Chapter 11. Refining the Textures

In this chapter, we will cover the following recipes:

- Sculpting more details on the high resolution mesh
- Baking the normals of the sculpted mesh on the low resolution one
- The Armor textures
- Adding a dirty Vertex Colors layer and baking it to an image texture
- The Quick Edit tool

Introduction

In Chapter 10, *Creating the Textures*, we have prepared the **color** and **bump** texture images for the **Gidiosaurus** skin. In this chapter, we'll see the process for creating some additional (but equally important, nonetheless) textures, both for the character and the iron **Armor**.

Sculpting more details on the high resolution mesh

In Chapter 2, *Sculpting the Character's Base Mesh*, we sculpted the **Gidiosaurus** character's features, obtaining a high resolution mesh that we re-topologized in the following Chapter 4, *Re-topology of the High Resolution Sculpted Character's Mesh*, to have a low resolution mesh for easy rigging and texturing.

Because in the following recipe (*Baking the normals of the sculpted mesh on the low resolution one*) we are going to bake the normals of the sculpted mesh on the low resolution one, we should now add as much detailing and finishing to the sculpted model.

I'm not going to explain every step in detail, here, because the procedure is the same as already seen in the Chapter 2, *Sculpting the Character's Base Mesh*, so just a quick tour to show what I've done should be fine.

Getting ready

Let's start by preparing the file:

1. Start Blender and load the `Gidiosaurus_painting_BI.blend` file; if necessary, go out of **Texture Paint** mode back to **Object Mode** and save the file as `Gidiosaurus_details_sculpt.blend`.
2. Collapse all the **UV/Image Editor** windows on the left of the screen and then join them with the 3D viewport (put the mouse pointer on the edge of one of the two windows; as it changes into a two opposite arrows pointer, right-click and in the **Area Options** pop-up menu, left-select the **Join Areas** item; then, move the mouse pointer towards the window to be eliminated and left-click to join them).
3. Join the **Material** and **Texture** windows in the main **Properties** panel, switch to the **Object Data** window, and enlarge the 3D viewport as much as possible.
4. Click on the **File** item in the main top header and then select the **Append** item (or else, directly press the *Shift* + *F1* keys); navigate to the `Gidiosaurus_retopology_02.blend` file, click on it, and then click on the **Object** item (folder) to select the **Gidiosaurus** item.
5. Click on the **Append from Library** button on the top-right of the screen and then go to the **Outliner** window to click on the **eye** and the **arrow** icon buttons (*Restrict view-port visibility* and *Restrict view-port selection*) and enable both the object visibility and selection in the 3D viewport.
6. Move the appended high resolution **Gidiosaurus** mesh to the **14th** scene layer (*M* key):

The appended, sculpted Gidiosaurus mesh

7. Press *N* to call the **Properties** sidepanel and in the **Display** subpanel, enable the **Only Render** item; go down to the **Shading** subpanel, enable the **Matcap** item, and then select your favorite matcap type (mine is always the brick red colored **Zbrush**-like).
8. Enable the **12th** scene layer to show the **Eyes**; however, in the **Outliner**, just to be sure, disable the selection arrow icon button.
9. Press *N* again to hide the **Properties** sidepanel and then switch to **Sculpt Mode** and save the file.

The Gidiosaurus object ready for the new sculpting session

How to do it…

We are now ready to sculpt again on the **Gidiosaurus** mesh; first, let's do some more settings pertinent to the sculpt tools:

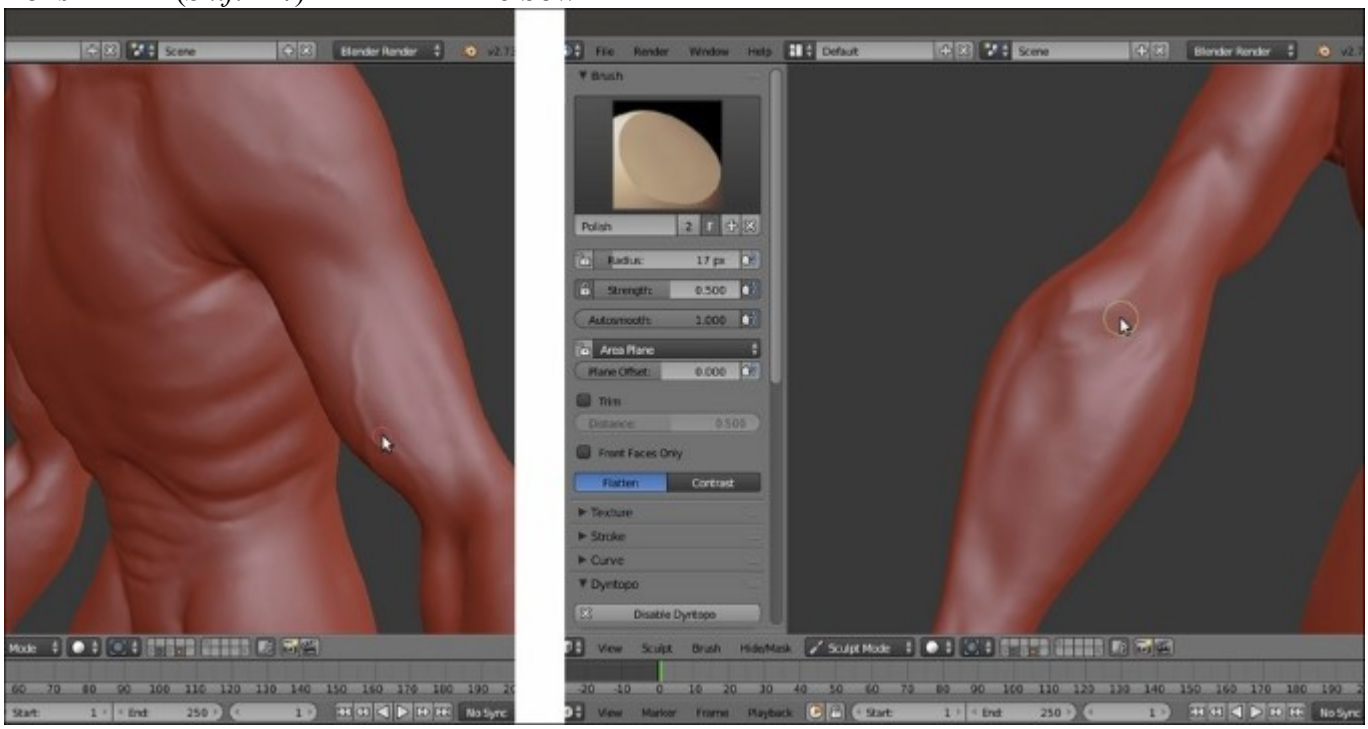
1. Go to the **Dyntopo** subpanel under the **Tool Shelf** and click on the **Enable Dyntopo** button; set **Detail Size** to **1.60** px and check the **Smooth Shading** box.
2. Go down to the **Symmetry / Lock** subpanel to be sure that **Mirror** is enabled for the *x* axis.
3. Click on the **Options** tab and go to the **Options** subpanel to enable the **Fast Navigate** item (the **Threaded Sculpt** item should be already enabled by default).
4. Go back to the **Tools** tab and click on the **Brush** windows; select the **Crease** brush (press the *Shift* + *C* or *5* keys), zoom to the **Gidiosaurus's head**, and start to add **expression folds**:

Adding expression folds with the Crease brush

5. Move to the **throat**, in the **Tool Shelf** panel, switch the effect of the brush from **Subtract** to **Add** through the buttons at the bottom of the **Brush** subpanel (or simply by pressing the *Ctrl* key while sculpting), and add veins to the area:

