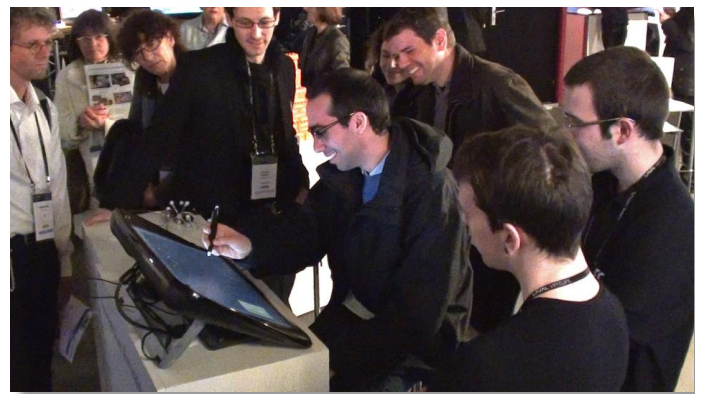
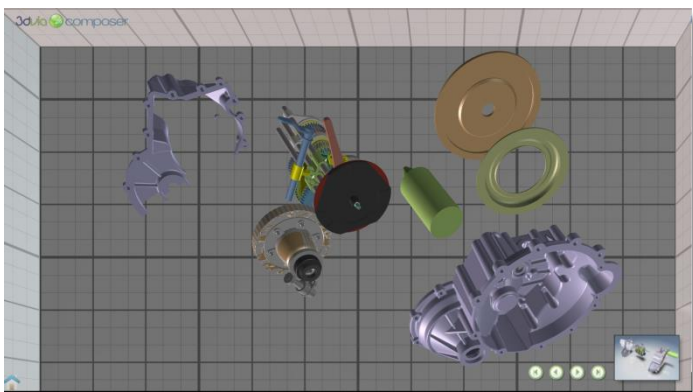


# zSpace 200 **3DEXPERIENCE** with zSpace Composer Powered by iV Lab



**3DEXPERIENCE**



## Table of contents

INTRODUCTION .....	3
1. Overview.....	3
2. Experience Description .....	3
PREREQUISITES .....	4
1. Hardware .....	4
2. Software .....	5
3. Licenses .....	6
4. Furniture .....	6
5. Critical Lighting .....	7
SETUP.....	8
1. Computer.....	8
2. Experience Package Copy.....	9
3. zSpace Composer Player Installation.....	9
4. Player Configuration .....	9
5. Active Stereo .....	10
6. zSpace 200 system Installation.....	11
7. Space Navigator Configuration .....	13
8. Services.....	13
9. Experience Projects .....	13
START .....	14
1. Run the Experience .....	14
2. Play.....	14

06/12/2014	Olivier ALLOYER	olivier.alloyer@3ds.com	Created
24/12/2014	Joris FELIX	joris.felix@3ds.com	Updated

# INTRODUCTION

## 1. Overview

In this manual, you will learn how to set up the experience and how to play it. This experience has been developed and certified by the iV Lab at Dassault Systèmes. For any feedback, please contact this document's writer.

## 2. Experience Description

This demo is showcasing a concept experience of a 3DVIA Composer content running on zSpace 200 station. It is based on Immersive Virtuality (iV) features from 3DVIA Studio.

# PREREQUISITES

## 1. Hardware

This experience requires a computer and a zSpace 200 station.

### ▷ Computer



The iV Lab has certified the experience with the following computer's specifications:

- ▷ Laptop LENOVO W530
- ▷ GPU: NVIDIA K2000M (very important)
- ▷ RAM: 16 GB
- ▷ CPU: Intel i7 2.7 GHz
- ▷ OS: Windows 7, 64-bit edition
- ▷ Disk: 400 Gb

### ▷ zSpace 200 station



- ▷ With 1 stylus, 1 tracked passive stereo glasses, 2 passive stereo glasses
- ▷ <http://zspace.com/>

