



Private Public Partnership Project (PPP)

Large-scale Integrated Project (IP)



Interface Designer Installation and Administration Guide

Project full title: Future Internet Core

Project acronym: FI-Core

Contract No.: 632893

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Introduction

This document describes the installation and administration of the Interface Designer GE.

System Requirements

Hardware Requirements

Since this GE is application-oriented, and serves for manipulating a 3D scene, any recent PC/Mac configuration that is capable of 3D rendering is considered as a minimum system requirement.

Operating System Support

Any operating system that is supported by the target WebGL-enabled browser.

Software Requirements

The interface designer GE is currently implemented specifically for Web Rocket / Web Tundra and XML3D scenes.

A WebGL-enabled browser, which includes, but not limited to:

- Google Chrome 9+
- Mozilla Firefox 4.0+
- Safari 6.0+ (WebGL disabled by default)
- Opera 11+ (WebGL disabled by default)

Other internal dependencies which are included in the release package (but pointed out here for reference) are:

- Classy.js v1.4 (<https://github.com/mitsuhiko/classy/archive/1.4.tar.gz/>)
- jQuery v2.0.3 (<http://code.jquery.com/jquery-2.0.3.min.js/>)
- jQuery UI v1.10.3 (<http://jqueryui.com/resources/download/jquery-ui-1.10.3.zip/> and <http://jqueryui.com/resources/download/jquery-ui-themes-1.10.3.zip/>)
- Fancytree v.2.0.0-5 (<https://github.com/mar10/fancytree/releases/download/v2.0.0-5/jquery.fancytree-2.0.0-5.zip/>)
- jqueryui-contextMenu v1.10 (<https://github.com/mar10/jquery-ui-contextmenu/archive/v1.10.0.zip/>)
- FileSaver.js (<https://github.com/eligrey/FileSaver.js/>)
- vkbeautify 0.99 (<https://code.google.com/p/vkbeautify/downloads/detail?name=vkbeautify.0.99.00.beta.js/>)

Software Installation and Configuration

- Download the package from the [Interface Designer FIWARE Catalogue](#) or clone the [Git repository](#). The package contains **all necessary dependencies**, and the directory structure is as follows:

```
1 ROOT/  
2   lib/  
3     skin-win8/  
4       icons.gif  
5       loading.gif  
6       ui.fancytree-org.css  
7       ui.fancytree.css
```

```

8     classy.js
9     FileSaver.min.js
10    jquery-ui.js
11    jquery.ui-contextmenu.min.js
12    jquery.fancytree-all.min.js
13    jquery.js
14    three-TransformControls.js
15    vkbeautify.0.99.00.beta.js
16    xml3d.tools.js
17    xml3d.js
18    resources/
19        ball.xml
20        cone.xml
21        cube.xml
22        cylinder.xml
23    conf.json
24    COPYRIGHT
25    InterfaceDesigner-main.js
26    LICENSE
27    README.md
28    WebTundraEditor.webtundra.js
29    XML3DEditor.js
30    xml3dExample.html

```

WebTundra

- Refer to the WebTundra's [User and programmer's guide](#) to set up Interface Designer in WebTundra;

XML3D

- The `xml3dExample.html` is a complete ready-to-use example containing an HTML page that has an empty XML3D scene with Interface Designer installed. Let's breakdown the code for better understanding.
- First, the CSS styles are added for jquery UI, jquery.fancytree and styling of the mainContent div:

```

1 <link rel="stylesheet" href="http://code.jquery.com/ui/1.10.3/themes/smoothness/jquery-ui.css">
2 <link rel="stylesheet" href="lib/skin-win8/ui.fancytree.css">
3
4
5 <style>
6     #mainContent {
7         position: absolute;
8         top: 0; right: 0; bottom: 0; left: 0;
9     }
10 </style>

```

- Later, the XML3D library is always added "BEFORE" all other libraries:

```

1 <script type="text/javascript" src="lib/xml3d.js"></script>
2 <script type="text/javascript" src="lib/xml3d.tools.js"></script>
3 <script type="text/javascript" src="lib/jquery.js"></script>
4 <script type="text/javascript" src="lib/jquery-ui.js"></script>
5 <script type="text/javascript" src="lib/jquery.fancytree-all.min.js"></script>
6 <script type="text/javascript" src="lib/jquery.ui-contextmenu.min.js"></script>
7 <script type="text/javascript" src="lib/FileSaver.min.js"></script>
8 <script type="text/javascript" src="lib/vkbeautify.0.99.00.beta.js"></script>
9 <script type="text/javascript" src="lib/classy.js"></script>

```

- Lastly, `XML3DEditor.js` and `InterfaceDesigner-main.js` are added as last:

```

1 <script type="text/javascript" src="lib/InterfaceDesigner-main.js"></script>
2 <script type="text/javascript" src="lib/XML3DEditor.js"></script>

```

- This example uses XML3D Tools' Mouse/Keyboard Fly controller (camera). It is added in the window's 'load' event:

```

1 <script type="text/javascript">
2     window.addEventListener('load', function() {
3         var cameraTransformable = XML3D.tools.MotionFactory.createTransformable($("#mainCamera")
4             [0]);
5         var camera = new XML3D.tools.MouseKeyboardFlyController(cameraTransformable, { moveSpeed
6             : 0.2, rotateSpeed: 2 });
7         camera.attach();
8         // XML3D editor instance
9         var editor = new XML3DEditor({
10             mainContent: "mainContent",
11             canvas: "mainCanvas",
12             resourcesPath: "resources/"
13         });
14     }, false);
15 </script>
16 <!-- etc etc... -->

```

- In the 'load' event, an instance of XML3DEditor is made that accepts an options JSON: `mainContent` is the variable that will hold the ID of the main `<div>` element, `canvas` holds the ID of the main `<xml3d>` element, and `resourcesPath` the path to the `resources` folder that comes with the package.

```

1 var editor = new XML3DEditor({
2     mainContent: "mainContent",
3     canvas: "mainCanvas",
4     resourcesPath: "resources/"
5 });

```

- Finally, we have the "main scene" in `<body>` element. It consists of a `<div>` element with ID `mainContent` that has only one child element `<xml3d>` with ID `mainCanvas` that will contain the whole XML3D scene:

```

1 <body>
2     <div id="mainContent">
3         <xml3d xmlns="http://www.xml3d.org/2009/xml3d" id="mainCanvas" activeView="#cameraView" s
4             tyle="width:100%; height:100%;background-color:white;">
5             <defs>
6                 <transform id="cameraTransform"></transform>
7             </defs>
8             <group id="mainCamera" transform="#cameraTransform">
9                 <view id="cameraView"></view>
10            </group>
11        </xml3d>
12    </div>
13 </body>

```

Sanity check procedures

As a verification that everything was installed correctly, pressing the shortcut "Shift" + "S" should open up the scene editor, and should be ready to use. If you use the above XML3D example, you will come across an empty scene.