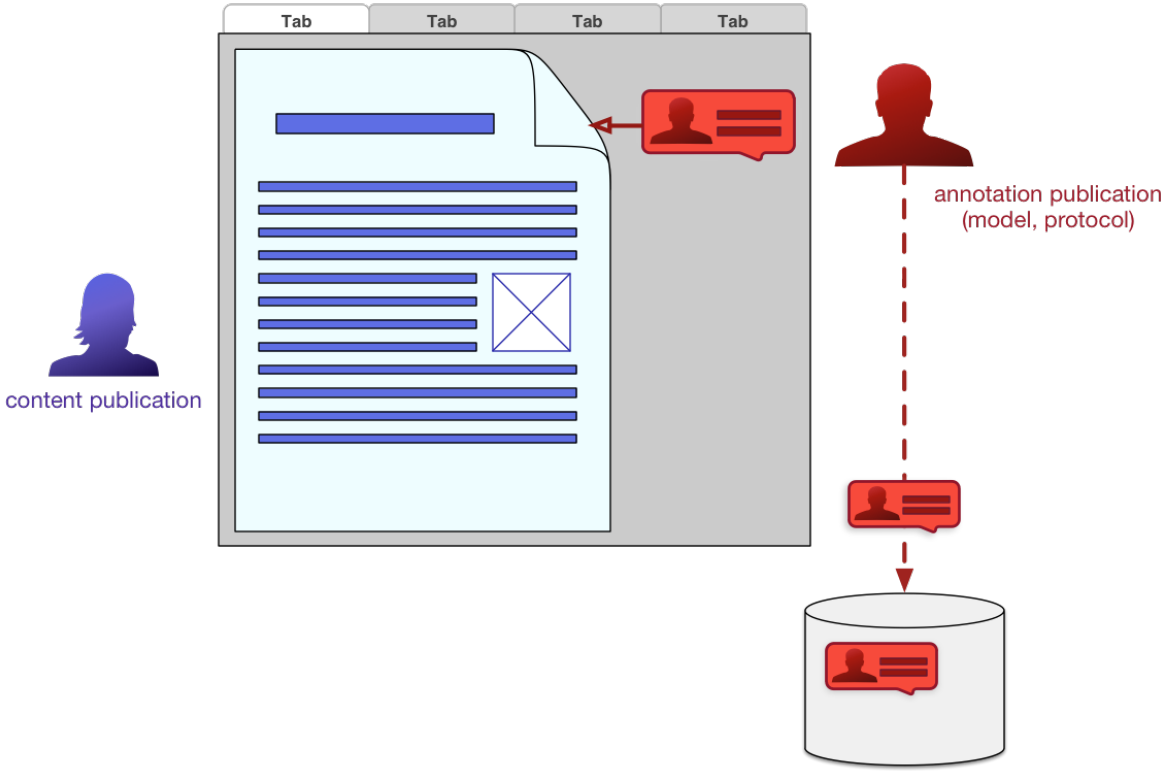

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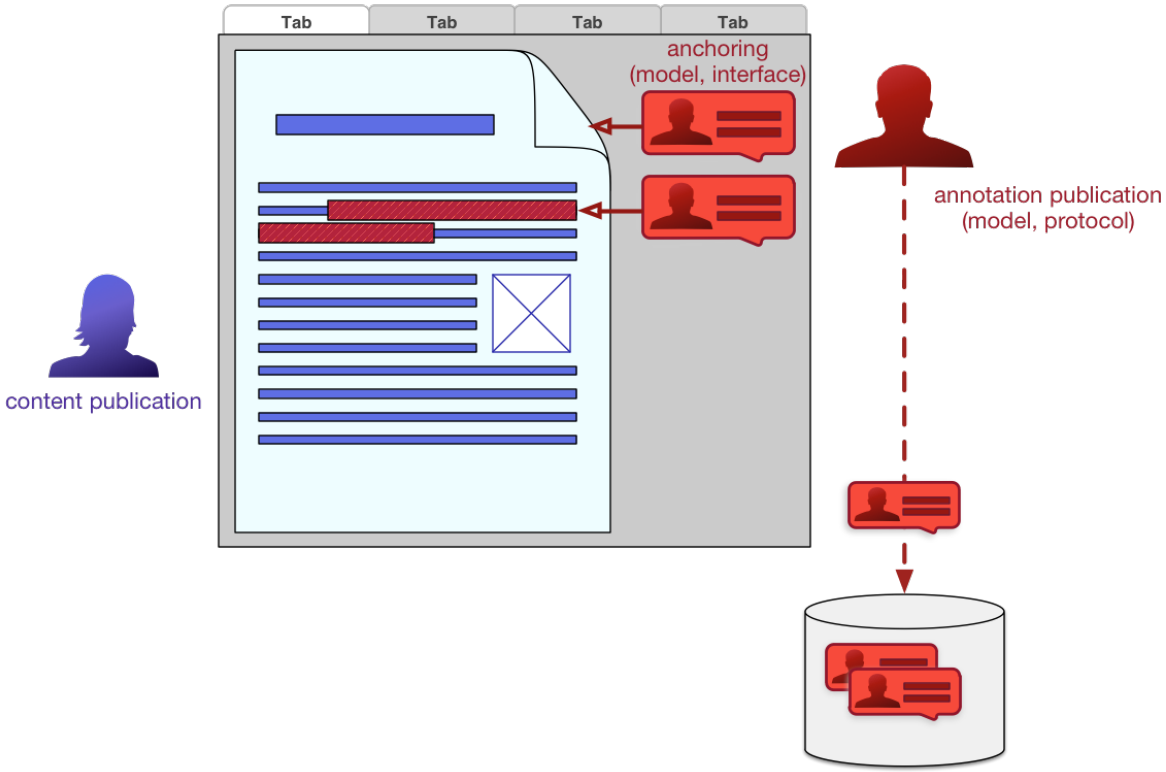