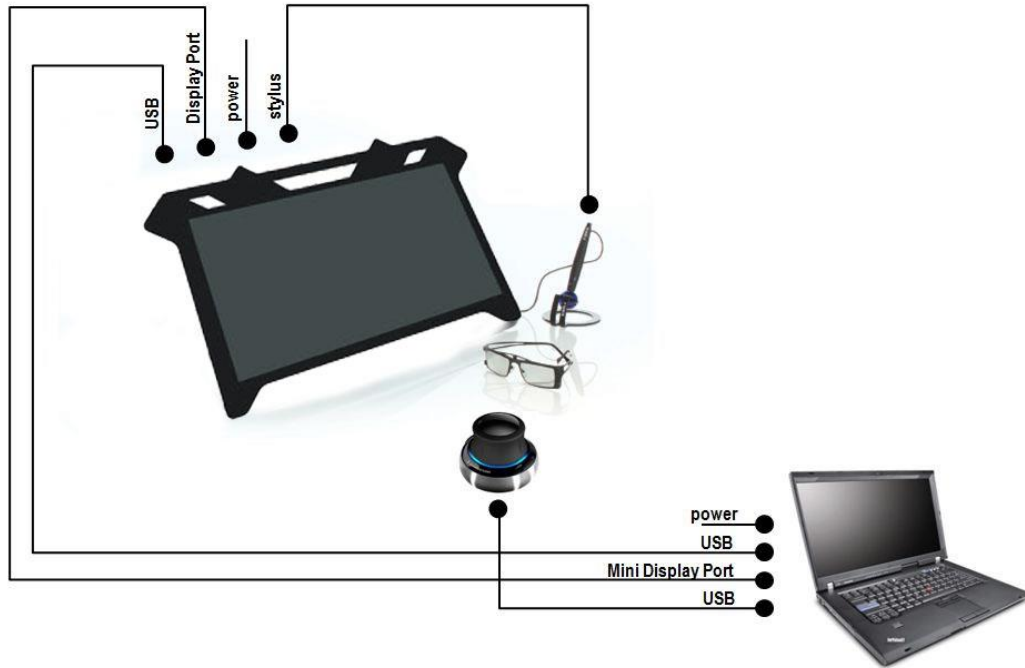
### ▷ Space Navigator



- ▷ <http://www.3dconnexion.com/products/spacenavigator.html>

## ▷ Connections

- ▷ 1 USB cable specific to zSpace 200 station
- ▷ 1 cable specific to stylus
- ▷ 1 mini display port – display port video cable (not provided but available on internet)
- ▷ 1 power cable for laptop
- ▷ 1 power cable for zSpace 200 station
- ▷ 1 USB cable specific to Space Navigator



## 2. Software

- ▷ Windows
  - ▷ Windows 7, 64-bit edition
  - ▷ Graphic resolution: 1920x1080
- ▷ Contact [dscampus.education@3ds.com](mailto:dscampus.education@3ds.com) with « zSpace installation » as email object. We will provide the ZSPACE\_Experience\_Package. This package is mandatory for installing the necessary softwares.
- ▷ DirectX 9
  1. If your computer does not have DirectX yet, unzip DirectX.zip in the directory ZSPACE\_Experience\_Package
  2. Execute the file DXSETUP.EXE located in the directory ZSPACE\_Experience\_Package\DirectX
  3. Follow the instructions.



### 3. Licenses

1. To request a license, go to DSLS Target ID located in the directory E:\ZSPACE\_Experience\_Package\.
2. Double click on DSLicTarget.bat.
3. A text file named lictarget.txt is created in the same directory.
4. Send an email to [dscampus.education@3ds.com](mailto:dscampus.education@3ds.com) with lictarget.txt as an attached file.
5. You will receive an email with the license keys and a .LIC file attached.
6. Connect to a network.
7. Install a node lock **STY license** for 3DVIA Studio Pro V6R2013X (it is the .LIC file to be copied in the directory C:\ProgramData\DassaultSystemes\Licenses)

### 4. Furniture

- ▷ Make sure the pod is large enough to host the computer and cabling and to support the zSpace 200 station with glasses and stylus.
- ▷ The iV Lab recommends the following specifications (dimensions in centimeters):



- ▷ Inside the pod, check if a ventilation system or holes are necessary to prevent risks of overheating.

