Third-party Web UI and Application Framework

The innovative HTML5 based Internet TV solution for the global smart DTV and STB market

Third-party Web UI and Application Framework Overview

Nowadays, TV/STB device manufacturers are facing the constantly increasing competition as more and more coessential products prevail in the consumer electronics industry. The mainstream TV solutions of SoC vendors are mostly based on native UI engines. The manufacturers find that it takes a huge effort to develop feature-rich TV applications and it is hard to implement a unique user experience, crucial for those who intend to provide brand-specific products on the market. The giant TV manufacturers, such as Samsung, LG and etc., have been aware of this years ago and launched their own web based TV systems, like Tizen, webOS. However, other manufacturers are also eager to catch up the industry trend and leverage the power of web based engine to their TV products.

SERAPHIC, the leading digital TV browser technology provider, develops Sraf HTML5 Browser based on Chromium/Blink engine to support Freeview Play, HbbTV, YouTube TV, TV Portal, Premium Web App, Open Browser and etc. Third-party Web UI and Application Framework is the web based Internet TV solution, targeting at providing manufacturers with highly flexible, manageable, and operational web based Internet TV platform and enabling manufacturers to develop competitive TV products by leveraging SERAPHIC's mature smart TV solutions.

Third-party Web UI and Application Framework provides common HTML5 and configurable HbbTV 1.5/2 application environment to support global OTT services. It breaks the wall between the native TV applications and web based applications, which allows both kinds of applications to be laid out onto the same menu page and launched instantly. By adopting the advantage of the widely deployed Sraf TV Portal product, Third-party Web UI and Application Framework provides rich application and program management functions that can easily adapt to mainstream global OTT content integrators.

Third-party Web UI and Application Framework has TV API to support global TV standards from Tuner, analog input (CVBS/SCART/Component/VGA), digital input (HDMI, MHL), mass storage input and etc. It also includes the native application management functions that allow web-based TV application to control the whole lifecycle of all types of applications on the hybrid Internet TV platform.

Third-party Web UI and Application Framework provides the innovative style management feature, enabling end users to update their favorable skin/theme on TV devices. Style store server solution and style manager on TV devices are important components to help manufacturers deploy this key feature within shorten time.

Third-party Web UI and Application Framework has Uniform Operation API which allows manufacturers to develop value-added services into TV products, e.g. functionality usage statistic, advertisement, program recommendations, device maintenance and etc. The Third-party Web UI and Application Framework based smart TVs become a kind of platform that brings long-term benefits after sold. The scalable Uniform Operation API is designed to cover the above requirements as the reference solution in Third-party Web UI and Application Framework. What is more, Third-party Web UI and Application Framework does not limit manufacturers to integrate their own services or totally remove the entire Uniform Operation API.

Third-party Web UI and Application Framework provides many kinds of platform APIs which allow applications to control TV/STB functions or TV devices. To avoid malicious control, referring to the industry standards, e.g. HbbTV, Freeview Play and etc., Third-party Web UI and Application Framework creatively designs a system to control application access right, which helps to import open web contents in a very convenient way.

Third-party Web UI and Application Framework also provides OTA, smart input and other accessory functions to build the full feature web based Internet TV products.

Figure 1. TV launcher powered by Third-party Web UI and Application Framework

Figure 2. TV menu powered by Third-party Web UI and Application Framework

Figure 3. TV menu powered by Third-party Web UI and Application Framework

Specification

Product Highlights

Compliant with the global DTV standards, e.g. DVB, ATSC, ISDB and etc
Compliant with the latest W3C standards
Flexible mechanism to support global OTT services
Unique application authorization policy to adopt open web contents
Uniform operation API to support customization requirements from manufacturers
Innovative Style management to enable devices to update skin/theme by end users after product launch
Web based Internet TV platform to support all SERAPHIC products, Freeview Play, HbbTV, Youtube TV, TV Portal, Premium Web App, OpenBrowser and etc.

HTML5 Browser Core Features

HTML5 (Canvas 2D/3D, Web Storage, Web Components, WebRTC, Web Workers, Web Socket, Audio/Video Tags, Server-Sent Events, Web Cryptography API, Web Animations, Web Audio, WebGL, Application Cache and 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)
CSS2.1, CSS1
Image support: GIF, JPEG, PNG, SVG
Smooth Streaming, HLS, DVB DASH
HTTP Caching, Redirect, Cookies, User-Agent
TLS 1.2

Supported CPUs

ARM
MIPS

Memory Requirements

ROM: > 12MB (ARM Linux)
RAM: > 128MB

Documents

Sraf HTML5 Browser Integration Guide

Sraf MediaPlayer Adaptor API Specification

Third-party Web UI and Application Frameworke Adaptor API Specification

Third-party Web UI and Application Frameworke TV API Specification

Third-party Web UI and Application Frameworke Smart Application API Specification

Third-party Web UI and Application Frameworke Style Management Specification

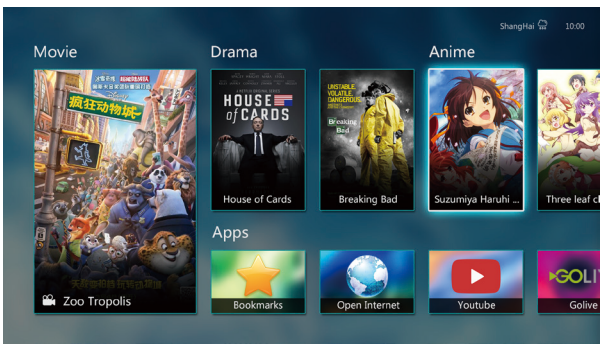

Figure 4. TV launcher powered by Third-party Web UI and Application Framework

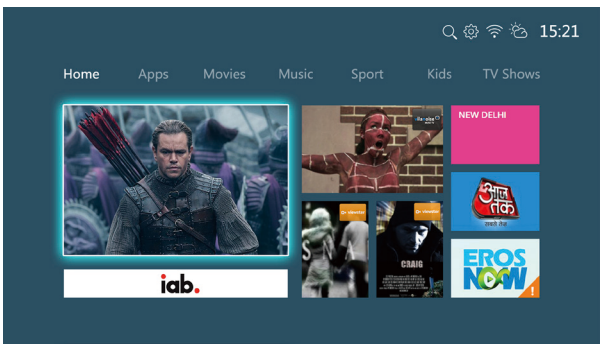

Figure 5. TV launcher powered by Third-party Web UI and Application Framework