EPUB: The Next-Generation Digital Content Platform

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Bill McCoy
Executive Director IDPF
President, Readium Foundation

Agenda

- IDPF and Readium Foundation background

- EPUB Platform vision

- EPUB Platform status and roadmap

- Q&A

International Digital Publishing Forum
     the global trade association for digital publishing

     founded in 1999 (originally Open eBook Forum)

- 359 member organizations from 45 countries
  - 40% North America, 34% Asia, 21% Europe, 5% ROW

- Member organizations include publishers, service providers, e-retailers, reading system developers, libraries, educational institutions, government agencies, national and global industry bodies

IDPF Mission, Strategy, and Programs

- **Mission:** *foster global adoption of an open, accessible, interoperable digital publishing ecosystem*

- **Strategy:** develop (collaboratively) and promote EPUB as the universal accessible interchange and delivery format for digital publications based on the Open Web platform

- **Programs**
  - Standards development
  - Education, evangelism, community building, branding
  - Open source infrastructure instigation and development

Readium Foundation

- Created March 2013 as an independent nonprofit corporation
  - Mozilla / Apache / Eclipse / OpenStack model

- Readium Foundation mission: *develop production-level open source software to advance EPUB and the Open Web platform for publishing*

- Now over 50 members from around the world
  - Some key members: Hachette, Gallimard, Editis, Adobe, Google, Kobo, Ingram/VitalSource, HMH, Deutsche Telekom, IBM, NYPL, Bokbasen, Bluefire, TXTR, ACCESS, Sony, DAISY, Mantano, TXTR, Intel, Penguin Random House

Mobile Device Ubiquity Drives the Need for Native Digital Content

Open Web Platform

- The Open Web Platform is a comprehensive framework for rich, interactive, cross-platform content and applications.

- HTML5 is the cornerstone

- Separation of content and presentation is fundamental (CSS)

EPUB makes Web content into reliable publications

- Structured
- Navigable
- Accessible
- Metadata
- Packaged

EPUB Platform in a Nutshell

•The EPUB Platform is a set of open specifications, open source software, and industry collaborations that enable next-generation portable documents based on Web technologies that are

- •Accessible
- •Global-ready
- •Mobile-device optimized
- •Easily authored, manipulated, and interchanged
- •Integrated with HTML5 and other foundational building-blocks
- •Suitable for cloud and app-based consumption
- •Interoperable: not tied to a proprietary vendor solution

The EPUB Platform Has Many Elements

- EPUB **specification**
- EPUBCheck **content validator**
- EPUBTest **reading system test suite**
- Readium **rendering software**
- **DRM** mechanisms
- **Authoring tools and services** for content creators
- **Collection exposure and delivery** mechanisms (OPDS)
- And more…

EPUB and the Broader Open Web Platform Advance Via Cross-Organization Collaborations

EPUB Platform Status and Roadmap

- Overall state of the platform and near-term goals
- Specific initiatives
    - EPUBTest
    - EDUPUB
    - EPUB 3.1
    - Readium projects
    - Global IDPF/Readium support
- EPUB-WEB vision

Global Situation for eBook Formats

- EPUB has been universally adopted for ingestion of trade eBooks from publishers
  - PDF did not play a significant role in the scale-up of the trade eBook business
- EPUB 3 w/ HTML5 and fixed layout support now rapidly gaining adoption in eBooks
- EPUB 3 is driving expansion of EPUB adoption beyond trade publishing to address requirements for mobile device and accessibility support

EPUB 3 Global Adoption

- Reading System support for EPUB 3 rapidly increasing
  - Apple iBooks, Google Play Books, Kobo, Adobe, OverDrive, VitalSource, TXTR, Sony, Tokyo Shoseki, Shogakukan, ACCESS, Voyager Japan, Mantano, …

- EPUB 3 authoring tool options increasing
  - From high end (Adobe InDesign) to mass-market (Apple Pages, Ichitaro, Hangul WP)
  - Dozens of Publisher-focused workflow tools
  - Apple iBooks Author yesterday updated to support EPUB 3 export (v. 2.3)

- Japan, Taiwan, Korea have holistically adopted EPUB 3

- Major US/Euro publishers have moved to EPUB 3
  - Hachette, Elsevier, O'Reilly, ..

- EPUB 3.0 approved as an ISO Technical Specification (TS) via JTC/1 SC34

- DAISY has retargeted all tech development work from DTBook format to EPUB 3

Key Goals for 2015 and Beyond

- Finish upgrade of EPUB 2 Reading Systems and supply chains to EPUB 3

- Enable trade publishers to send one fixed-layout EPUB 3 to all channels globally

- Improve consistency of interactivity support in Reading Systems

- Enable delivering title-specific UX (e.g. custom navigation)

- Help eliminate authoring tool gaps

- Help publishers and stakeholders quantify achieved accessibility

- Expand EPUB Platform adoption into new segments of global publishing
    - Education, STM publishing, digital magazines, corporate publishing, …

EPUBTest

- Test suite, testing infrastructure, and reporting methodology to systematically report on compliance levels of EPUB support in reading systems

- Test suite primarily developed by IDPF, infrastructure supported by DAISY, reporting methodology by BISG