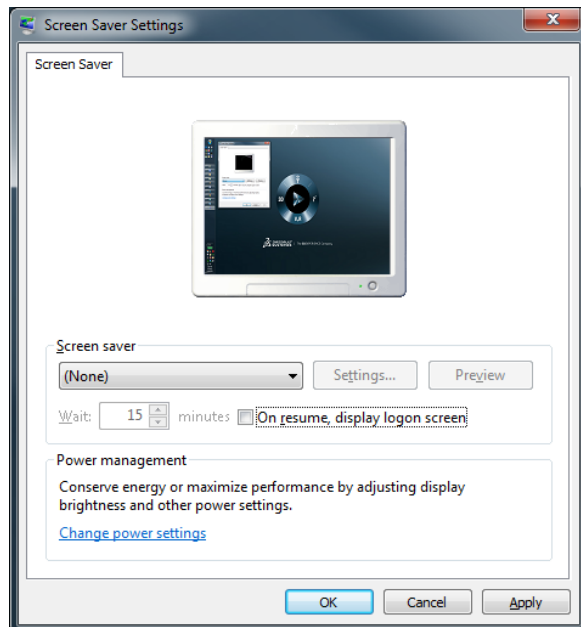
## 5. Critical Lighting

1. Check for potential interferences with lighting around the zSpace 200 (other equipments, booth lights, ceiling lights and so on...).
2. Turn off or move away from the lights that might affect the performances of the Space 200.

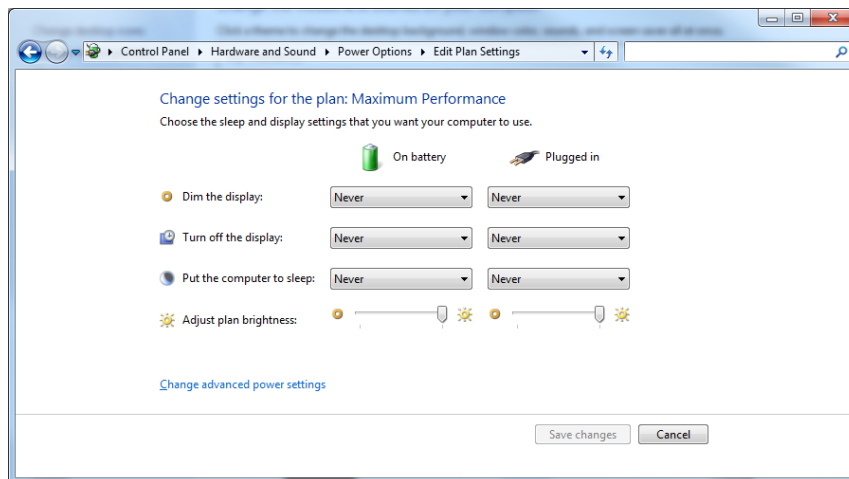
# SETUP

## 1. Computer

1. In screensaver drop-down list, select “none”
2. Uncheck “On resume, display logon screen”



3. Disable the energy economy mode.



4. Disable automatic starting processes like Communicator, Outlook Meeting Rooms Finder, automatic backups, automatic updates...

