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Convergence between digital publishing and learning technology – EDUPUB

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IMS GLOBAL Learning Consortium

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BISG BOOK INDUSTRY STUDY GROUP

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Why EDUPUB?

Publishers

Content

Too many format variants

Not enough feature support

Presentation

High development costs

Not enough content

eReaders

ALWAYS LEARNING

Benefits of next-generation learning content

The Publisher

- Achieve **economies-of-scale** in:
  - design
  - development
  - distribution
- Greater **sourcing flexibility**
- Enable **consistency of presentation** and **functionality**
- Ensure **highest quality** across **multiple platforms** and devices
- **Avoid overhead** from needless output variants
- Drive **product/service innovation**

Benefits of next-generation learning content

The Platform Provider

- Develop features and support based on a **known, consistent content format**
- **Increased volume** of educational content from publishers
- High quality products **expand markets** for eBooks and other learning content

Benefits of next-generation learning content

The Educator

- Content is easily:
  - **integrated with LMS** and other services:
    - assessments, outcomes
    - teacher-student, peer exchanges (annotations)
    - analytics
  - **trackable** through metadata-driven services to enable adaptive learning, efficacy reporting
  - **repurposed** by teachers
- Proprietary vendor solutions are avoided:
  - Content is **easily retrieved** from multiple sources
  - Content can be **seamlessly deployed** on multiple devices and platforms
- **Affordable**

Benefits of next-generation learning content

The Learner

- **Responsive** to the Learners:
  - learning style
  - personal preferences
  - ability/disability
- **Richer** learning experiences (rich media, interactivity)
- Adaptability and accessibility improving **learning outcomes**
- Faster subject mastery and increased retention
- **Flexible:** use in both classroom/off-campus and online/offline environments, on mobile devices and PCs
- **Affordable**

The Power of Open Standards

From VitalSource

- EPUB 3 has quickly taken over the top 25* book list
  - 9 months ago - no EPUB 3 books in top 25*
  - Today - 18 of top 25* books
  - More than 20,000 EPUB 3 titles in inventory
- Students respond with more page views and engagement
  - Responsive design allows flexible multi-device access
  - Rich media and interactivity > print under glass
- Publishers - large and small - can focus!

* By usage/page views

What is the EDUPUB Alliance?

- A global community for focused coordination of ongoing work among multiple standards organizations and their stakeholders (currently IDPF, IMS Global, W3C, BISG)

- Charged with creating a lightweight superstructure to help ensure that **existing** widely-adopted standards mesh and meet requirements of next-generation learning content

- **EDUPUB = Open Web Standards (inc. next-gen Portable Documents) + Educational Connectivity**

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The *EDUPUB* Deliverable

a comprehensive model for the interchange and deployment of educational content

based on the Open Web Platform

expressed as an integrated set of specifications including EPUB 3 (IDPF), LTI, QTI, Caliper (IMS) and other emerging standards

EPUB-centric Lens on EDUPUB

Equip EPUB 3 with everything needed for EDU content:

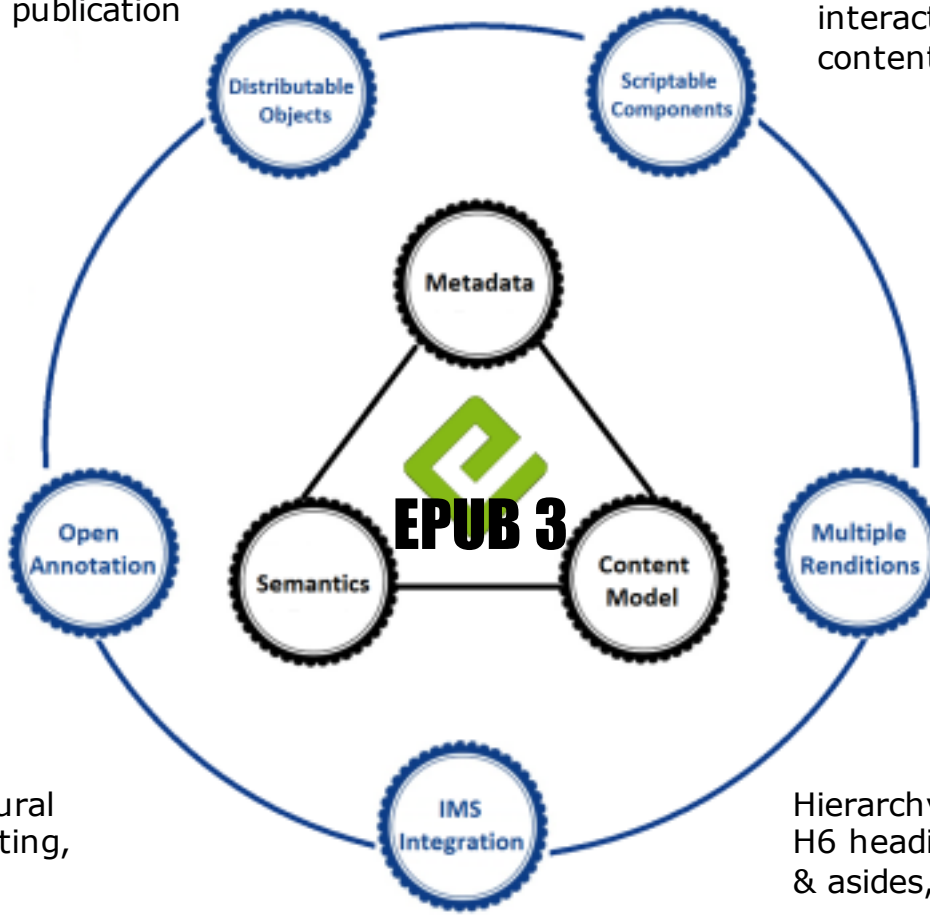
- Integrate existing IMS standards (QTI, LTI, Caliper)
- Deliver general EPUB capabilities needed for EDU (annotations, widget API, discrete entities)
- Develop EDU-semantic-enhanced profile of EPUB 3
- Facilitate rapid implementation (Readium open source)

