

## **zSpace Monitor Installation Guide** Siemens PLM Teamcenter Visualization 10.1



**zSpace**<sup>®</sup>

# zSpace Monitor - Installation Guide

## Overview

The following guide is designed to help existing zSpace users install and configure Siemens Team Center Visualization Mockup 10.1 for use with zSpace. It is assumed that you have a copy of the TCVis 10.1 installer, SPLM License Server 6.2.0 and a license with mockup service level and concept showroom option. In addition, it is assumed that you have installed zSpace System Software 2.7 and zSpace VRN server 2.7 or newer in advance of these steps.

## Prerequisites

- zSpace System Software 2.7 or newer
- zSpace VRPN server 2.7 or newer
- SPLMLicenseServer\_v6.2.0\_win64\_setup.exe installed and license loaded locally
- License file "License\_Ugslmd.txt" for your PC from Siemens with Mockup service level and concept showroom license
- 64-bit Teamcenter Visualization (TcVis) version 10.1
- Java for Windows installed ([www.java.com](http://www.java.com))

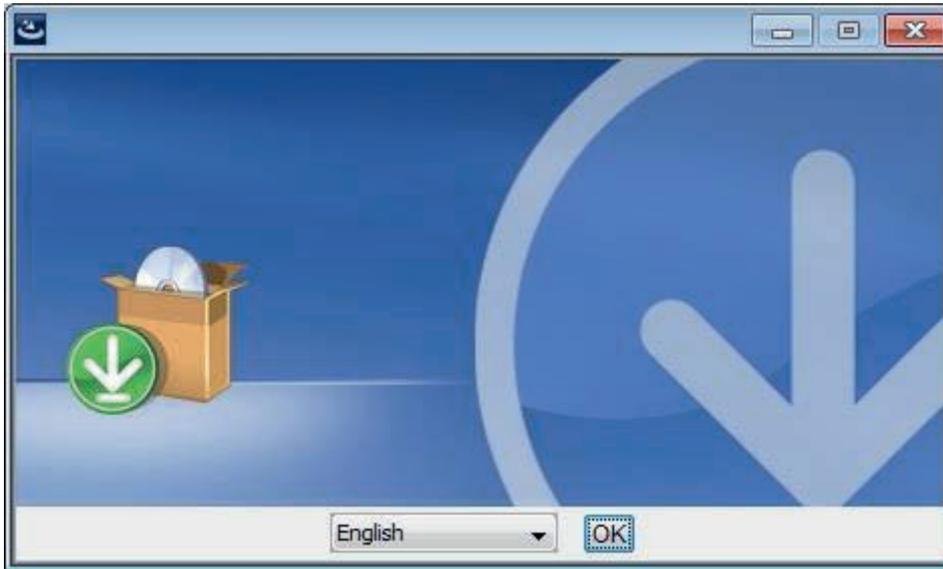
## Download and Setup Preparation

Download and unzip **tcvis101.zip** archive into a folder. Within that folder should be the following structure:

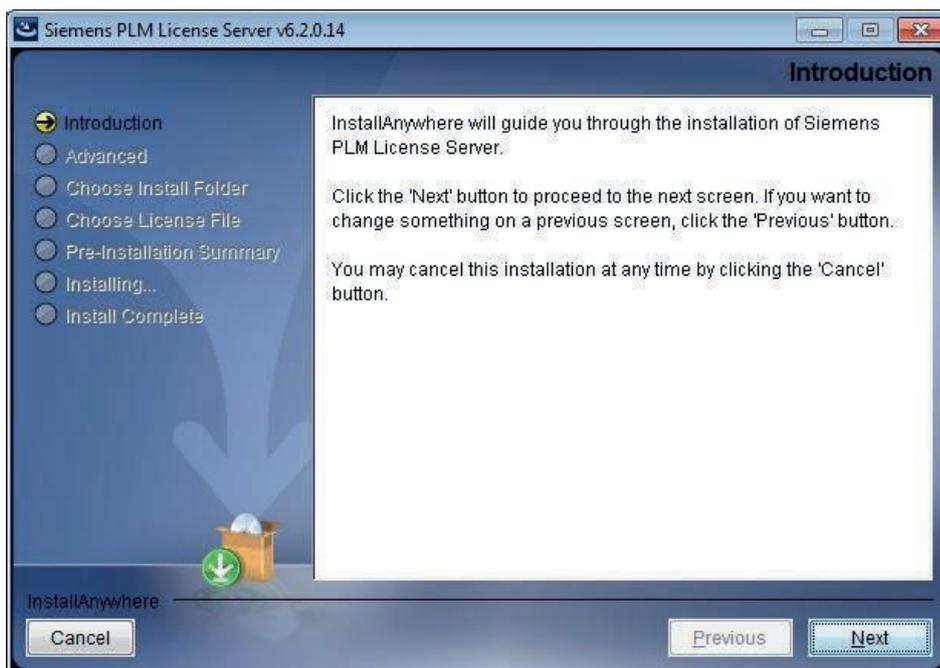
- **TcVis\_zSpace\** (Folder containing the models and zSpace config files (xml, vcd, scd) for TcVis)
- **TcVis\_101\_zSpace\_Setup.docx (This document in word format)**

## Installation of Siemens PLM License Server v6.2.0.14

The following screens step you through the process of installing the PLM License server and pointing it to your license file. You will need your license file and the name of your PC to proceed.

