How to create a texture coordinates template in 3ds Max 9

OBJECTIVE

In this tutorial, you will perform the following steps to complete your template.

1. Apply the Unwrap UVW modifier
2. Create a template to work in Photoshop
3. Apply a Material (a checker texture in this case)
4. Apply a texture from Photoshop

For purposes of this tutorial, you will work on one of the seats on the scene, but you’ll need to do these steps for all items in the scene. You will later substitute the checker texture for the material that you will use on your objects.

So, let’s get started.

STEP 1. APPLYING THE UNWRAP UVW MODIFIER

1. Open the scene provided in the assignment.
2. Select one of the chairs
3. Apply the Unwrap UVW Modifier with the chair still selected.
4. On the Modify tab, find the Parameters rollout and click on EDIT.

5. You should be able to see the EDIT UV’s window.

6. If you’re not seeing the bottom of the window, just maximize the window by clicking on the square to the left of the red X at the top right side of the window.

7. Ok, now you see a bunch of UV’s there but can’t really relate that to your chair geometry. Next, you’ll layout the UV’s so that you can see each individual piece of your geometry.
8. At the bottom of the window, you’ll see a section called Selection Modes. This will allow you to select Vertex, Faces, or Edges on your geometry to work on individual areas as needed. Click on the FACES option.

9. Next, you’ll tell 3ds Max to unwrap the UV’s based in the faces of the chair. Go to MAPPING – FLATTEN MAPPING. On the Flatten Mapping, click OK to use the default values. You will see now the different faces that make your chair’s geometry laid out for you on a more clear way. If you can’t see the checkers on the background, you can activate or deactivate the background by clicking on the checker cube icon at the top of the window (it’s circled in red on the illustration below). For this tutorial, I’ll deactivate it on the next few illustrations for a more clear view.
10. If you click on any of the faces on your Edit UV’s window, you’ll see the corresponding face highlighted in the viewport window in 3ds Max. This will give you a better idea of the placement of the textures.

11. If you try to click on one face and move it, you’ll notice that if there are any other faces attached to the sides, these will move too and get dragged.

12. At this point, there are several ways to go around this. You could detach each face or add up the faces that are contiguous so that the textures later run from one face to the next. For this tutorial, I’ll show you how to move and link several areas that are contiguous so that the texture comes out seamless. Before we move on to the next step, make sure that the template looks like it is in step 10, if you tried to move any faces. You can click CTRL-Z to undo any moved faces that you tried out.
STEP 2. CREATING A TEMPLATE

1. With the Edit UVW’s window still open, select the front panel of the chair.

2. Holding CTRL, click on the surrounding 4 panels.
3. For this exercise, you can choose to layout the front panel just like you see it on the viewport window, with the smaller panels facing upward. To do this, you can either select the rotation tool at the top toolbar on the window (circled in red on the illustration below) or click twice on the ROTATE +90 button at the bottom right corner of the window.

4. This will rotate your panel so that it matches the direction that you see on the viewport.

5. Next, we’ll find which panel is consecutive to that one. For this exercise, I’ll use the right side on the viewport, since it’s visible to us from the Perspective view angle that we have on the illustration.
6. Click on the 4 panels that make the side panel of the chair. To do this, click on the first panel and hold CTRL until you have the four of them selected on the viewport. If you need to minimize the Edit UVW’s window, you can do so, or you can resize it to be side by side to your viewport like I did, by dragging the upper corner of the window and moving the window up by dragging up the blue bar with the name of the window.

7. If you try to drag this segment and place it next to your front panel, you’ll see that it drags the other piece with it.

8. If you don’t want this to happen, you can just detach the pieces by going to TOOLS – BREAK. If you try to move the piece now, it will leave behind that segment that you don’t want to work with just yet.
9. Now you can move the piece that you have selected, next to the front panel. Click and drag it to be to the side of your front panel as shown below.

10. If you notice, the panels that are in the front are not aligned with the ones on the side in the Edit UVW’s window. We’ll need to rotate the piece that we just moved so that it goes on the same direction of the other panel.
11. To rotate the side piece, just select the four panels and hit the ROTATE +90 button at the bottom right side of the screen once to align all pieces. Make sure you have all 4 pieces selected. If you’re having trouble selecting all 4 pieces, click on SELECT ELEMENT option at the bottom of the screen. That will allow you to select all the faces at once on that piece.