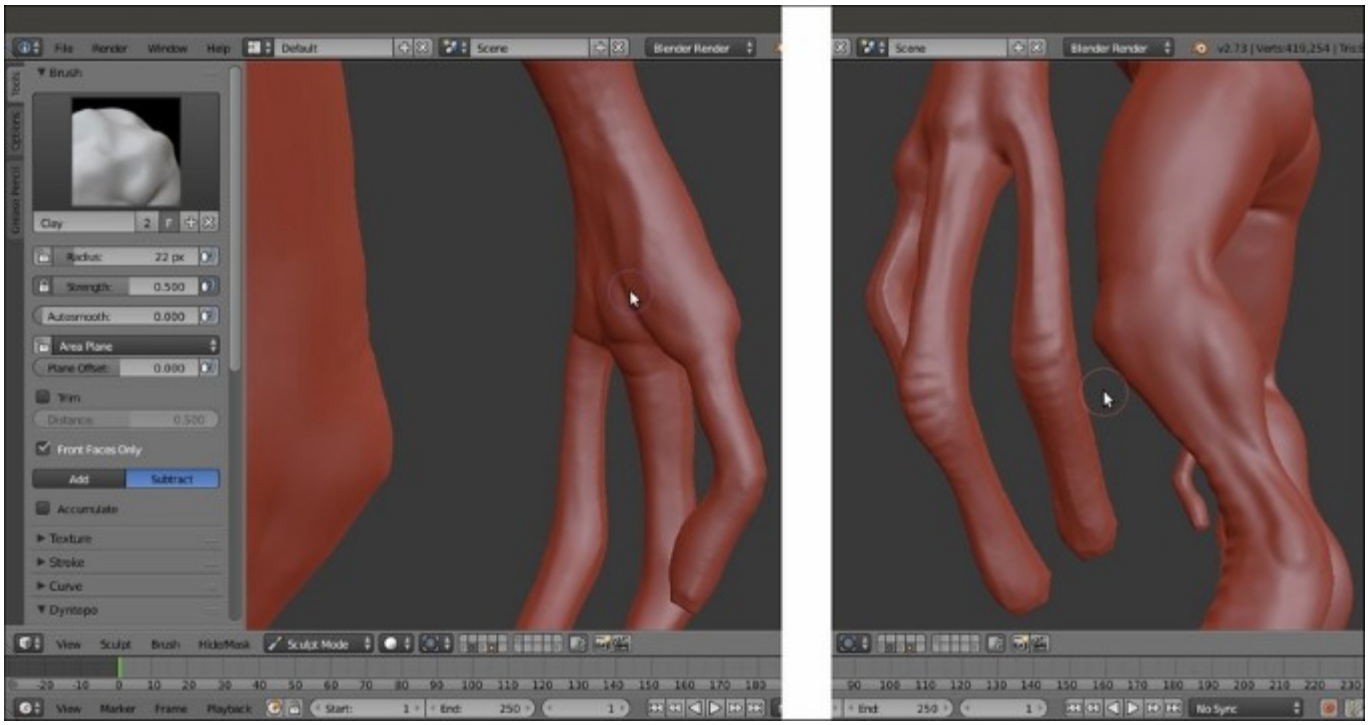
Adding veins under the jaw and on the neck by using the Crease brush again, but with inverted effect

6. By using the same technique, add **veins** also on the **shoulders** and the **biceps**; then, select the **Polish** brush (*Shift* + *4*) and refine the **elbow** a bit:



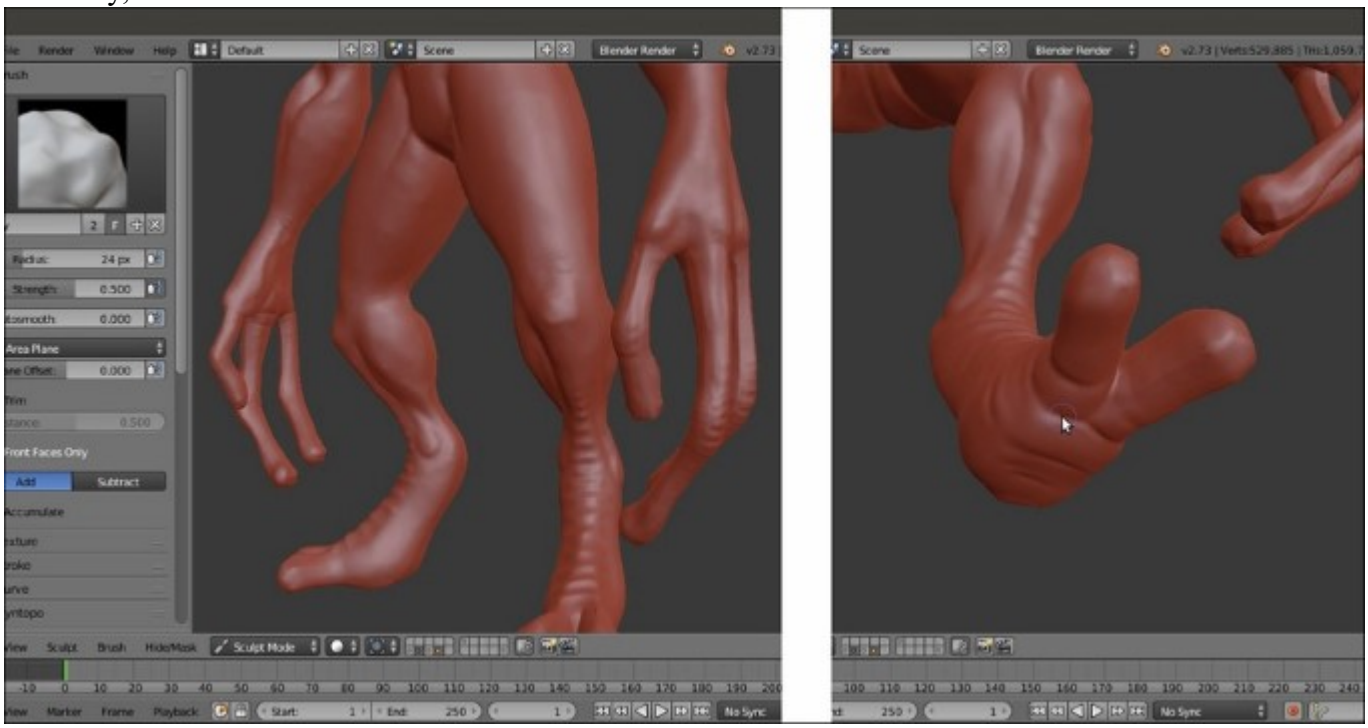
Adding the veins on the arm muscles and polishing the elbow's bulging muscle

7. By using the **Clay** brush (*C* or *3* keys) and also the **Crease** (*Shift* + *C* or *5* keys) and **Pinch** (*P* or *Shift* + *3*) brushes, refine the shape and the folds of the **palm** and add details to the back of the **fingers**. The **Clay** brush can be used in **Subtract** mode too, to carve shapes:



