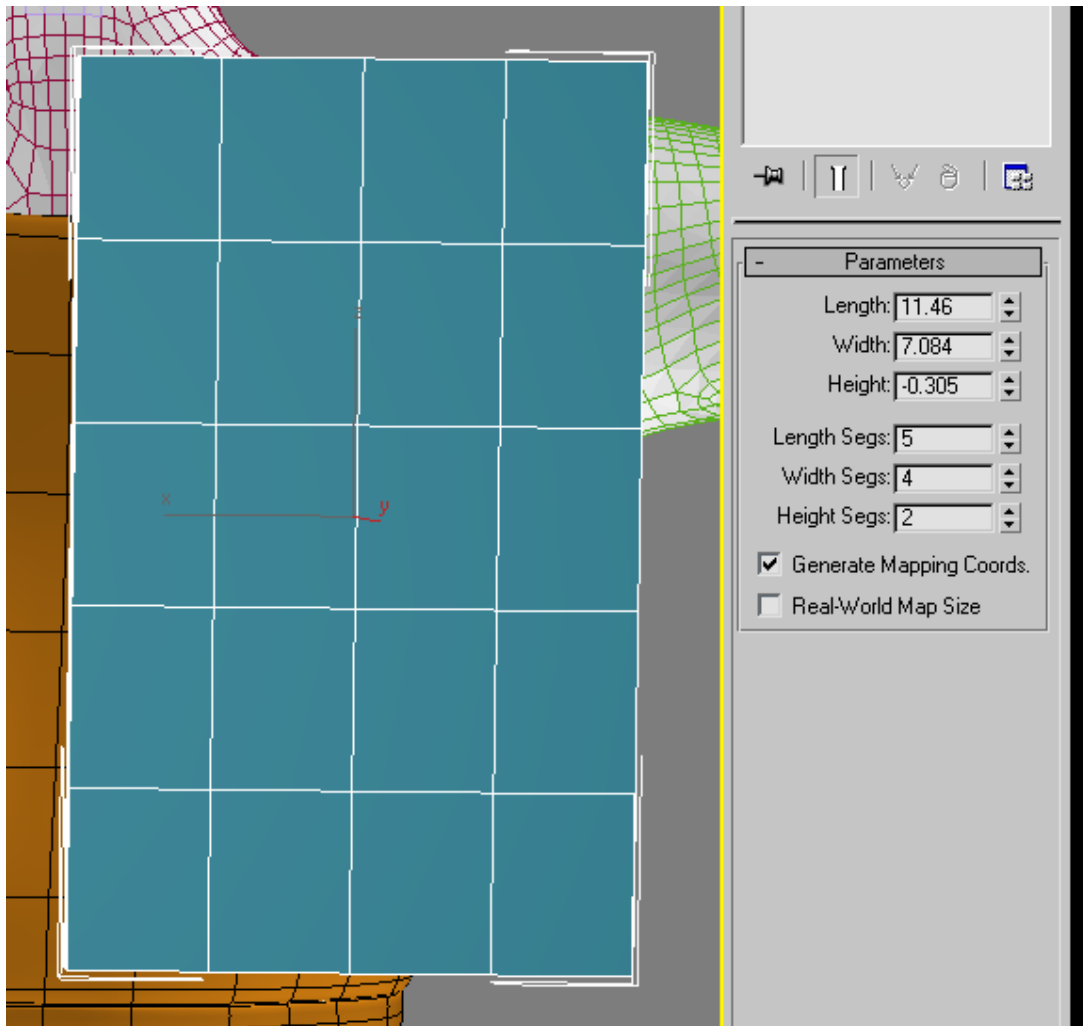


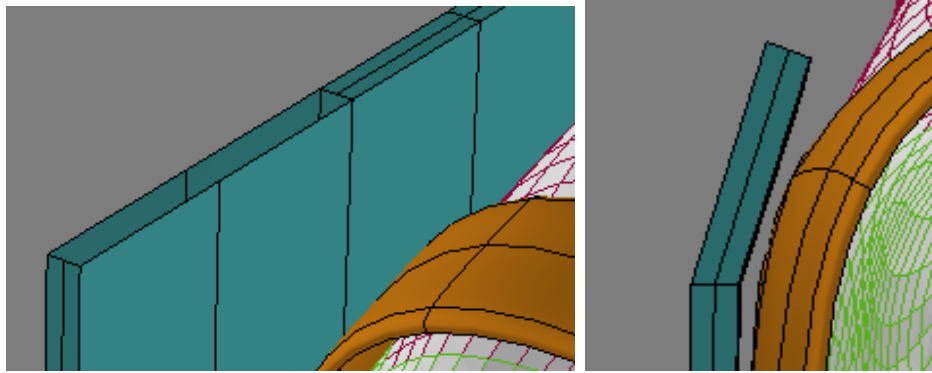
Modeling a Sailor Fuku in 3ds Max - Part 2 - Sailor Collar

So, we're back for more again. Last tutorial, we saw the creation of the base leotard. Now, we're moving on to create the collar. For the leotard, we used splines to build up our base mesh framework - this time, I'm actually going to use a primitive since I don't really have to match any specific body curves. So now I have a box setup and ready to go making up the back of the collar.

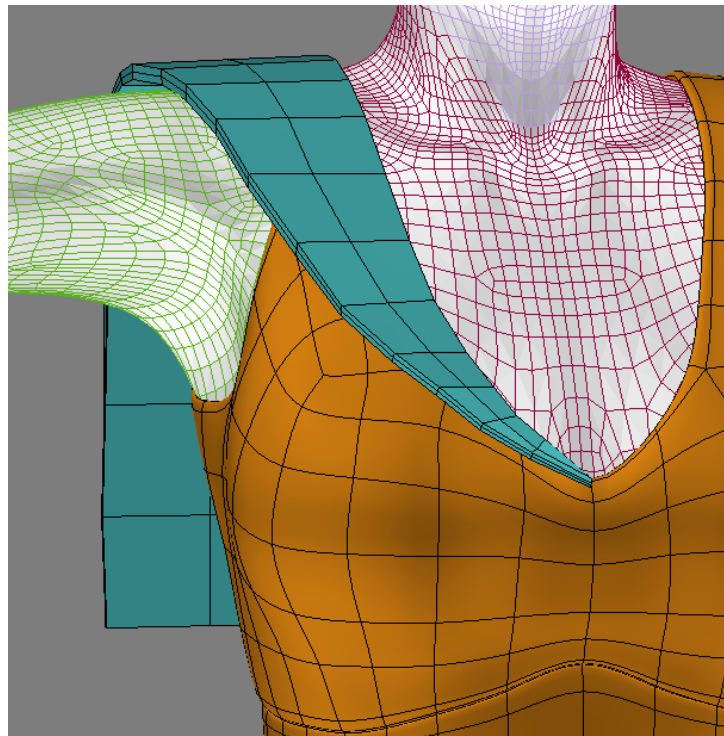
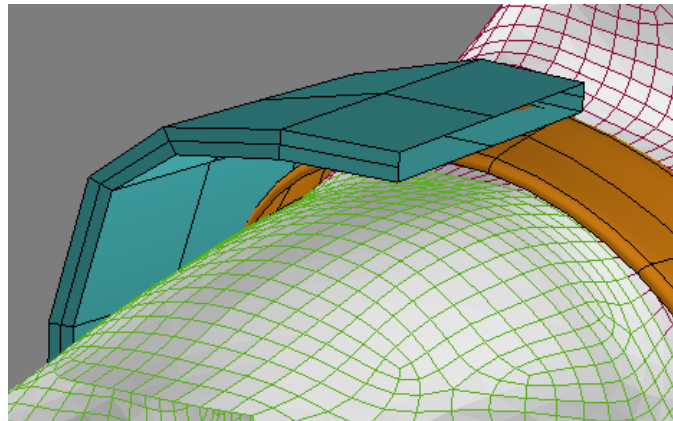


It doesn't cover the entire back, because it's much easier to just mirror the other half for the complete thing. After converting to Edit Poly I then make ready to extrude out the front of the collar. While you can certainly simply extrude the faces out while in poly select mode, I prefer more control over my extrudes, so I delete the faces from where I want to bring the collar over and use the border select to grab what I want.

