

Time	Subject – Total video time 1:05:27
00:00	Introduction: <ul style="list-style-type: none"> - propeller animation (still, slow, blurred) - propeller blade creation - setting attachment-points to the 3 different nose-cones - adding materials to all objects - adding textures to all materials - creation of the 3D propeller volume, with the “prop_blurred” textures. - create the 3 different nose-cones animations (still, slow, blurred)
00:20	Open Blender file
00:45	Reference to a creating Propeller blurred texture with Gimp?? (B2FSX video 7a)
01:30	Update about how to measure the exact dimensions inside the Blender aircraft model:
	3D View: <ul style="list-style-type: none"> - [Tab] to object_mode - select the front landing gear tire - [Tab] to edit_mode - select only the lowest vertices 3D View,Toolbar-Right,[Transform],[Global] <ul style="list-style-type: none"> - here you can read the absolute Z coordinate of the selected vertices at the underside of the tire.
03:20	3D View,Toolbar-Left,[Blender2FSX],[FSX File Properties]: <ul style="list-style-type: none"> - [Initialize Toolset] 3D View: <ul style="list-style-type: none"> - select all - [Ctrl-A][Scale] everything to default (1,1,1) 3D View,Toolbar-Right,[Display]: <ul style="list-style-type: none"> - [x] Background images to turn them on again
04:50	3D View: <ul style="list-style-type: none"> - reposition 3D cursor to the center of the nose of the plane - add a cone to the nose - [R][X]-90[Enter] to rotate the cone - size, scale and move it in position - [Ctrl-A][Object] to scale everything back in to default scale
06:35	Panel-Properties,[Object]: <ul style="list-style-type: none"> - rename it to “spinner-still” 3D View: <ul style="list-style-type: none"> - [Shift-D][Enter] to copy the nose-cone object Panel-Properties,[Object]: <ul style="list-style-type: none"> - rename it to “spinner-slow” 3D View: <ul style="list-style-type: none"> - [Shift-D][Enter] to copy the nose-cone object Panel-Properties,[Object]: <ul style="list-style-type: none"> - rename it to “spinner-blurred”
08:00	3D View: <ul style="list-style-type: none"> - select all spinner objects - select the body - [Ctrl-P][Object] to parent the 3 spinner-objects to the body
08:45	Panel-Outliner: <ul style="list-style-type: none"> - select spinner-blurred - select spinner-slow - click on the eyeball behind it to hide them

09:10	3D View,Toolbar-Left,[Blender2FSX-tab],[FSX Animation Tool]: - [+] - Search for the “prop0.still” - [Assign]
	3D View,Toolbar-Left,[Blender2FSX-tab],[FSX Attachpoint Tool]: - [v] Visibility - [Tag]... select “prop0.still” - [Attach]
10:55	Panel-Properties,[Object],[FSX Properties]: - Animated Tag: prop.0.still - Length:0-100 - Attachpoint tag: YES
11:20	Panel-Outliner: - select spinner-still to hide it again - select spinner-slow - click on the eyeball behind it to unhide them
11:33	3D View,Toolbar-Left,[Blender2FSX],[FSX Animation Tool]: - [+] - Search for the “prop0.slow” - [Assign]
12:10	3D View,Toolbar-Left,[Blender2FSX],[FSX Attachpoint Tool]: - [v] Visibility - [Tag]... select prop0.slow - [Attach]
12:20	Panel-Properties,[Object],[FSX Properties]: - Animated tag: prop.0.slow - Length:0-100 - Attachpoint tag: YES
12:40	Panel-Outliner: - select spinner-slow and click on the eyeball behind it to hide them - select spinner-blurred and click on the eyeball behind it to unhide them
	3D View,Toolbar-Left,[Blender2FSX],[FSX Animation Tool]: - [+] - Search for the “prop0.slow” - [Assign]
	3D View,Toolbar-Left,[Blender2FSX],[FSX Attachpoint Tool]: - [v] Visibility - [Tag]... select “prop0.blurred” - [Attach]
	Panel-Properties,[Object],[FSX Properties]: - Animated tag: prop.0.blurred - Length:0-100 - Attachpoint tag: YES

13:56	Panel-Outliner: - select spinner-blurred and click on the eyeball behind it to hide them - select spinner-still and click on the eyeball behind it to unhide them
14:05	Save Blender file
	Creation of the propeller-blade(s):
14:30	3D View: - reposition 3D cursor to center of the nosecone - add cube: - resize(x,z) it to the thickness of the propeller blade Front View: - resize(x,z) it to the thickness of the propeller blade Top View: - resize(x,z) it to the thickness of the propeller blade 3D View: - resize(y) it to the thickness of the propeller blade - [Ctrl-A][Scale] to set it to default scale - [R][Z]20[Enter] to rotate the propeller blade.
18:30	Left View: - [Shift-D][Z] to copy the blade - [R][Z]-40[Enter] to adjust the pitch of the copied blade
19:30	3D View: - [Z] to switch to solid mode - select prop-spinner object 3D View,Toolbar-Left,[Shading]: - [Smooth] – to create smooth shading effect of the spinner Panel-Outliner: - select prop-spinner object, hide it - select prop-slow object, unhide it 3D View,Toolbar-Left,[Shading]: - [Smooth] – to create smooth shading effect of the spinner Panel-Outliner: - select prop-slow object, hide it - select prop-blurred object, unhide it
	Naming the propeller-blades:
20:50	3D View: - select top prop blade Panel-Properties,[Object]: - rename it to “blade1” 3D View: - Select lower prop blade Panel-Properties,[Object]: - rename it to “blade2”