Detailing the palm and the fingers of the hand

8. Similarly, add details and refine the back of the **foot** and the **sole**:



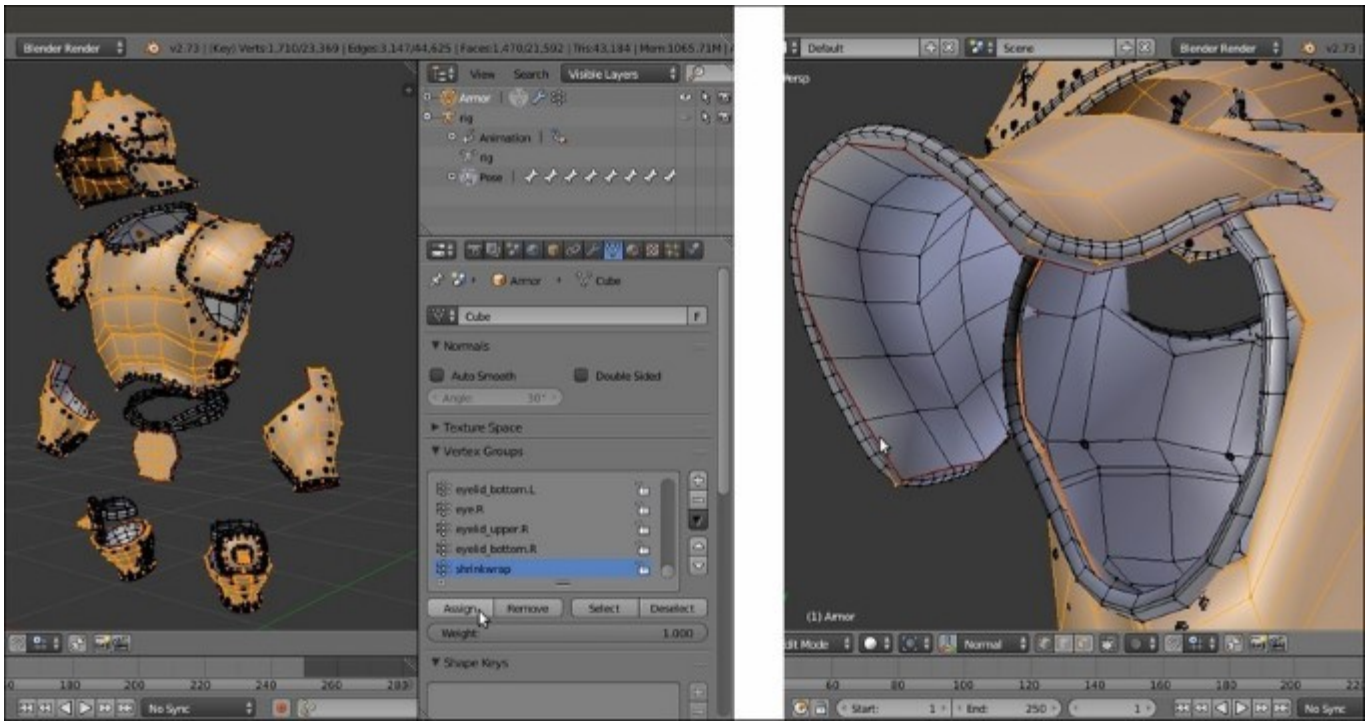
Detailing the feet

9. Use the **Smooth** brush (*S* or *Shift* + *7* keys) to gently soften the character's features; when you are done, save the file.

Smoothing the added features

Now, as we have detailed the body of the **Gidiosaurus**, it would be a good idea to refine the **Armor** also.

10. Switch to the **13th** scene layer; select the **Armor** object and go to the **Shape Keys** subpanel under the **Object Data** window.
11. Select the **Basis** shape key and then click on the **–** icon button to delete it (this leaves the only remaining shape key, **Armor_fix**, as the base one, so permanently applying the morph to the mesh); then, also select the **Armor_fix** shape key and delete it.
12. Repeat the previous steps for the **rivets** and the **Armor_decorations** objects as well.
13. Through the **Outliner** window, *Shift*-select the **rivets**, **Armor_decorations**, and **Armor** objects; then, press *Ctrl* + *J* to join them as a single object.
14. Go to the **Vertex Groups** subpanel and add a new vertex group; rename it as **shrinkwrap**.
15. Enter **Edit Mode** and select the vertices on the outside of the **armor body plates**, leaving the **inside faces** of the **plates**, the **bottom** of the **spaulders**, the **decorations**, the **rivets**, and the **tiers**, unselected; if necessary, use the **seams** to help you to divide the outer from the inner parts of the mesh. Click on the **Assign** button at the bottom of the **Vertex Groups** subpanel:

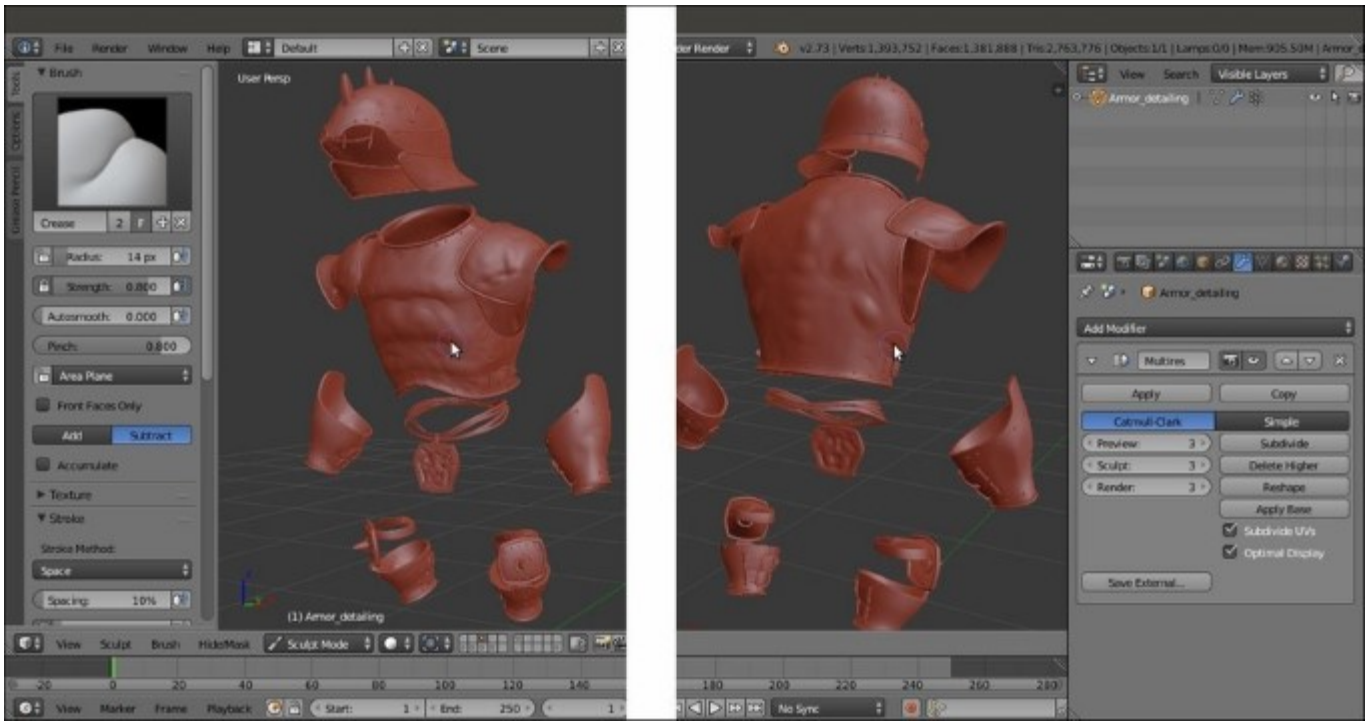


Selecting the outer parts of the Armor

16. Split the 3D view into two windows and change the left one into a **UV/Image Editor** window.
17. Go to the **UV Maps** subpanel under the **Object Data** window, click on the + icon button to add a new UV coordinates layer, and rename it as **UVMap_norm**. Then, click on the camera icon on the right-hand side of the name to make it the active UV layer.
18. Put the mouse pointer in the 3D viewport and press *U*; in the **UV Mapping** pop-up menu, select the **Smart UV Project** item; in the pop-up panel, click on the **Island Margin** value (default = **0.00**) and set it to **0.001**. Leave the other values as they are and click on the big **OK** button at the bottom of the panel.

The UVMap_norm UV coordinates layer for the Armor object

19. Go out of **Edit Mode** and minimize the **UV/Image Editor** window as much as possible; press *Shift* + *D* to duplicate the **Armor** object and move the duplicated one to the **3rd** scene layer.
20. Enable the **3rd** scene layer; go to the **Object Modifiers** window and delete the **Armature** and the **Subdivision Surface** modifiers; in the **Outliner**, rename the new object (now **Armor.001**) as **Armor_detailing**.
21. Assign a **Multiresolution** modifier. Click on the **Subdivide** button until it reaches level **3**; then, check the **Optimal Display** item and go in **Sculpt Mode**. Using the same procedure as before, add scrapes, bumps, deformations, and so on, to the **armor** surface; add some kind of engraving also, for example, on the **groinguard**.