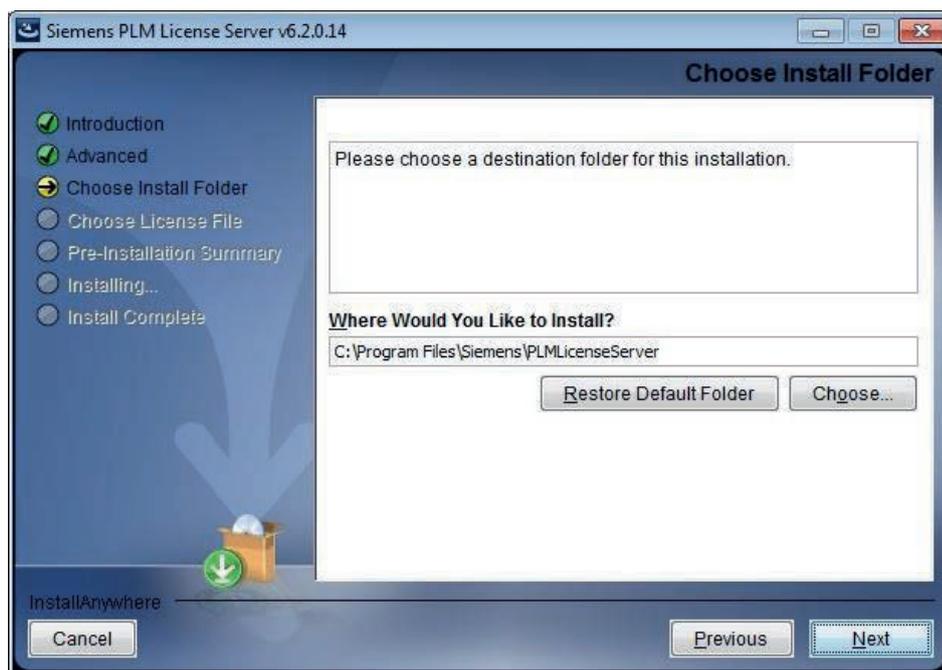


**Screen 1** - Click **OK** to continue.

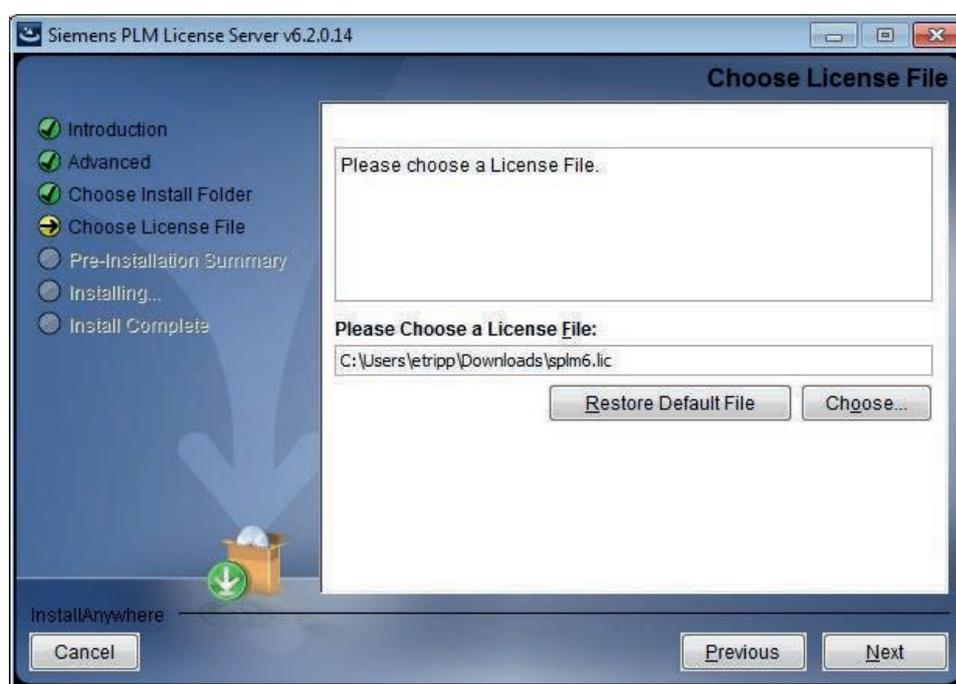


**Screen 2** - Click **Next** to continue.

## Installation of Siemens PLM License Server v6.2.0.14



Screen 3 - Leave default path and click **Next** to continue.



Screen 4 - Prompt for license file. Point it to your „License\_Ugslmd.txt.“ file and click **Next** to continue.

```

#####
#
#                               Siemens PLM Software Inc.
#                               License File
#
# Sold-To/Install: _____ webkey Access Code: _____
# Contact Name: _____ Created: 06-15-2013
# Customer Name: zSpace Inc.
# E-mail Address: _____ Version: 8.5
#####
SERVER YourHostName COMPOSITE=888B8DFAC45D 28000
VENDOR ugs1md
PACKAGE NXPTR101 ugs1md_28.0 COMPONENTS="NXPTR101_adv_assemblies \

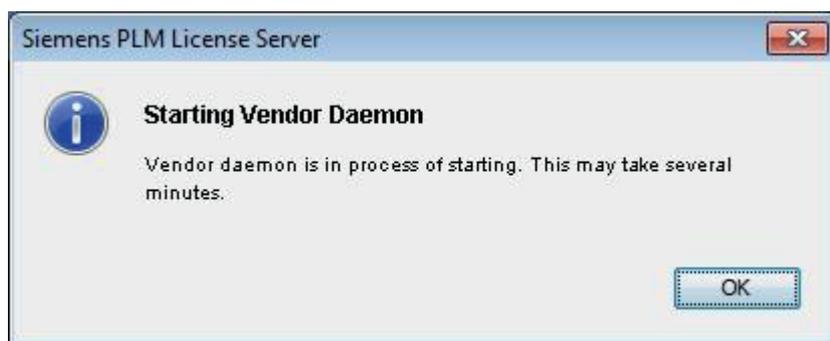
```

**Example license file** - Note the first line has  
SERVER YourHostName COMPOSITE={your CID from running the CID utility earlier}.

