

FSDS 3.5.1 Hard surface creation - FSX

This tutorial will show how to create a hard surface (landing pad) with FS Design Studio (FSDS) 3.5.1 for Microsoft© Flight Simulator©, FSX version.

Beforehand, you should configure FSDS preferences in order to create a bgl compilation into FSX. You must have SDK tools for FSX.

1. Preferences configuration

Launch FSDS and select Preferences within Files Menu

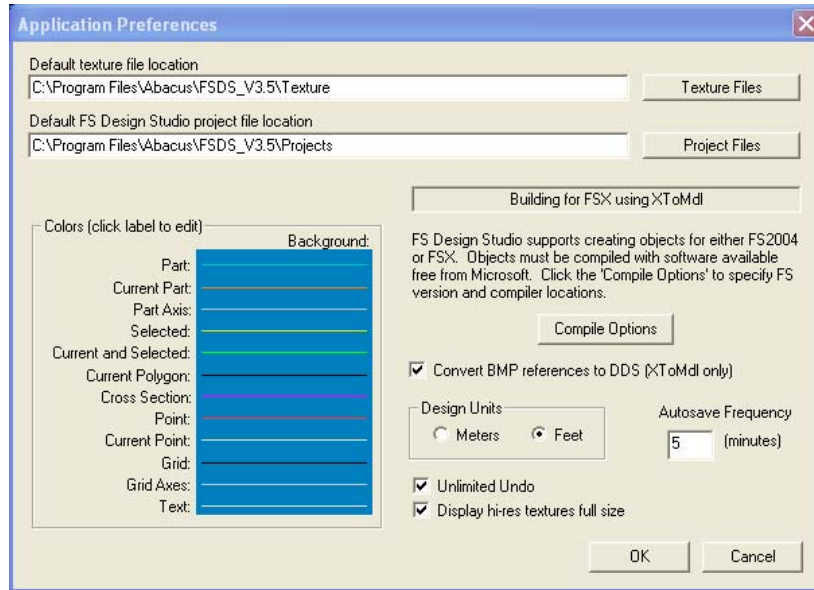


Fig. 1- Preferences window

The Convert BMP references to DDS (XToMdl only) box is checked, we shall get back to it later.

Click on Compile Options button and check the Compile for FSX box, just like in the following window.

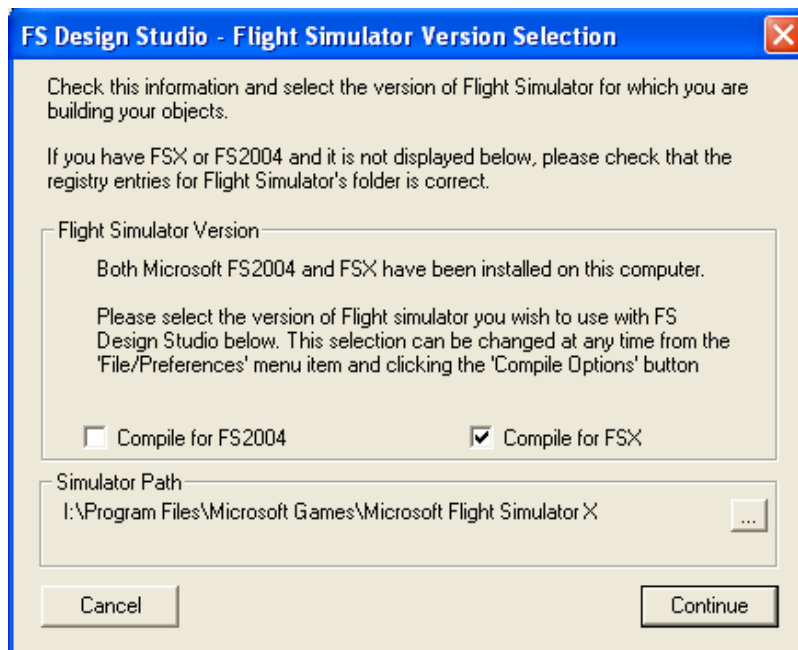


Fig.2 – FS version selection window

Click Continue button, select XToMdl box and configure the various SDK modules path towards FSX : XToMdl, BglComp and modeldef.xml as shown hereunder.