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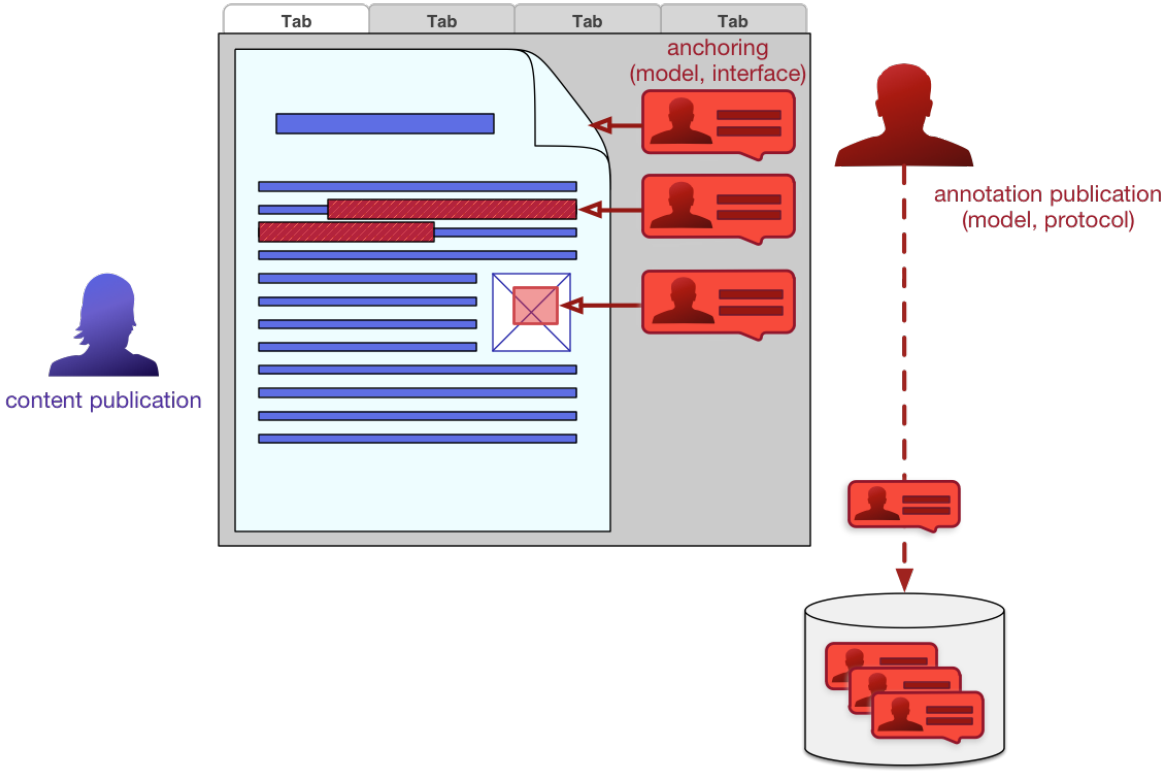