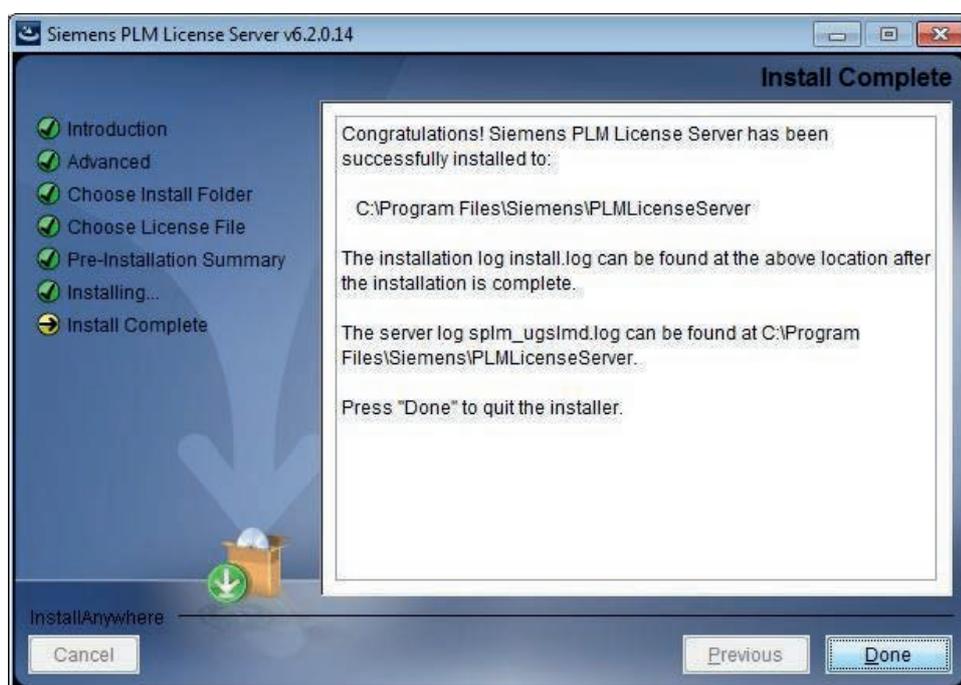


**Screen 5** - Click **Install** to install license server with your supplied license file locally.

## Installation of Siemens PLM License Server v6.2.0.14



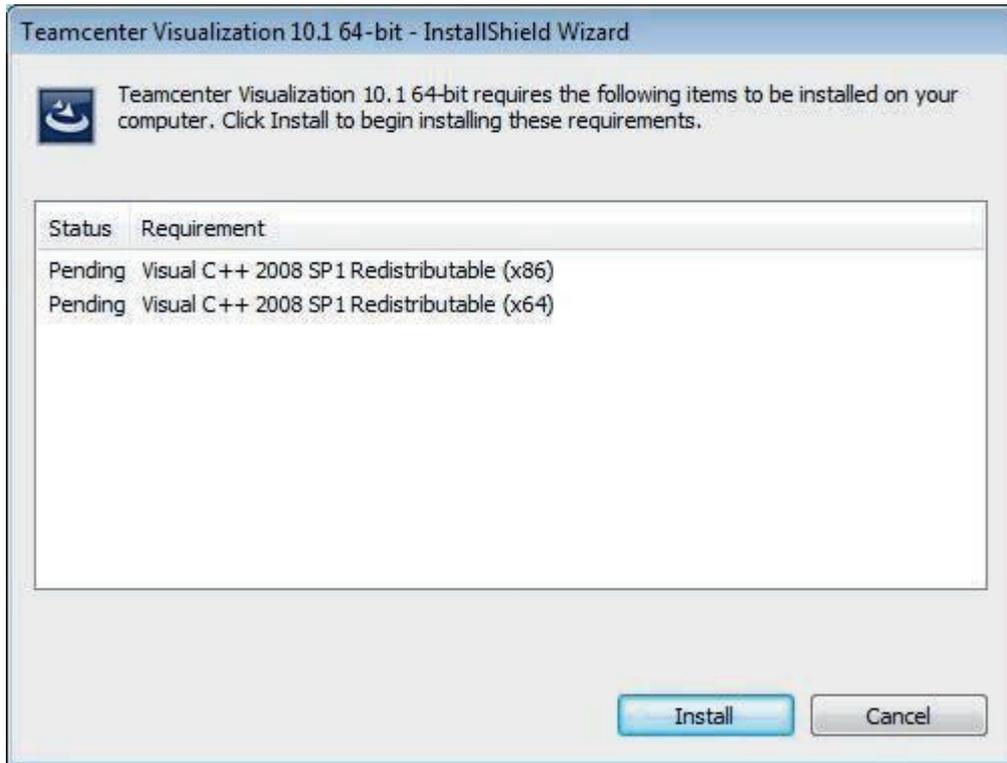
**Screen 6** - Starting Vendor Daemon. Click **OK** to continue.



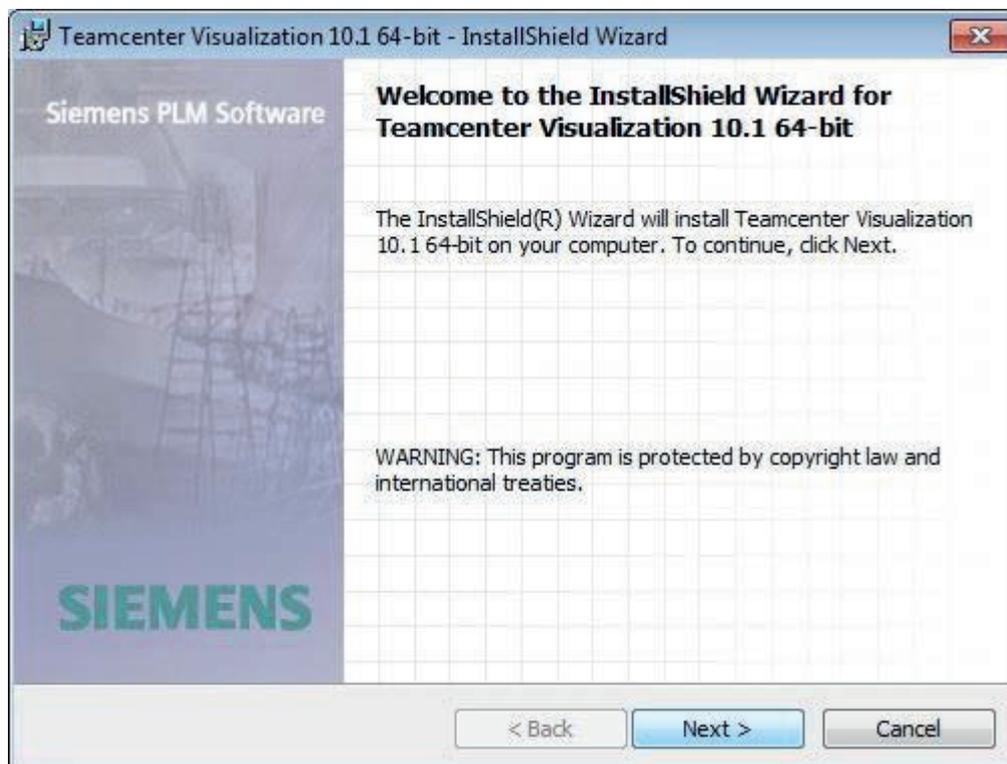
**Screen 7** - Success! Your license server is installed with your license. Click **Done** to finish.

## Installation of TC Visualization Mockup 10.1

Install TcVis 10.1 by running setup.exe inside of the folder “TcVis\_101\_20130521\_win64” and follow through the screens as detailed below.