Sculpting the Armor_detailing object

22. Save the file.

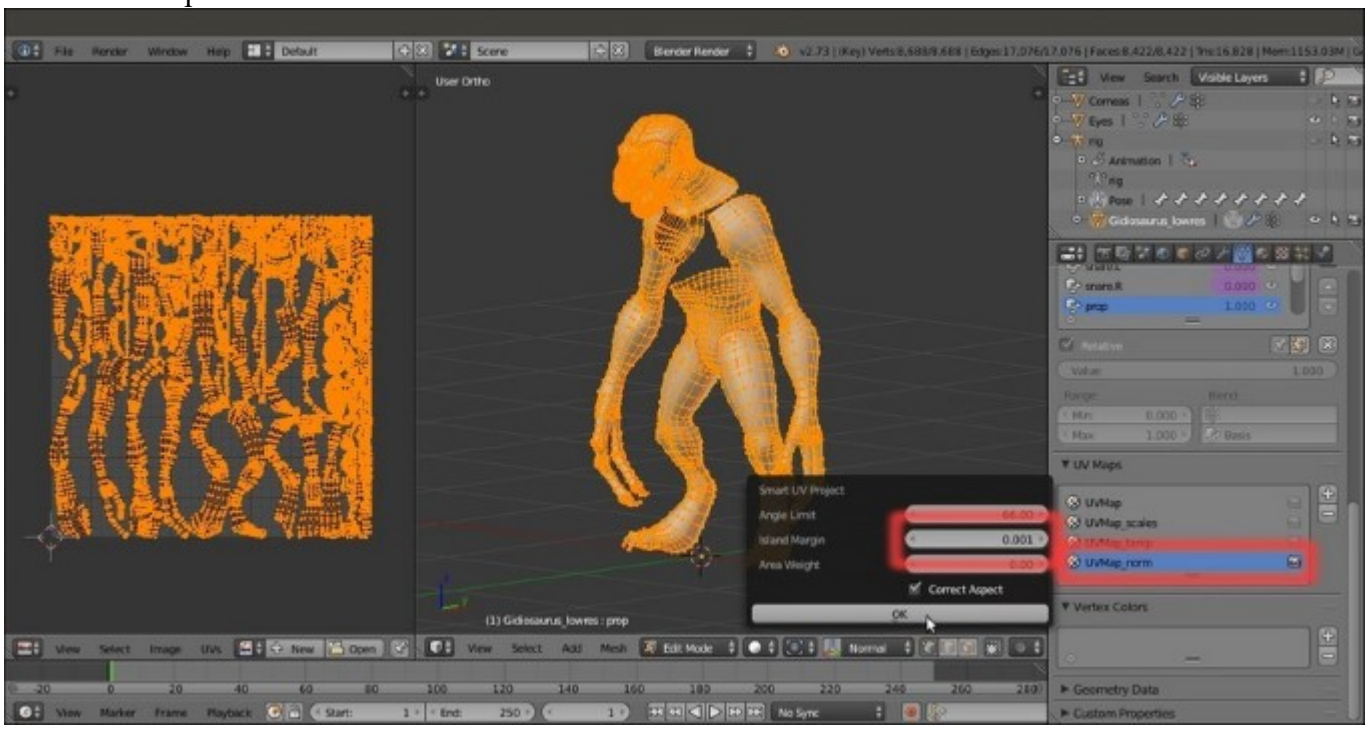
Baking the normals of the sculpted mesh on the low resolution one

At this point, we can transfer all the details sculpted on our high resolution meshes (the **Gidiosaurus** and the **Armor** objects) to the low resolution assets; to do this, we have to **bake** these details as **normal maps**.

Getting ready

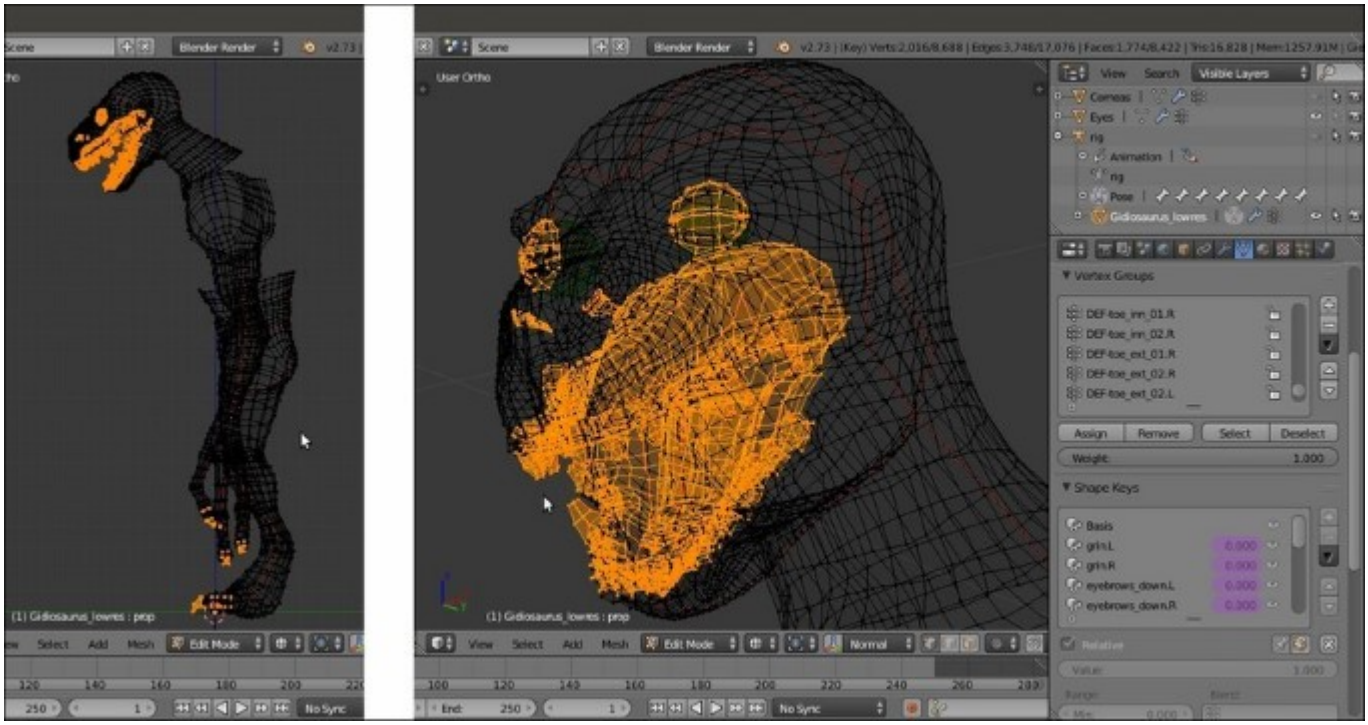
Continue from the previous `Gidiosaurus_details_sculpt.blend` file:

1. Split the 3D viewport into **two** windows and change the left one into a **UV/Image Editor** window.
2. Go to the **11th** scene layer and select the **Gidiosaurus_lowres** object; press the *Tab* key to enter **Edit Mode** and, if necessary, press *A* to select all the vertices.
3. Go to the **UV Maps** subpanel under the **Object Data** window, click on the + icon button to add a new UV coordinates layer, rename it as **UVMap_norm**, and click on the camera icon to make it the active UV layer.
4. Put the mouse pointer in the 3D viewport and press *U*. In the **UV Mapping** pop-up menu, select the **Smart UV Project** item; in the pop-up panel, click on the **Island Margin** value (default = **0.00**) and set it to **0.001**. Leave the other values as they are and click the big **OK** button at the bottom of the panel.



