

Inclusive Reading Systems

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Readium Foundation (Readium.org)

- Created March 2013 as an independent nonprofit corporation
 - Mission to advance EPUB and the Open Web Platform for publishing by developing product-quality open source technology
 - Mozilla / Apache / OpenStack model for promoting open ecosystem via open source software
 - Not just free alternatives to commercial solutions, but **enabling** and **stimulating** commercial innovation with and by open source software
- 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, Feedbooks, Sony, DAISY, Mantano, TXTR, Intel, Penguin Random House



Readium – Current Projects

- **Readium SDK**
 - EPUB 3 rendering engine for native mobile and device apps
 - 14 vendors already shipping apps based on Readium SDK
- **Readium JS**
 - EPUB 3 rendering engine for cloud and browser-stack apps
 - Readium for Chrome - 300K users
- **Readium LCP**
 - Interoperable vendor-independent DRM system for EPUB
 - First LCP-based app recently shipped (Learning Ally)





Readium and Accessibility: The Big Picture

- **Principles**

- ***Enabling technology*** must enable & facilitate accessibility (Readium SDK)
- ***Consumer-facing solutions*** must deliver accessibility “out of the box” (Readium for Chrome, Readium Cloud)

- **Already delivering significant accessibility enablement**

- 4 of 7 most accessible EPUB solutions (DAISY press release April 14, 2015) are from Readium Foundation members

- **Key contributors collaborating to further raise the bar**

- DAISY, IBM, Learning Ally, Benetech



Readium Current Accessibility Features

- **Screen reader support**
 - JAWS, Apple VoiceOver, NVDA, Narrator, etc.
- **Voice feedback based on localised UI labels, navigation/interaction**
 - Facilitated by semantic HTML ARIA markup (roles of UI controls)
- **Keyboard-driven "mouse-free" navigation/interaction**
 - Single-key command shortcuts designed to work in conjunction with screen readers
- **Support for synchronised "read-aloud" audio narration**
 - EPUB 3 Media Overlays (aka DAISY "Digital Talking Book")
- **User control over formatting and display**
 - Font sizes, color, styles (e.g. day/night), scroll vs. paginated reading view, etc.
- **EPUB 3 Multiple Renditions support (experimental)**
 - Switch from reflow to/from fixed layout, w/ synchronisation



Readium Accessibility To-Do List

- **Page list support** (map to print edition pages)
- **Better handling of footnotes** (e.g. accessible popup)
- **Synthetic speech / TTS support via authored SSML and CSS3 Speech**
- **Out-of-line descriptions for diagrams, complex tables, etc.**
- **Further enhance text rendering options**
 - Text/line spacing controls, dyslexia font, colour-blindness mode
- **Improve touch-screen experience**
- **Make Readium Cloud more robust & deployable**
 - Any website can easily deploy any EPUB 3 file for online reading on any browser
- **Readium LCP DRM as accessibility enabler (esp. lending)**
- **OPDS as enabler for accessible content discovery and acquisition**
- **New project(s) for accessibility validation / preflight/content fix-up**
- **EDUPUB features (annotations, EDU semantic profile, ...)**