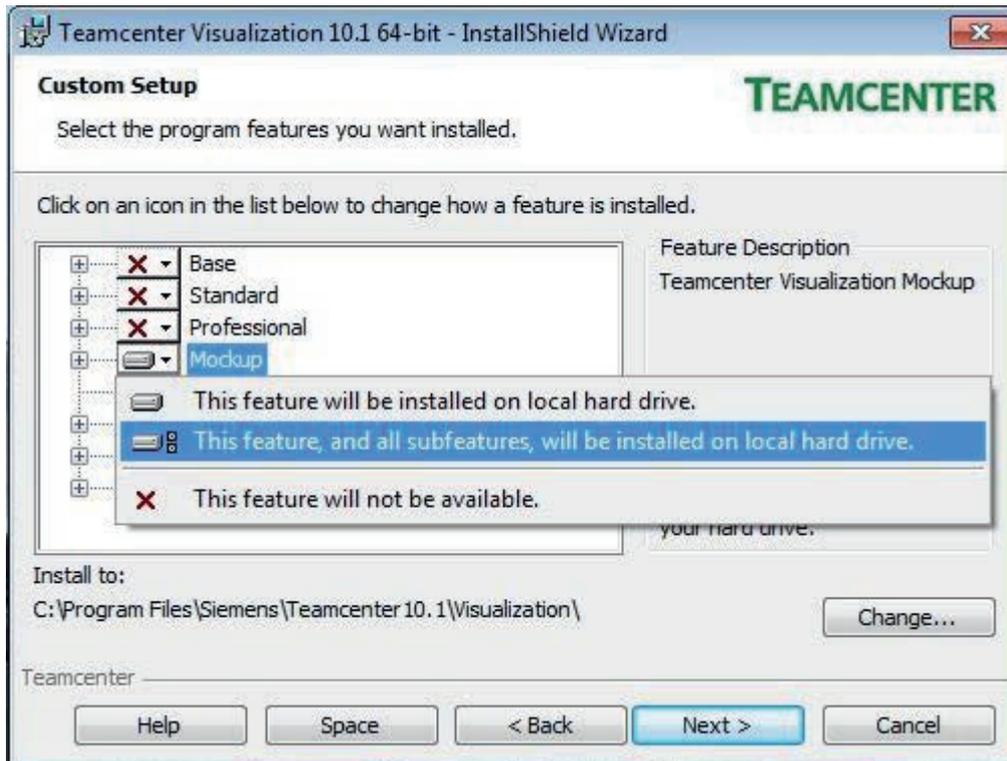


**Screen 1** - Warns of installing VC redistributables. Click **Install** button to continue.

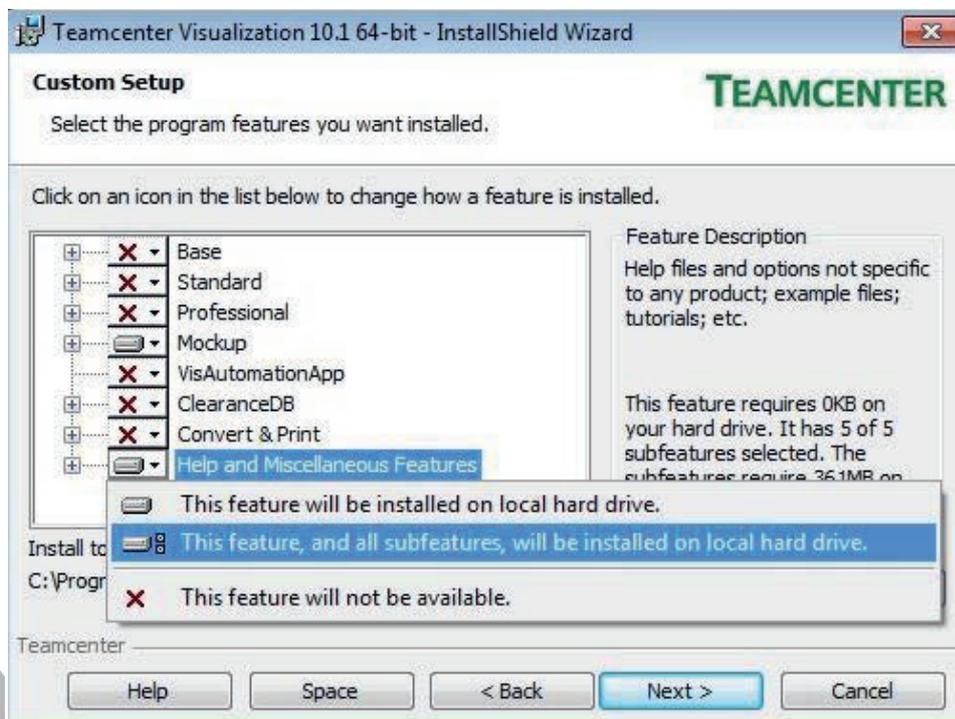


**Screen 2** - Press **Next** to continue.

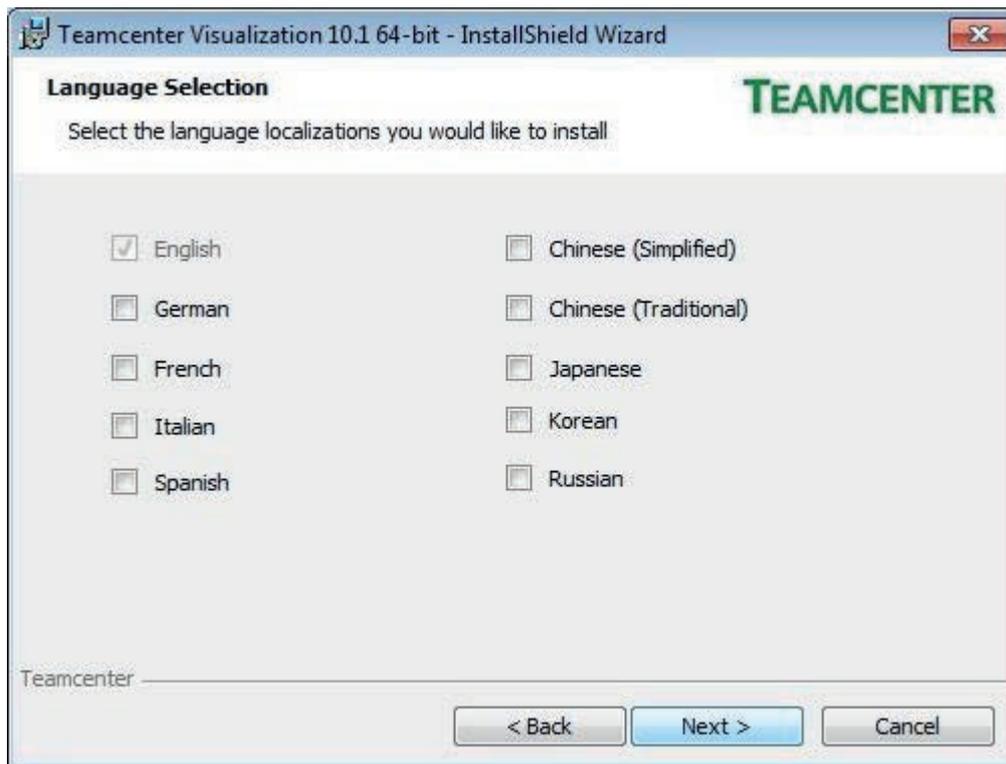
## Installation of TC Visualization Mockup 10.1



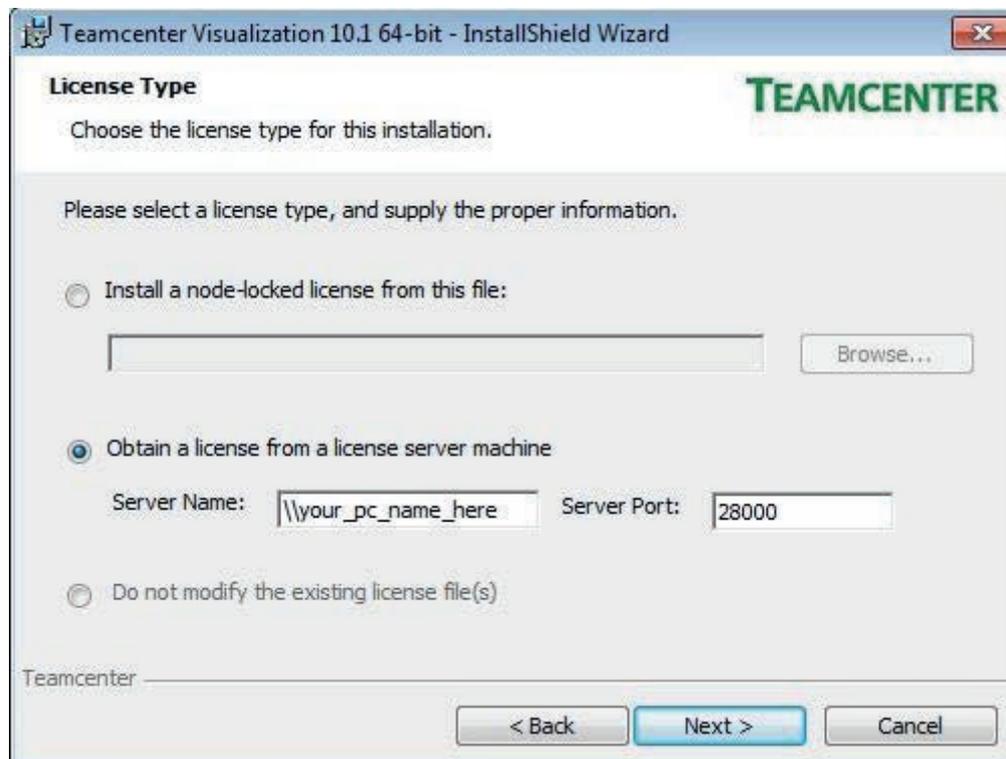
Screen 3 - Left-click on **Mockup** and select „This feature, and all subfeatures“.