12. Once you have it rotate, the pieces should look like this.

13. Next, we’ll merge the edges very well aligned so that when you apply a texture, it goes seamless. First, let’s straighten some edges to avoid the slanting on the arm rests.
14. Select the EDGE selection mode on the Edit UVW’s window. Make sure that SELECT ELEMENT is OFF.

15. Click on the edge shown above, and move it to the left until the slanted edge on the right, below it is straightened. HINT: Use the scrolling wheel in your mouse to zoom in or out in this window. Your results should look like the image below.
16. Next you’ll move the side panel to match the positions of the front panel. Click back ON the Select Element option and click on one of the edges of the side panel.

17. Next click and drag the piece as close as you can to match the edges of the front piece as shown below.
18. The problem you’re having now is that this piece is slightly taller than the other one. We need to align the edges now so that they have the same or similar width. Deselect the Select Element at the bottom of the window. Then, click on any empty area to deselect your panels. Then, click on the top edge of the front panel as shown below.

19. Raise that edge to align to the other two panels as close as you can.
20. Next, you’ll Weld these UV’s together along the side of the front panel, so that you don’t have a seam in your texture. At this point, if you click on the VERTEX selection mode and try to move any of the vertex on the edges of either panel, you’ll notice that they will leave a gap. That’s why we need to weld them, so that they’re together and you don’t have seams in that zone when applying your texture (unless you want a seam there, this is recommended).

21. Let’s switch to Vertex mode on the selection modes and click and drag a selection around the two UV’s shown below.
22. Once you do this, go to TOOLS – WELD SELECTED. This will keep them together now. Try
deselecting the vertex and clicking once on it again. This time, the whole vertex moves together. Do
the same for the two vertex indicated below.

23. Once you weld these, you will notice some distortion on the edges after you welded them. You can
easily adjust this by moving the vertex until the edges become straight.
24. To do this, just click on one vertex, for example, the one shown below, and move it up until the edge becomes straight.

25. You can do the same for the vertex shown below until you make the edges straight. HINT: Hold CTRL to select more than one vertex in a row to move the ones on the edges as the illustration below. That will save you time.
26. Continue editing the pieces as you seem necessary to align them. You can follow the example below, or leave it as it is until you apply the checker material to the geometry. Then you’ll be able to spot any trouble areas and come back to this UVW editor and move uv’s as needed.

27. Finally, you’re almost ready to export this to Photoshop. You’ll need to verify that your texture fits inside the darker line in the box shown above. I turned off my grid so that you could see it. If any areas fall outside this box with the darker edge, it will not be seen in the snapshot.

28. Finally, go to TOOLS – RENDER UVW TEMPLATE. This will open the dialog box and will save a file that you can use as a guide in Photoshop.

29. Leave the resolution as 1024x1024 to have a big texture to work with enough resolution. Click on RENDER UV TEMPLATE at the bottom of the screen.
30. This will open the Render Map window. Click on the SAVE icon on the top left corner to save this as a jpg and open it with Photoshop next.

31. On this window, select JPG as the file type, rename your file to be relevant to the object that you’re texturing, which is named THRONE in 3ds Max, so let’s call this one Throne_Template.jpg. For each different object that you texture, name it to the name of the geometry in the Modify tab. It will be much easier for you later. I saved my jpg to a folder called Texture Maps for easy access later.
32. Click SAVE and then OK on the options.

**STEP 3. CREATING AND APPLYING THE MATERIAL**

Next, we’ll create a material in 3ds Max and I’ll show you how to upload this and using Photoshop, make any changes to the texture.

33. Close all texturing windows until you see the viewports again.
34. Press M to access the Material Editor.
35. With the first material selected, rename it to Throne Material. When you create materials for other objects, follow this advice on labeling it with a significant name. Make sure that the throne is still selected, and click on ASSIGN MATERIAL TO SELECTION. This will apply the material to the throne.

36. Next, you’ll apply the checker texture to the throne to view the alignment of the UV’s more clearly. That’s how you’ll turn in your assignment #2.
37. Select the checker box next to Diffuse and in the next window, you can select any texture, but you’ll apply the checker one. Click OK to apply your texture.
38. If you can’t see the checker texture applied to your viewport, click on the SHOW MAP IN VIEWPORT icon shown below.