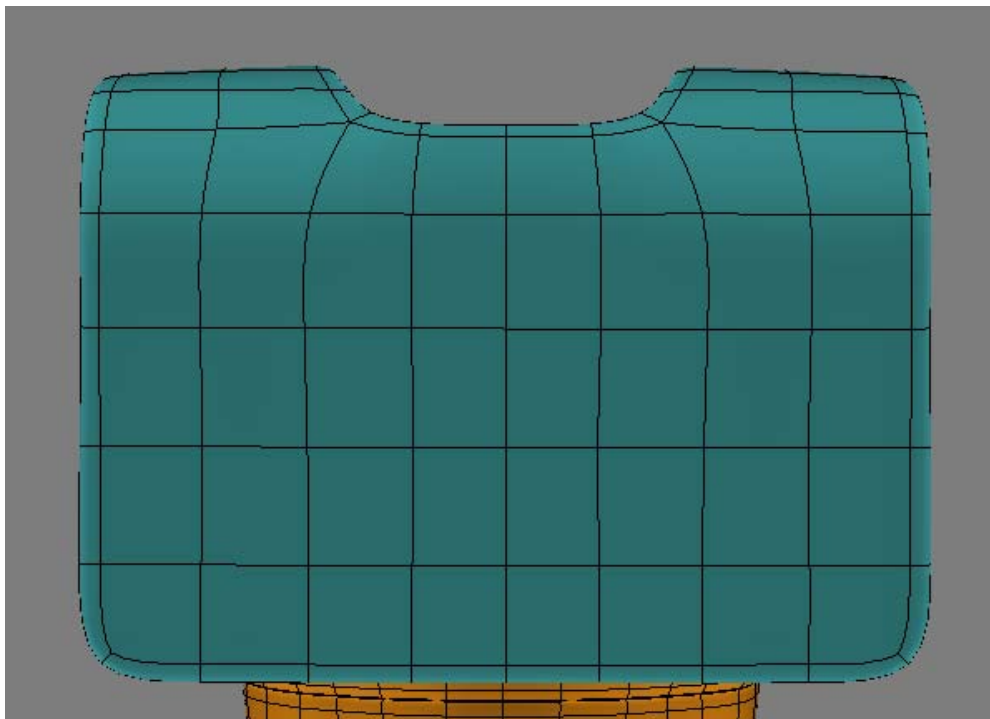
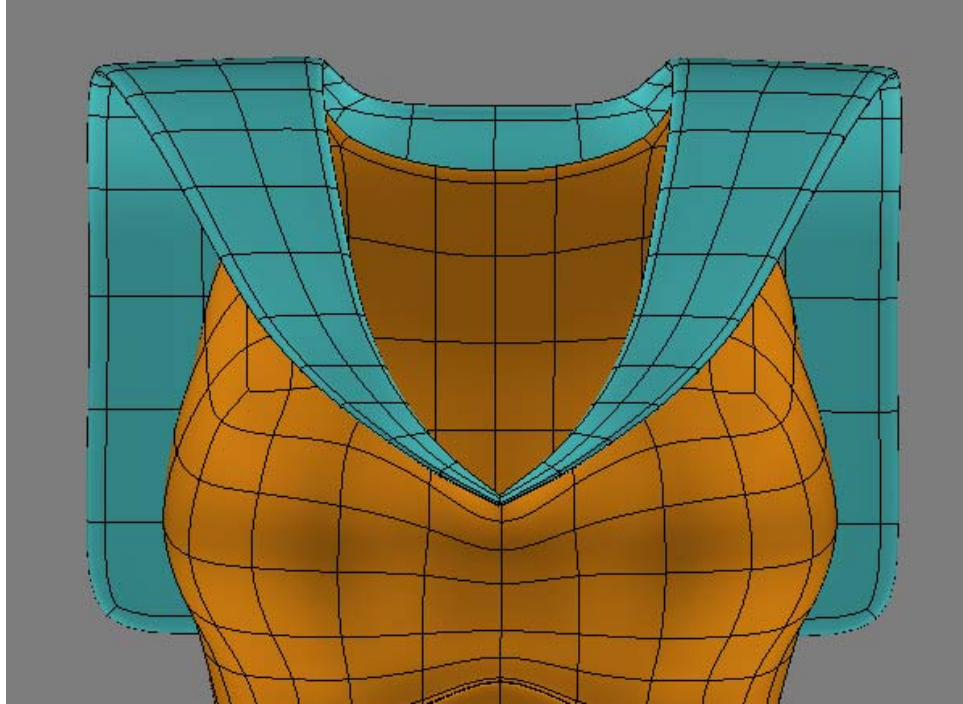
The, holding down the shift key and dragging out with the translate tool, I can extrude and position at pretty much the same time. If you extrude from the poly faces, you'll have to extrude and then position. With a hole made and ready to go, I can make the rest of my collar. I've also repositioned the top row of verts.



I rotate, scale and reposition the border selection periodically as I go, keeping the inside lined up with the neck line.