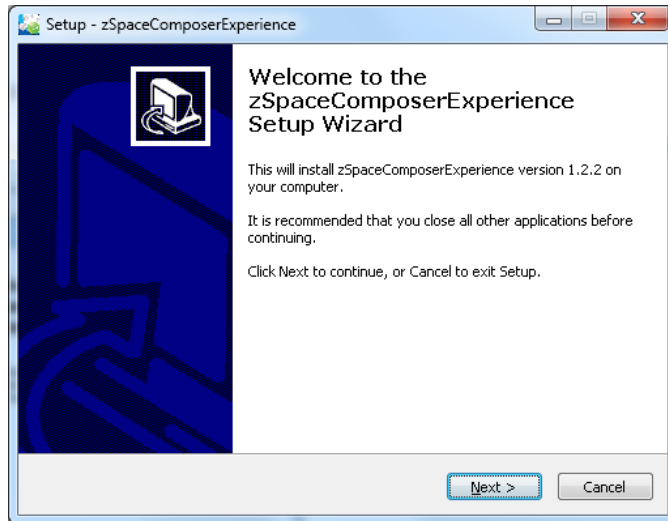


## 2. Experience Package Copy

1. Copy the directory `ZSPACE_Experience_Package`.
2. Paste it into `E:\drive`.

## 3. zSpace Composer Player Installation

1. Execute the file `zSpaceComposerExperienceSetup_x64.exe` located in the directory `E:\ZSPACE_Experience_Package\`

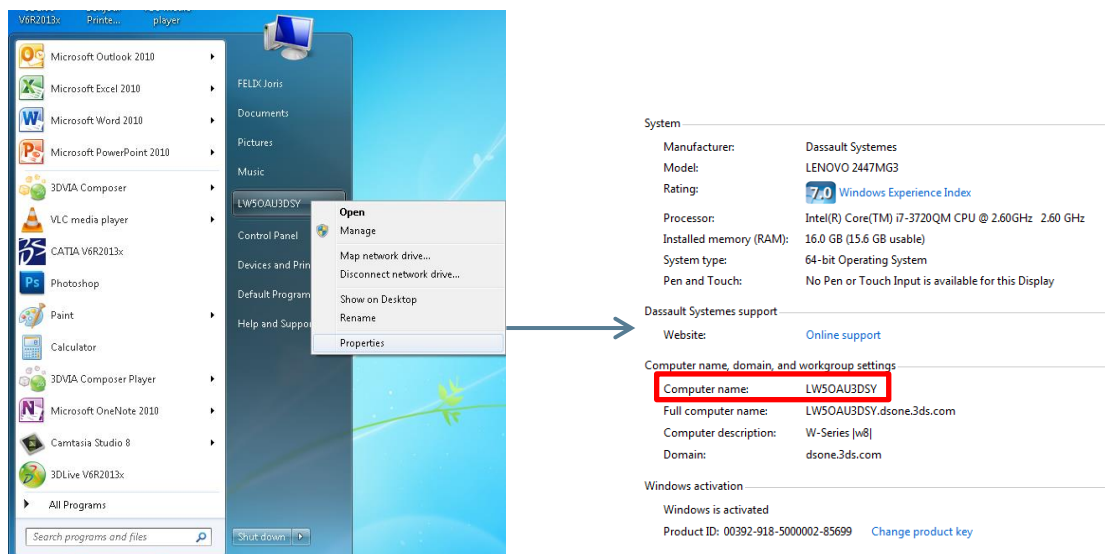


2. Follow the instructions.
3. Select a licensed version when prompted.

You cannot choose the installation directory. The experience only runs if installed in `C:\zSpaceComposerExperience`.

## 4. Player Configuration

1. Open the file `ActiveStereoFullScreen.ivcfg` located in the directory `C:\zSpaceComposerExperience\management` with a text editor.
2. Check your computer name.

