



Smart TV<sup>®</sup>  
Alliance

Sample  
Application

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## 2. Introduction

### 2.1. Overview

Welcome to the Smart TV platform Sample Application (a.k.a. STA SA). This example will help you to easily develop your App for the Smart TV Alliance platform. It supports Smart TV Alliance Specification 5.0, Smart TV Alliance Specification 4.0, Smart TV Alliance Specification 3.0, Smart TV Alliance Specification 2.5, and Smart TV Alliance Specification 2.0 application development.

The Sample Application consists of the following parts:

- this manual
- example application, that shows a simple Smart TV platform application

This manual describes the software that is included, it gathers the following components:

- A code sample - it is included in the IDE. It is a sample application that gives you a very first start for development of your new App.

For best results, please you study this manual carefully before and during your use of the Sample Application.

### 2.2. Definitions

DOM	Document Object Model
GIF	Graphics Interchange Format
JPEG	Joint Photographic Experts Group (compression format)
PNG	Portable Network Graphics
SDK	Software Development Kit
HTML	HyperText Markup Language

## 3. System requirements, installation and usage

### 3.1. System requirements

The STA Sample Application runs on a number of platforms. The platform has to conform the following requirements:

- Operating system (X86/AMD64 only):
  - Windows 7, Windows 8, Windows 10
  - Mac OS X 10.5+
  - Ubuntu 10+
- Minimum memory 1.5 GB
- 2GHz X86/AMD64 based processor (AMD 64X2, Intel Core i5/i7 series, Core 2 Duo), i5 series preferred; with preferably support for Intel VT-x or AMD-V technology
- Resolution of 1280X1024 @ 32 bits - less is supported, but only scaled down
- 8 GB free disk space
- Network connection (wireless or wired) (note: the OSX Mavericks/10.9 thunderbolt network interface is not supported)
- Java Runtime Environment:
  - Windows/Linux - JRE6 (1.6.X, newer versions are *not supported*).
    - Download location:  
<http://www.oracle.com/technetwork/java/javasebusiness/downloads/java-archive-downloads-javase6-419409.html#jre-6u30-oth-JPR>
    - Make sure you install the *32-bit* version for Windows)
    - For Ubuntu Linux, please read the instructions below.
  - Mac OSX – JRE6 or JRE7 if running Mac OSX Mountain Lion+ (newer JRE versions are not supported)
    - Download location: JRE7 can be found at  
<http://www.oracle.com/technetwork/java/javase/downloads/jre7-downloads-1880261.html>
- Virtualbox 5.0+ on linux, or 5.0+ (if it is not already installed on your system, for Windows and Mac OS X only) - uninstall other/older versions *prior* to install the SDK:
  - Download location (needed for Ubuntu/Linux only):  
[https://www.virtualbox.org/wiki/Linux\\_Downloads](https://www.virtualbox.org/wiki/Linux_Downloads)

Note: These system requirements are the same as the Smart TV Alliance SDK.

### 3.2. Installation Details

#### 3.2.1. Overall

In order to launch the sample application you need a server architecture (like XAMPP). The application is based on HTML and JavaScript.

#### 3.2.2. Windows (7/8/10), Ubuntu Linux (10+), Mac OS X (10.5+)

For the installation, the "Smart\_TV\_Alliance\_SA\_X.Y.Z.zip" package is required.

1. Verify your system fulfils the requirements. Especially, please verify if you have installed a server like Apache or NGINX. Otherwise, the installation will fail.
2. Download the installer package, "Smart\_TV\_Alliance\_SA\_X.Y.Z.zip" (e.g. "Smart\_TV\_Alliance\_SA\_0.1.0.zip").
3. Unzip the package.
4. Copy the result folder into the web server.
5. Now, access to the base URL of the project. For instance: [http://localhost/SmartTV\\_App](http://localhost/SmartTV_App)

A working Internet connection is required to download and install the package.