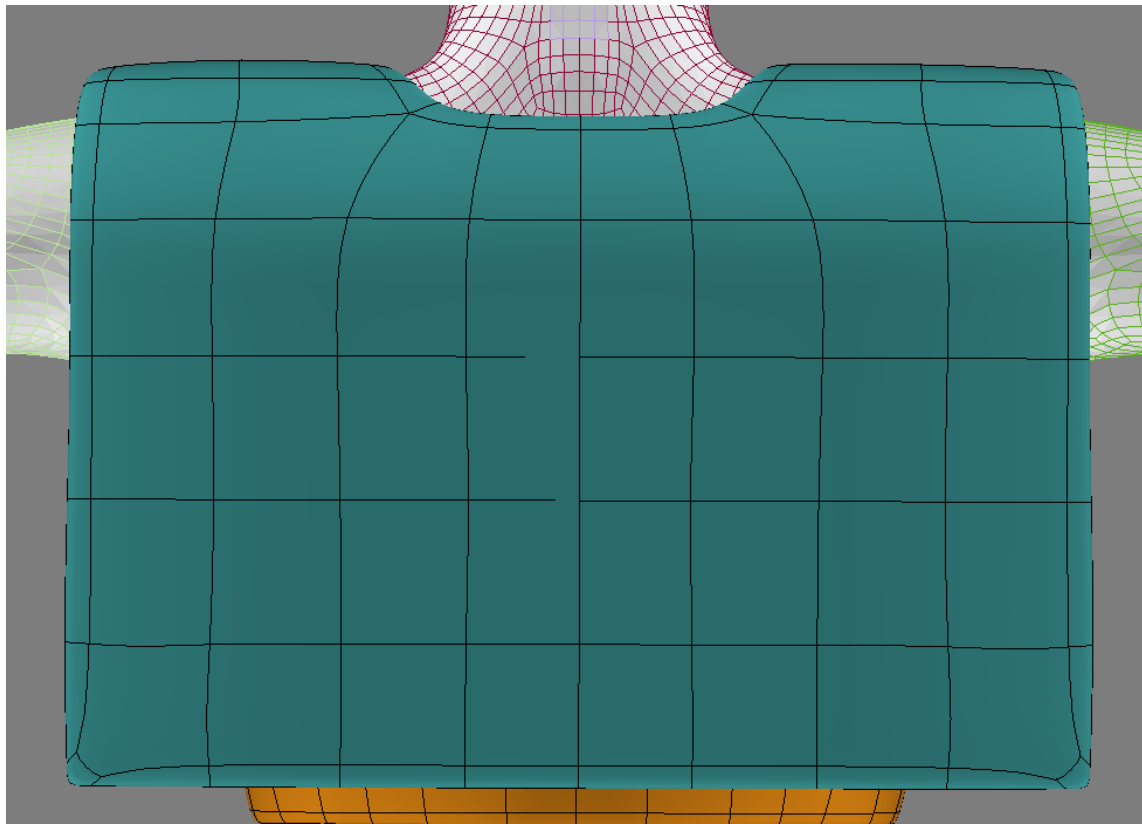
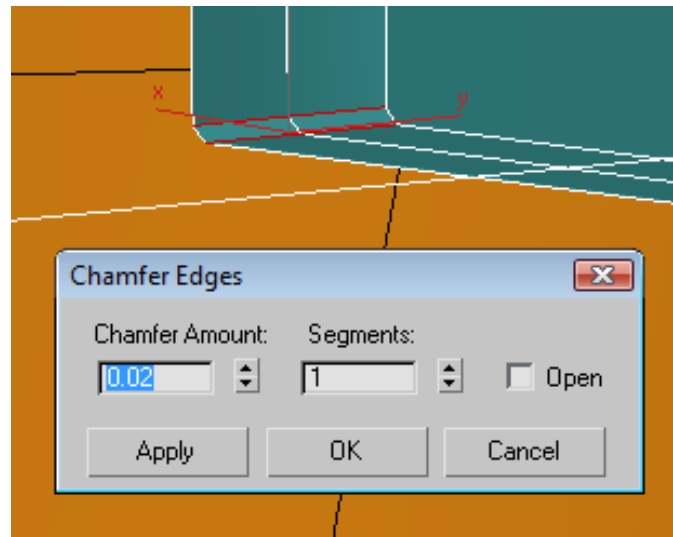


Before I mirror it for the other half, I delete the row of polys on the center edge. Will be much easier to weld the two parts together this way. After everything is welded together, I put a mesh smooth modifier on the collar mesh, and turn off the figure to make any adjustments to have it laying on top of the leotard rather than poking through it. This brings us to a nearly finished collar. Quick and easy, right?



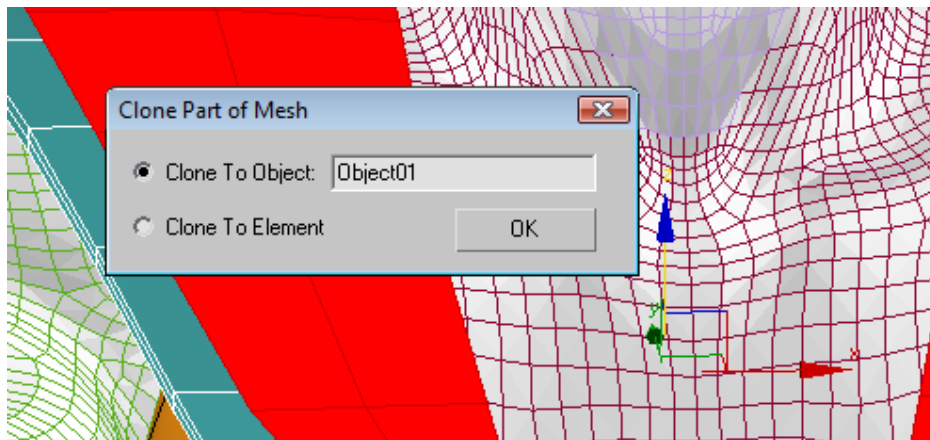
Well, it was quick and easy till I reminded myself to look at my reference images again...and I now have to decide if I want to leave it or adjust it more...did I mention to have reference images handy while you're working? (I may have missed that part of the imparting of the knowledge earlier) But as I'm happy with how my particular version looks as is - I'm going to be leaving it.

Now, the original design has the collar with straight square corners - easy to do with pen on paper - but not always so easy in modeling or real clothing (trust me - I hate sewing corners). I can either leave mine with a more rounded look, or I can put a very small chamfer on the lower side edge for a more squared off look.

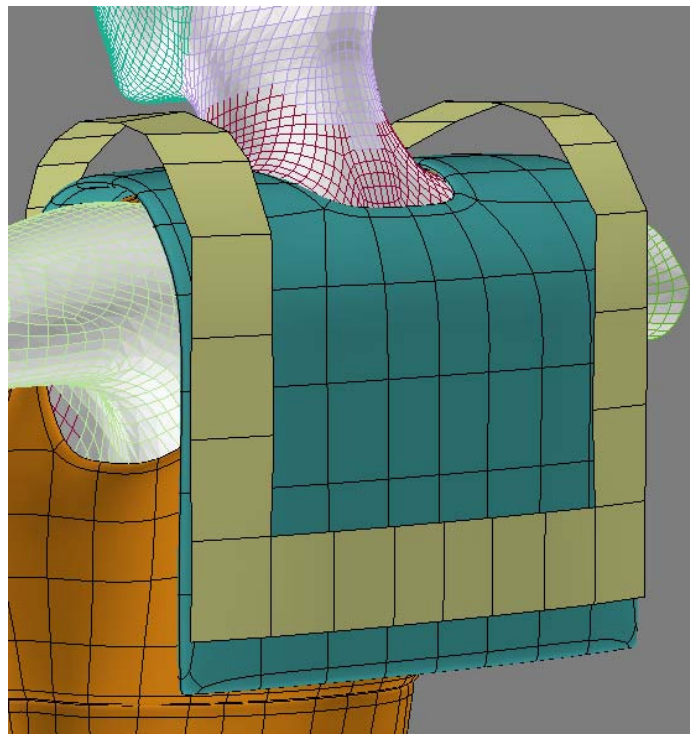


Now, the only thing remaining are the detail "stripes" that the collar has. I could do this in a few ways - I can start with a new box primitive to match the shape of the collar, copy it twice for the three stripes - or I could cut the mesh and extrude - or I can copy the top layer of polys and edit it down/copy/rinse/repeat. Yes, this could be done as a texture - but that isn't much help if you're doing a toon style render - and this is anime based after all.

