



Web on TV Browsers and Applications



Line of Product Description

- **iWedia sees tomorrow's TV set not only as a multimedia hub within the home network but also as a means to access the best of the Web over the Internet**
- **From the comfort of their sofa, viewers will be able to use their remote control to enjoy the most popular online services whilst continuing to watch their favourite TV show**
- **Available services will range from information retrieval (news, weather forecast, stock exchange data and so on) and social networking through to video and audio on demand, photo sharing, a TV guide, and catch-up TV**
- **To fulfill the different requirements of the various stakeholders (including TV broadcasters, ISPs and CE manufacturers), broadband only, broadcast only as well as hybrid services shall be possible and the services must be either stand alone or bound to a channel (or an event)**

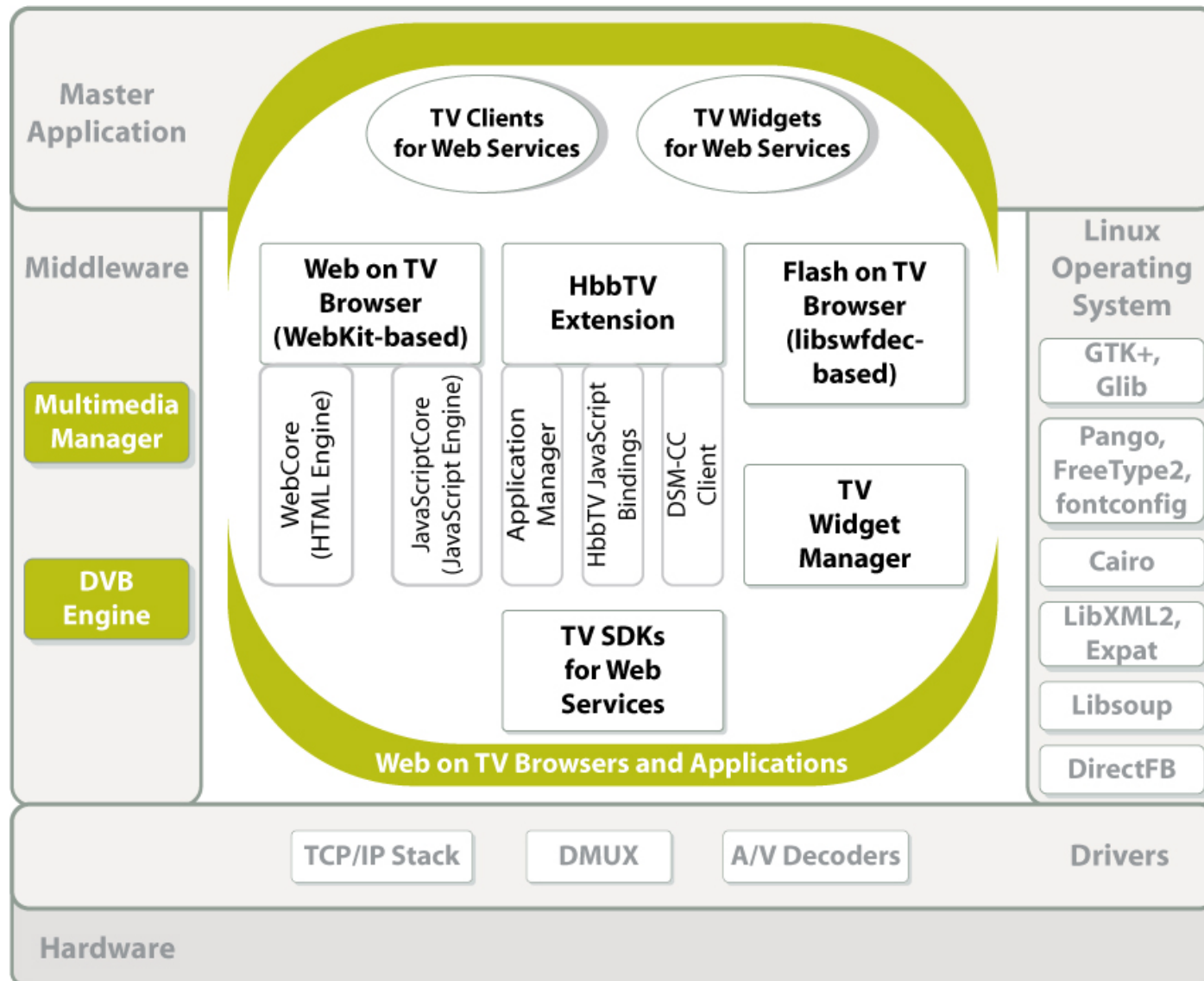
Web on TV Browsers and Applications Products



- A complete Web on TV browsing environment (HTML, JavaScript) based on customized open source software (WebKit, GTK+, DirectFB, etc.)
- That can be extended towards HbbTV compliance (application manager, JavaScript bindings, DSM-CC client, etc.)
- A Flash on TV browsing environment (including ActionScript support) based on customized open source software (libswfdec)
- A range of TV SDK for major Web services: Facebook, Twitter (social networking), etc.
- A collection of “native” TV clients for Web services: Skype (VoIP), Netflix, VUDU, CinemaNow, Yahoo! TV (VoD), etc.
- A TV widget manager and a suite of TV widgets: Flickr (photo sharing), blip.tv (VoD), vTuner (Internet radio), ZDF, WDR (broadcaster), etc.