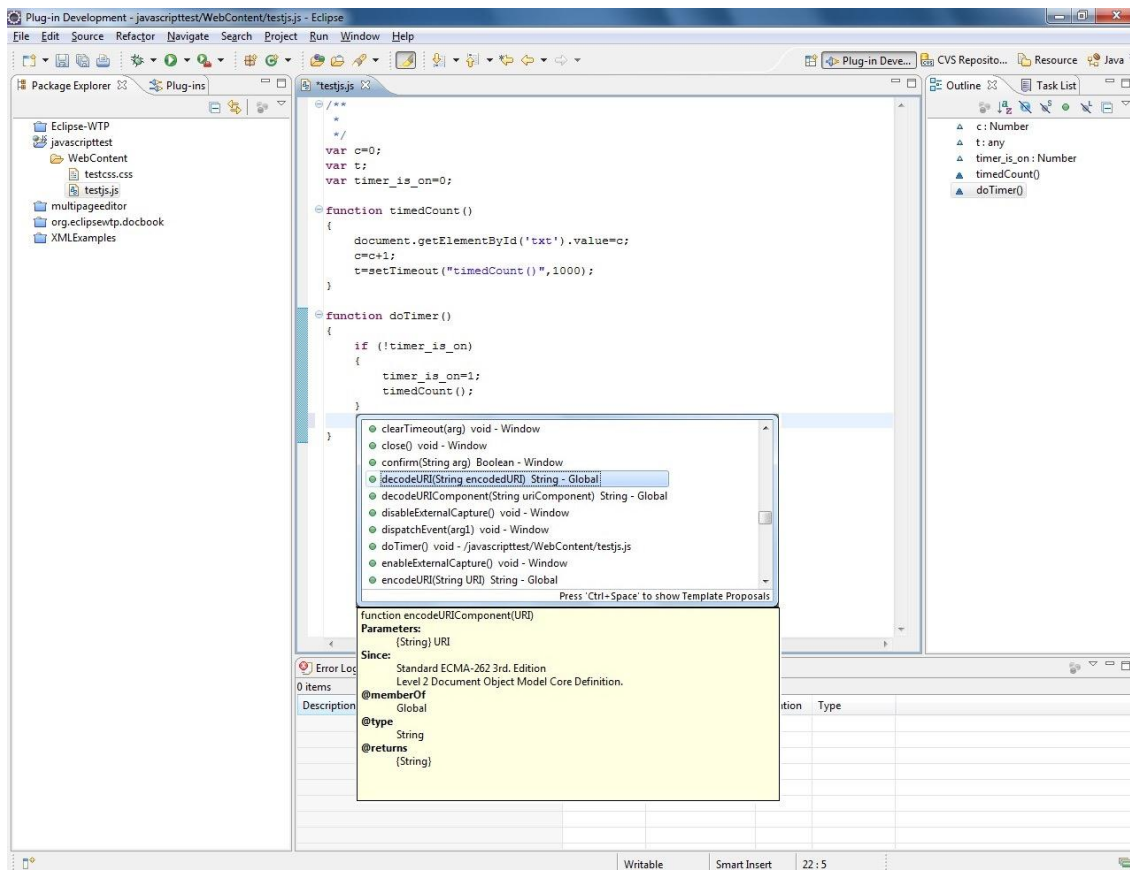
### 3.2.3. Open Source

The STA SA consists of a number of Open Source support packages as well. The source code for these packages is available from the same download location as where you obtained the SA binary installation. A separate license description document is available that lists the various licenses used in these Open Source packages.

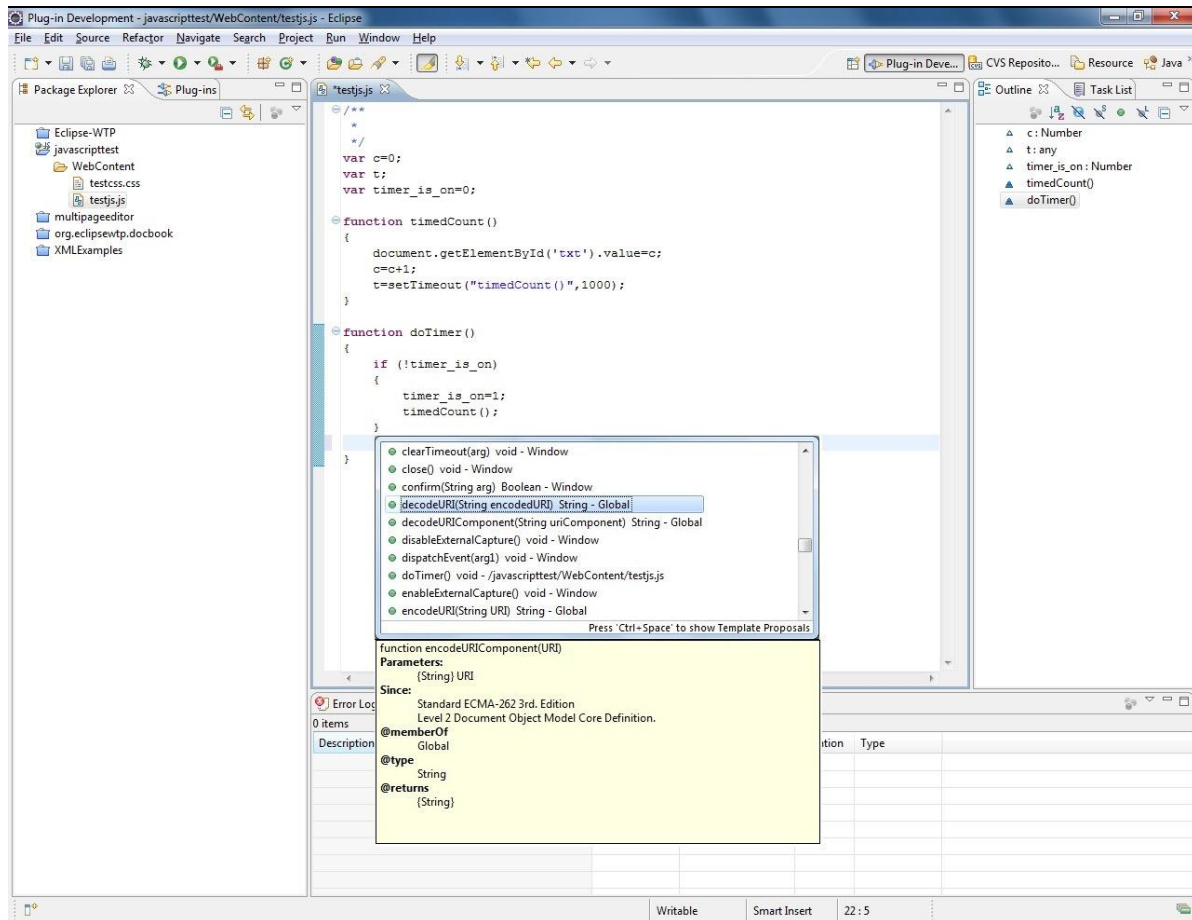
### 3.2.4. Code completion

You can create files with extension .xhtml or .html, .js or .css and use code assist, completion and validation in accordance with the file type.