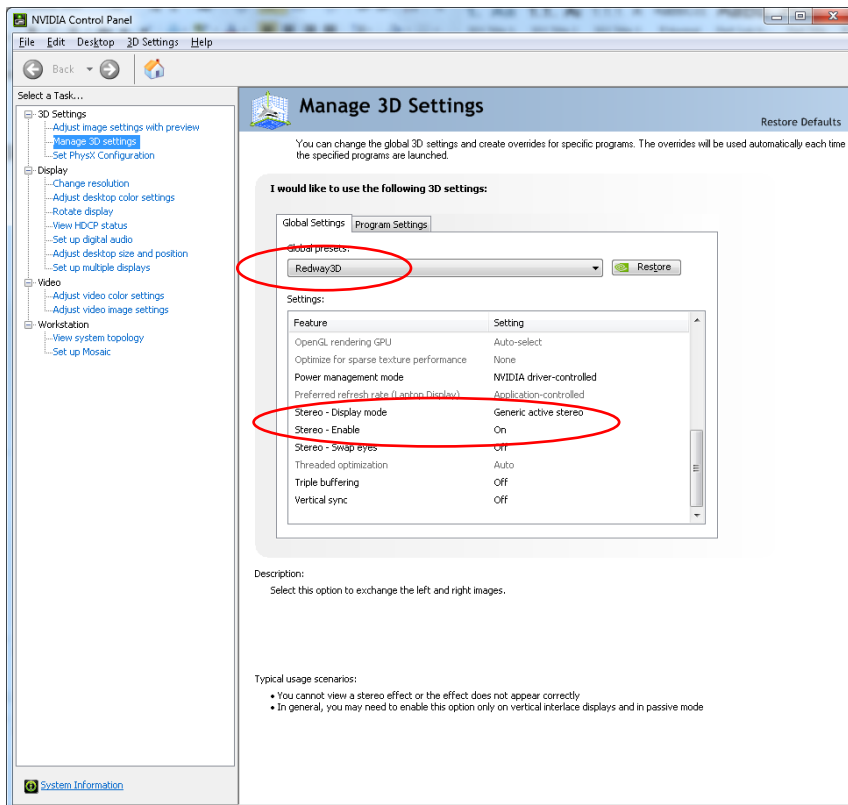


3. In the file `ActiveStereoFullscreen.ivcfg`, replace `myhost` with your computer name if it's not done.

```
<?xml version="1.0" encoding="UTF-8"?>
<asset>
  <infos>
    <version>2.15.482.0</version>
  </infos>
  <resources>
    <item id="myIVConfigFile" create="vkIVConfigurationResource">
      <HostsList count="1">
        <item>
          <HostName>LW50AU3DSY</HostName>
          <ViewsList count="1">
            <item>
              <stereoscopicMode>eActive</stereoscopicMode>
              <physicalCameraName>ControlScreenCamera</physicalCameraName>
              <desktopCoordinates>
                <left>0.0</left>
                <top>0.0</top>
                <right>1920.0</right>
                <bottom>1080.0</bottom>
              </desktopCoordinates>
              <isFullscreen>true</isFullscreen>
            </item>
          </ViewsList>
        </item>
      </HostsList>
      <clusterPort>5300</clusterPort>
    </item>
  </resources>
</asset>
```

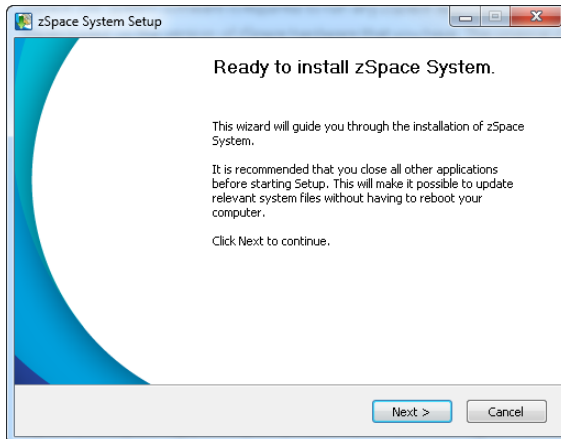
## 5. Active Stereo

1. Open the NVIDIA Control Panel (right-click on your desktop and activate the NVIDIA Control Panel).
2. In the left-hand task list, select `Manage 3D Settings`.
3. In `Global settings` tab, select `Redway 3D` as a Global Presets.
4. In the `Settings > Stereo - Enable`, select `On`.
5. In the `settings > Stereo - Display Mode`, select `Generic Active Stereo`.

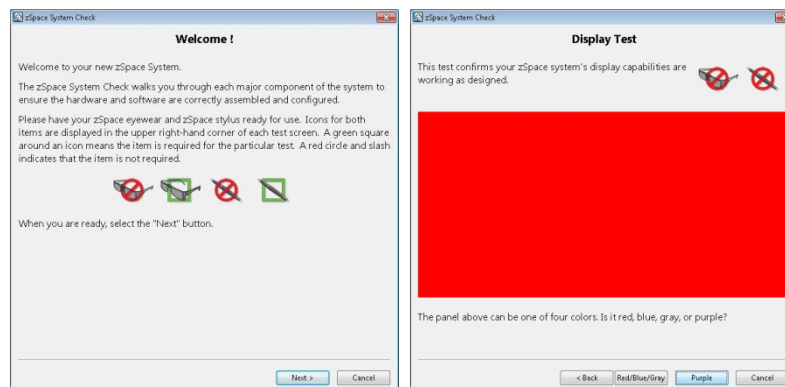
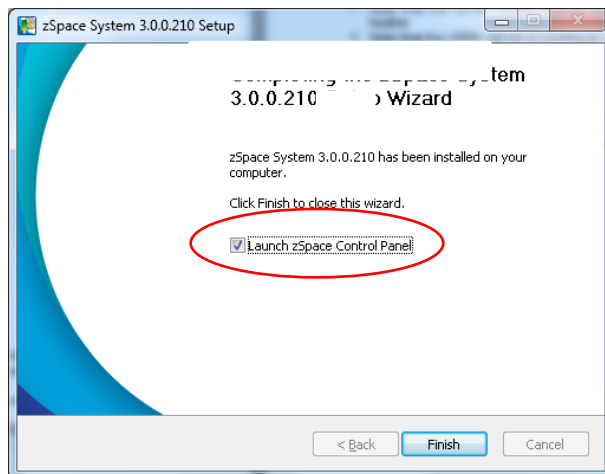