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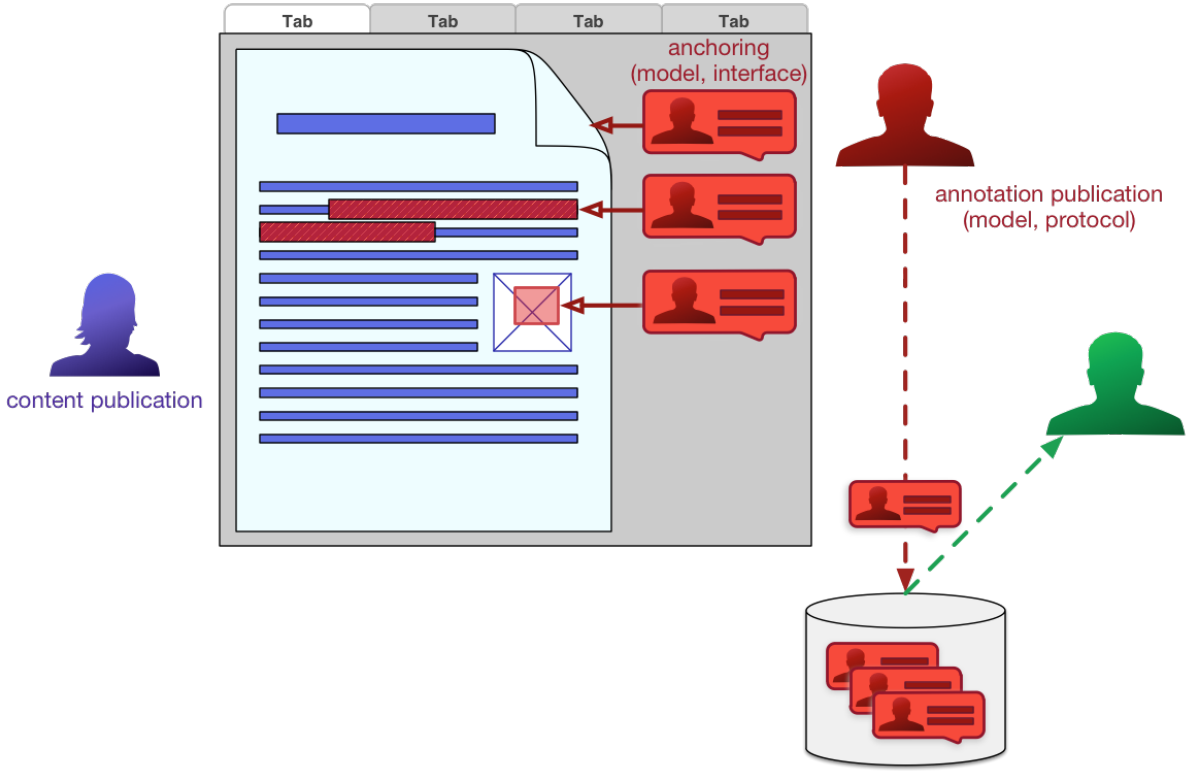