Fig. 3 – SDK path configuration

Click OK to save.

2. PartDataDefs.txt file

Upon FSDS installation, PartDataDefs.txt file does not exist. Please download it here: <http://www.abacuspub.com/adam/blog/downloads/PartDataDefs.txt> and save it into FSDS main directory.

3. Amending PartNames.txt file

FSDS should take into account the PartDataDefs.txt file. To do so, PartNames.txt file should be amended (We highly recommend to save this file beforehand. It is located in FSDS main directory)

Open this file with Notepad or any decent text editor and place your cursor UNDER this section:

```
[FSX Aircraft Visibility]
c_tire_still
c_tire_blurred
prop0_blurred
prop0_slow
prop0_still
prop1_blurred
prop1_slow
prop1_still
l_tire_blurred
l_tire_still
r_tire_blurred
r_tire_still
airspeed_effects_windshield
airspeed_noeffects_windshield
```

Add the following functions:

[FSX Attach Points - Lights]

attachpt_landing_1
attachpt_landing_2
attachpt_taxi_1
attachpt_beacon_1
attachpt_obsflight_1
attachpt_obsflight_2
attachpt_obsflight_3
attachpt_obsflight_4
attachpt_obsflight_5
attachpt_obsflight_6
attachpt_obsflight_7
attachpt_obsflight_8

[FSX Attach points - Misc]

airspeed_effects_windshield
airspeed_noeffects_windshield
attachpt_Steam_Med_1
attachpt_Steam_Med_2
attachpt_Steam_Med_4
platform_CONCRETE_0

[Exterior Aircraft Model Names]

fuselage
fuselage_front
fuselage_center
fuselage_back
tail
tail_lower
tail_upper
left_wing
right_wing
left_wing_support
right_wing_support
wing_tip
window_left_rear
window_right_rear
window_left_front
window_right_front
window_left_center
window_right_center
window_left_door
window_right_door
antenna_front
antenna_center
antenna_rear
antenna_lower
pitot_tube

Save and close your text editor.

Check these changes. Open FSDS, create a cube (any size) and press F2.

The following figure shows three new categories:

- Exterior Aircraft Model Names
- FSX Attach Points - Lights
- FSX attach Points - Misc