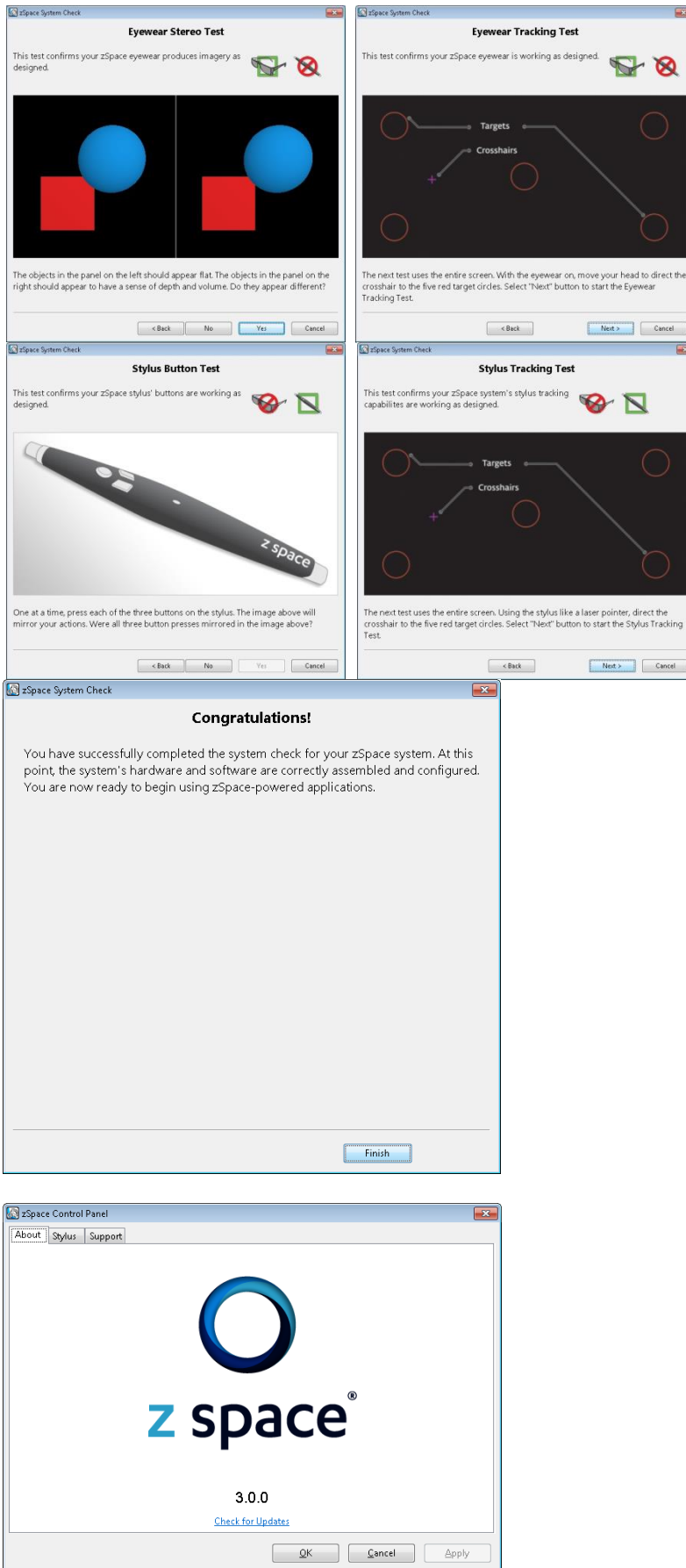
## 6. zSpace 200 system Installation

1. Visit <http://zspace.com/software/zspace-200-system-software>
2. Download the zSpace 200 system installation available (zSpace 200 only runs on zSpace System Software 4.x or higher).
3. Cut zSpaceSystemInstall-4.x.Release.exe and paste it into the directory C:\zSpaceComposerExperience\redist\InfiniteZ
4. Execute the file zSpaceSystemInstall-4.x.Release.exe



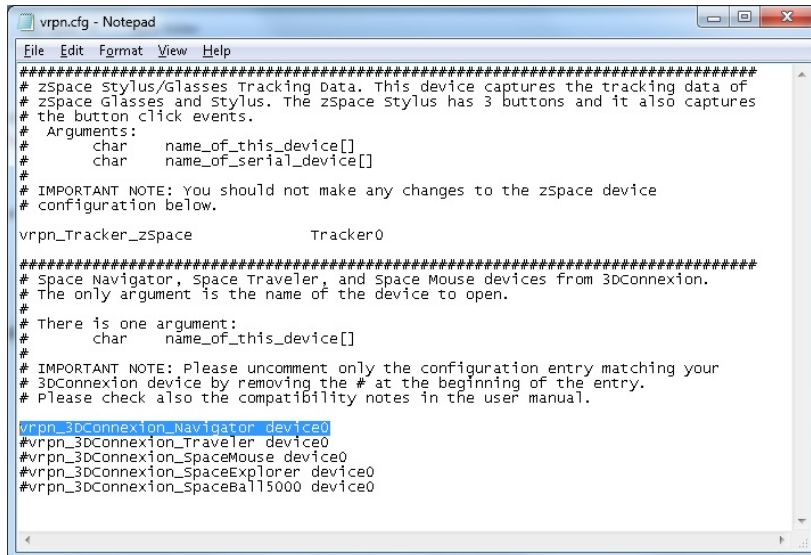
5. Follow the instructions.
6. When prompted, click Yes to authorize the update of the zSpace Display Firmware.
7. Launch zSpace Control Panel and follow the instructions to set up the calibration (display, eyewear stereo, eyewear tracking, stylus button, stylus tracking).





## 7. Space Navigator Configuration

1. Connect the Space Navigator USB cable to the computer.
2. Open the file `vrpn.cfg` located in the directory  
`C:\zSpaceComposerExperience\redist\InfiniteZ\bin\zSpaceVRPNServer\1.2.0.17886` with a text editor.
3. Uncomment the line `vrpn_3Dconnexion_Navigator device0`.



```
vrpn.cfg - Notepad
File Edit Format View Help