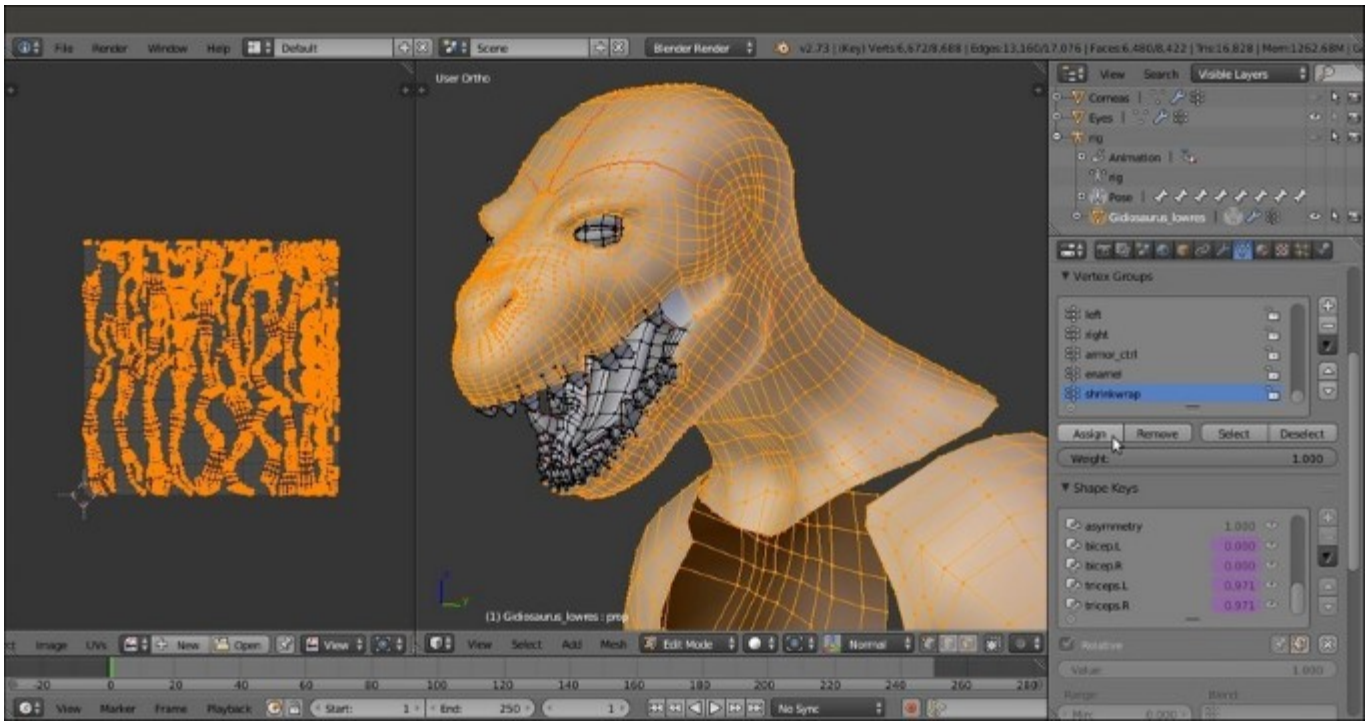
The UVMap_norm UV coordinates layer for the low resolution Gidiosaurus mesh

5. Deselect all the vertices (the *A* key again) and zoom to the **head**; *Shift*-select the vertices of all the parts that don't actually exist in the high resolution sculpted model such as the inside of the **mouth**, the **mouth inner rims**, the **tongue**, the **eyelids**, the inside of the **nostrils**, the **teeth**, and the **talons**:



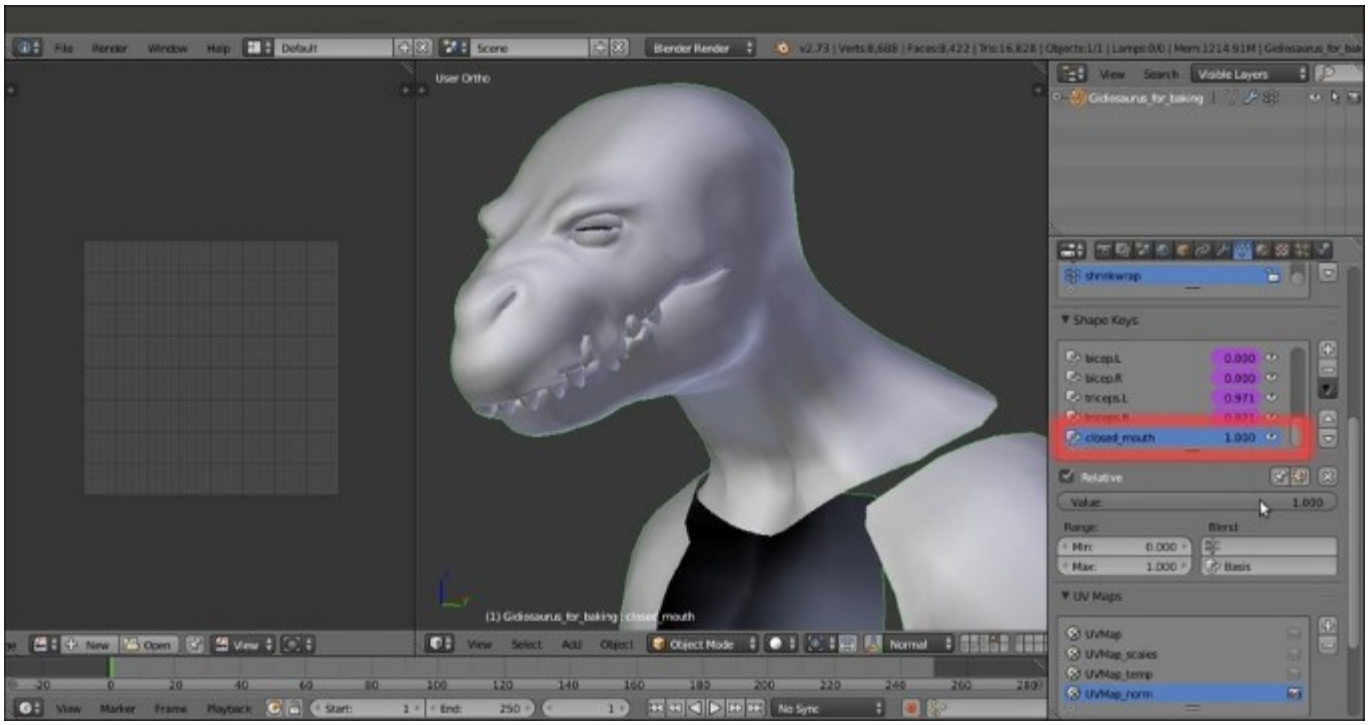
Selecting the low resolution mesh parts that don't have a counterpart in the high resolution sculpted mesh

6. Go to the **Vertex Groups** subpanel under the **Object Data** window and click on the + icon button to add a new vertex group; rename it as **shrinkwrap**.
7. Press *Ctrl* + *I* to invert the selection and then click on the **Assign** button below the vertex group list window in the **Vertex Groups** subpanel:



Assigning the inverted selection to the "shrinkwrap" vertex group

8. Go out of **Edit Mode** and press *Shift* + *D* to duplicate the **Gidiosaurus_lowres** object; move the duplicate to the **4th** scene layer and in the **Outliner** window, rename it as **Gidiosaurus_for_baking**.
9. In the **Outliner**, enable the 3D viewport visibility of the **rig**; select and move the **ctrl_mouth** bone upward to close the **Gidiosaurus's** mouth and then hide the **11th** scene layer.
10. Reselect the **Gidiosaurus_for_baking** object and go to the **Object Modifiers** window; click on the **Apply as Shape Key** button of the **Armature** modifier.
11. Go to the **Shape Keys** subpanel under the **Object Data** window to find a new shape key at the bottom of the list: **Armature**, with the value of **0.000**.
12. Rename the new shape key as **closed_mouth** and set the value to **1.000**:



The closed_mouth shape key

13. Go to the **Object Modifiers** window and assign a **Shrinkwrap** modifier to the **Gidiosaurus_for_baking** object; as **Target**, select the **Gidiosaurs_detailing** object and then click on the **Vertex Group** slot to select the **shrinkwrap** vertex group.