39. Next, we’ll repeat the tiling so that we can see smaller boxes and we can see if the placement is working. Go to TILING and set the U’s to 10 and the V’s to 10.
40. You’ll see the tiling now much more clear and you’ll be able to see deformations better. If you see any deformations on your checkers, that are not showing perfect boxes (not rectangles), you’ll be fine. If you find rectangles, it means that you need to move UV’s closer on the EDIT UV’s window that we explored above.

41. For example purposes, I moved one UV so that you can see how the texture placement changes when you don’t have the UV’s nicely aligned. This part is ALL visual, so you’ll need to go back and forth editing your uv’s until you get the results that you want.

As far as assignment 2, you’ll just need to do this for all objects in your scene. Now, for assignment 3, you’ll need to apply textures. How do you do that? Simply replace the checker texture for the image that you work with in Photoshop. The next few steps show you how.

**STEP 4. APPLY A TEXTURE FROM PHOTOSHOP**

42. Open the Material Editor by pressing M. If you’re still seeing the Tiling options, it means that you’re seeing the Diffuse attributes. To go back, click on the GO TO PARENT icon shown below.
43. That will take you to the main options for that material. We’ll need to replace the checker texture for the texture that you’ll create in Photoshop. To do so, you’ll need to remove the checker texture first, so right-click on the M next to the diffuse attribute and select CLEAR.

44. Then, click on the checkbox again but this time we’ll select BITMAP.

45. On the next window, find the texture template that we just created, called Throne_Template.jpg and apply it. Right now you don’t see much because it’s black, but I’m going to go back to Photoshop and edit the panel colors so that you see them applied to your UV layout and material. Remember to apply the SHOW MAP IN VIEWPORT option if you don’t see the material.
46. Open Photoshop and open the file Throne_Template.jpg file that you created.
47. Create a new layer, where you’ll paint the texture that you need for the throne. This can also be one of your textures and you can cut and paste pieces or clone as you need to in the upcoming steps.

48. Next, double click on the BACKGROUND layer to rename it and unlock it, rename it TEMPLATE, and press OK.

49. Then, move the Template layer to the top of the layer stack. You can just click and drag it, or go to LAYERS- ARRANGE – BRING TO FRONT. This will move the Template layer to the top of the layer stack.

50.
51. Now, you’ll set the blending mode to SCREEN. On the blending mode menu, select SCREEN. This will allow you to see what you paint underneath the template. Other artists decide to set the opacity lower to 50% instead. This is an artistic choice. I personally prefer setting the blending mode to SCREEN.

52. Next, select Layer 1 and paint or clone the texture that you want. For this exercise, I’ll keep it simple and will just draw with the Photoshop brush mostly to show placement.

53. I will now save the file as Throne_Template.jpg by overwriting it. Select FILE – SAVE AS and change the type to JPG, and find the Throne_Template.jpg file and click it and hit SAVE. When prompted if you want to replace it, say yes. Remember to save your Photoshop File as a psd too if you want to continue working on this later, since the template will be altered.

54. Back in 3ds Max, you’ll see that since we applied that same file texture to the material, it’s showing the changes I made.
55. To change this to another texture, remember to click OFF the TEMPLATE layer in PHOTOSHOP so that you don’t see the template with the green edges, but only the texture material that you want to apply.

This should be enough for now to get you going on this assignments this week. I hope it helps. Remember to create materials for each surface you’re creating. In this case, I don’t want to create another material for the other throne, but instead, I’ll apply the same material to the throne that I already created.

On a final note, if you want to apply the same material to the other throne, select the other throne and on the Materials (press M), select the Throne Material and click on ASSIGN MATERIAL TO SELECTION. If you notice, the throne doesn’t react well to the material because it doesn’t have UV’s.
This can easily be fixed by copying the uv’s from one to the other (since they’re the same). To copy the UV’s from one throne to the next, do the following:

1. Select the first throne. Under the UNWRAP UVW modifier, select the Parameters rollout and click on SAVE.

2. Rename your uv’s file to Throne and click SAVE.
3. Then, select the second throne. If you can’t select it manually, select the SELECT BY NAME option and click on THRONE 01 and click SELECT.

4. Next, apply the Unwrap UVW modifier to the Throne01 as done before to Throne (the first chair). You’ll notice that the UV’s look weird. They haven’t been adjusted yet. Just click on the LOAD button shown below and select the Throne.uvw and click OPEN.
5. Once you click OPEN, your throne01 will adopt the same uv layout and you’ll be fine with the textures.

Well, that should be enough to get you going, so have fun!!!

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Noelia  
ndelgado@aii.edu