- **http://epubtest.org**

EDUPUB: EPUB 3 for delivering native-digital EDU content

- **Complete general EPUB capabilities needed for EDU**
  - Annotations, widget API, discrete entities, multiple renditions

- **Integrate key standards for LMS integration**
  - IMS QTI, LTI, and Caliper Analytics

- **Develop EDU-semantic-enhanced profile of EPUB 3 content**

- **Facilitate rapid implementation (via Readium open source)**

- **Other holistic initiatives to promote deep interoperability (certification, ...)**

- **Collaboration between IDPF, IMS Global, W3C, Readium.org, and BISG**

EDUPUB 2015 Status

- **Full EPUB 3.01 conformance as minimum content baseline**
  - Embedded Scriptable Components (ESCs) a MUST

- **IMS LTI 1.2 as minimum application integration baseline**

- **Enhance existing content and application conformance**
  - **EPUBCheck** (content conformance)
  - **EPUBTest** (app conformance, linkage to IMS certification results)

- **EDUPUB semantic profile, annotations, multiple renditions, Caliper analytics, QTI**
  - On track for completion/rollout but not 2015 "MUST"s

- **EPUBCheck, EPUBTest available with initial EDUPUB support**

- **For more information see http://idpf.org/edupub**

EPUB 3.1

- Next incremental revision of EPUB specifications
  - Starting now, to be completed by mid-2016
- Will integrate EDUPUB enhancements, other modular extensions (Indexes, Dictionaries)
- Aiming to better support other vertical markets (comics, magazines, sci/pro/scholarly, ad hoc corporate documents)
  - Interactive page transitions, customizable navigation, dig signatures
- Aiming to improve alignment with base Open Web Platform
  - HTML serialization
- EPUB 3.1 intended to be the baseline for EPUB ISO International Standard (IS)

- Link to draft charter: http://bit.ly/1FS67aG

- All IDPF members invited to participate in EPUB Working Group
  and all work activities are done is public
  (mailing list: https://groups.google.com/forum/#!forum/epub-working-group)

Readium Current Projects Status

- **Readium SDK**
  - Rendering engine for native mobile and device apps
  - 14 vendors already shipping apps based on Readium SDK
  - Adobe RMSDK now uses Readium SDK
- **Readium JS**
  - Rendering engine for cloud and browser-stack apps
  - Readium for Chrome – 460K active users
- **Readium DRM**
  - Lightweight DRM system
  - First supporting app recently shipped (Learning Ally)

Readium Projects Roadmap

- Near-term
  1. Readium SDK 1.x with more robust sample apps, improved conformance, a11y improvements, LCP DRM integration, etc.
  2. Finish Readium Cloud configuration of Readium JS
  3. Launch Readium DRM

- Rest of 2015
  1. Support EDUPUB capabilities in Readium JS and Readium SDK
  2. Add extensibility APIs to Readium SDK & Readium JS
  3. Begin additional projects TBD

Readium DRM Launch Elements

- Security analysis/enhancement
- Interoperability testing
- Robustness rules
- Key material provisioning
- IP policy
- Licensing program
- Project management
- Branding & Marketing
- Support

Scalable Model for New Readium Projects

- Stakeholders with interest in particular area propose to foster new project or sub-project, ideally with prototype / initial implementation already in progress

- Readium Foundation provides infrastructure and can receive earmarked financial contributions

  - Contributions can be used to hire consultants or provide specialized infrastructure

- Steering Committee of stakeholders guides the effort, reporting to Readium Board and members

Potential New Readium Projects

- Production-level mobile/desktop applications based on Readium SDK

- Authoring tool for EPUB 3 content

- Supporting OPDS (Open Publication Distribution System, an Atom-based protocol) within Readium Foundation

- EPUB Print-on-demand (POD) initiative

- EPUB Accessibility Checker initiative

Supporting IDPF/Readium Activities Globally

- To help increase awareness and accelerate adoption the IDPF and Readium Boards have agreed to seek to foster regional headquarters / R&D labs on a global basis
- We anticipate launching our first center in 2015, with IDPF and Readium Europe headquartered in Paris, France
  - A consortium of stakeholders including the French government Ministry of Culture, Ministry of Finance, French Publishers Association, and others are providing significant financial support to enable this
- We would like to start one or more Asian centers in the near future

EPUB-WEB: a Long-Term Vision of IDPF and W3C to Unify EPUB and the Web

- The next generation portable/packaged document format

EPUB-WEB

Package (for offline/archival use)

Same content used in different states

Un-package (for online use)

- Publishers gain access to all Web devices

- Users gain the capabilities of on-line
  just-in-time content (when connected)

- Web content creators gain enhanced formatting capabilities

- Features flow seamlessly between on-line and off-line

Benefits of Participation in Development of the EPUB Platform

- Accelerate technology development and adoption

- Faster innovation of products and services with a global reach

- Reduce R&D and production costs for each individual organization

- Maximize impact and benefits by participating rather than staying on the sidelines

Thank You!

http://epubzone.org

http://idpf.org

http://readium.org

Email: bmccoy@idpf.org

Twitter: @billmccoy