Code completion and syntax support are illustrated below in case of javascript:



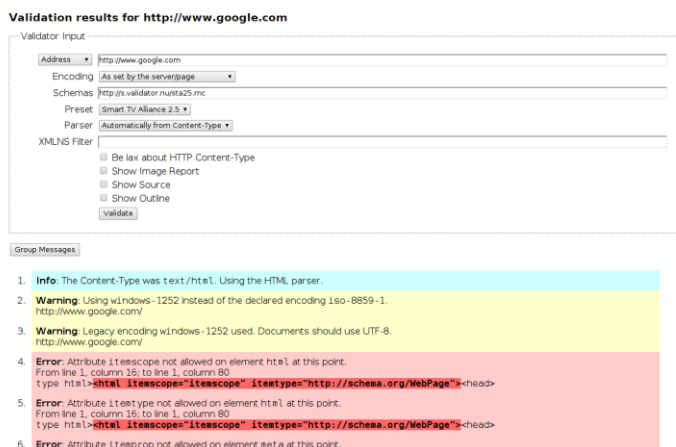
By typing Ctrl/Space in the editor a popup opens offering valid language options. The list of available options shortens with every character typed. By clicking an item in the popup an extra (yellow) help screen opens explaining the syntax of the selected item.



### 3.2.5. Code validation

The included validators can be used outside of the Eclipse IDE by using a browser and visiting each validator's URL as noted below. Each Validator has an option to choose which STA spec to validate against. In the HTML5 validator it is called "Preset" in the others it is called "Spec". Each validator has the option to validate a file uploaded or text pasted directly into the browser in a "Text Field" or "Text Area". The HTML5 Validator can also validate a web URL:

- HTML5 Validator – <http://localhost:9224>



- CSS3 Validator – <http://localhost:9225>

### Smart Alliance SDK CSS Validator

Validation Input

File:

Spec version:

1. **Error:**background: Invalid value for "background" property: rgba(0, 0, 0, 0.5)  
Line: 71, Column: 2
2. **Error:**background: Invalid value for "background" property: -moz-linear-gradient(top, #242424 50%, #1f1f1f 50%, #171717 100%)  
Line: 117, Column: 2
3. **Error:**background: Invalid value for "background" property: -webkit-gradient(linear, 0% 0, 0% 100%, color-stop(50%, #242424), color-stop(50%, #1f1f1f), color-stop(100%, #171717))  
Line: 118, Column: 2
4. **Error:**background: Invalid value for "background" property: -webkit-linear-gradient(top, #242424 50%, #1f1f1f 50%, #171717 100%)  
Line: 120, Column: 2
5. **Error:**background: Invalid value for "background" property: -o-linear-gradient(top, #242424 50%, #1f1f1f 50%, #171717 100%)  
Line: 121, Column: 2
6. **Error:**background: Invalid value for "background" property: -ms-linear-gradient(top, #242424 50%, #1f1f1f 50%, #171717 100%)  
Line: 122, Column: 2
7. **Error:**background: Invalid value for "background" property: linear-gradient(top, #242424 50%, #1f1f1f 50%, #171717 100%)  
Line: 123, Column: 2
8. **Error:**background: Invalid value for "background" property: -moz-linear-gradient(top, #333, #666)  
Line: 224, Column: 2
9. **Error:**background: Invalid value for "background" property: -webkit-gradient(linear, 0% 0, 0% 100%, from(#333), to(#666))  
Line: 225, Column: 2
10. **Error:**background: Invalid value for "background" property: -webkit-linear-gradient(top, #333, #666)  
Line: 227, Column: 2
11. **Error:**background: Invalid value for "background" property: -ms-linear-gradient(top, #333, #666)  
Line: 228, Column: 2

JS Validator – <http://localhost:9226>

### Smart Alliance SDK Javascript Validator

Validation Input

File:

Spec version:

1. **Warning:**(function(window, undefined) {: Missing space after 'function'.  
Line: 21, Column: 10
2. **Warning:** var VideoJS = function(id, addOptions, ready) {: Missing space after 'function'.  
Line: 25, Column: 24
3. **Warning:** id = id.slice(1); Missing semicolon.  
Line: 29, Column: 21
4. **Warning:** return \_V\_players[id]; Missing semicolon.  
Line: 32, Column: 27
5. **Warning:** tag = \_V\_el[id]; Missing semicolon.  
Line: 34, Column: 23
6. **Warning:** tag = id; Missing semicolon.  
Line: 37, Column: 12
7. **Warning:** The element or ID supplied is not valid. (VideoJS): Missing semicolon.  
Line: 41, Column: 59
8. **Warning:** return tag.player || new \_V\_Player(tag, addOptions, ready); Missing semicolon.  
Line: 43, Column: 62
9. **Warning:** + "Video-js swf": Bad line breaking before '+'.  
Line: 65, Column: 5
10. **Warning:** + "Video-js swf": Missing semicolon.  
Line: 65, Column: 22
11. **Warning:** \_V\_merge = function(obj1, obj2, safe) {: Missing space after 'function'.  
Line: 87, Column: 25