#####
# zSpace Stylus/Glasses Tracking Data. This device captures the tracking data of
# zSpace Glasses and Stylus. The zSpace Stylus has 3 buttons and it also captures
# the button click events.
# Arguments:
#   char   name_of_this_device[]
#   char   name_of_serial_device[]
#
# IMPORTANT NOTE: You should not make any changes to the zSpace device
# configuration below.

vrpn_Tracker_zSpace           Tracker0

#####
# Space Navigator, Space Traveler, and Space Mouse devices from 3DConnexion.
# The only argument is the name of the device to open.
#
# There is one argument:
#   char   name_of_this_device[]
#
# IMPORTANT NOTE: Please uncomment only the configuration entry matching your
# 3Dconnexion device by removing the # at the beginning of the entry.
# Please check also the compatibility notes in the user manual.

vrpn_3Dconnexion_Navigator device0
#vrpn_3Dconnexion_Traveler device0
#vrpn_3Dconnexion_SpaceMouse device0
#vrpn_3Dconnexion_SpaceExplorer device0
#vrpn_3Dconnexion_SpaceBall5000 device0
```

## 8. Services

The zSpace Composer Player relies on two services, 3DVIA Studio Cluster Daemon and VRPN Server, which need to run in the background. They start automatically when Windows starts.