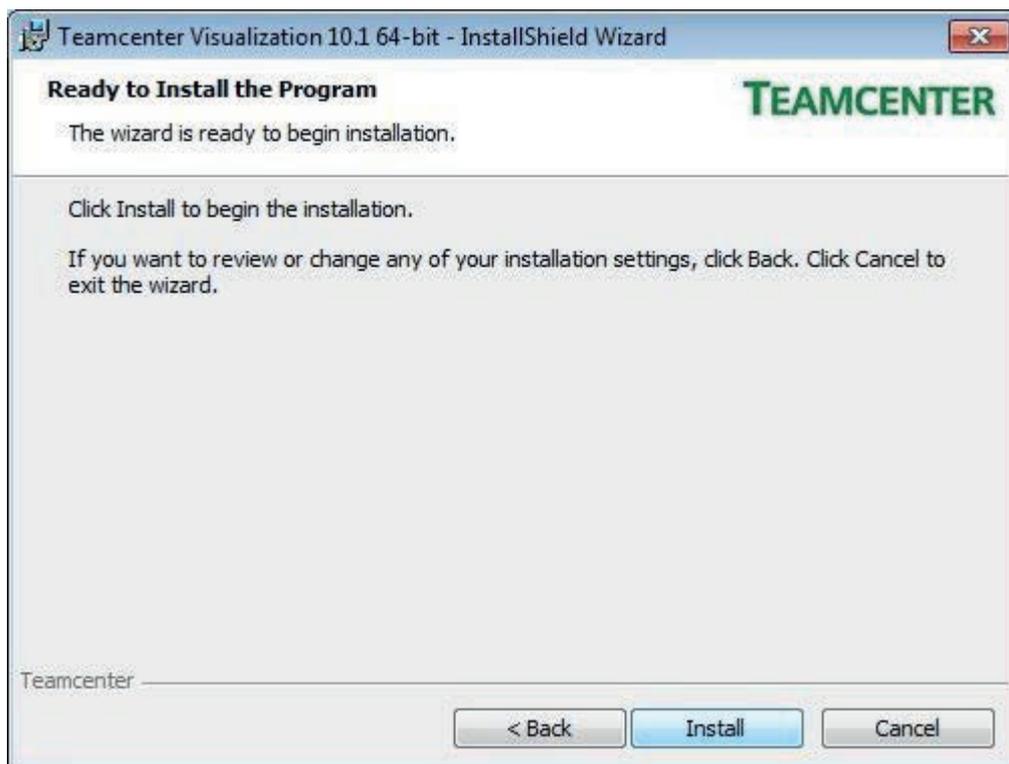
Screen 4 - Left-click on **Help and Miscellaneous Features** and select „This feature, and all subfeatures“ and click **Next** to continue.



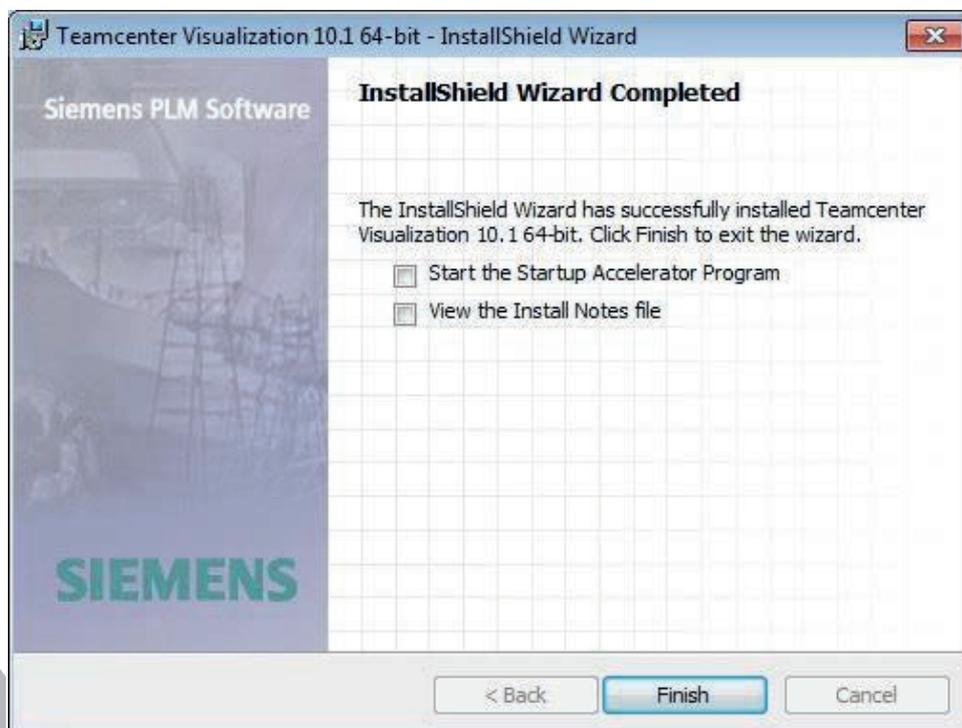
**Screen 5** - Click **Next** on language selection screen to continue.



**Screen 6** - Select **Obtain license from a license server machine** option - For Server name: \\your\_PC\_name\_here and Server Port: 28000 as shown above. Click **Next** to continue.



Screen 7 - Click **Install** to begin the installation process.