## Hover help

For specific code, there is on-hover help available:

```
<title>Structured Source Editing Introduction</title>
</head>
<body>
<div id="document-body" class="document-body" style="font-family: sans-serif; font-size: 1em; line-height: 1.2em; padding: 0 1em; text-align: left; width: 85%;">

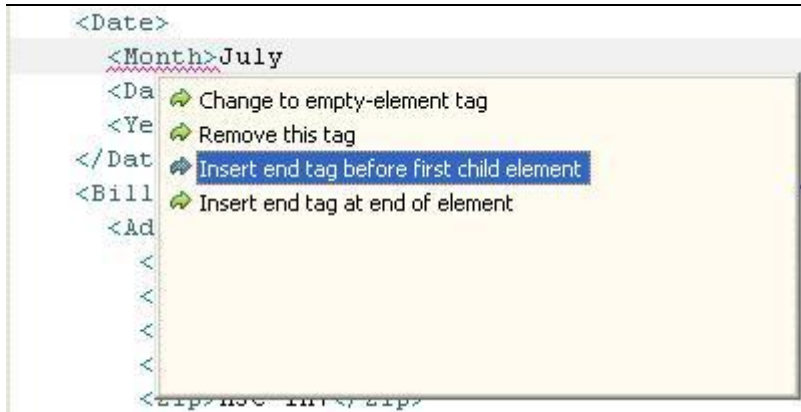
The document body. Contains all the content for the page.


```

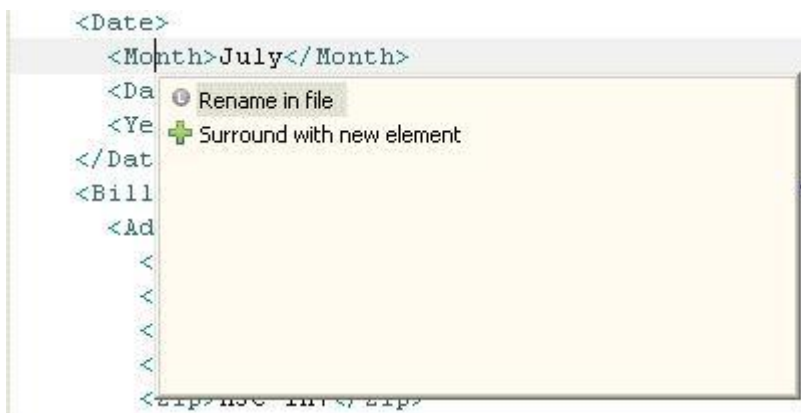
## Quick Fix and Quick Assist

In the XML editor, if you see an error underlined with a squiggly line, position the caret inside the underlined range and press Ctrl+1 (or Cmd-1) or select **Edit > Quick Fix** to see a list of suggested corrections.





Quick Assist proposals are available even if there is no problem or warning.



### Context information for attributes

A popup with information about attributes for an element is available (invoked via ctrl+shift+space). The attributes which are already there show up in **bold**, and required attributes show up with an \*:



### 3.3. Sample Application

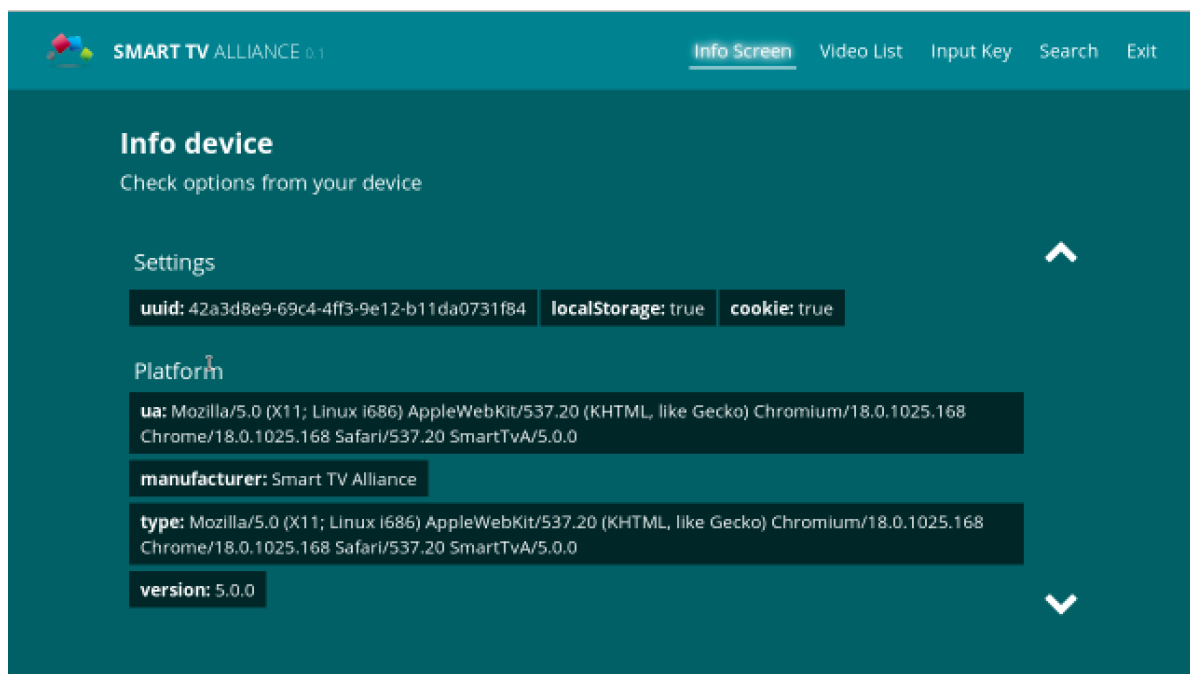
You can use the STA SA to follow and create an own smart TV application. This is just an example, where you can find compatible functionality with the SDK of STA.