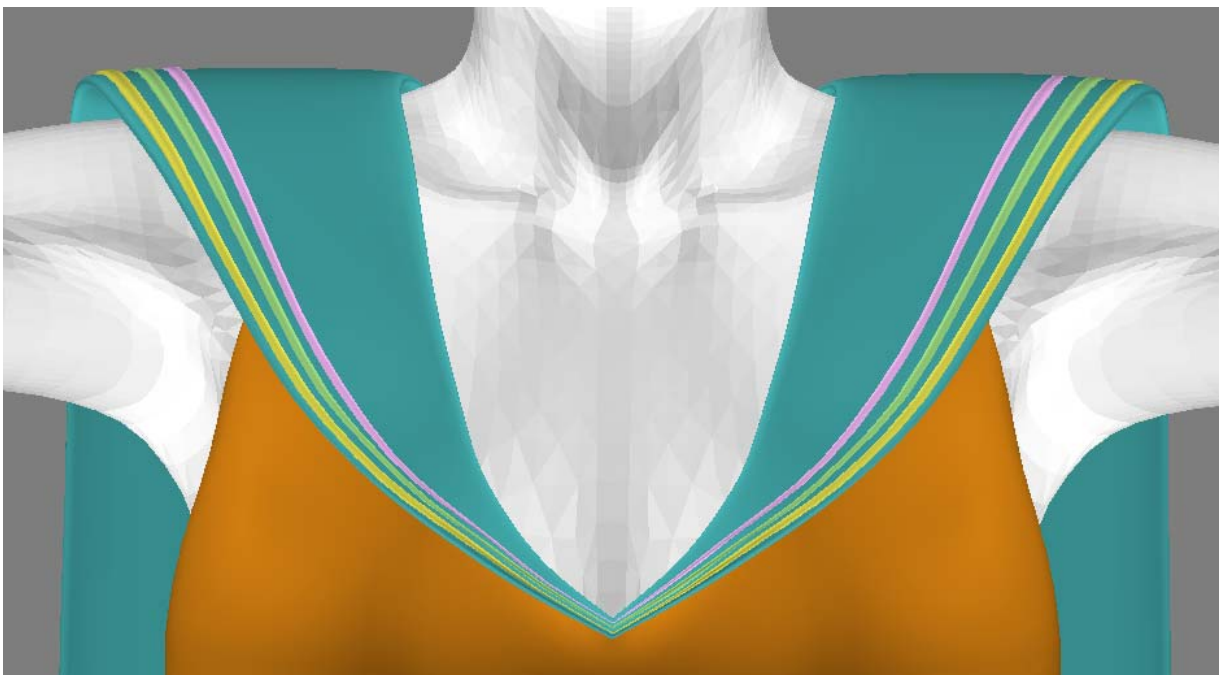
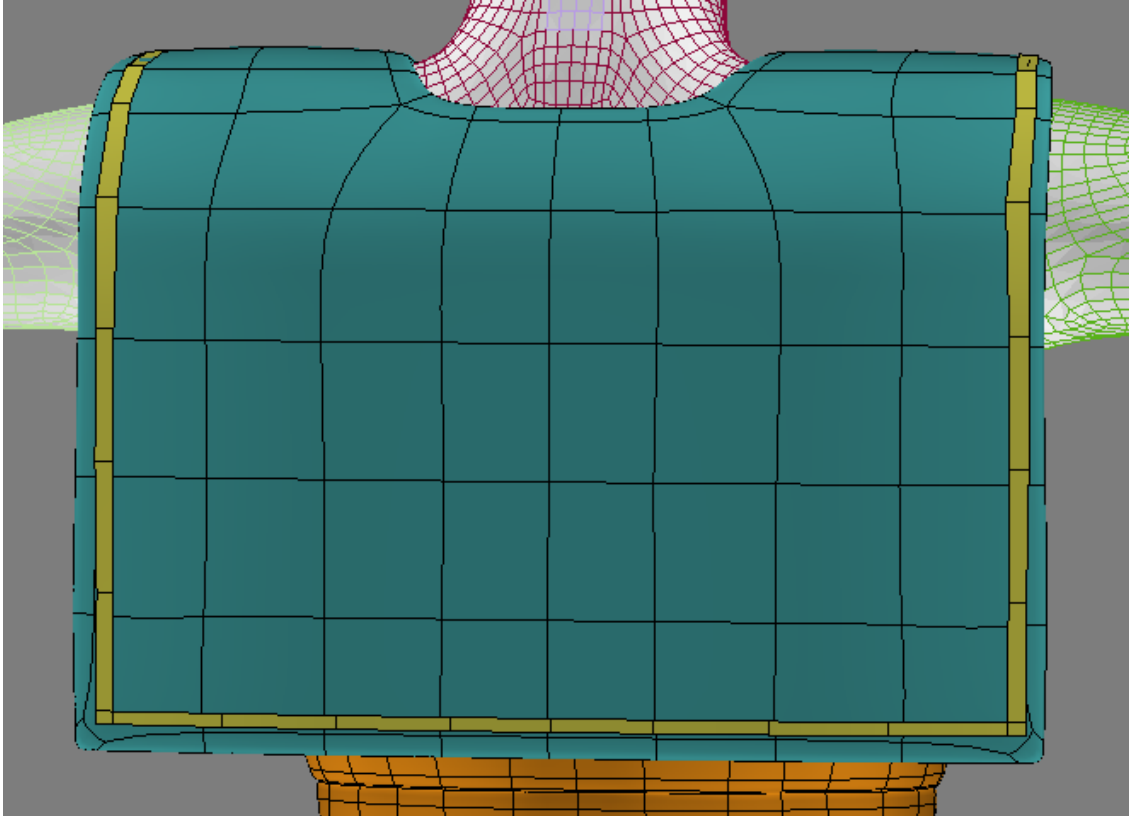
Since the stripes need to be the same general shape as the collar, I'm simply going to make myself a copy of the top polys and edit it down to make my stripes. After selecting the polys I want, I use the translate tool while holding down the shift key to make myself a new mesh object. If you clone an element, it will be attached to the base mesh - it's easier sometimes to work on a new mesh and then attach them when finished.