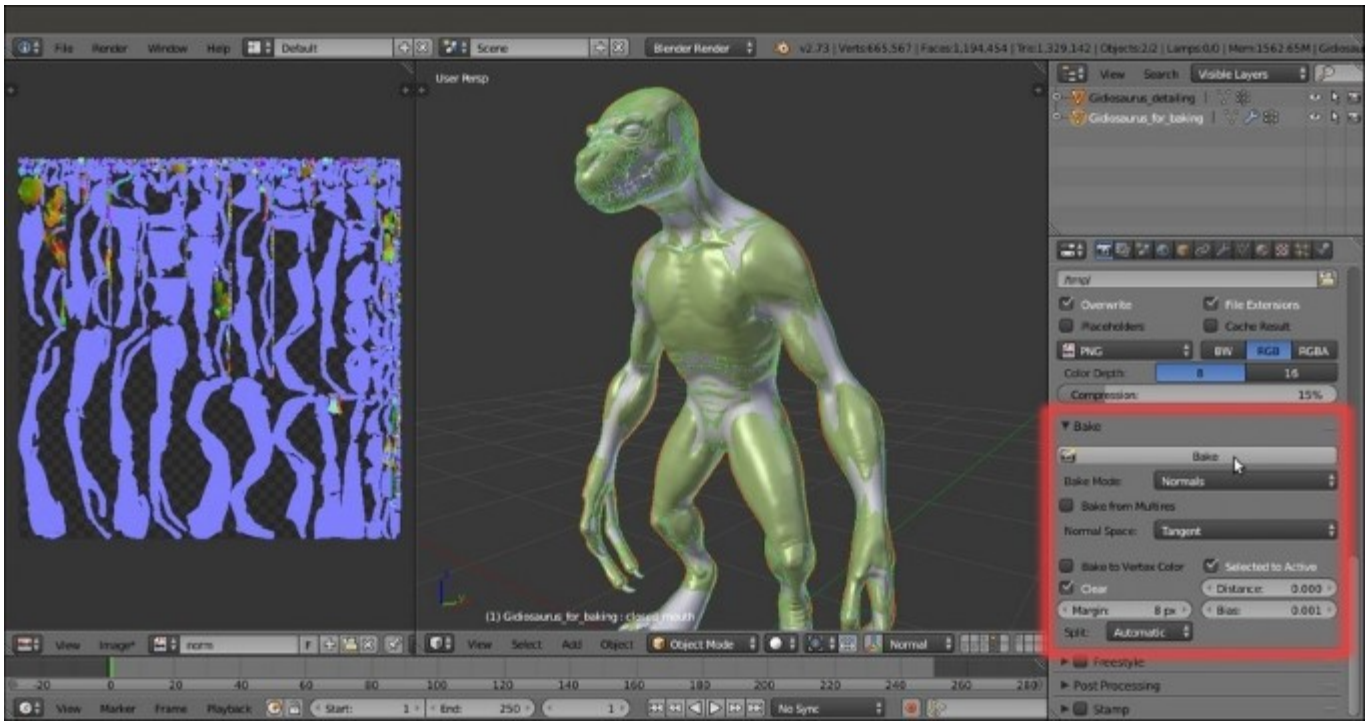
In the following screenshot, you can see the effect of the **Shrinkwrap** modifier on the low resolution mesh with the **Subdivision Surface** modifier enabled also for the 3D viewport:

The "shrinkwrapped" low resolution Gidiosaurus mesh

How to do it…

After this quite *intensive* file preparation, let's go with the baking itself:

1. Enter **Edit Mode** and select all the mesh vertices; in the **UV/Image Editor** window, add a new **3072** x **3072** blank image and rename it as `norm`.
2. Go out of **Edit Mode**, enable the **14th** scene layer, select the **Gidiosaurus_detailing** object, and then *Shift*-select the **Gidiosaurus_for_baking** object.
3. Go to the **Render** window, scroll the panel down and, in the **Bake** subpanel, check the **Selected to Active** item. Set **Margin** to **8** pixels, the **Bake Mode** to **Normals**, and the **Normal Space** to **Tangent**; click on the **Bake** button to start the baking:



The baked normals' image map, the two overlapping and selected objects, and the Bake subpanel

4. Click on the **Image** item in the **UV/Image Editor** window toolbar to save the baked image as `norm.png` inside the `texture_making` folder.

How it works…

To close the **mouth** (to conform it to the sculpted mesh), we moved the control bone in the rig and then applied the **Armature** modifier as a **shape key**; be aware that a modifier cannot be applied to a mesh with shape keys (you get a warning message), so we had to use the **Apply as Shape Key** option or delete all the shape keys with drivers and redo them later. In this case, however, it wouldn't have been necessary to duplicate the **Gidiosaurus** low resolution mesh, but we did it anyway to keep things simpler and cleaner.

Right before the baking, a **Shrinkwrap** modifier has been assigned to the lowres **Gidiosaurus_for_baking** object, to conform its surface to the high resolution sculpted **Gidiosaurus_detailing** object and avoid any possible intersection between the two meshes (that would give ugly artifacts in the baked image); we used the **shrinkwrap** vertex group to keep the vertices that don't have a counterpart on the high resolution mesh (**teeth**, **eyelids**, **inner mouth**, and so on) out of the modifier influence.

As you can see in the following OpenGL screenshot, comparing the sculpted and the low res **Gidiosaurus** meshes, the result of the baked normals on the low resolution object is pretty good and effective:

Comparison between the high resolution sculpted mesh and the low resolution object with the baked normal map

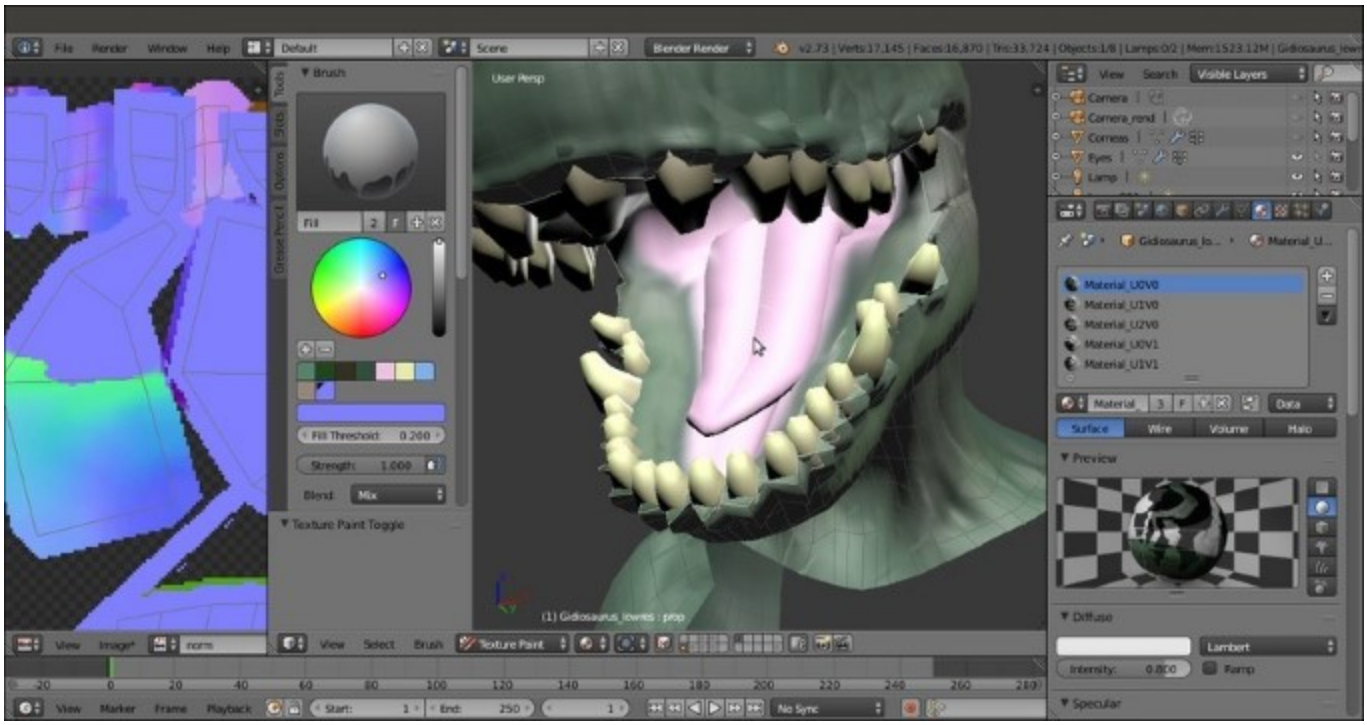
There's more…

As we reopen the **mouth** by lowering the **close_mouth** shape key value to **0.000** or also by simply assigning the baked normal map to the **Gidiosaurus_lowres** object, we see that something is wrong inside the **mouth** (and, actually, also on the **teeth** and **talons**): the normals have been calculated for those parts too, but they show wrong and weird artifacts because there were no counterparts to take the normals from in the sculpted high resolution mesh.

