ORB Update For The 10th HbbTV Symposium

Founded By

obs

OBS Background

Ocean Blue Software is the pioneer of open/shared source broadcast software

- Founding member of DTVKit (with Broadcom)
- Actively involved in Android / AndroidTV for 5+ years
- Working with RDK for 4 years on broadcast integration
- Providing HbbTV solutions since 2015 and developer of parts of the HbbTV Test Suite
- Creator of ORB (The Open Red Button Project).
- HbbTV Test Centre

- European Based (offices in Bristol UK & Athens Greece) and growing rapidly.

The Open Red Button Project

What Is ORB?

- Collaboratively developed by OBS and several large HbbTV members
- An HbbTV 2.0.3 browser solution leveraging the latest innovations in browser technology
- Majority implemented in JavaScript
- Facilitates the use of the default browser in the platform (Android WebView/RDK WPE)
- Royalty free with a route to full open source

The Benefits

- Faster
- Cheaper
- More Flexible
- More Secure

ORB integrated with Foxxum OS4 running on RDK

Technical Implementation

Cross Platform Reusable Core

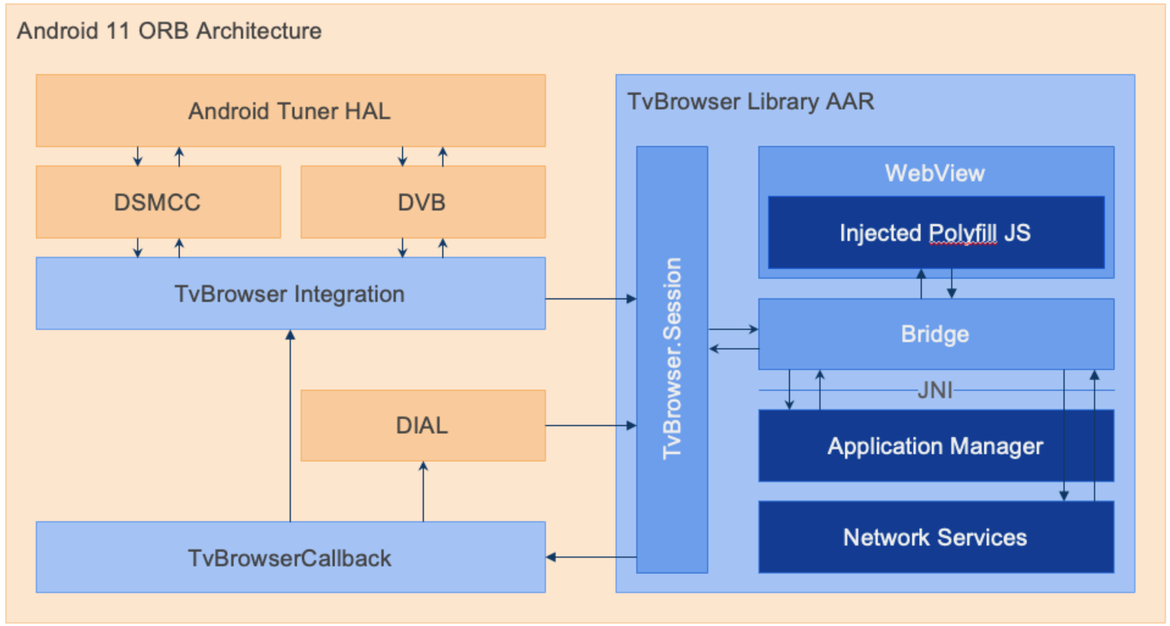
- Injected JavaScript polyfill extending the browser frame for HbbTV
- Default JavaScript behaviour overridden where needed
- HbbTV video object polyfilled to use the browsers native HTML5 Video object for a fast start – can easily be replaced
- Other features fully in JavaScript include TTML subtitle decoder
- Small number of reusable C++ components (Application manager, parts of media synchroniser)