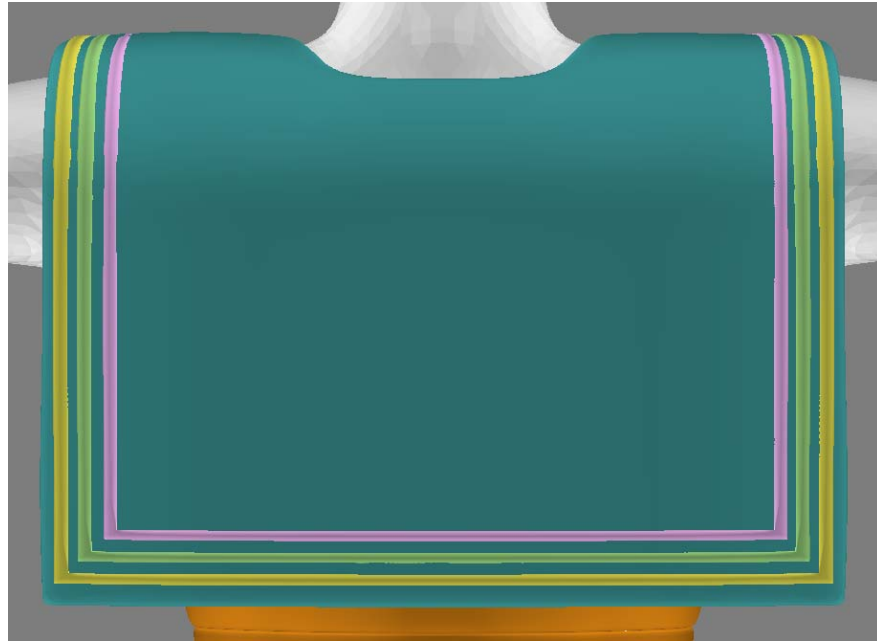


Then, I get rid of the polygons I won't be needing - these are just three small stripes that run around the top outer area of the collar.



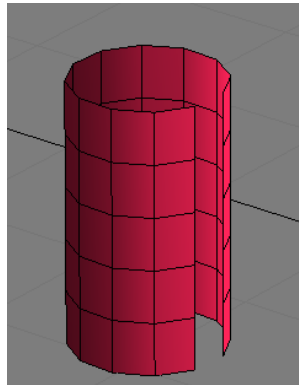
A couple quick cuts, and our stripe is coming to life more. Now, just a small extrude and some positioning adjustments are needed. After the extrude, I chamfered both edges of the 90° bend to keep the squared look. The inside edge of the stripes is pushed into the collar mesh slightly so they look like one mesh, and once attached, they will behave thus in Poser.



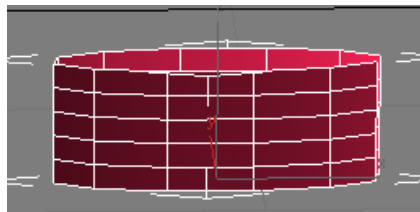


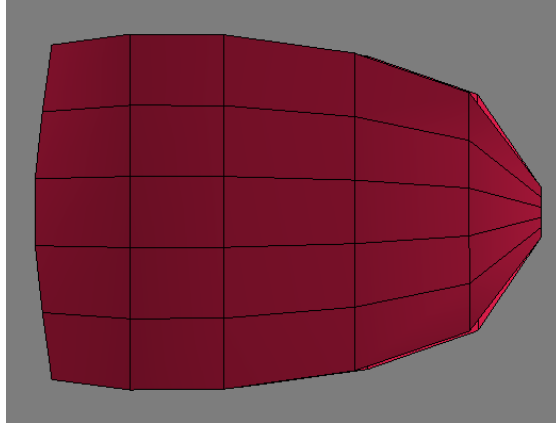
The collar itself is done - but we still have a bow and broach to make to finish off the front.

For the bow, I'm going to start with a cylinder primitive. Deleting the two end polys, and a section down one side. When generated, I'm not worrying about the size here, though I do set the sides down to around 10-12 from the default 18. Height and cap segments are left as is. You can also slap a cylindrical uvmap on it at this time to save time later on.

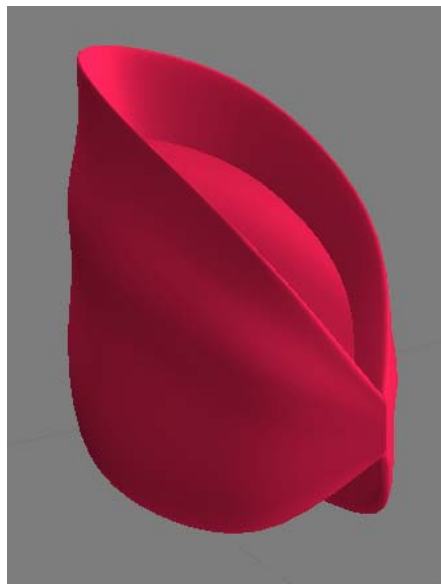
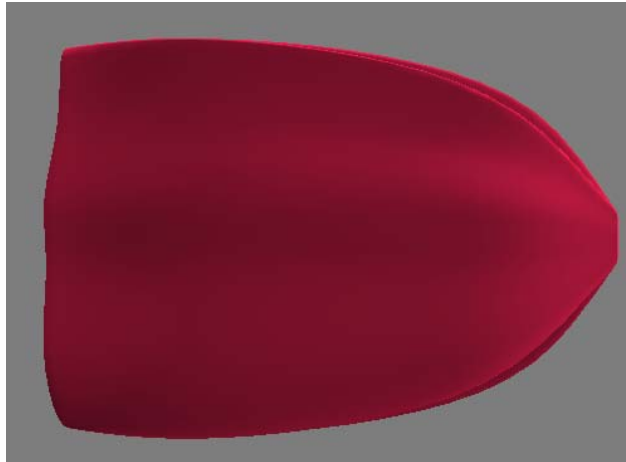


Now, to get the bow shape, I just need to do some scaling and adjusting. The main scaling is done on the Z and Y axis, then I'll go in and scale by edge/vert selection to get the final defined shape.