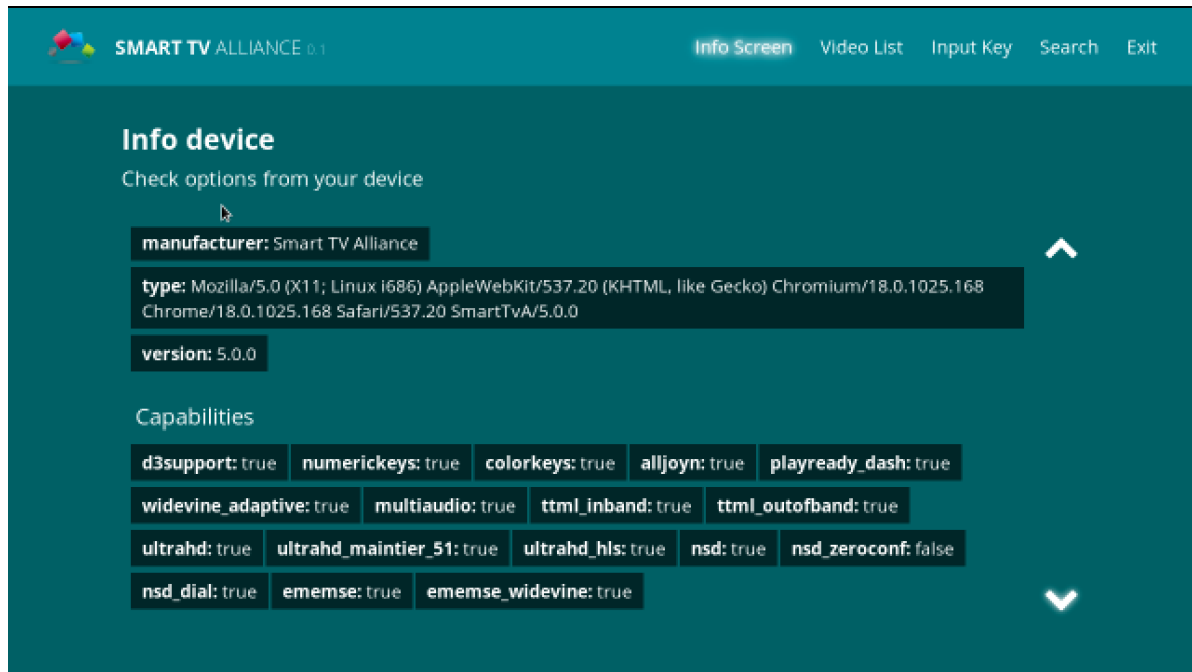
The application contains 6 mains sections:

- Info screen
- Video list
- Input key
- Search
- Details
- Player

#### 3.3.1. Info screen

This screen shows the settings, platform, capabilities, etc. of your device.

