TRADE SECRETS

UV layout in Blender

Need a hand with your UVs? Cover artist Andreas Goralczyk explores the best way to unwrap a model for texturing

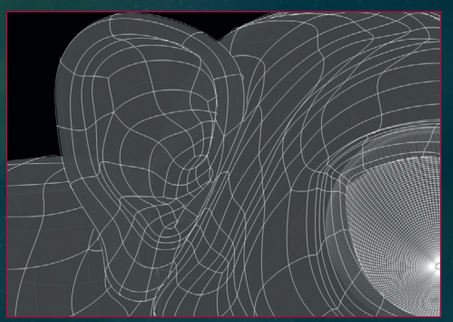
UV unwrapping can be a tedious task, and it's one that beginners often struggle with. Thankfully, the most recent release of *Blender*, the software used to create this month's cover image, benefits from a number of valuable improvements that make unwrapping more comfortable.

In this brief tutorial, I'll show you how to perform a quick and easy UV unwrap on a character's head and torso. As an example, I'm using the slightly simpler original version of the character featured on the cover: Moonman. Using the technique set out on the right, even heavily exaggerated anatomy like this can be converted into a tidy UV layout ready for texture painting in a matter of minutes.

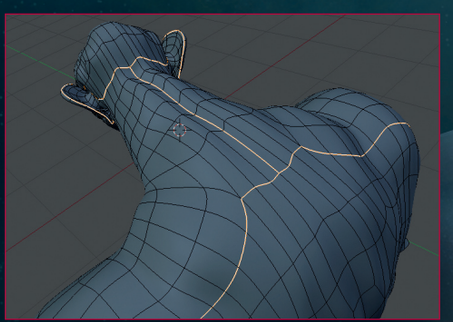
You have to think of unwrapping as though you were cutting your clothes open along their seams to get flat pieces of fabric. You first have to tell the unwrapper where to split the model into its individual pieces: face, chest, back and arms. Since you don't want any of these seams to appear on the finished texture, you have to hide them in the right places. After that, it's time for the actual unwrapping. The final step is to clean up the resulting UV layout by 'pinning' the points between which you would like *Blender* to stretch it, exactly as if you were stretching a piece of cloth on a table.

If you're applying the technique set out here to a *Blender* model of your own, you will see that I make use of brand-new tools, such as interactive live unwrapping. These are not available in *Blender 2.41*, the version of the software included on the CD. However, with the release of *Blender 2.42*, which should be available for download by the time you read this, they will become accessible for everyone to use. Check out the official site at **www.blender.org** for more information.

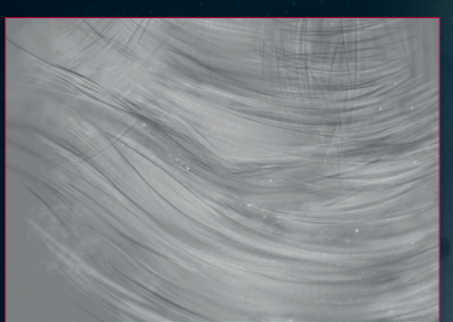
Andreas Goralczyk is a 21-year-old 3D character artist based in Germany. He mainly uses open source software, and has worked on numerous images and short films
www.artificial3D.com