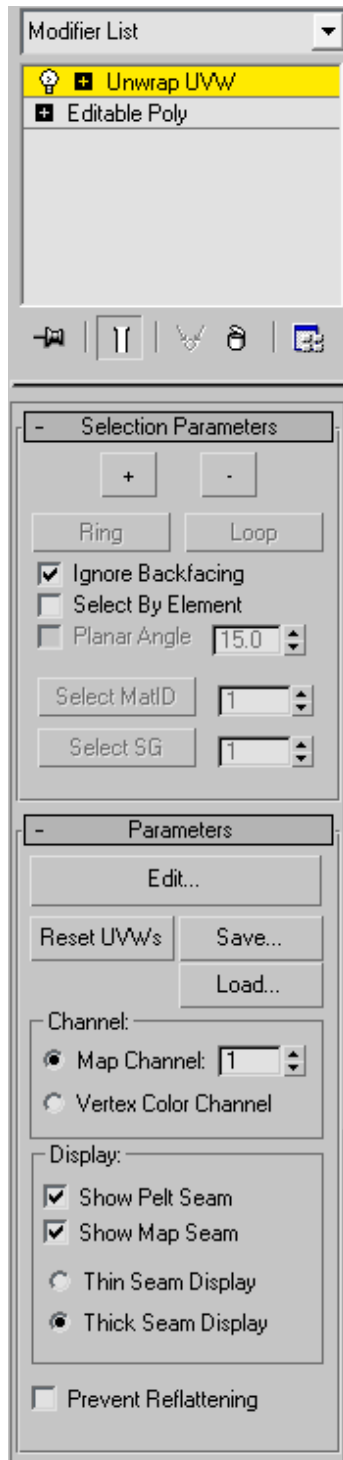


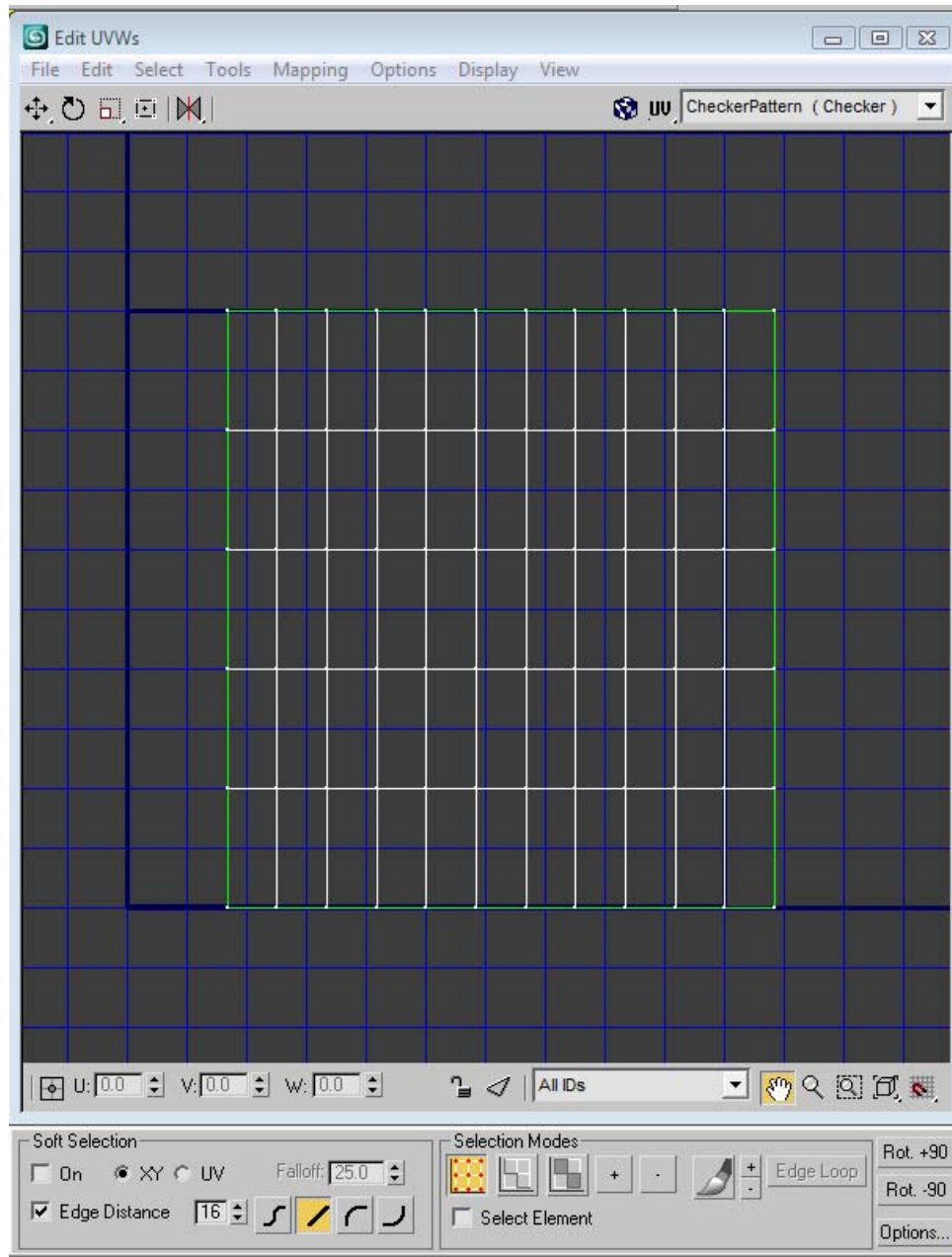


Rough shaped bow, looks pretty decent with a mesh smooth in the stack - but still just a tad plain. To give it some "details" I'll adjust some of the central edges/verts. I'm also going to add a slight extrude on the "outer" edges to give the bow some depth - leaving out the scaled down edges where the tie would be.



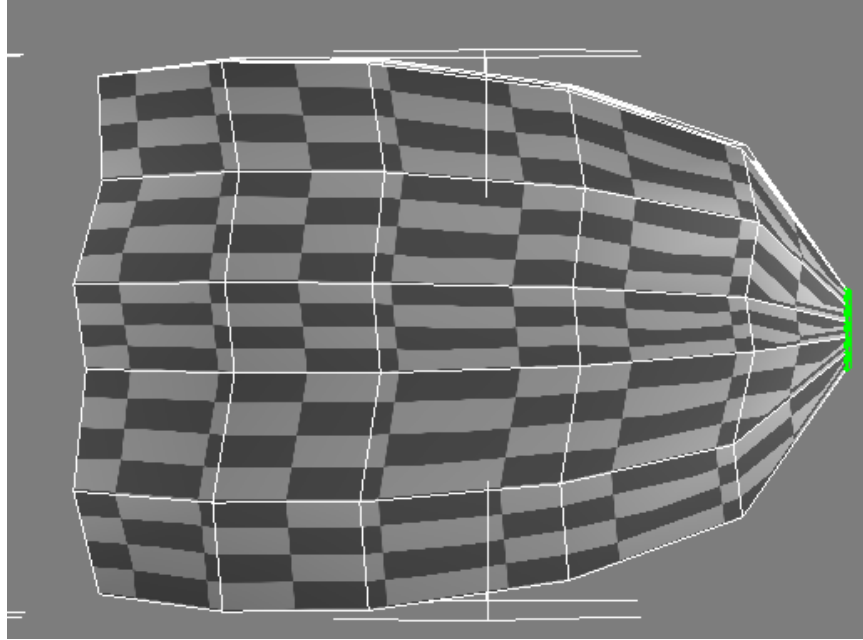
Before I clone the other side of the bow, I need to adjust the UV map for the extrudes I did. I know we haven't mapped our other pieces yet, but they'll get their own tutorial for that. Delete the mesh smooth modifier from the stack - it's easier to work with the unsmoothed mesh. Now, we need to work with **Unwrap UVW**. Click the Edit button to bring up the UV layout window.