Artifacts of the normal map in some mesh parts

The solution in this case is very simple: we must paint the areas on the baked normal map corresponding to the afflicted parts, such as the **teeth**, the **tongue**, and so on, with a *flat normal* color (**R 0.498**, **G 0.498**, **B 1.000**) to *flatten* and therefore erase the unwanted details.

We can do this directly in Blender, by selecting the vertices of the areas to be painted on and enabling the **mask tool** in the 3D viewport toolbar:



Flattening the unwanted artifacts by painting on the normal map

Alternatively, we can do it in an external painting software program such as Gimp; in this case, just delete the vertices of the parts that you don't want to change in the mesh and export the UV layer of all the remaining parts to be used as a guide to paint.

The Armor textures

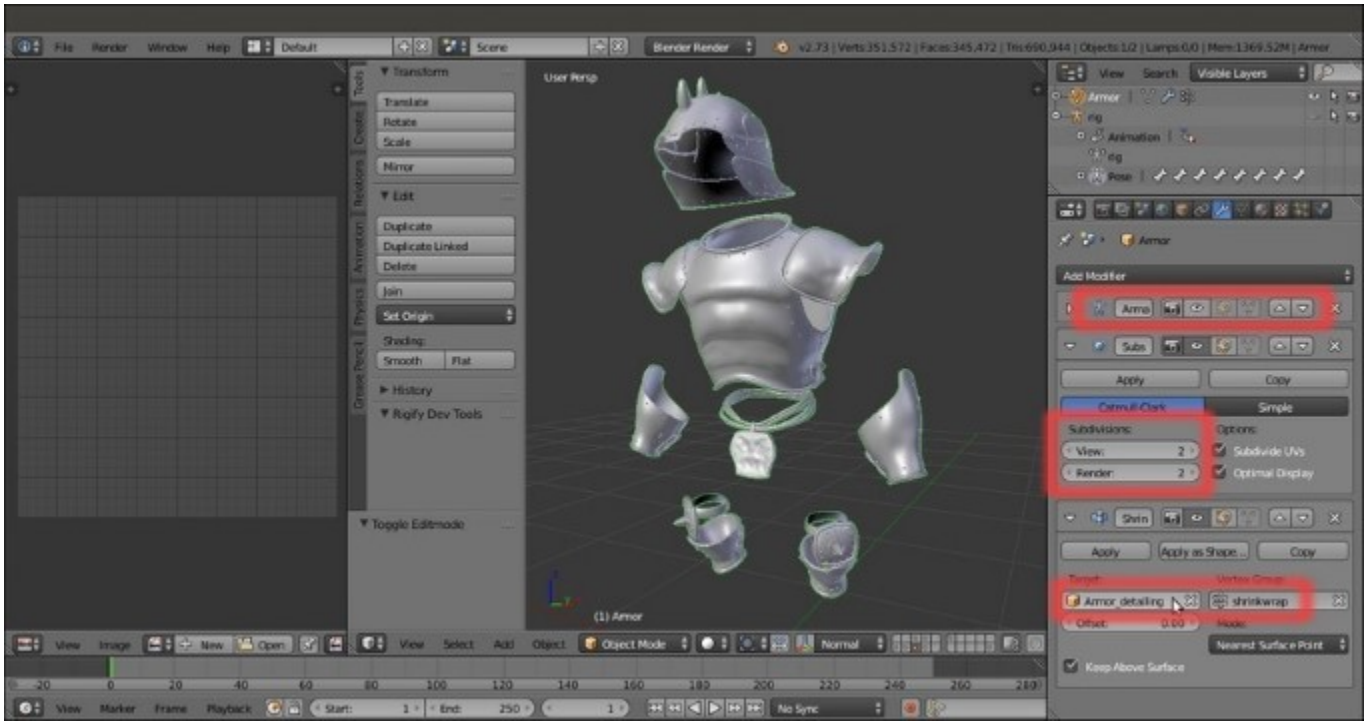
The same procedure used in the previous recipe must be used for the **Armor** object, to bake the normals of the sculpted high resolution version on the low poly one.

Getting ready

So, in short, we will do the following:

1. Enable the **13th** scene layer; select the **Armor** object and go to the **Object Modifiers** window.
2. Temporarily, disable the **Armature** modifier both for rendering, and the viewport, and be sure that the **Subdivision Surface** modifier levels are both set to **2**.
3. Assign a **Shrinkwrap** modifier with a target to the **Armor_detailing** object; in the **Vertex Group** slot, select the **shrinkwrap** vertex group and, just to be sure, also check the **Keep Above Surface** item.

Also, in this case, thanks to the **shrinkwrap** vertex group, only the outside of the **armor** mesh is conformed to the sculpted mesh; the insides are not important and can even be deleted (only for the baking and, of course, on a duplicated **armor** object, as we did with the **Gidiosaurus_for_baking** object). In any case, they will be barely visible.



The Armor object prepared for the baking

How to do it…

Let's now bake the sculpted geometry in a few steps:

1. Enter **Edit Mode** and select all the mesh vertices; in the **UV/Image Editor** window, add a new **3072** x **3072** blank image and rename it as `norm2`.
2. Go out of **Edit Mode**, enable the **3rd** scene layer and select the **Armor_detailing** object, and then *Shift*-select the **Armor** object.
3. Go to the **Render** window, scroll the panel down; in the **Bake** subpanel, check the **Selected to Active** item, and set the **Margin** to **8** pixels, the **Bake Mode** to **Normals**, and the **Normal Space** to **Tangent**. Then, click on the **Bake** button.
4. Click on the **Image** item on the **UV/Image Editor** window toolbar to save the baked image as `norm2.png`, inside the `texture_making` folder.
5. Save the file as `Gidiosaurus_baking_normals.blend`.

In the following OpenGL screenshot, you can see the comparison between the sculpted and the low resolution **Armor** objects with the assigned normal map:

A comparison between the sculpted and the normal map versions of the Armor

There's more…

Inside the `texture_making` folder provided with this cookbook, there is also an already seamless `iron_tiles.png` image to be used for the **Armor**; it has been made seamless in **Gimp**, but after the

mapping on the model, we'll need to fix some visible seams again by using the **Clone** brush of the Blender **Paint Tool**.

I won't go through all the required steps here, because this would be a repetition of recipes already explained in Chapter 10, *Creating the Textures*.

