



# The Radium Open Source Initiative

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Radium Foundation

# Background

- Radium began as a proof of concept implementation of EPUB 3 in JavaScript packaged as a Chrome Extension
- While successful, it was clear there was a need for a native-optimized SDK for EPUB 3
- The IDPF and other stakeholders decided to foster an expanded Radium initiative to fill the need
- Radium Foundation was created in March 2013 as an independent nonprofit corporation
- Mission: to develop product-quality open source technology to advance EPUB and the Open Web platform for publishing
- Now over 40 members from around the world

# Radium Projects Overview

- **Radium SDK:** A largely native implementation (Obj-C, C++ or Java) with JavaScript where required or appropriate
- **RadiumJS:** An implementation completely in JavaScript
  - Browser-based and Chrome extension configurations
- **Radium LCP:** Open source lightweight DRM
- **Preflight & accessibility checking software:** In planning stages

# Platforms

## SDK

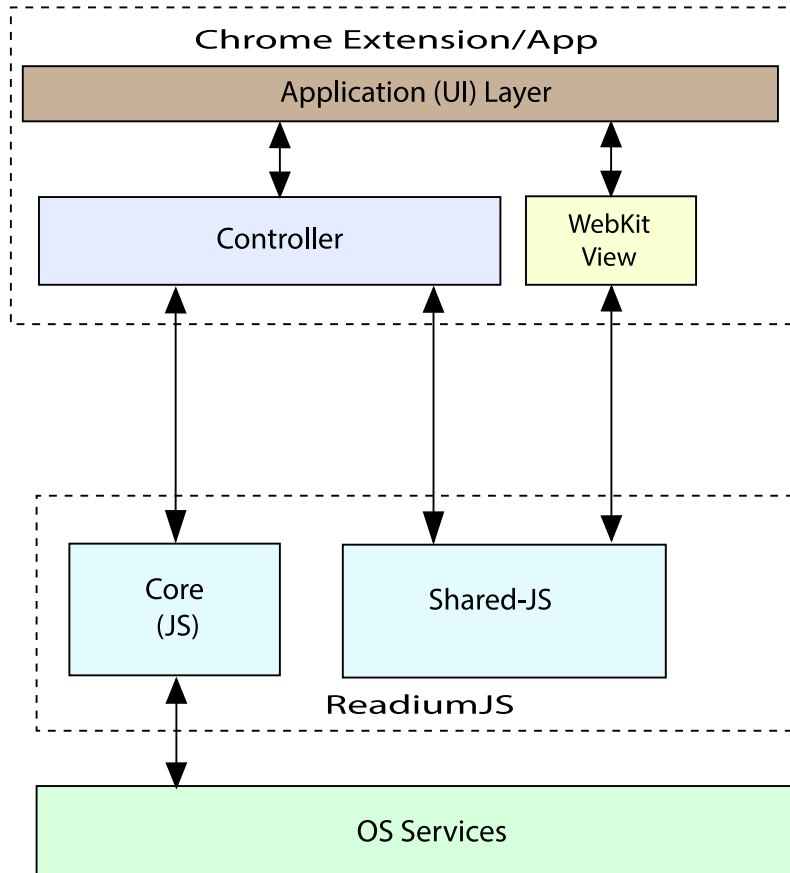
- iOS
  - Runtime: v. 6.x +
  - Tooling: XCode 5 +
- OSX
  - Runtime: v. 10.6 +
  - Tooling: XCode 5 +
- Android
  - WebKit: 4.x +
  - Runtime: 4.x +
  - Tooling: Android NDK/ADT 19+
- Windows Desktop
  - Runtime: Windows 7/8
  - Tooling: Visual Studio 13 +