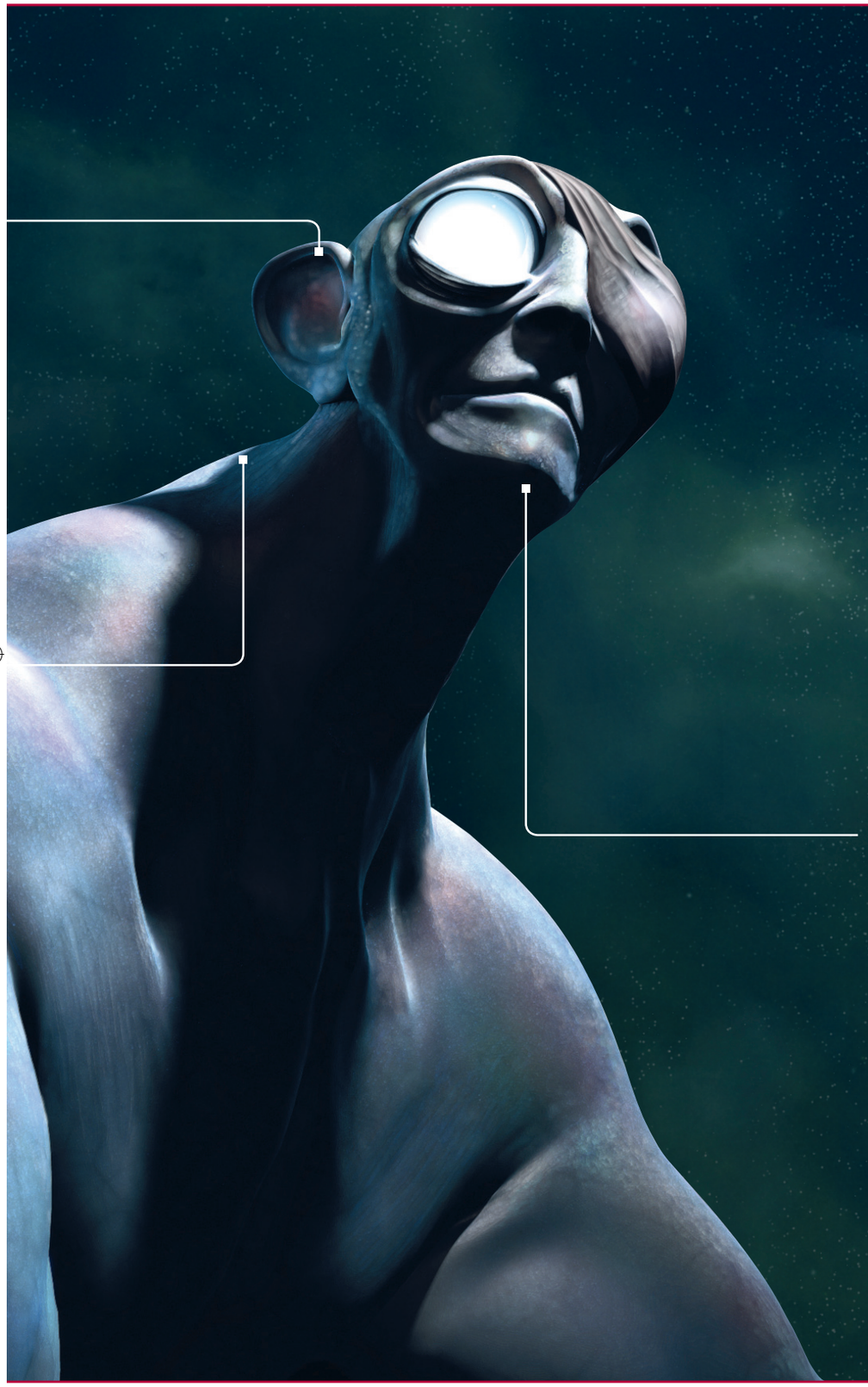
01 Split your *Blender* window into two halves. You need a 3D window with the model and the UV Image Editor. Hit [Tab] to go into Edit mode on your mesh and switch to edge-selection with [Ctrl]+[Tab]. First, select the edges that form a closed loop around the head, keeping the front of the ears attached to the face, then hit [Ctrl]+[E] > Mark Seam.

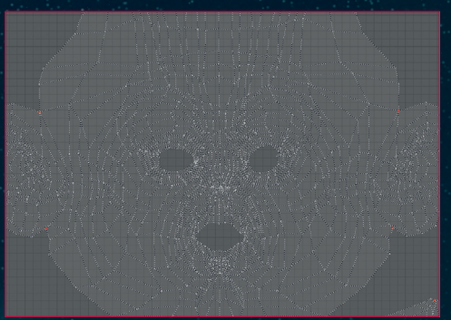


02 Do the same around the back of the neck and down to the shoulders. The chest should be separated from the back entirely. Since arms have a cylindrical shape, you have to mark an edge loop around the shoulders. Set up another one along the arm, meeting with the shoulder seam. Again, you can mark and unmark them with [Ctrl]+[E]. When you're finished, leave Edit mode with [Tab].



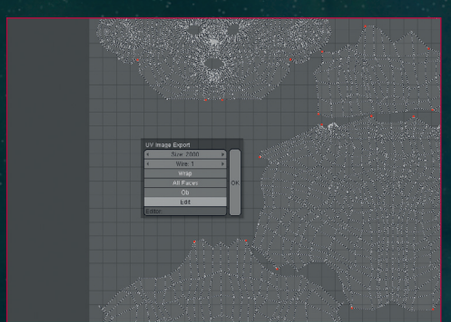
03 Hit [F] to go into UV Face Select mode and select everything by pressing [A]. Then bring up the unwrapping menu with [U] and select Unwrap. If you marked the seams successfully, you'll see the individual parts in the UV image editor without any distortion. The next challenge is to tweak each piece so that you can easily make out where each part of the mesh ends up in the texture.





04 Select two opposite vertices on each piece and pin them with [P]. Enable the interactive mode with UV > Life Unwrap Transform. The unwrap calculation is achieved interactively each time you move pinned vertices. The faces will stretch between the pinned points, trying to keep their overall shape. Only moving the pinned points with [G], bring each piece into the right position and form.

05 Some areas will require more texture detail, so pin a few surrounding vertices. (Make sure you select the opposite ones, too. That way, you keep everything as symmetrical as possible). Select them and scale them up with [S]. It makes sense to enlarge the face, because the viewer's attention is focused here. Nose and chin areas are usually compressed and should be stretched.



06 Now arrange the pieces so that all the UV space is used up efficiently. Connected regions can easily be selected by hovering over them and pressing [L]. When everything is cleanly arranged, you can save the layout as an image for texture painting with UV > Save UV Face Layout. In the pop-up, set the size of the UV image and select 'OK'. Now everything is prepared for texturing!