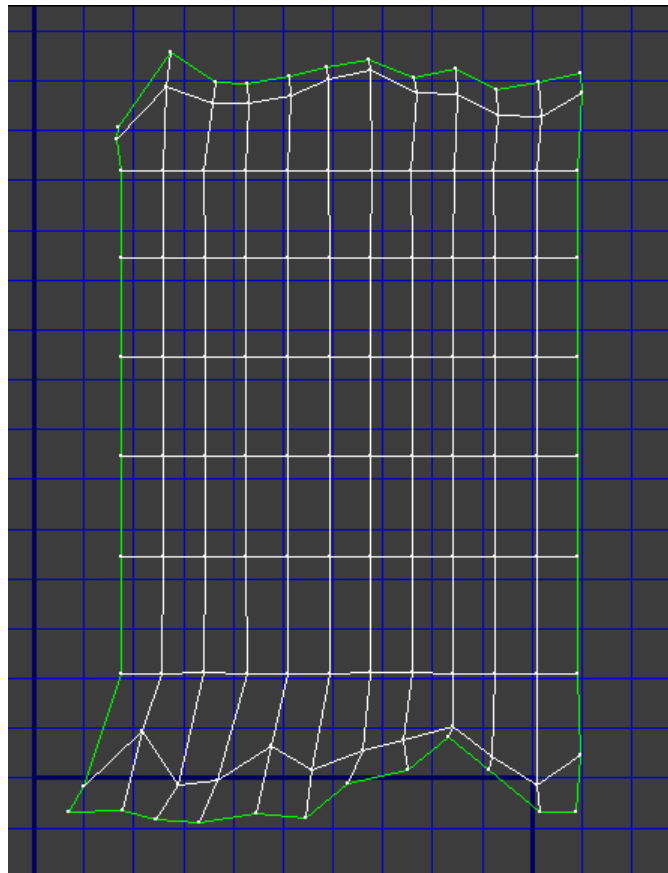


In the UV editor, you should see some dark blue lines - ending in a box. You can work with your UVs anywhere in the editor space - but everything will need to fit within the little box before exporting the obj for use in Poser. Max 2008 has a Checker pattern you can load (top right drop down) so you can see how a tiled texture will look on your model. If you have a different version of Max - I suggest finding some simple checkerboard or other repeating type pattern to use for this process. It will save you a great deal of headache later on when making texture if you can set the UVs up to your best advantage.

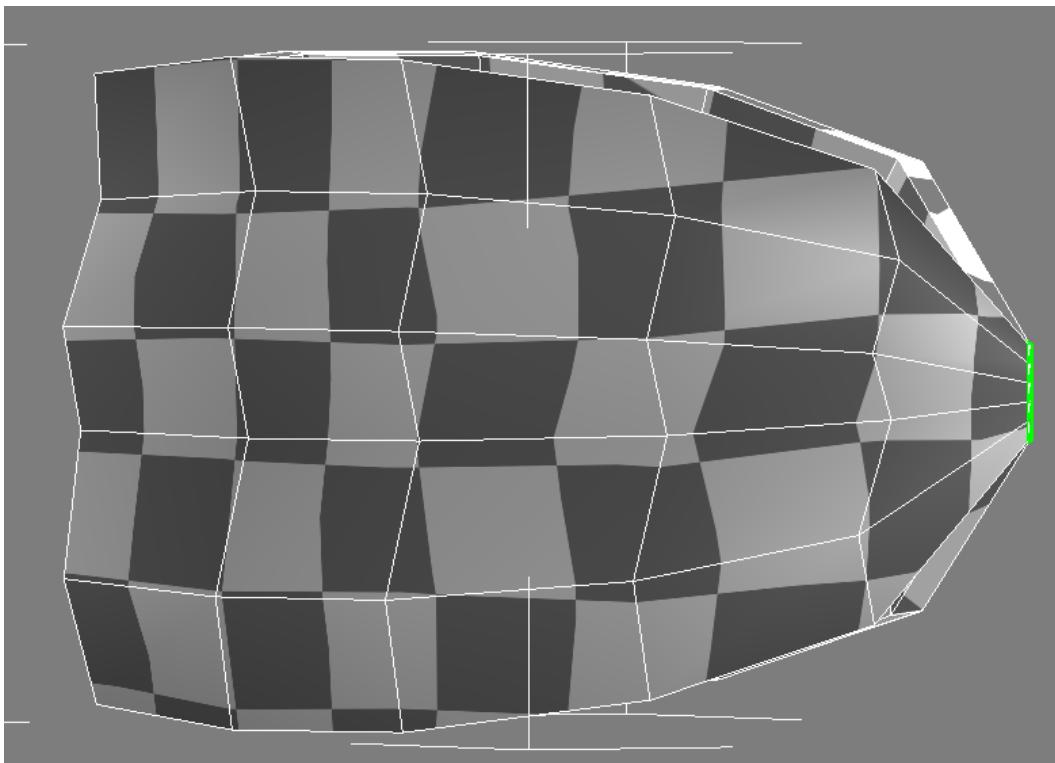
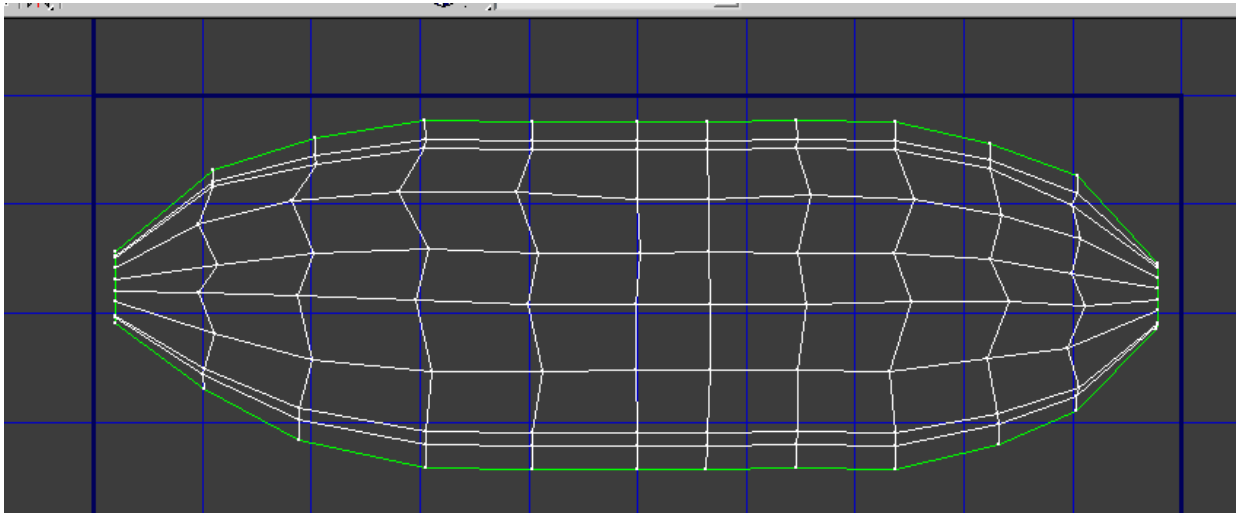
You can see in the shots below how the checker pattern gets a little funky where I've scaled things down to a smaller distance from each other - this is because my map is currently set with everything at an equal distance. Before I make those adjustments, I need to fix the extruded polys that are on the inside of the bow. I can select them on the mesh itself, or from within the UV editor.



I still need to make it look better - but here you can see the extruded sections pulled out on the UV map. I just used the vert selection mode to separate them all so I could see them, I'll reposition them in a bit to line up with the rest of the map.



And - the finished UV map for this part of the bow. Since I won't be making any changes to the cloned copy, I can simply leave the UV map as is because it will be the same for both. This saves space on the template I'll use later on when making textures.