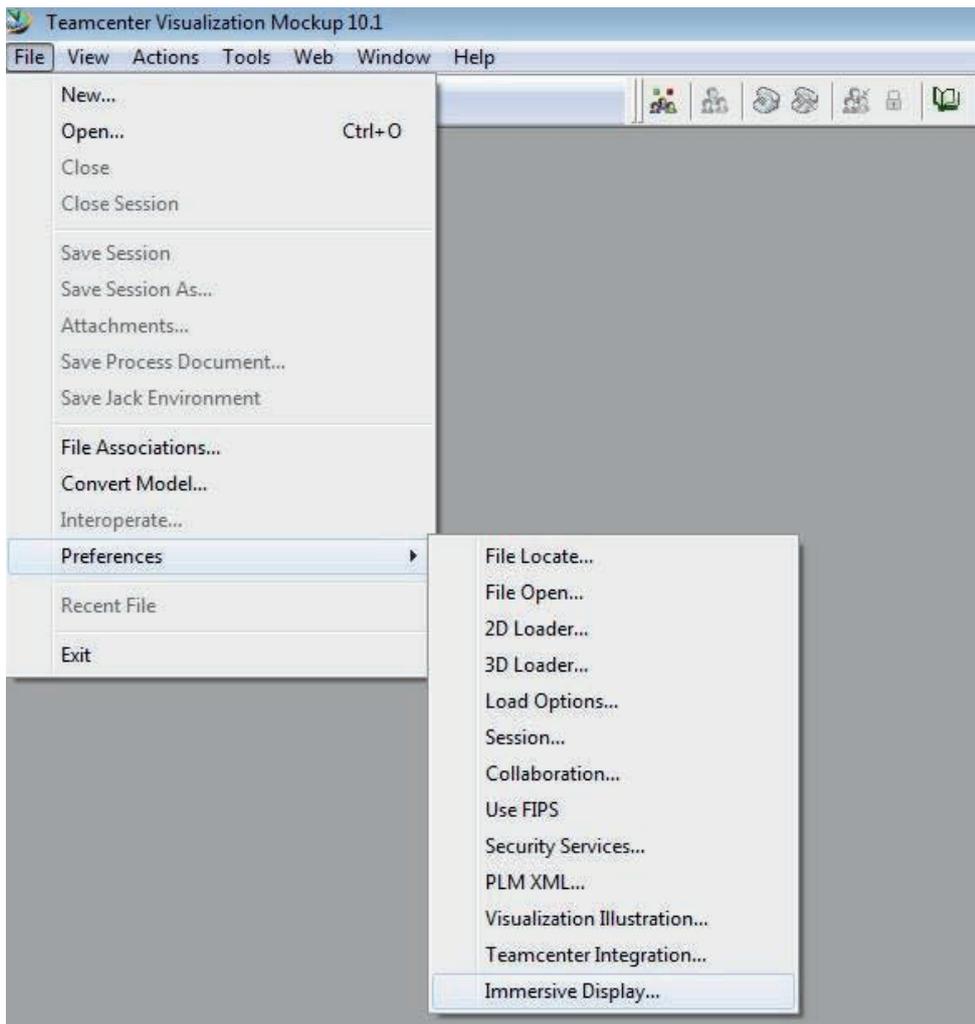
Screen 8 - Click the check-box for **Start the Startup Accelerator Program** and click **Finish** to finalize the setup.

## Running and Configuring TcVis Mockup for zSpace for the first time

The first time you launch TcVis Mockup 10.1, you will need to setup the immersive display profile, rendering quality and setup the immersive display toolbar icon. Once all of this is setup once, you will not have to do it again, you will only have to load a project, click snapshot view and enable the immersive display.

Steps for first time setup:

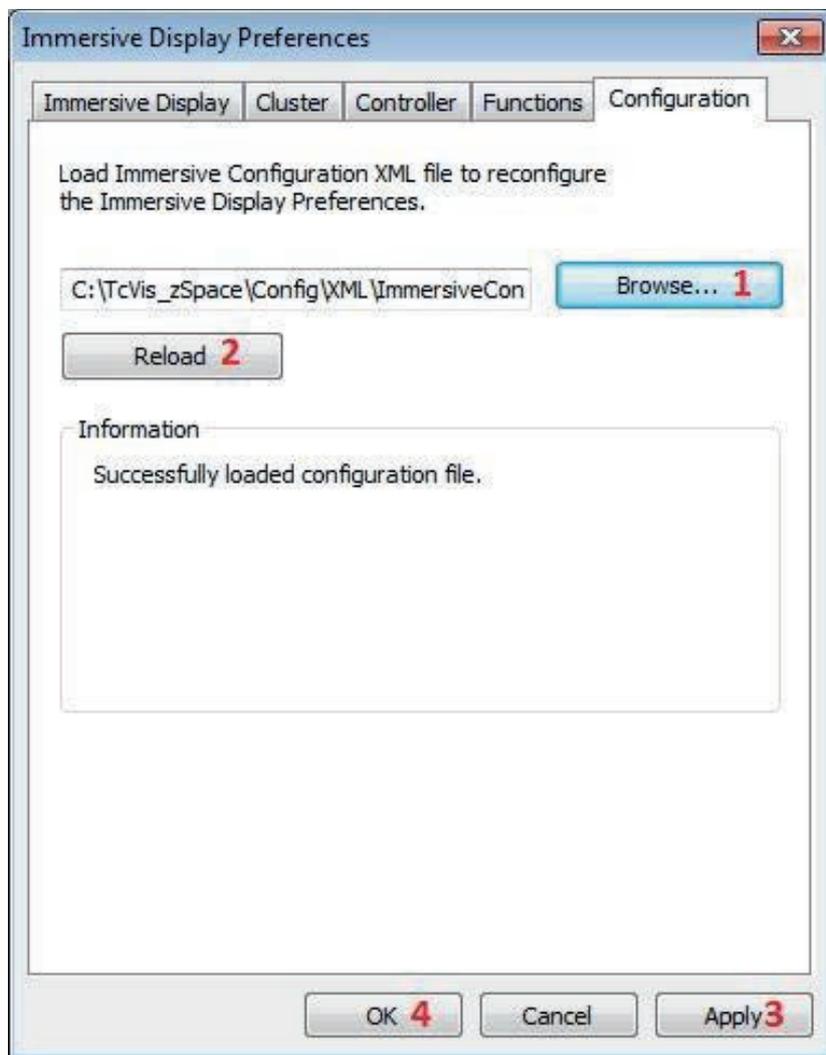
1. Copy the whole directory „TcVis\_zSpace“ into the root of drive C: such that you now have the path c:\TcVis\_zSpace
2. Run zSpace VRPN server (installed in advance of TcVis)
3. Launch **TcVis Mockup**
4. Click **File - Preferences - Immersive Display** in TcVis to bring up an „Immersive Display Preferences“ dialog as shown below