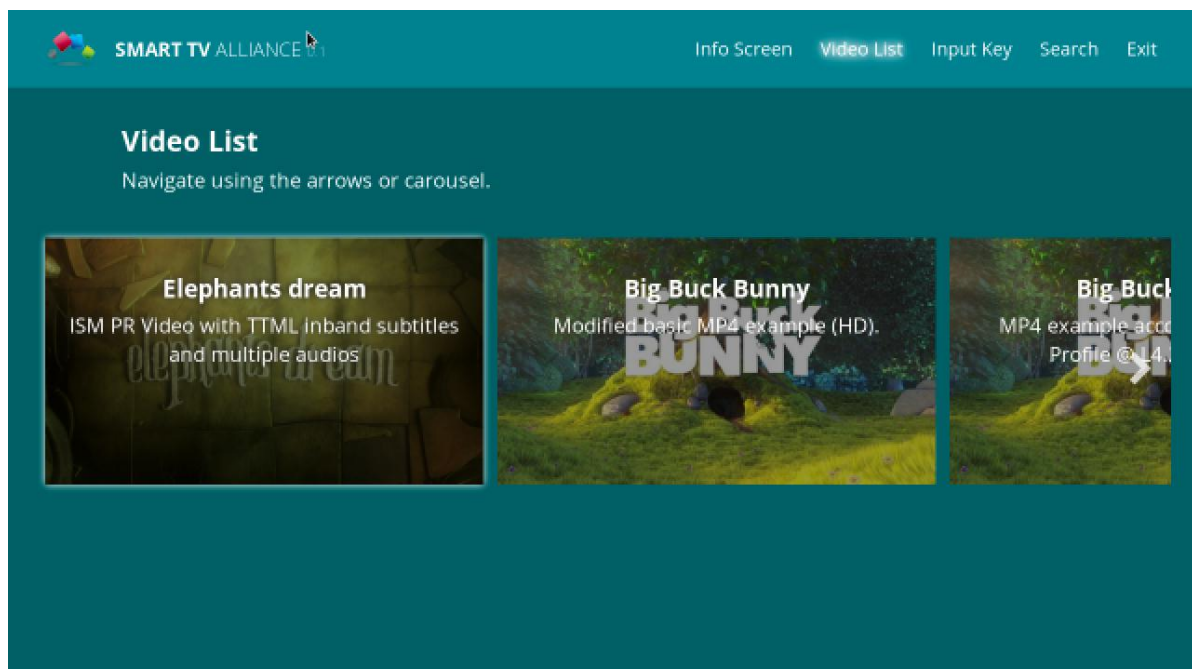




When the SDK version is lower than 3, the application won't show the capabilities. Check the Smart TV Alliance SDK Guide.

### 3.3.2. Video List

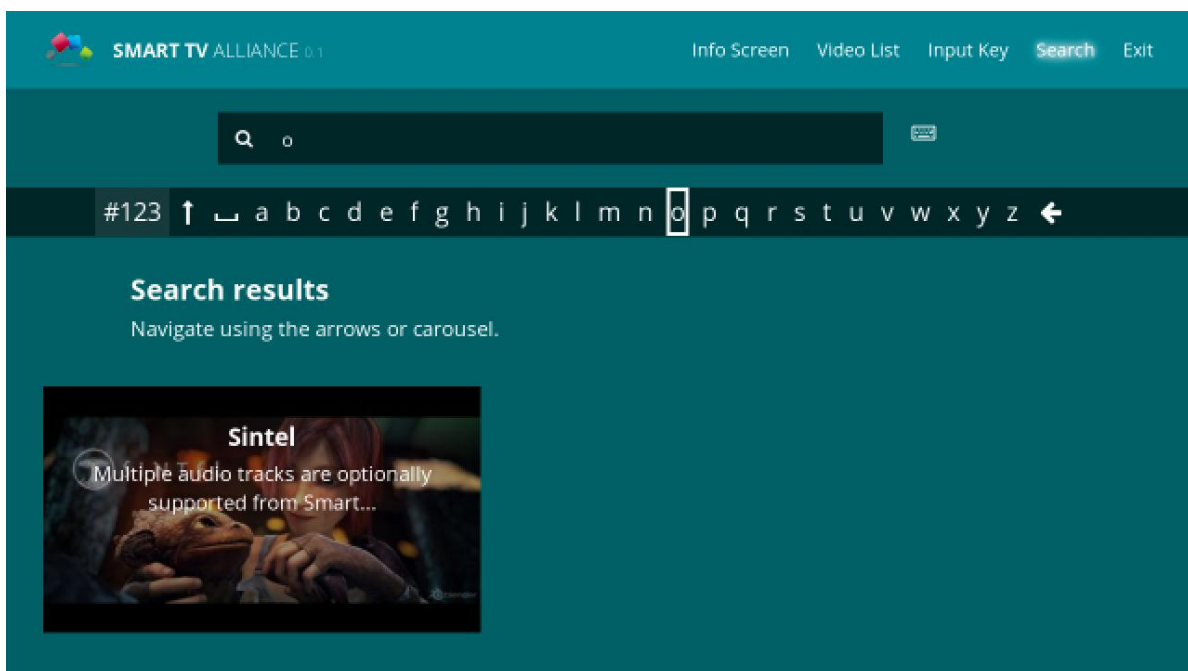
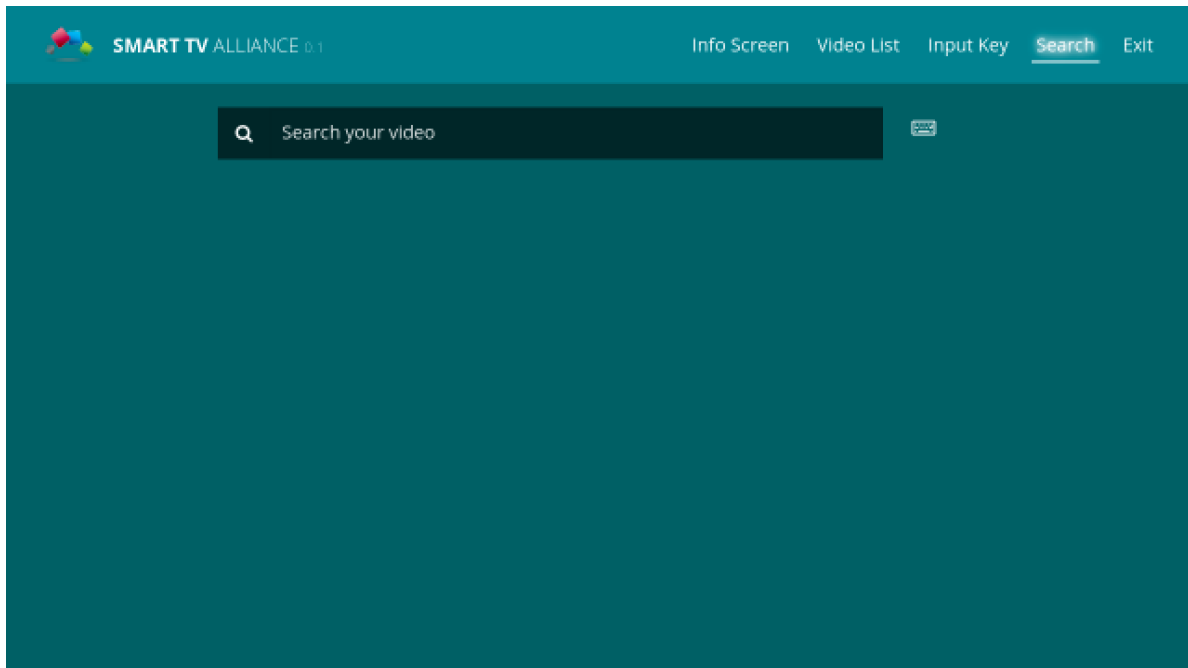
Video list screen allows to see a carousel of movies. It is able to be navigable by means of a pointer, a keyboard or remote control.