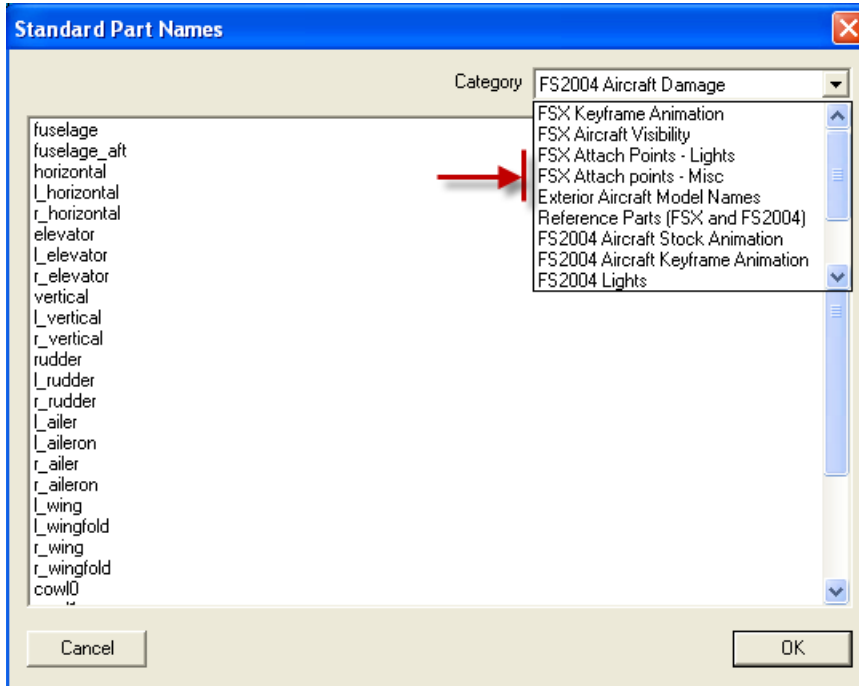


Fig. 4 – New FSX functions categories

4- Creating a landing pad on a platform

1. With FSDS, create a new cube with following dimensions (meter) and name it Base Hélipad

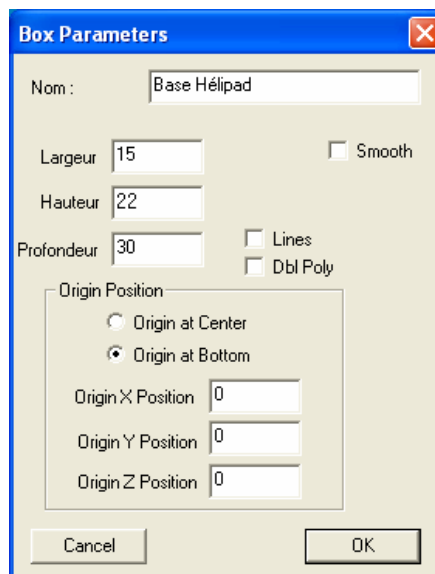


Fig. 5 – Base hélipad

2. Better apply some textures now..... ;-))



Fig. 6 – Textured building

3. Create a square and flat surface with a 10.605 m diagonal (7,5 m x 1,414) , apply a 45° rotation and place it 1 centimeter under the H , at a 21,99 m height. Do not texture it.
4. Press F2

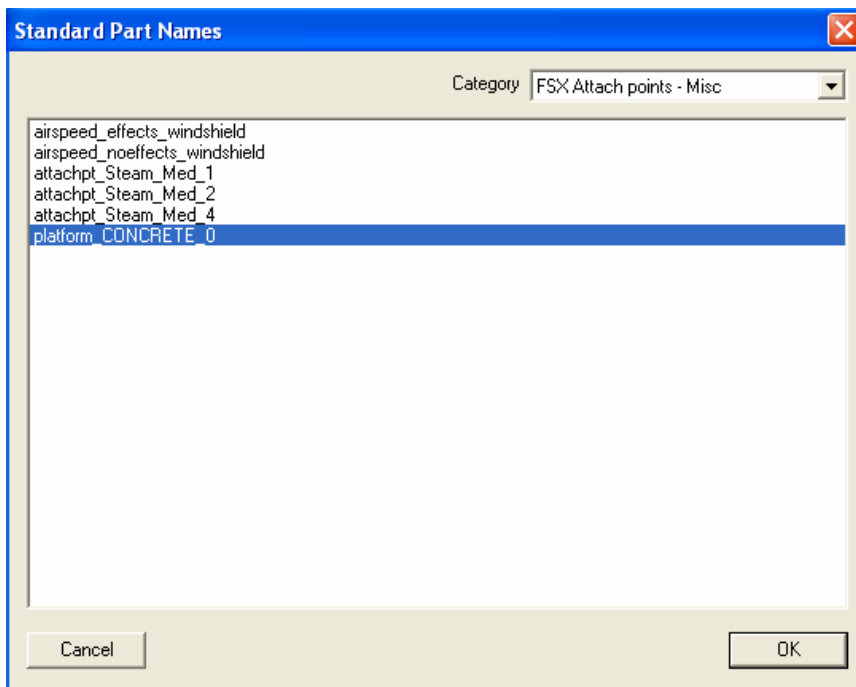


Fig. 7 – Script selection

5. In the Category drop-down menu, select FSX Attach points – Misc and highlight platform_CONCRETE_0 in the main window.

The hard surface is now allocated to the square polygon. This surface is transparent. Click on OK and save this scene as Test_SD.fsc

All the scene elements are now created but it must be placed into FSX and compiled.