	3D View: <ul style="list-style-type: none"> - select both prop blades: - [Shift-D][Enter] to copy them both Panel-Outliner: <ul style="list-style-type: none"> - hide blade.001 - hide blade.002 - select blade1 - select blade 2 - select spinner-still - [Ctrl-P],[Object] to parent the blades to the spinner-still object.
24:00	Panel-Outliner: <ul style="list-style-type: none"> - hide blade.001 - hide blade.002 - hide spinner-still - unhide blade.001 - unhide blade.002 - unhide spinner-slow - select blade.001 - select blade.002 - select spinner-slow - [Ctrl-P],[Object] to parent the other blades to the spinner-slow object.
25:00	Adding materials to the prop-blades and nose-cone
	3D View: <ul style="list-style-type: none"> - select nose-cone Panel-Properties,[Object],[Materials]: <ul style="list-style-type: none"> - [New] - Name: spinner_slow_color - Diffuse, hex: ff0000[Enter] - Specular: 0.15[Enter] Panel-Outliner: <ul style="list-style-type: none"> - Select top blade Panel-Properties,[Object],[Materials]: <ul style="list-style-type: none"> - [New] - Name: blade1_color - Diffuse, hex: 999999[Enter] - Specular: 0.15[Enter] Panel-Outliner: <ul style="list-style-type: none"> - select lower blade Panel-Properties,[Object],[Materials]: <ul style="list-style-type: none"> - [New] - Name: blade2_color - Diffuse, hex: 999999[Enter] - Specular: 0.15[Enter]
27:00	Panel-Outliner: <ul style="list-style-type: none"> - select and hide spinner-slow - select and hide blade001 - select and hide blade002 - select and unhide spinner-still - select and unhide blade1 - select and unhide blade2

27:40	Panel-Properties,[Object],[Materials]: - [New] - Name: spinner_still - Diffuse, hex: ff0000[Enter] - Specular: 0.15[Enter] 3D View: - select blade1 Panel-Properties,[Object],[Materials]: - [x] Blade1.color 3D View: - select blade2 Panel-Properties,[Object],[Materials]: - [x] Blade2.color
29:00	Panel-Outliner: - select spinner_blurred Panel-Properties,[Object],[Materials]: - [New] - Name: spinner_blurred - Diffuse, hex: ff0000[Enter] - Specular: 0.15[Enter]
30:00	Panel-Outliner: - select blade1 and unhide it - select blade2 and unhide it - spinner_blurred and unhide it Left View: - [Z] edit mode - reposition 3d cursor to the meeting point of the 2 blades - add a [mesh][plain] - [R][X]90[Enter] to rotate the plane - size the plain(x,z) to enclose the full length of the prop-blades
32:20	- [Z] to see the plain in solid mode
32:50	3D View,Toolbar-Right,[Shading]: - [x] Textured Solid
33:20	3D View: - [Shift-H] to hide everything but the selected object - [Tab] edit-mode 3D View,Toolbar-Left,[Tools], [Mesh Tools],[Add]: - [Subdivide] - [A] to unselect everything - [G][Y], select middle vertex - pull vertice a little out towards fuselage - [Tab] object mode Panel-Properties,[Object]: - rename it “prop_blurred_back”
35:20	3D View: - [Shift-D][Enter] to copy it - [R][Z]180[Enter] to flip the prop_blurred_back around the z axis – to create a 3d propeller-volume shape Panel-Properties,[Object]: - rename it “prop_blurred_front” Front View: - control the position of both blades in relation of the nose-cone

38:25	Panel-Outliner: - select “prop_blurred_front” - select “prop_blurred_back” - select “spinner_blurred” - [Ctrl-P][Object] to parent both planes to the “spinner_blurred_object” 39:20 - [Alt-H] to hide everything but the selected object.
40:20	Applying the prop-blade textures to the blades:
	Panel-Outliner: - select “prop_blurred_back” 3D View, Front View:
41:20	Split the 3D View(port) window and add another, 2nd window Switch 2nd window into an UV/Image-Editor Left Window: - [Tab][A] to go to edit mode and select all - [Mesh][UV-Unwrap][Smart UV Project] >> dialog box pops up - Leave everything to default [Ok] >> UV map appears in right 2 nd UV-Image-Editor Window
42:50	Panel-Properties,[Object],[Materials]: - [New] - name it “blurred_prop”
43:14	Panel-Properties,[Object],[FSX Material Params]: [Bloom]: - [x] allow bloom [Frame buffer blend]: - [Set Transparent] [Enhanced parameters]: - [x] No shadow - [x] No Base Material Specular
44:30	Panel-Properties,[Texture]: - [New] - Type: image or movie [Image]: - [Open] the selected texture image file - select “prop_blurr.png” file [Open Image] [Mapping]: - Coordinates: [UV] Panel-Properties,[Materials]: > UV/Image-Editor Window: - [+New]: - select the prop_blurr.png[Enter] >> texture is now placed on UVMap.