**Screen 9** - Immersive display options.

## Running and Configuring TCVis Mockup for zSpace for the first time

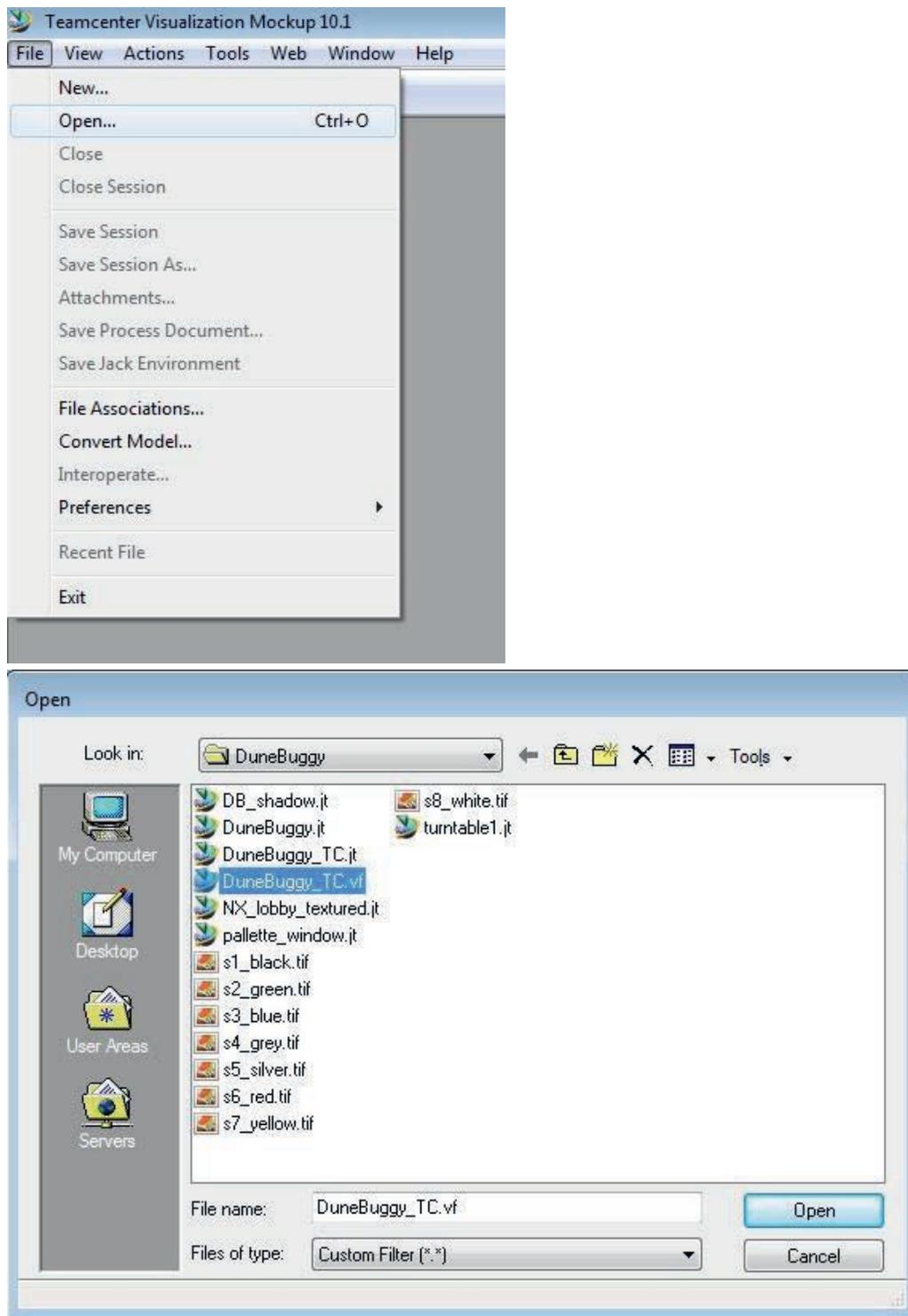
5. Click **Configuration** tab, click **Browse...** button, locate and select the config file in **C:\TcVis\_zSpace\Config\XML\ImmersiveConfig\_zSpace.xml**, click **(2) Reload** button to load the file and finally click **(3) Apply** button and finally click **(4) OK** to save the changes as indicated in the screen below. This will put the proper setting for our zSpace display configuration into the Windows registry. You only need to do this step once unless you change the configuration file for another demo.



Screen 10 - Immersive Display Preferences.

6. It's time to load our first model and finalize a few configuration settings.

7. Click on **File - Open...** and navigate to c:\TcVis\_zSpace\Models\DuneBuggy\DuneBuggy.vf

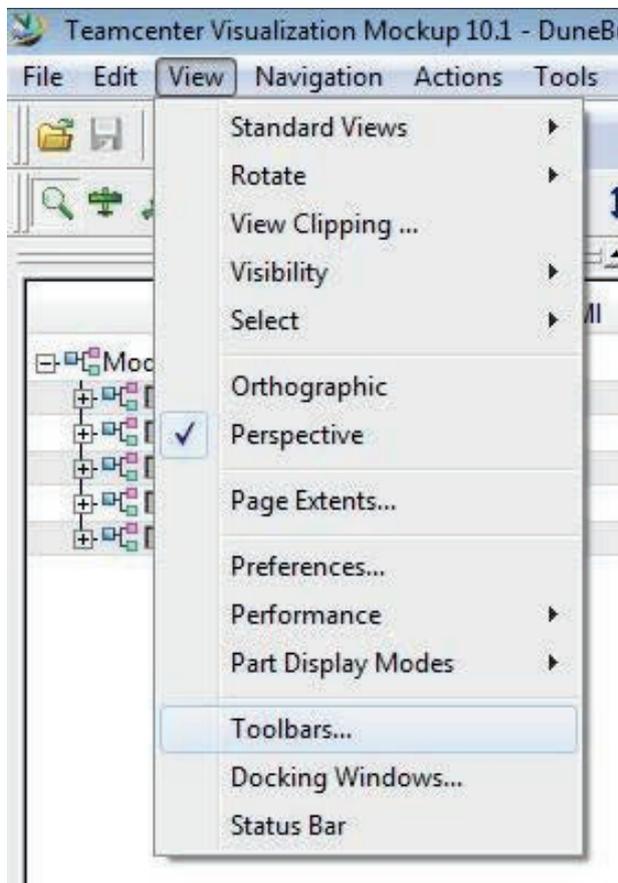


**Screen 11** - Loading our first model DuneBuggy\_TC.vf.

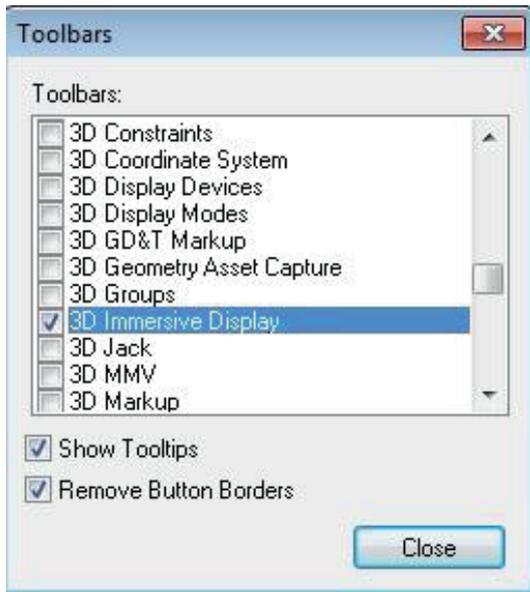
8. You should see a 3D Display Devices prompt - check the box **Keep the current selection and don't show this dialog again** and click **Yes** to proceed.