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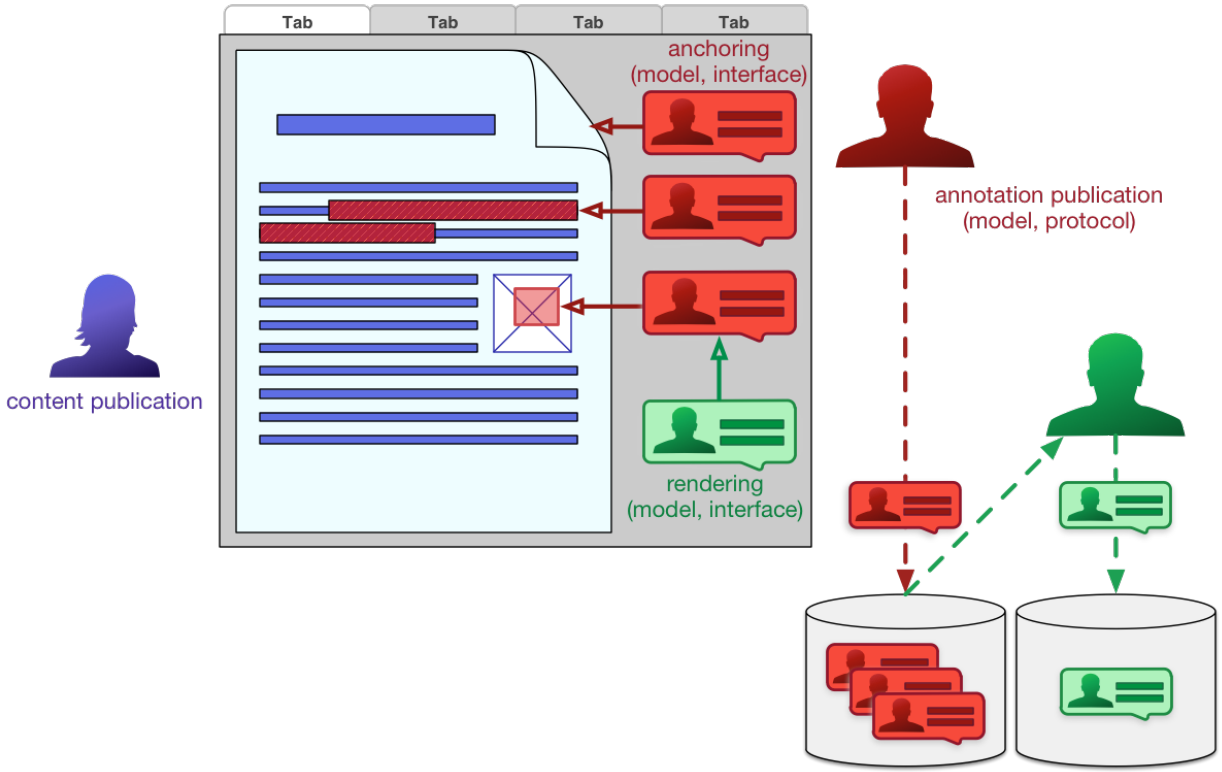