## ReadiumJS

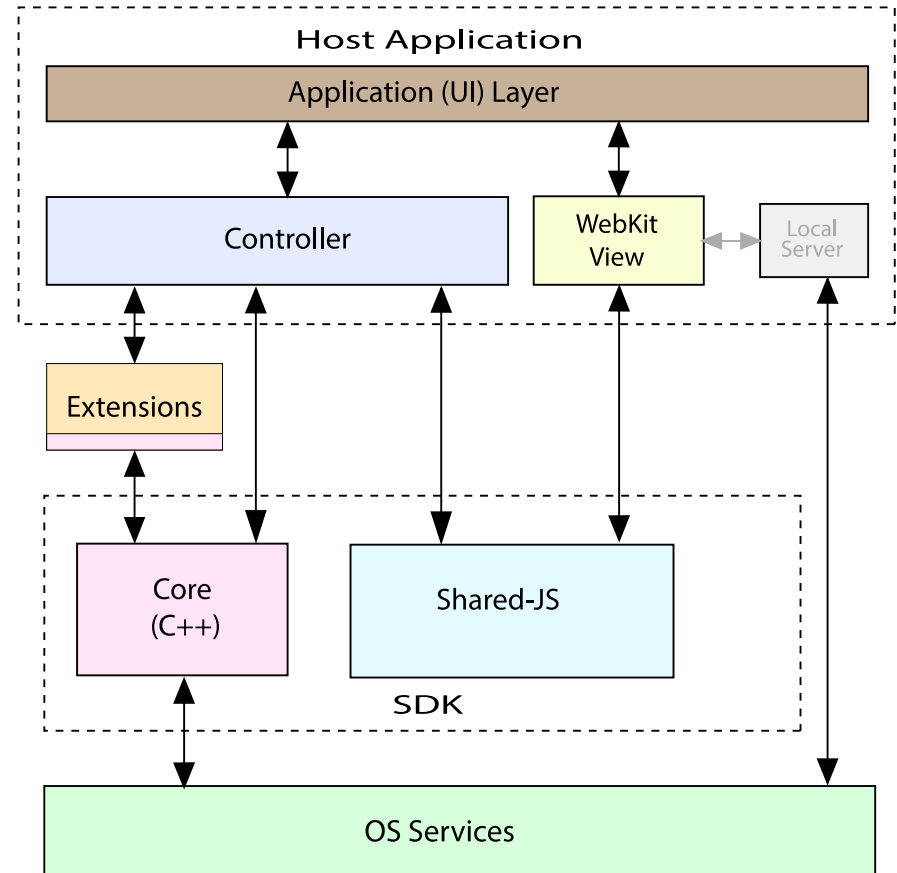
- Chrome Extension
  - Available [here](#) (or Google for *readium chrome*)
- Browser Support
  - Google Chrome
  - Safari
  - Firefox
  - Opera
- Platform Support
  - iOS
  - OSX
  - Windows
  - Android

# RadiumJS & RadiumSDK Architecture

## RadiumJS



## Radium SDK



# Logistics

- All JS code licensed under BSD-style license
- The Radium SDK core C++ library is made available under a dual license regime:
  - Publicly licensed under the GPL Affero license
  - Commercial-use-friendly Alternative License (which requires making a financial and/or development commitment to the Foundation)
- Source hosted on github (Radium) in multiple repositories
- Documentation and samples on github and Google code
- Website at [Radium.org](http://Radium.org)
- Backlog on Trello
- Build system based on Jenkins
- Test framework under development
- Bug reporting based on github Issue tracker and Bugzilla

# Development Methodology

- Agile approach
  - Product backlog (Trello)
  - Weekly “stand up” conference calls
- “Grooming” of backlog by consensus of stakeholders
  - Prioritization based on functional dependencies
- Currently operating in 3-week sprints

# Lessons and Challenges

- Scheduling is very difficult since resources:
  - Are not known with any certainty
  - Are intermittently available
  - Can't be coerced - at least not easily ☐
- *Key is flexibility and ability to juggle*
- No single product owner – prioritization is either arbitrary or by time-consuming consensus
- *Key is to mix consensus building where/when feasible and make arbitrary decisions when not. Often heavily constrained by resource availability*
- Huge span across globe poses difficulties in Language, Time, and/or Culture
- *Key is patience and a LOT of email but sometimes flexible scheduling and more patience – also building a stronger team culture*
- End-game problems – developers don't like fixing bugs. In normal environment they can be coerced, but in open source they often are pulled off for higher priority (internal) projects...
- *Key is firm pressure, cajoling and some whining ☐*
- A robust platform requires strategic coordination between specification development and implementation



# Useful Links

- Technical contact
  - [rkwright@readium.org](mailto:rkwright@readium.org)
- EPUB 3
  - <http://www.idpf.org/epub/30/spec/epub30-publications.html>
- Source on github
  - <https://github.com/readium/>
- Samples on Google code:
  - <http://code.google.com/p/epub-samples/w/list>
- EPUB Conformance Suite:
  - <https://github.com/mgylling/epub-testsuite>
- Trello-hosted backlogs
  - <https://trello.com/board/readium-sdk/509aaab662cd81b33e00954d>
  - <https://trello.com/b/mdx405yR/readiumjs>



# **Radium.org**

**February 2014**