SERAPHIC®

Sraf® HTML5 Browser HbbTV Edition

The industry leading ready-for-certification HbbTV solution based on Chromium/Blink Browser Technology

HbbTV Overview

Hybrid broadcast broadband TV (or "HbbTV") is a global initiative aimed at harmonizing the broadcast and broadband delivery of entertainment services to consumers through connected TVs, set-top boxes and multiscreen devices. By leveraging existing specifications from other standards including OIPF, CEA, DVB, MPEG-DASH and W3C, HbbTV is developed to improve the video user experience for consumers by enabling innovative, interactive services over broadcast and broadband networks.

Sraf HbbTV is the world leading HbbTV solution which is compliant with the latest HbbTV 2 specification. Built on Blinked based Sraf HTML5 Browser engine, Sraf HbbTV is a market-proven, platform-independent software solution that enables device manufactures, SoC vendors, middleware providers and operators to quickly launch or upgrade HbbTV capable devices and services with affordable cost.

Sraf HbbTV provides a flexible architecture to deliver high performance and rapid porting on various SoC platforms. Even more, it has been already pre-integrated with the major DTV/STB SoCs and can be used to develop products on turnkey solutions with zero porting and integration effort. Being an advanced hybrid platform, it not only delivers the latest HbbTV compliance but also supports a wide range of popular catch-up TV services and portal services.

Sraf HbbTV solution is ready for certification on reference platforms and compliant with the latest test suite from HbbTV Association with the industry leading Ligada Test framework.

Figure 1.   Das Erste powered by Sraf HTML5 Browser
Copyright Das Erste content: Das Erste

Figure 2.   ZDF mediathek powered by Sraf HTML5 Browser
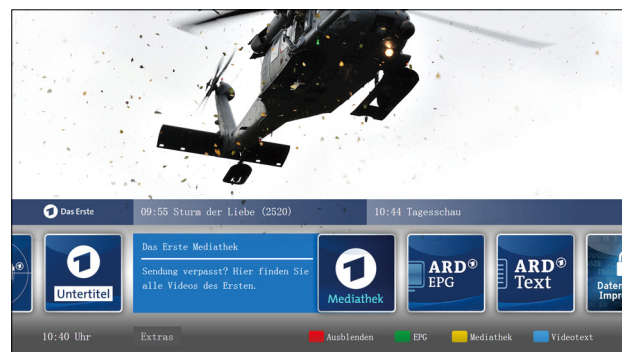Copyright ZDF content: ZDF mediathek

Figure 3.   Das Erste powered by Sraf HTML5 Browser
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Specification

Product Highlights
Fully functional HbbTV Application Manager
Application Management Integration APIs
for Broadcast Application (AIT), Broadcast
Independent Application, XML AIT, Key
Events, Teletext and etc.
CE-HTML Object Video Leverages Media-
Player Adaptor as HTML5
All Adaptors and Integration APIs are Based
on IPC to Avoid Additional Efforts

HbbTV 2 Highlights
Ad Insertion
Companion Screen
Clear key encryption
Encrypted Media Extension
Media Synchronization
TTML based Subtitle
Web Audio

Standard Compliance
ETSI TS 102 796 v1.1.1
ETSI TS 102 796 v1.2.1
ETSI TS 102 796 v1.3.1
ETSI TS 102 796 v1.4.1
CEA-2014-A
HbbTV JavaScript APIs as defined in OIPF
DAE v2.3

Browser Core Features
HTML5 (Canvas, Web Storage, Web
Components, WebRTC, Web Workers,
Web Socket, Audio/Video Tags, Server-
Sent Events, Web Cryptography API, Web
Animations, WebAudio, WebGL, etc.)
HTML4.01 (XHTML 1.1, XHTMLBasic 1.1,

XML 1.1, RSS feed, etc.)
CSS3 (3D Transforms, CSS3 Animations
& Transitions, CSS3 Media Queries and
Selectors,CSS3 Opacity, CSS3 Outline, CSS3
Background)
CSS1, CSS2.1
XHTML 1.1
Image support: GIF, JPEG, PNG, SVG
Extensions of CE-HTML profiling
New URI scheme dvb:// support
TLS 1.2

JavaScript Extensions
Application Management
Audio/Video Component
Audio/Video Control Object
Companion Screen
Capabilities
Configuration and Settings
Channel and Channel List
Download Manager
Download Trigger
DRM Agent
DSM-CC Contents Access
DSM-CC Stream Event Listener
Gateway Information
HTML5 Media Elements
Object Factory
Parental Rating and Parental Control
Programme
Metadata
Media Synchronization
Scheduled Recording
Search manager
Scheduled Content and Hybrid Tuner

TTML based Subtitle
Video Broadcast
Other HbbTV OIPF APIs

Supported CPUs
ARM
MIPS
x86

Resource Requirements
ROM: > 43MB (ARM Linux)
RAM: > 128MB

Documents
Sraf HTML5 Browser Integration Guide
Sraf HbbTV Adaptor API Specification
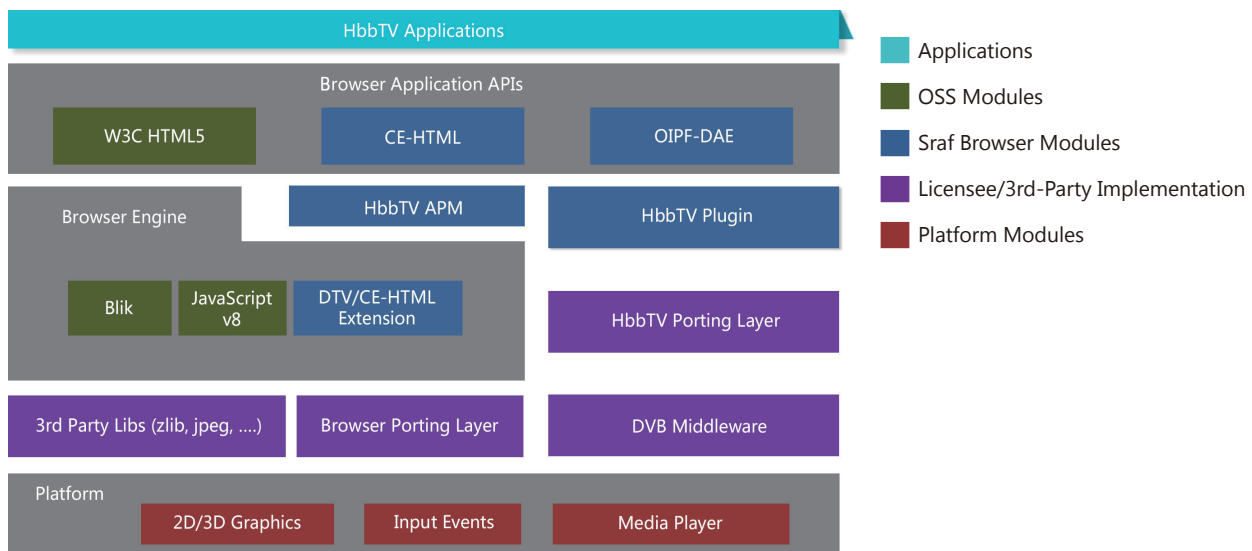Sraf HbbTV AMP Integration API Speci-
fication

Figure 4.   Sraf HTML5 Browser HbbTV Edition Module Diagram