Reference Integrations

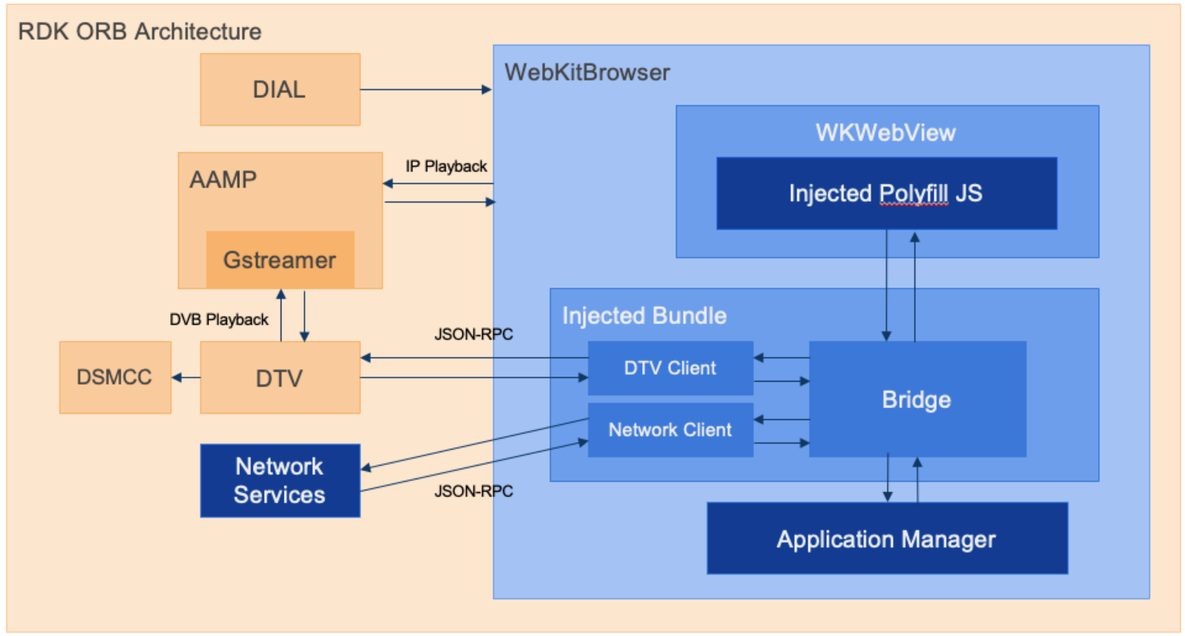
Reference Integrations

- Narrow integration interfaces for porting to platforms, browsers, DVB, DSM-CC, media players
- Android 12 and RDK reference integrations available
- Reference integrations use DTVKit components with binaries supplied

Android 11



RDK 4



Non ORB Platform / 3rd Party Components

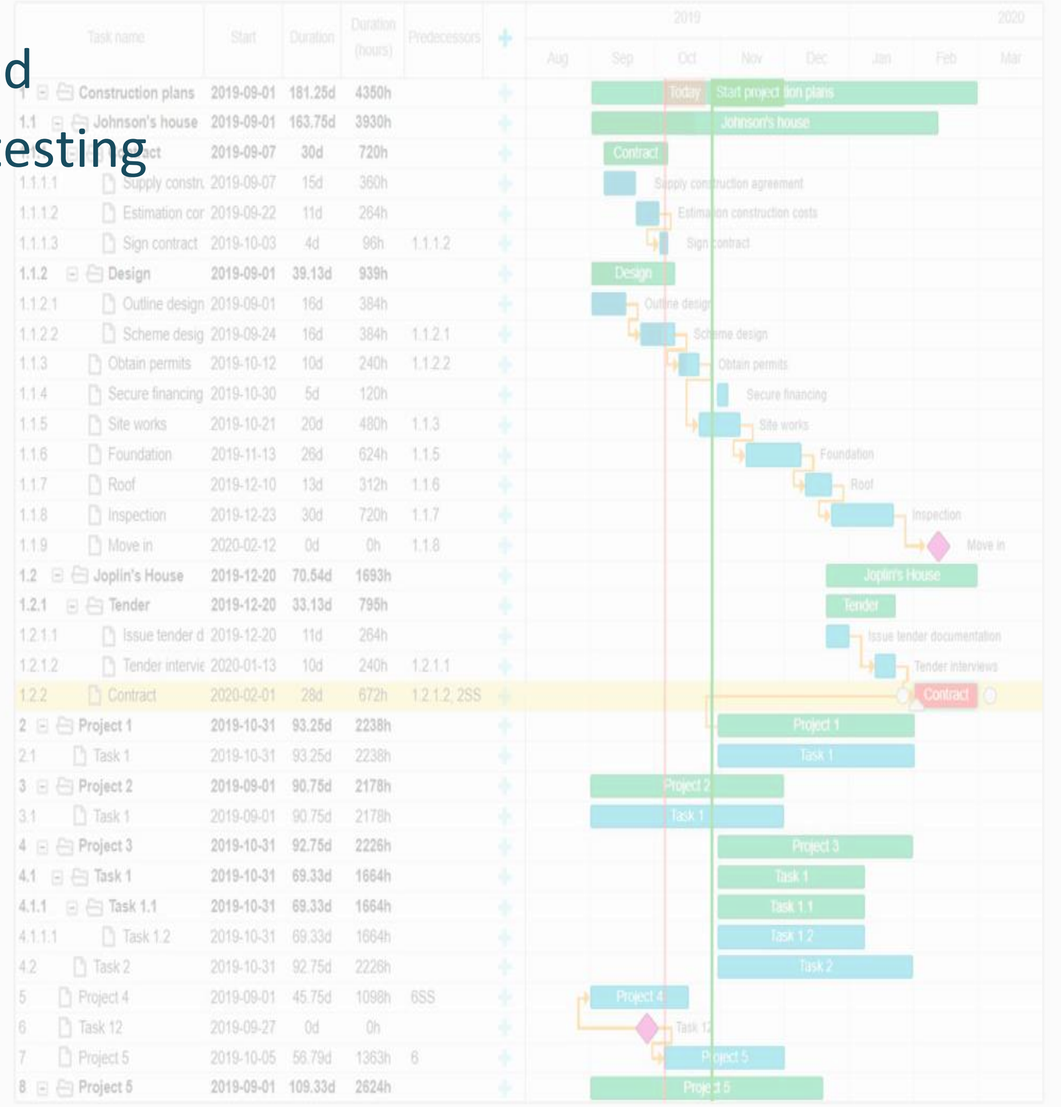
ORB Reference Integration Specific Components