### 3.3.3. Search

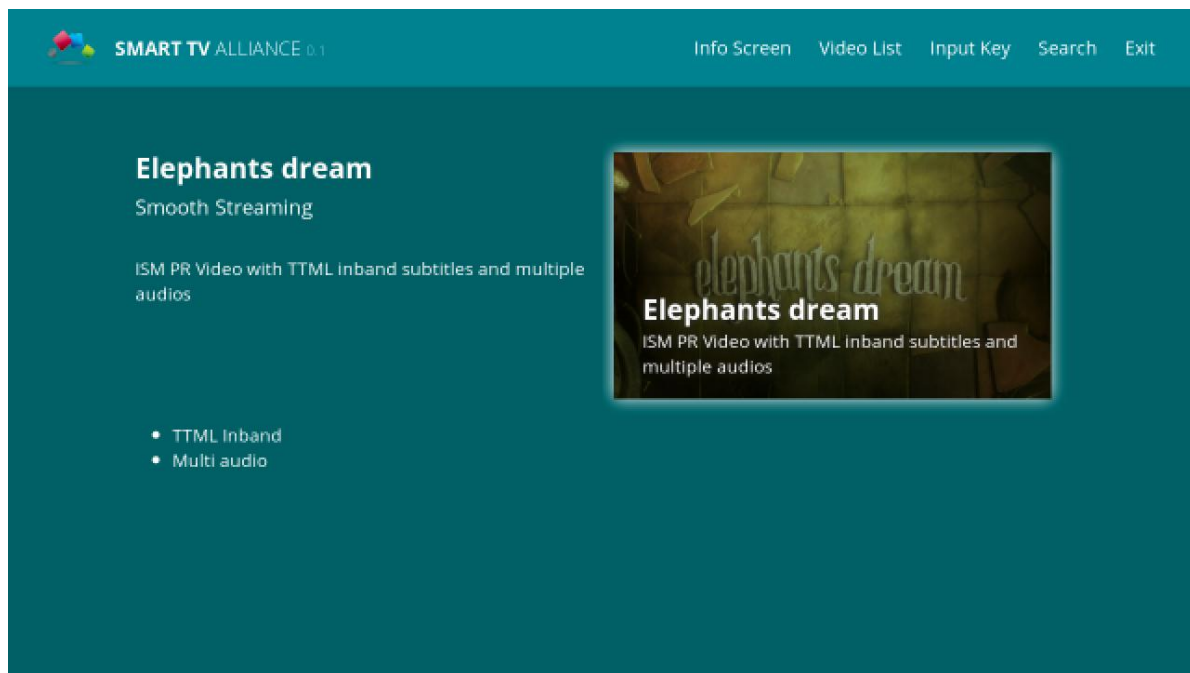
The search box allows you to search a movie from the video list. There are two ways to search:

1. Focus the input box and the TV will show the native keyboard.
2. Enable the virtual keyboard, and the Sample Application will show you an inline keyboard.