9. Click the **View** menu and then **Toolbars...**



10. Scroll down the toolbar list to locate and check the box next to 3D Immersive Display.



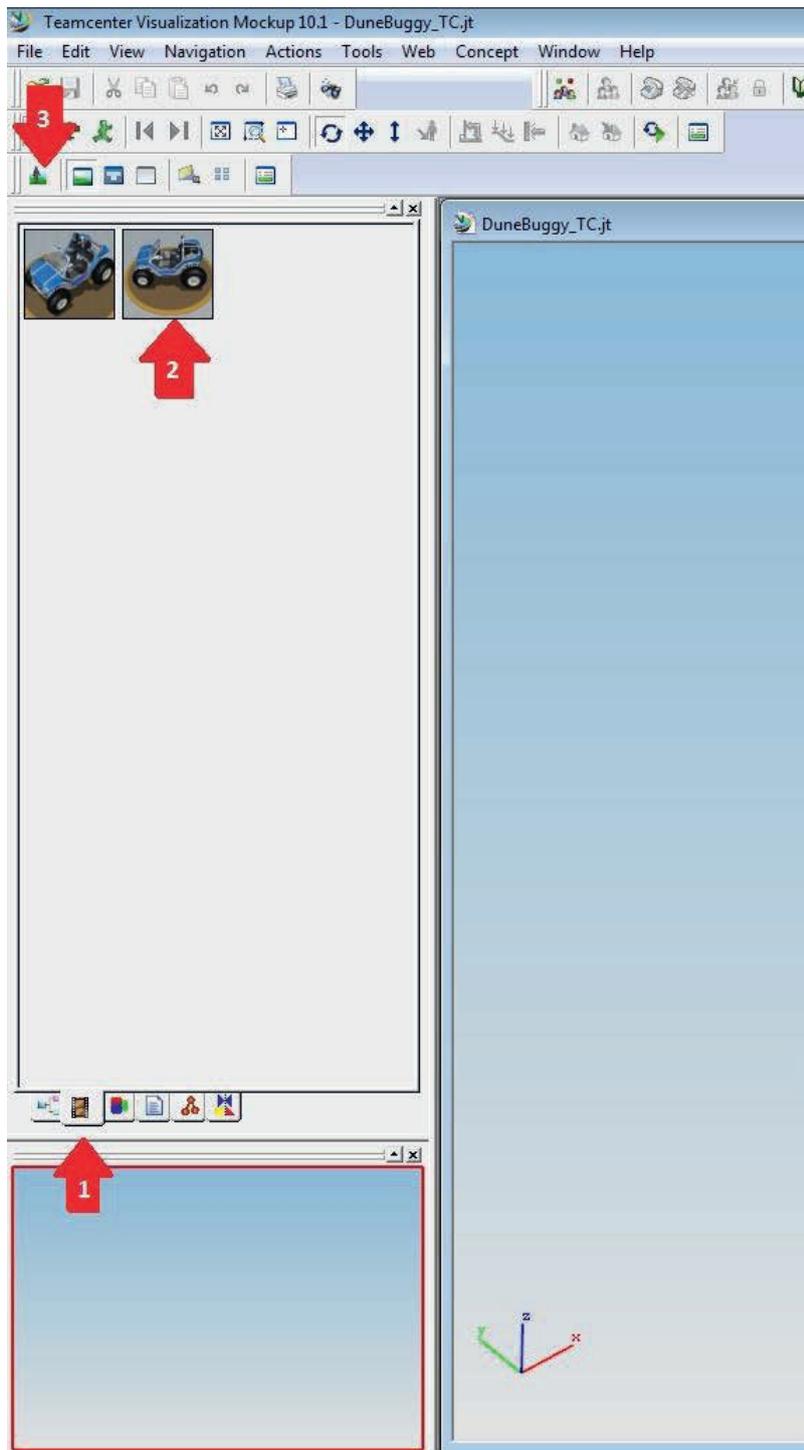
11. The Immersive Display toolbar will show up on the viewer menu bar and looks like the image below:



12. Click the first button to turn on the full screen mode. Since all settings have been configured properly, you should be able to use zSpace glasses right away to move viewpoint, and use the stylus to control a 3D cursor. To come out of the full screen mode, press “ESC” button.

13. The round button on zSpace stylus is similar to the left mouse button, which is used to select object or trigger motion. For the other two buttons, the left button is used to toggle the immersive menu, and the right button is used to switch the cursor mode.

14. It's time to bring our model into zSpace 3D immersive view. Follow the steps as indicated in the image below:



- (1) - Click on snapshot view
- (2) - Select and double-click the perspective you would like to use
- (3) - Click on the Immersive Display toolbar icon to open a stereo viewport

15. You may see a Windows firewall prompt when VFFrame initializes. Check all three boxes and click on **Allow Access** to proceed.



## Keys to use while in TC Vis

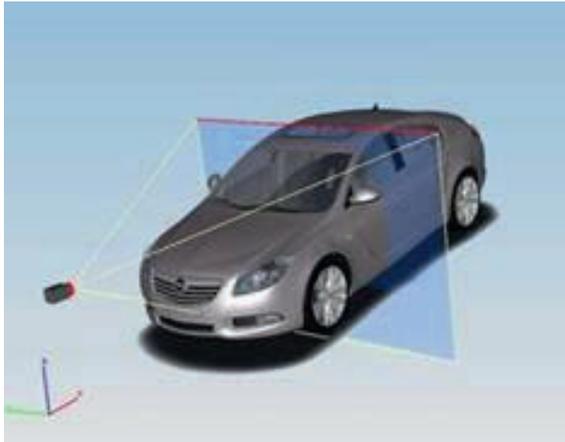
Ctrl+S : Toggle left/right stereo flip (in immersive display mode only)

Ctrl+E : Toggle stereo viewing on and off

Ctrl+G : Toggle tracking devices on and off (head tracking and stylus)

## Using „World View“ to optimize stereo viewing

In order to make the stereo viewing look good when you start up the immersive mode, we recommend that you position the object that you would like to emphasize to be “on the projection plane” (i.e, the screen of zSpace hardware), like the figure below such that part of the object is in front of the screen and part of the object is behind the screen, and you will see the best stereo result.



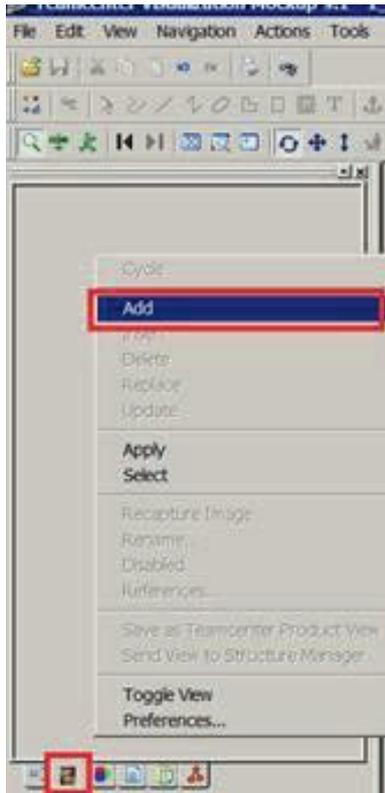
To do that for any other model, you can do the following:

1. Load the file into TcVis. Turn on all parts (you can do it from tree view, or right click on the view window and select “All On” from the context menu).
2. Click “Concept->Immersive Display->World View” to bring on world view window.
3. Click “Window->Tile Horizontally” so there are two visible view windows in TcVis. One is the original view window and the other is the world view.
4. Click the original view window to make it focused.
5. Use mouse to rotation the object in the original view window. You can also hold Shift-key and mouse to zoom, and use Ctrl-key and mouse to pan.

6. Move the object in the original view window, and you will see that the camera in the world view is also moving. Watch closely on the World View window in order to position the object on the projection plane like the figure above. You may also adjust the view angle in the world view too while doing this step.

7. Sometime the object may be too big or too small with respect to the projection plane, you can select all parts by clicking the root node on the tree view (or right click on the view window and select "Select All" on the context menu), then click "Actions->Part Transformation->Transformation..." to bring up the transformation dialog. Use "Scale" to scale the whole object so it can fit into the projection plane.

8. Once you set up the scene, use "Snapshot" to capture the current scene. You may capture different view angle depending on your need.



9. Save the current session "File->Save Session As" to save the session file.

10. Now you can follow the normal steps that you always did to active the immersive display.



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