ORB Reusable Core Componenets

Current Project Status

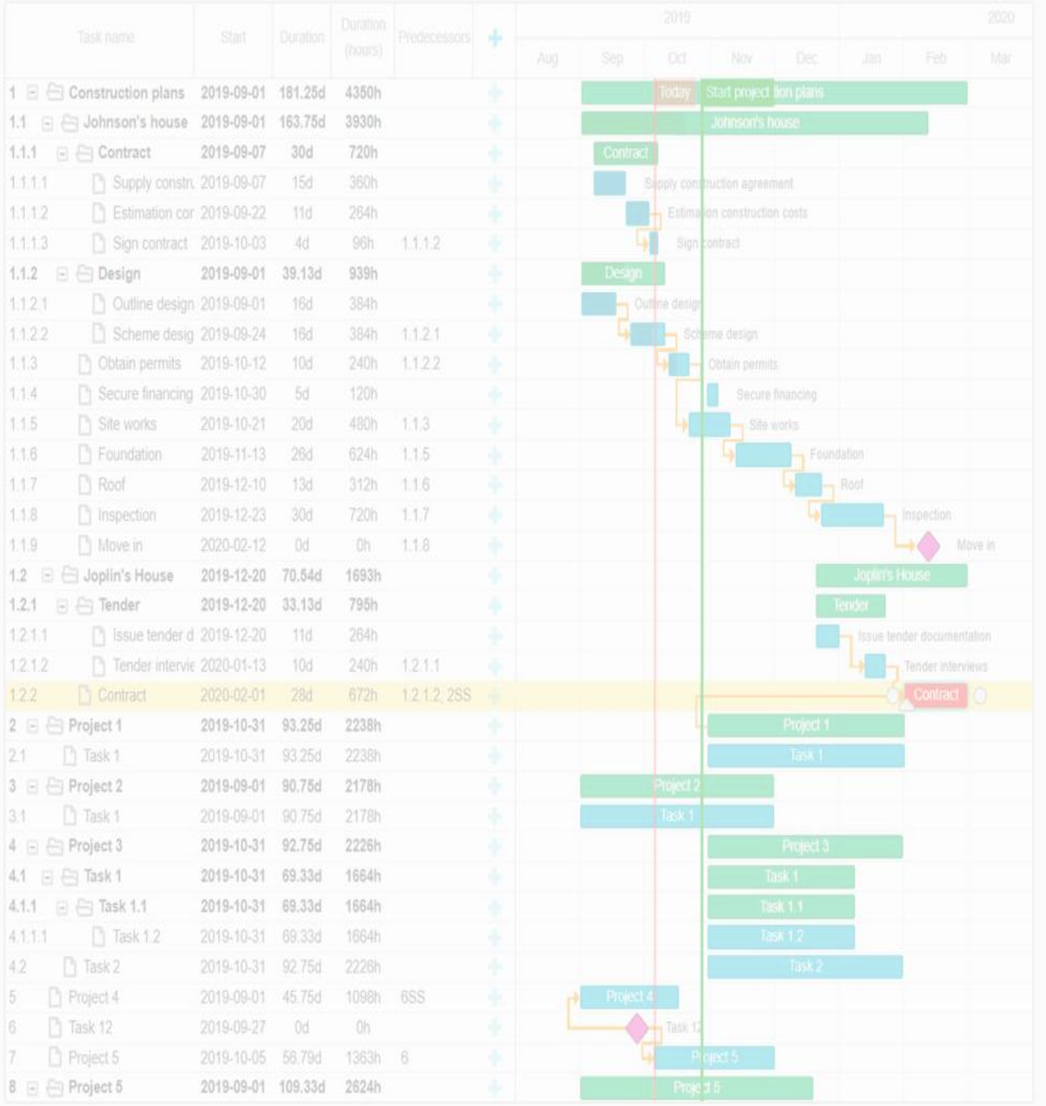
Status

- Android reference integration complete and fully tested
- RDK reference integration architecture revised and in testing
- Compliance level competitive with traditional licenced solutions
- Focus moved to design in projects
  - 2 TV projects based on Android
  - 2 TV projects based on RDK
  - 1 semiconductor reference design



Plans For 2023

- Launch 1st TV in market using ORB in Q1
- Further commercial launches in Q2 & Q3
- Maintenance of 2.0.3
- Innovation
  - OpApp
  - HbbTV 2.0.4
  - Targeted advertising
- Setting ORB free ….



Open Sourcing ORB

- The Open Reb Button will launch as an open source project on March 31st 2023
- https://github.com/OpenRedButtonProject
- Will include
  - source code for reusable components
  - Android reference integration
- Permissive Apache 2 licence
- Initially moderated by OBS engineers
- No fees or royalties

- RDK reference integration will be available via RDK Central in the same timeline.

- OBS will offer training, support, maintenance, testing and integration services

Visit our booth for more details and a demo

obs