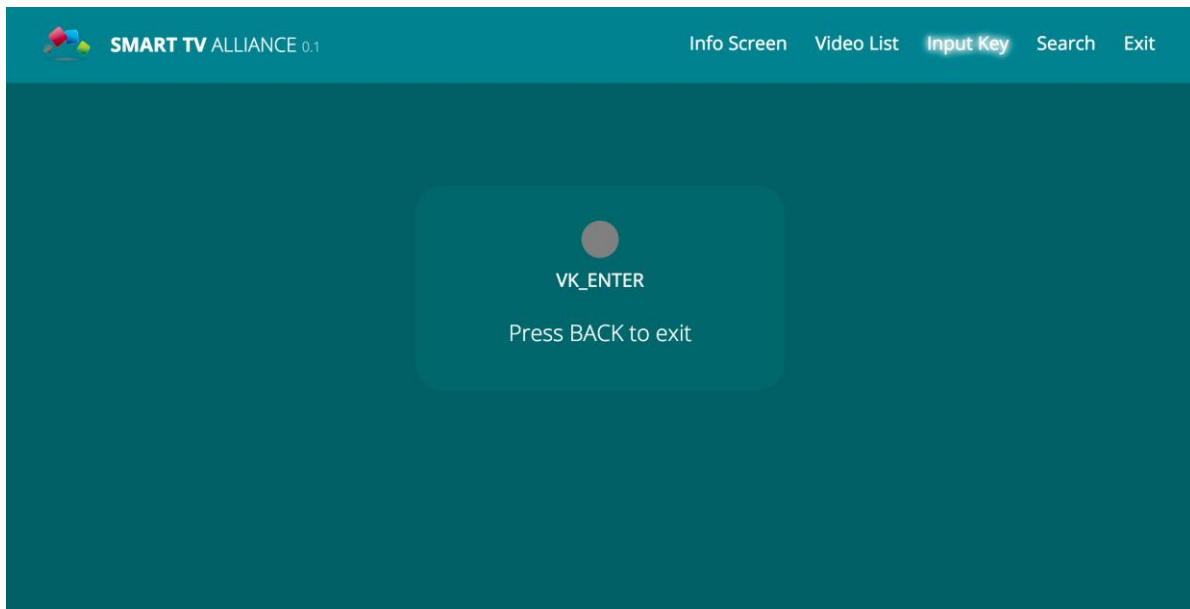
### 3.3.4. Detail video

The Detail screen displays the info for each video you select on the video list. The info is retrieved from the API of the provider.



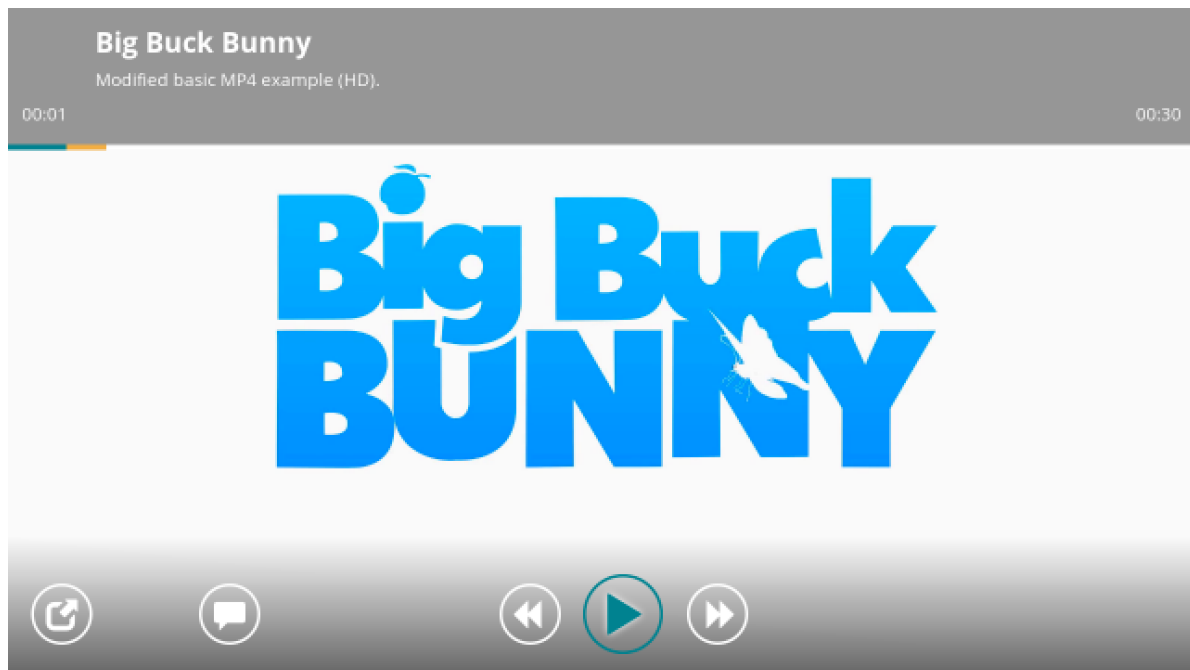
### 3.3.5. Input

The Input key screen allows you to check every key in the remote control device. It will return the associated STA virtual code for the key. You have to select the grey circle and then press any button.



### 3.3.6. Video player

The video player can play, pause, rewind, or fast-forward the video. It is able to reproduce multiple audio languages and display subtitles. It shows the loaded buffer, the current time of playback and the basic information of the video.



### 3.3.7. Exit

To exit the application, use this option from the main menu, or from the info screen: press VK\_BACK key.

*Note: if the device is compatible with STA SDK, the application will close properly.*

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### 3.4. Troubleshooting

When you experience problems with running the Sample Application, please check possible symptoms and solutions below. More information is available online:

Q: The application doesn't render well.

A: Verify you are running a system that conforms to the minimum/typical system requirements, and belongs to Smart TV Alliance.

Q: I have problems installing under Windows 7 or 8 or 10

A: Verify you have administrative privileges while installing.

Q: I can't see the sample application

A: Check if the virtual server is running properly.

Q: The video does not work in the Sample Application?

A: Please make sure your HTTP server submits the mime type of the video or audio, refer to the SDK guidelines for details.

A: When testing, verify that you do not have a proxy server that caches the responses, this could present old test pages.

Q: The browser is started, but it takes a long time for the URL to load or the URL does not load

A: Depending on the TV browser, it could take longer for the URL to load. The loading process should generally complete in under a half minute.