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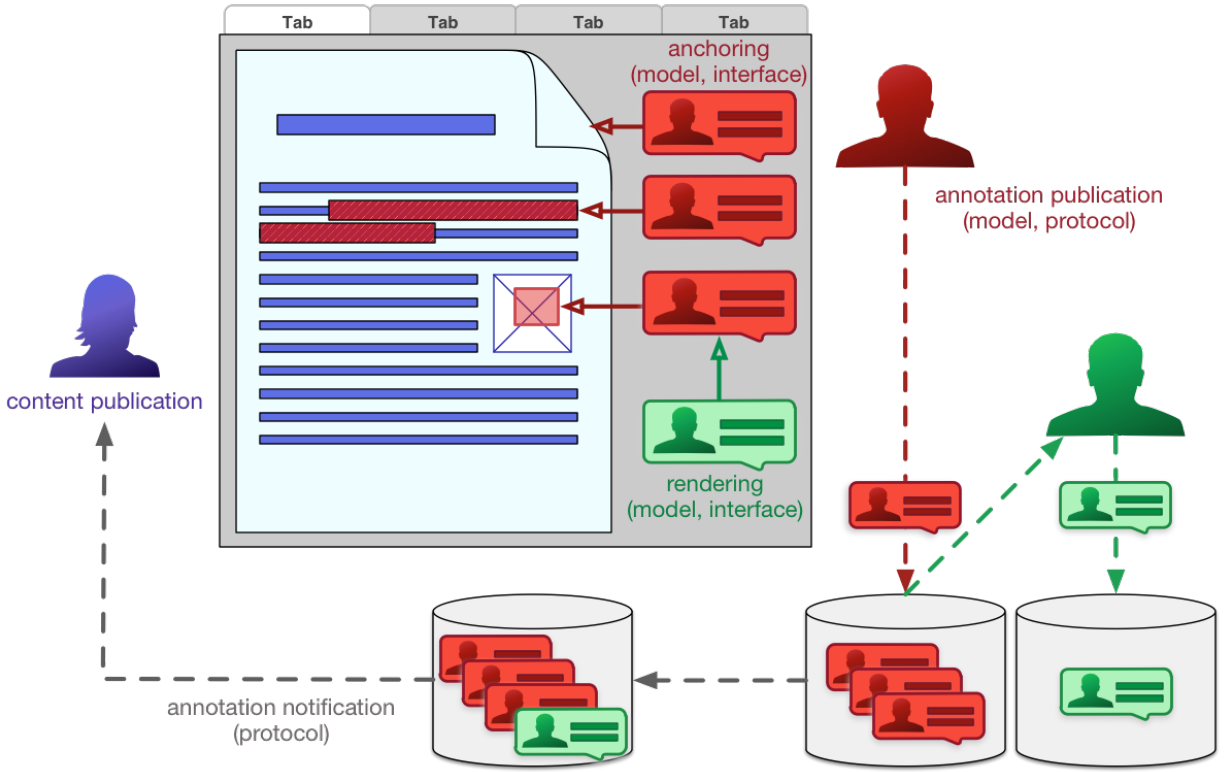
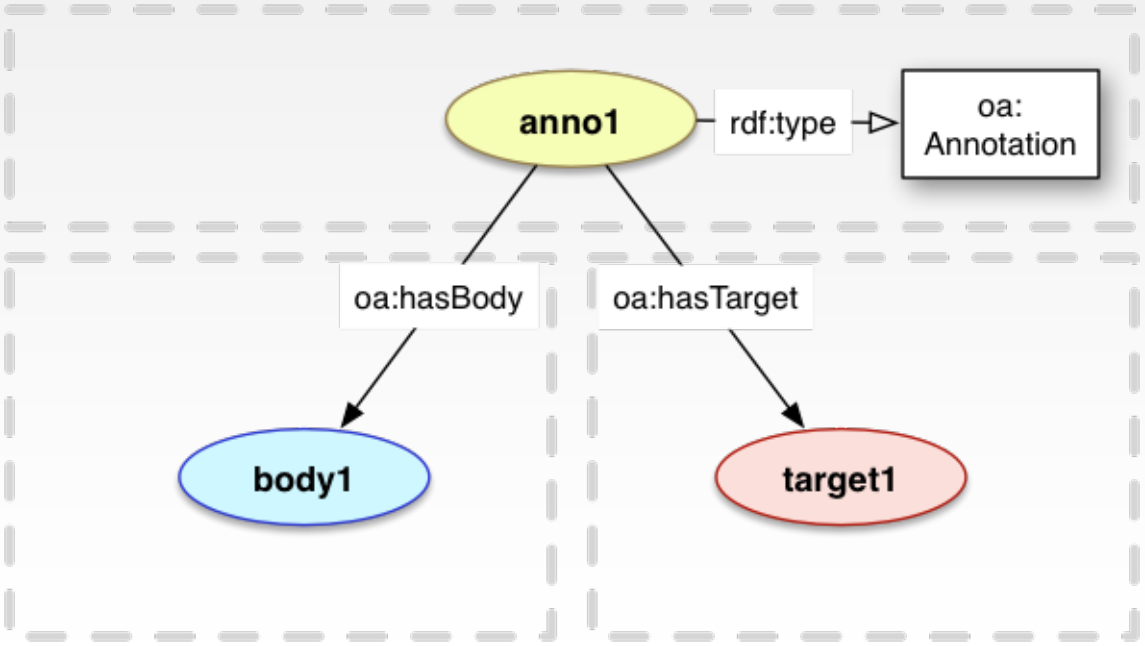