5 - Scene positioning into FSX

Launch FSX, select a chopper and position yourself at 02 Ranch (46TE), daytime. Take off!

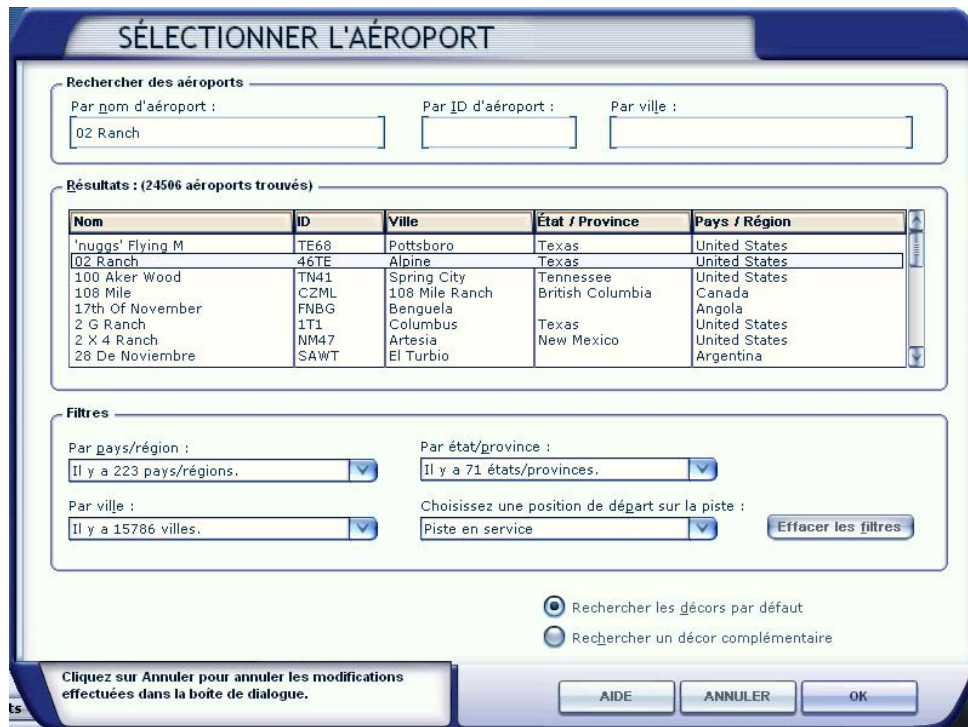


Fig.8 – Airport selection

Upon reaching your destination, save your flight as TEST. Close FSX and get back to FSDS.

1. In the Files drop-down menu, select Project Properties
2. Click on Import From Saved Flight
3. Look into Documents\Fichiers Flight Simulator X for the Test_SD.FLT file and open it