EPUB adopters in general benefit:

- **EDU content pushes the envelope of required capabilities**
  - Interactivity
  - Connectivity
  - Complex information design
  - A11Y requirements

Encapsulation, transportation, and integration of publication components

Cross-platform interactivity in flowing content



Student/teacher, accessibility, audience, role, activity…

Shared annotation import & export; JSON & EPUB CFI

Focus on re-flowable & accessible; FL should be semantic, not image-based

Extended EPUB structural semantics: asides, testing, learning objectives

Hierarchy-linked TOC, H1-H6 headings, nested sections & asides, page-list nav

The LMS Side of the World

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Global Utility is Essential

IDPF motto: *a11y and i18n = non-negotiable*

Different regions/stakeholders have different needs:

- Learning paradigms/styles
- Layout and Styling requirements
  - Reflowable vs Fixed Layout
  - Horizontal vs Vertical Layout
- Broad LMS integration supported (but not required)

EDUPUB must embrace and support these variances

Modus Operandi

Workshops

- Boston, September 2013
- Salt Lake City, February 2014
- Oslo, June 2014
- Tokyo, September 2014
- Phoenix, February 2015
- Baltimore, February 2016 (tentative)

IDPF WG Meetings

- Subgroup of IDPF EPUB 3 WG
  - Weekly, 90 minutes

Additional Collaborations

- W3C DPIG
- BISG EDUPUB Work Group

Public Drafts Available (23 July 2015)

- EPUB 3 EDUPUB Profile Public Draft http://idpf.org/epub/profiles/edu/spec/
    - Community feedback is encouraged
- "Satellite Specs" referenced in EDUPUB Profile:
    - Open Annotation in EPUB http://idpf.org/epub/oa/
    - EPUB Distributable Objects http://idpf.org/epub/do/
    - EPUB Scriptable Components (Widgets) http://www.idpf.org/epub/sc/api/
        - Packaging spec http://www.idpf.org/epub/sc/pkg/
- And from IMS: Using Caliper Analytics, QTI and LTI with EPUB 3: EDUPUB Best Practices: http://www.imsglobal.org/caliper/index.html

Looking Ahead

EDUPUB in 2015-16

- Focus on Implementation and Certification
  - Level 1 Conformance
    - Content via epubcheck (v4.0 supports EDUPUB)
    - Reading Systems via EPUBTest
    - Learning Environment integration via IMS LTI test servers

- DAISY working on clear baseline requirements for Accessibility compliant EPUB 3 - intent is for EDUPUB to guarantee these requirements are met

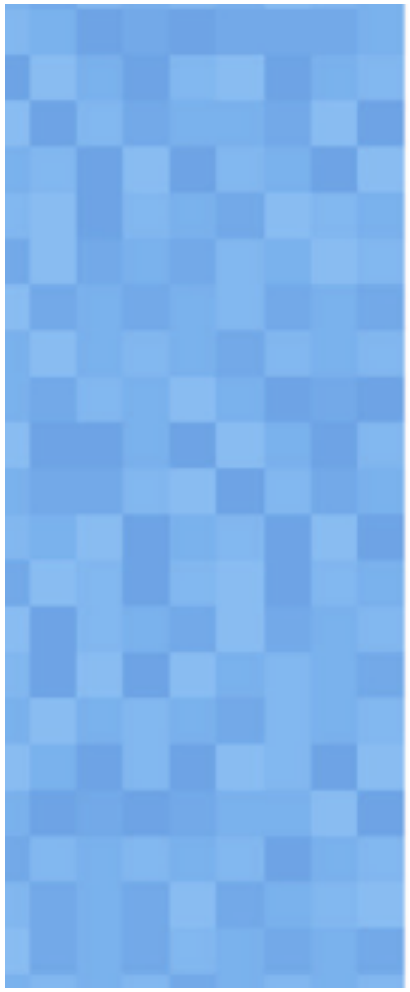
BISG: Getting Started with EDUPUB

Purpose

- Provide background on EDUPUB
  - The EDUPUB profile
  - The EDUPUB Alliance
  - EDUPUB's role in the educational ecosystem
- State the business case for EDUPUB
  - For Publishers, Platform Providers, Educators, Learners
- Help publishers begin implementing EDUPUB
  - Educational, trade and corporate
  - Provides links to specs, tools, other resources

Audience

- Publishing execs, authors/editors, production staff, production/sourcing managers
- Intended for general, non-technical audience



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Getting Started With EDUPUB

A guide for understanding the EDUPUB Profile of EPUB 3

July 2015

https://www.bisg.org/publications/getting-started-edupub

What's Needed

From Publishers

- Public support of EDUPUB Alliance goals
- Commitment to producing critical mass of rich, accessible edu content in a standard format

From Authoring Tools

- User-friendly tools that support structure while hiding complexity
- Easy output to valid industry standard formats like EDUPUB

From eReaders

- Support for **all** EPUB 3/EDUPUB requirements
  - Accessibility
  - Interactivity
  - Rich Media
  - MathML

Thank You

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