Web on TV Browsers and Applications Architecture



Web on TV Browsers and Applications

Web on TV Browser (1/2)



- **WebKit-based, full featured embedded browser for TV**
- **WebKit is made of WebCore (HTML browser) and JavaScriptCore (JavaScript engine); it is used by popular browsers (Apple Safari, Google Chrome, etc.), especially for mobile handsets**
- **The browser gives support to the following Web technologies**
 - **HTML 4.01, XHTML 1.1, DHTML**
 - **ECMAScript 3**
 - **CSS 3 (partial), CSS 2.1**
 - **DOM 3 (partial), DOM 2, DOM 1**
 - **XMLHttpRequest (AJAX)**
 - **I-Frames**
 - **XPath**
 - **Plug-in API: Netscape NP API**
 - **Image support: GIF, JPEG, PNG**
 - **Transport: http 1.1, https (based on OpenSSL support)**
 - **Navigation: through remote control or pointing device**



- **The browser relies on the following support libraries**
 - **DirectFB as the graphic back end**
 - **GTK+, Glib for window management**
 - **Cairo for 2D drawing**
 - **Pango, Freetype2, fontconfig for text layout and rendering**
 - **Libsoup for HTTP**
 - **LibXML2 and Expat for XML parsing**
- **It is optimized for embedded, resources-constrained devices especially with respect to its memory footprint**



- The HbbTV browser extends the Web on TV browser to give support to HbbTV
- It is compliant with the “base level” capabilities set defined in ETSI TS 102 796 V1.1.1 (“Hybrid Broadcast Broadband TV” technical specification)
- It is composed of
 - The bindings towards a DVB engine through the Netscape plug-in API of the HbbTV JavaScript APIs: applications management, configuration and setting, parental rating and parental control, scheduled content and hybrid tuner (incl. the video/broadcast embedded object), media playback, etc.
 - An application manager which handles DVB signaling for application detection (PMT, AIT, AIT XML parsing), and manages HbbTV applications lifecycle
 - A DSM-CC client which handles carousels for downloading of HbbTV applications and acquisition of DSM-CC stream events



- **Embedded Flash browser for TV based on customized open source software (libswfdec)**
- **May be used as a plug-in of the Web on TV browser through the Netscape plug-in API**
- **The browser gives support to Adobe Flash Lite V3 (Flash Player 8, ActionScript 2)**
- **The browser relies on the following support libraries**
 - **DirectFB as the graphic back end**
 - **GTK+, Glib for window management**
 - **Cairo for 2D drawing**
 - **Pango, Freetype2, fontconfig for text layout and rendering**
 - **Libsoup for HTTP**
- **It is optimized for embedded, resources-constrained devices especially with respect to its memory footprint**



- A collection of “native” TV clients that give access to major Web services from TV
- They have been developed
 - On top of in-house made SDKs: Facebook and Twitter (social networking)
 - On top of SDKs or on the basis of specifications made available by service provider: Skype (VoIP), Netflix, VUDU, CinemaNow, Yahoo! (VoD), etc.
- User Interface (UI) may be Web- or Flash-based



- The TV widget manager provides an execution environment for TV widgets
- It allows to launch and decode TV widgets as well as to control their execution
- TV widgets may be Web- or Flash-based
- Several TV widgets may run simultaneously
- A suite of TV widgets is available to give access to major Web services from TV: Flickr (photo sharing), blip.tv (VoD), vTuner (Internet radio), ZDF, WDR (broadcaster), etc.



- **Delivering a training and getting started session to Customer team**
- **Handling the integration (partial or complete) of the Web on TV components on Customer platform in the course of a fixed price program to be quoted**
- **Providing technical support to Customer during its Web on TV integration project on a time and material basis**
- **Using the HbbTV Test Suite, handling at iWedia's labs the HbbTV pre certification of Customer device, in the course of a fixed price program to be quoted**
- **Providing technical support to Customer during its HbbTV certification process on a time and material basis**

- **Reducing risks by leveraging state of the art Web on TV software components which are robust, reliable, and deployed**
- **Accelerating time-to-market by integrating off-the-shelf Web on TV software components with efficient porting, integration, and validation tools and processes**
- **Preparing for the future by relying on the Web on TV offering of a software publisher committed to ensuring its solutions remain at the state of the art and to guaranteeing interoperability with the various (existing and to be released) Web services and HbbTV applications**
- **Minimising the Web on TV learning curve by sharing iWedia expertise in the field of IP-connected Consumer Electronics devices**
- **Managing the Web on TV integration project thanks to access to “à la carte” iWedia professional services**



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of Software Solutions for TV**