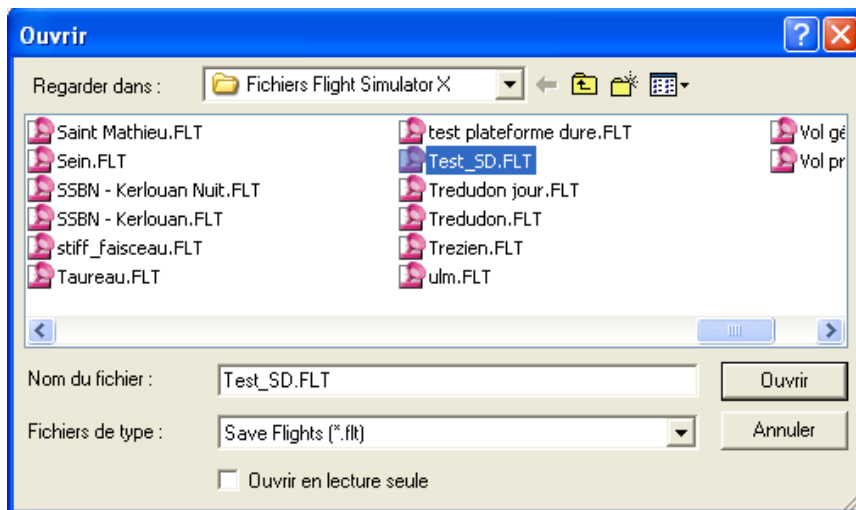


Fig. 9 – Saved flights directory

The landing pad coordinates are automatically displayed by FSDS

IMPORTANT : please make sure that Scale factor for "Snap to Scale" is set to 1 and that the Crash Detection box is unchecked.

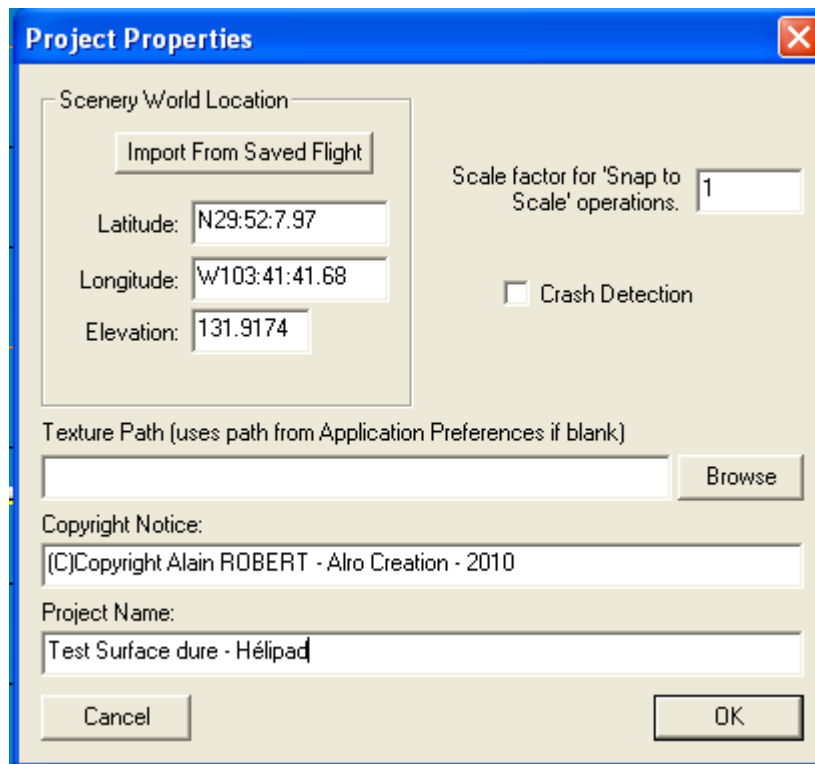


Fig. 9 – Positioning coordinates

4. Save the scene

6 – Converting BMP textures into DDS

Various utility programs are available to convert .BMP textures into .DDS

I use DXTBmp by Martin Wright.

Before any conversion, you should, within DXTBmp, give your BMP textures a 180° rotation by using The Image drop down menu and select Flip Image.

Convert the textures used in the scene and copy them into \Microsoft Flight Simulator X\Addon Scenery\texture directory

7 - BGL compiling

- Take place in the repertoire \Microsoft Flight Simulator X\Addon Scenery\scenery and save name Test_SD.bgl
- Go back to FSXS
- Within the Files drop-down menu, select Create FS Object File then Scenery Object File (.bgl or .mdl)
- Go to \Microsoft Flight Simulator X\Addon Scenery\scenery and save the scene as Test_SD.bgl

After a few moments, the scene is compiled and placed into FSX. Close all windows and go back to FSX. Position yourself at 02 Ranch (46TE) again.

The building with a landing pad on its top is on your right.

All you have to do is take off and land on the first above-ground platform created by yourself!!!

Happy flying and designing!!!

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