Web Annotation Working Group

- **Deliverables:**
  - **1-3.** Annotation Model, Vocabulary & Serialization
    Based on Open Annotation work
    First Public Working Draft expected 11 December
  - **4.** Transfer Protocol between systems
  - **5.** Browser Interfaces for required client functions
  - **6.** Robust anchoring model and interface

Progress from Community Draft

Model remains fundamentally the same



Progress from Community Draft

- **Progress from 18 months experience & new voices:**
  - Focus on JSON format, not RDF model
  - Allow on-ramp of simple string comments
  - Simplify tagging constructs
  - Simplify multiplicity constructs
  - Replace abandoned Content in RDF specification
  - Improve readability/understanding

Web Annotation Working Group

- **Who:** Co-Chair: Frederick Hirsch (Nokia)
  Co-Chair: Robert Sanderson (Stanford)
  Staff Contact: Ivan Herman (W3C)
  Staff Contact: Doug Schepers (W3C)
  Editor: Paolo Ciccarese (Harvard)

Plus further editors and leads to be added as required

Interaction with Other W3C Groups

- **Web Applications WG:**
  Robust Anchoring is joint deliverable
  Necessary to collaborate for client side interface spec
- **Social Web WG; Linked Data Platform WG:**
  Collaborations towards transfer protocol, search, notify, ...
- **Digital Publishing Interest Group, IDPF:**
  Identification & description of annotated Works

Ongoing Work

- Collect use cases, particularly for transport protocol and javascript browser interface
- Further work needed:
  - Collections of Annotations (model)
  - Annotation lifecycle (protocol)
  - Annotation discovery and notification (protocol)
  - Client/Content interaction patterns (interface)
  - Client/User interaction patterns (interface)

Working Mode

- **All work is done openly**
  - Mailing list is open to subscribe to: public-annotation@w3.org
  - All meetings (f2f & calls) are scribed and minutes published
  - Further documentation kept in the wiki: https://www.w3.org/annotation/wiki/Main_Page
  - **Please Participate!**

Summary:
Key Milestones for Digital Publishing at W3C

- **Annotations to First Public Working Draft this week!**
  Annotations use cases: http://www.w3.org/TR/dpub-annotation-uc/
- **Published reports:** Requirements for Latin Text Layout and Pagination and Annotation Use Cases: http://www.w3.org/TR/dpub-latinreq/
- **Face-to-Face meetings** with HTML5, CSS, Protocols and Formats Working Groups and International Interest Group at the W3C Technical Plenary, Oct. 2014 in Santa Clara, CA
- **EPUB/Web Vision White Paper in development:** http://w3c.github.io/epubweb/
  We welcome your comments, feedback and participation!
- **Contact:**

  Karen Myers: Karen@w3.org; @ConnectorKaren

  Rob Sanderson: azaroth@stanford.edu; @azaroth42

Thank you