47:00	Applying the prop-blade textures to the blades
	Panel-Outliner: - select “prop_blurred_front” and hide it - select “prop_blurred_back” and unhide it
47:30	Front View: Panel-Properties,[Texture]: - [x] texture box → prop_blurr_back - scroll down and check if all settings are still the same.
48:20	3D View: [Mesh][UV-Unwrap][Smart UV Project] >> dialog box pops up - leave everything to default [Ok] >> UV map appears in right 2 nd UV-Image Editor Window UV/Image-Editor Window: - [+New] - select the prop_blurr.png [enter] >> texture is now placed on UVMap.
	3D View: - [Tab][A] to unselect everything again - close UV-unwrap wrap window 3D View: - [Alt-H] to show / unhide everything again.
49:41	Animations of the propeller-blade:
50:00	Panel-Outliner: - hide the rest of the spinner and attached objects - select Spinner_Slow and all attached part visible
51:00	Panel-Animation: - set framecounter:0 3D View: - [I][R] for the 1 st animation keyframe Panel-Animation: - set framecounter:25 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees. - [I][R] for the 1 st animation keyframe. Panel-Animation: - set framecounter:50 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 2 nd animation keyframe Panel-Animation: - set framecounter:75 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 3 rd animation keyframe Panel-Animation: - set framecounter:100 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 4 th animation keyframe
53:00	Save your Blender file at this point

53:10	TESTING THE PROPELLER ANIMATION:
	Panel-Animation: - set framecounter:0 - press [>] to play the animation - reset framecounter:0 Repeat this entire process for the “spinner-blurred”
53:50	Panel-Outliner: - select the rest of the spinners and attached objects and hide them - select spinner_blurred and all attached part visible
54:00	Panel-Animation: - set framecounter:0 3D View: - [I][R] for the 1 st animation keyframe Panel-Animation: - set framecounter:25 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 2 nd animation keyframe Panel-Animation: - set framecounter:50 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 3 rd animation keyframe Panel-Animation: - set framecounter:75 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 4 th animation keyframe Panel-Animation: - set framecounter:100 3D View: - [R][Y]90[Enter]to rotate the propeller 90 degrees - [I][R] for the 5 th animation keyframe
55:10	Save your Blender file at this point
	Panel-Animation: - set framecounter:0 - press [>] to play the animation - reset framecounter:0 Repeat this entire process for the “spinner-still”
55:50	Panel-Outliner: - select the rest of the spinners and attached objects and hide them - select Spinner_still and all attached part visible
	#This spinner-still needs to stand still at all keyframes at a 30 degree position
56:00	Panel-Animation: - set framecounter:0 3D View: - [I][R] for the 1 st animation keyframe

	Panel-Animation: - set framecounter:25 3D View: - [I][R] for the 2 nd animation keyframe Panel-Animation: - set framecounter:50 3D View: - [I][R] for the 3 rd animation keyframe Panel-Animation: - set framecounter:75 3D View: - [I][R] for the 4 th animation keyframe Panel-Animation: - set framecounter:100 3D View: - [I][R] for the 5 th animation keyframe
56:56	Save your Blender file at this point
	3D View: - [Alt-H] the make everything visible again Panel-Animation: - set framecounter:0 - press [>] to play the animation - reset framecounter:0
	#Warning about always setting your animation to ZERO-th frame before exporting your model!
	Explanation about how the texture shows as movement. The texture mask does the trick inside FSX
59:00	Switch to Windows Explorer: - search your ..\MDL file folder - delete everything in that folder
	Switch back to Blender: [File],[Export],[Export x for FSX] Export your model with the following options: - Apply modifiers - Export animations - Export MDL - [Export FSX .x file]
	Close Blender
1:00:00	Switch to Windows Explorer: - go to your default FSX folder...\Simobjects\Aircraft\Testplane_name folder: - copy the newly created MDL file → ..\testplane\model folder - copy the propblur_t.dds texture file → ..\testplane\texture folder - copy the propblur_t.dds texture file → ..\testplane\texture.1 folder
1:03:00	Start FSX: - load the plane - change the airport - change the weather - click [Fly now] And enjoy the animated propeller spinning at your testplane's nose
1:05:00	End of the video