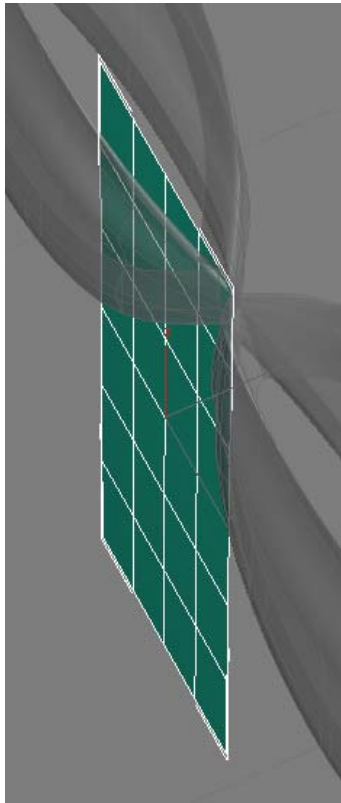
Now, I just collapse the UV editor into the stack and go on to finish modeling the bow. For the other side, I simply do a shift/translate clone object, then rotate on the Z axis. If you're wondering why I'm not simply mirroring it - one simple excuse I don't really feel like redoing the UV map. While you do indeed mirror the mesh - the UVs are rendered slightly useless outside of Max. Don't believe me? Map

something simple, mirror it and export the results. Load up this obj file in UVmapper and see what happens. (Hey, I'm not going to do all the work here)

And here's the top of the bow, cloned, attached and with a mesh smooth modifier turned on. The center edges are not welded together - they don't need to be as this will be behind another piece that will end up behind a brooch if the user so desires.



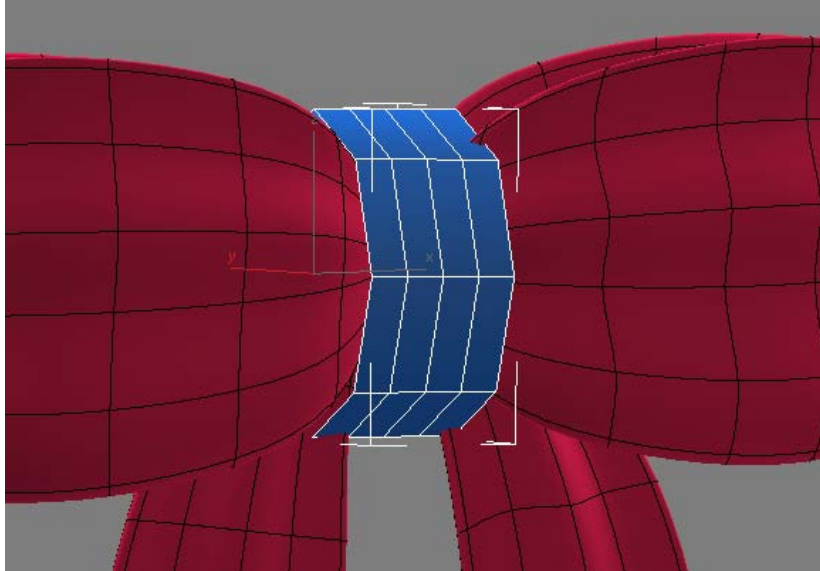
It's time to make the tails now - using a similar method only this time I'll be using a plane primitive. The plane has 4 width segs and 6 length segs. I've made the bow see through so I can position the top of the tail in the center to come out the bottom.



Just some scaling and adjusting for shape - and then I'll do a clone, rotate and flip normals for the other side to preserve my UVs. I don't need to put a UVmap on this as I had the Generate Mapping Coords. box checked when I generated the primitive. (handy little tip there if you haven't already figured that out) I will need to adjust them to better match the final shape - but I'll need to do that anyway after extruding slightly.

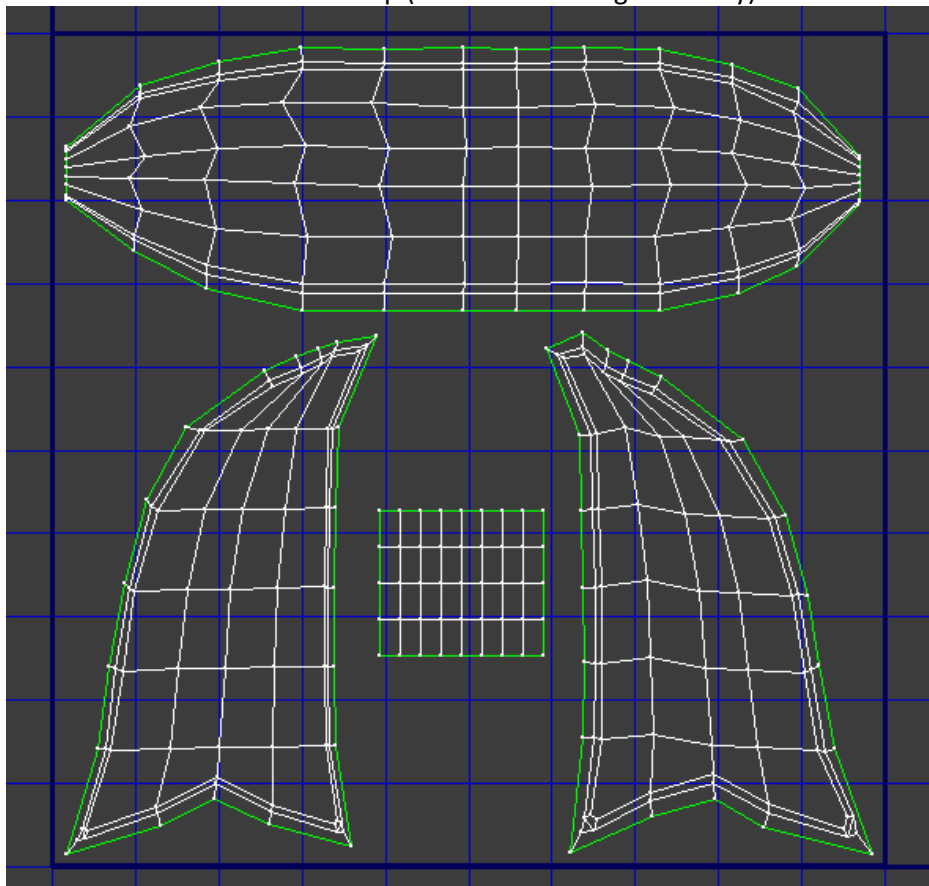


All we have left to do now is the center part of the bow to finish it, then move it into position with the collar. For the last piece of the bow, I'm going to use another cylinder - again with both cap polygons deleted. It will also need to be rotated so that the openings are side-side rather than top-bottom. Scaled down, I have it positioned where it's needed on the bow.



I don't really feel like making an extrude - instead I'm going to scale down the outside edges on both ends to fill that place. Then, just some adjustments to get it to fit properly and look like a finished bow. Is it going to be a 100% exact bow? No - that's not my purpose. But you can certainly use this method to construct one that would look more like a tied bow if that's what you really want.

Final bow UV map (before smoothing obviously)



Finished bow scaled and adjusted for rest of outfit



Before putting the bow into position on the collar, I made a copy of it for later - yes, we have more bows coming up. If you're a moonie following along, you may very well notice the bow doesn't match with anime/manga sources 100% - and hey, guess what - now you know how to make your own!

Now, we'd move on to the broach - but since we have to make a few different shapes, I'm going to save that for its own tutorial to come next. (and by that time, I will have probably argued with myself and made yet another bow to better match the source material....I do that to myself...cause I'm crazy)

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February 2009

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