1. Reboot your computer to start them automatically,  
or
2. start them manually from `Start\All Programs\Startup`.
  - ▶ An icon on the Windows toolbar indicates that 3DVIA Cluster Daemon is running.
  - ▶ The VRPN server is running as a minimized console application in the taskbar.

## 9. Experience Projects

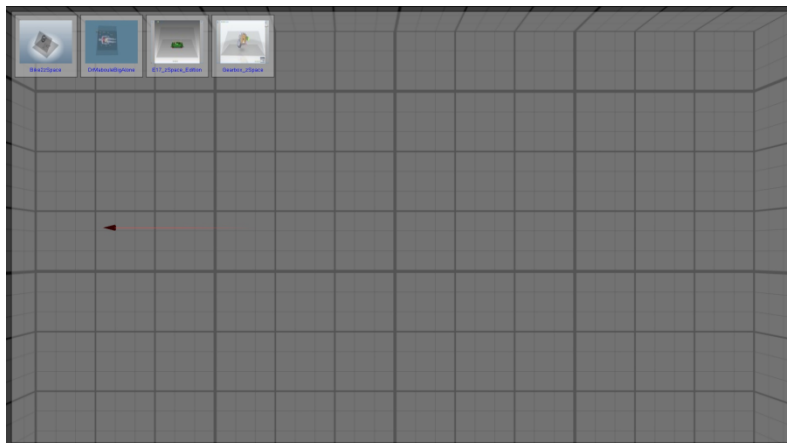
1. Unzip the file `E:\ZSPACE_Experience_Package\Projects`
2. Replace the files contained in  
`C:\zSpaceComposerExperience\media\studio` by the unzipped files located  
in `E:\ZSPACE_Experience_Package\Projects`.

# START

## 1. Run the Experience

To start the experience, click the shortcut `zSpaceComposerExperience` on the desktop.

The experience starts automatically in full screen.

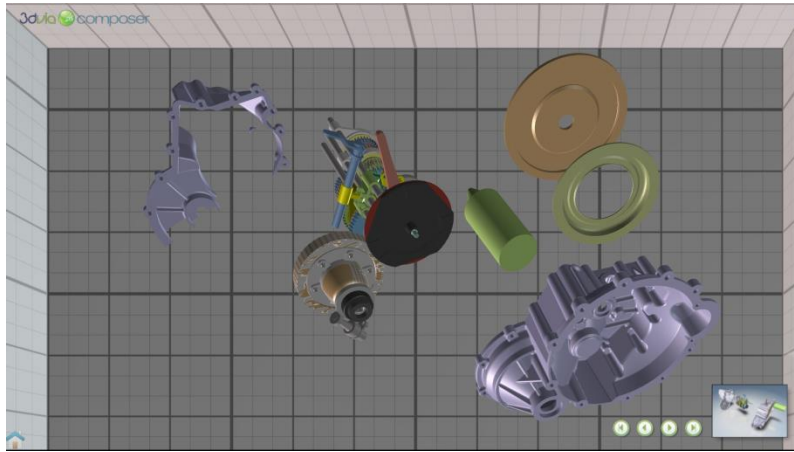


## 2. Play

### 2.1 Interact with the stylus

The stylus is the interaction device of the zSpace.

1. Take the stylus so that your hand does not cover the white cap at the upper end.
2. Move it in front of the screen.  
You'll see a red beam following the movement of your hand.
3. Aim the stylus at an object with the tip of the red beam. The object will change color to indicate it is highlighted.
4. Press the main button to activate an icon or to grab the object.
5. To undo your last object movement, press the right button of the stylus.  
Pressing the right button for at least two seconds will undo all object movements in the current view.
6. The stylus is tracked by two cameras in the upper corners of the zSpace device. In addition a gyro inside the stylus tracks rotations. If the stylus stops responding to your movement, rotate and move it until the tracking responds.



## 2.2 Load a project

1. To load a project from the project selector, activate the corresponding icon with the stylus.
2. Press the main button.



## 2.3 Interact with the Space Navigator

Use the space Navigator to rotate the mockup.



## 2.4 Leave the current project

To switch back to the project selector, aim at the home icon in the lower left corner of the screen.



## 2.5 Exit

To exit the Experience, press the [ESC] key on the keyboard.