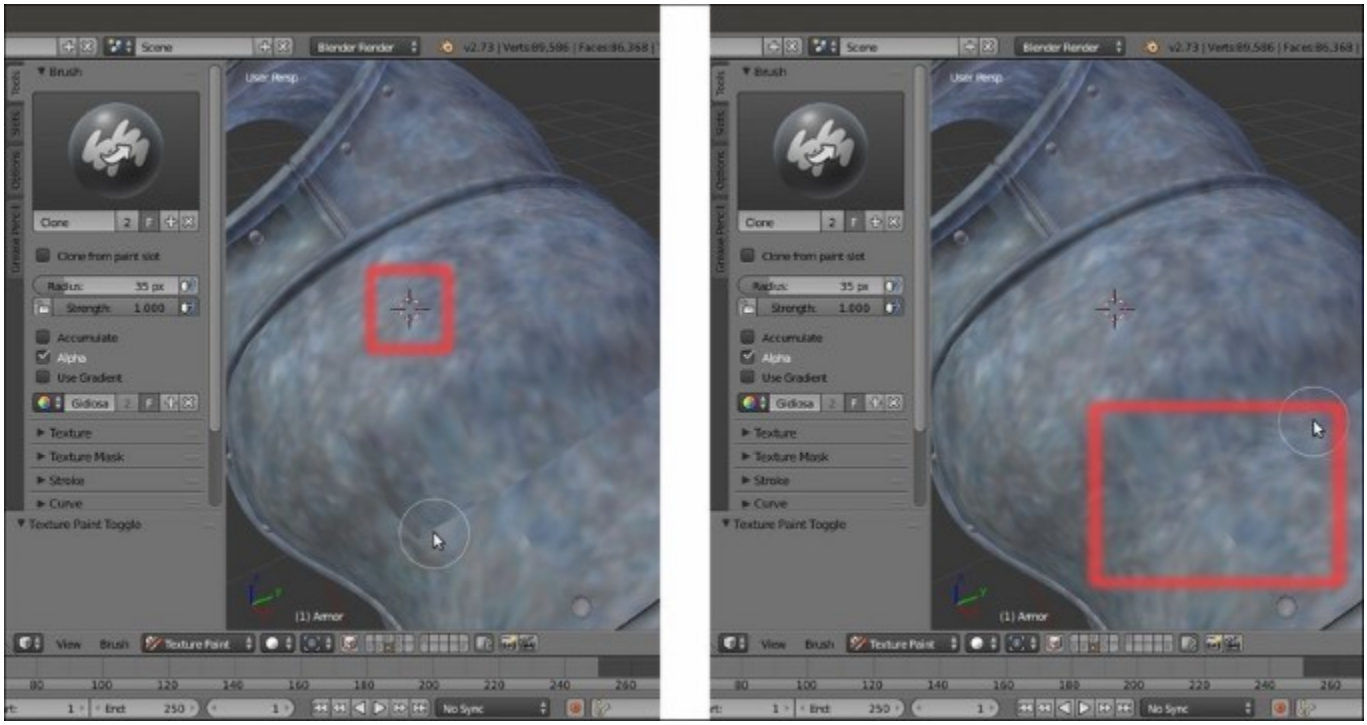
Note

Just remember that all we have to do is to bake the seamless `iron_tiles.png` image, which is mapped on the **UVMap_rust** coordinates layer, on the **UDIM UVMap** coordinates layer; in this case, shared into **two** tiles spaces and then fix the visible seams on the baked images.

So, we have to add two materials to the **Armor** object; each one with its own image texture and assigned to the vertices corresponding to each tile, and then also add the `iron_tiles.png` image to each affected material.

In short, we have to replicate the steps of the *Preparing the model to use the UDIM UV tiles*, *Baking the tileable scales texture into the UV tiles*, and *Painting to fix the seams and to modify the baked scales image maps* recipes from Chapter 10, *Creating the Textures*.

To use the **Clone** brush (press the *1* key to call it after entering **Texture Paint** mode), press *Ctrl* + left-click on the area of the mesh you want to clone from; this will place the **3D Cursor** in that location. Then, left-click on the seams to clone the texture from the area under the **3D Cursor**:



The Clone brush is cloning the texture area at the 3D Cursor location

Besides the **Clone** brush, in this case, it is also possible to fix the seams with the **Smear** brush (*4* key).

When you are done, save the two iron images as `iron_U0V0.png` and `iron_U1V0.png` inside the `texture` folder.

See also

Be aware that the first following link is for Blender version **2.6** (seems there is very little official documentation for version **2.7** at the moment), and a few things in the **Paint Tool** have changed; in any case, I think it can still be an interesting reading:

- http://wiki.blender.org/index.php/Doc:2.6/Manual/Textures/Painting
- http://www.blender.org/manual/render/blender_render/textures/painting.html

Adding a dirty Vertex Colors layer and baking it to an image texture

Let's see now how to add a *dirty* map through the **Vertex Colors** tool and how to bake it to an image texture; such a texture map can be useful for the creation of the shaders (which we'll see in the next chapter).

Getting ready

To do this, we are going to use an already set `.blend` file:

1. Start Blender and open the `Gidiosaurus_baking_normals.blend` file; save it as `Gidiosaurus_baking_dirty.blend`.
2. Put the mouse pointer in the 3D view and press the *Z* key twice to switch into **Solid** viewport shading mode; click on the **14th** scene layer to enable the visibility of the **Gidiosaurus_detailing** object.

How to do it…

Let's first go with the creation of the **Vertex Colors** layer:

1. In the **Outliner**, select the **Gidiosaurus_detailing** object and then click on the mode button in the 3D viewport toolbar to select the **Vertex Paint** mode:

Selecting the Vertex Paint mode item

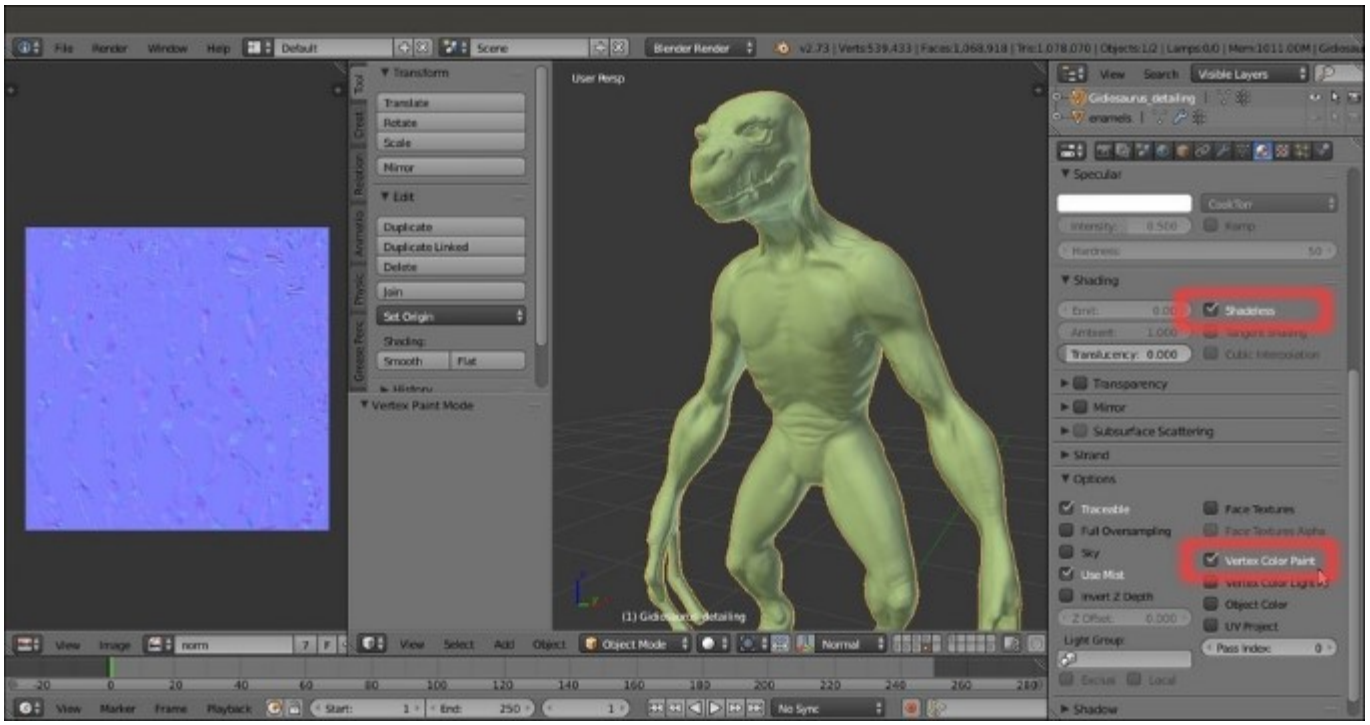
2. Now, click on the **Paint** item in the 3D viewport toolbar and from the menu, select the **Dirty Vertex Colors** item; the **Gidiosaurus** mesh, first filled with a plain white color, gets shaded in grayscale tones:

Using the Dirty Vertex Colors tool

3. Expand the last operation panel at the bottom of the **Tool Shelf** and press *Ctrl*+click on the **Dirt Angle** slot to enter the value **90°**; the grayscale shading on the mesh gets a lot more darker and contrasted:

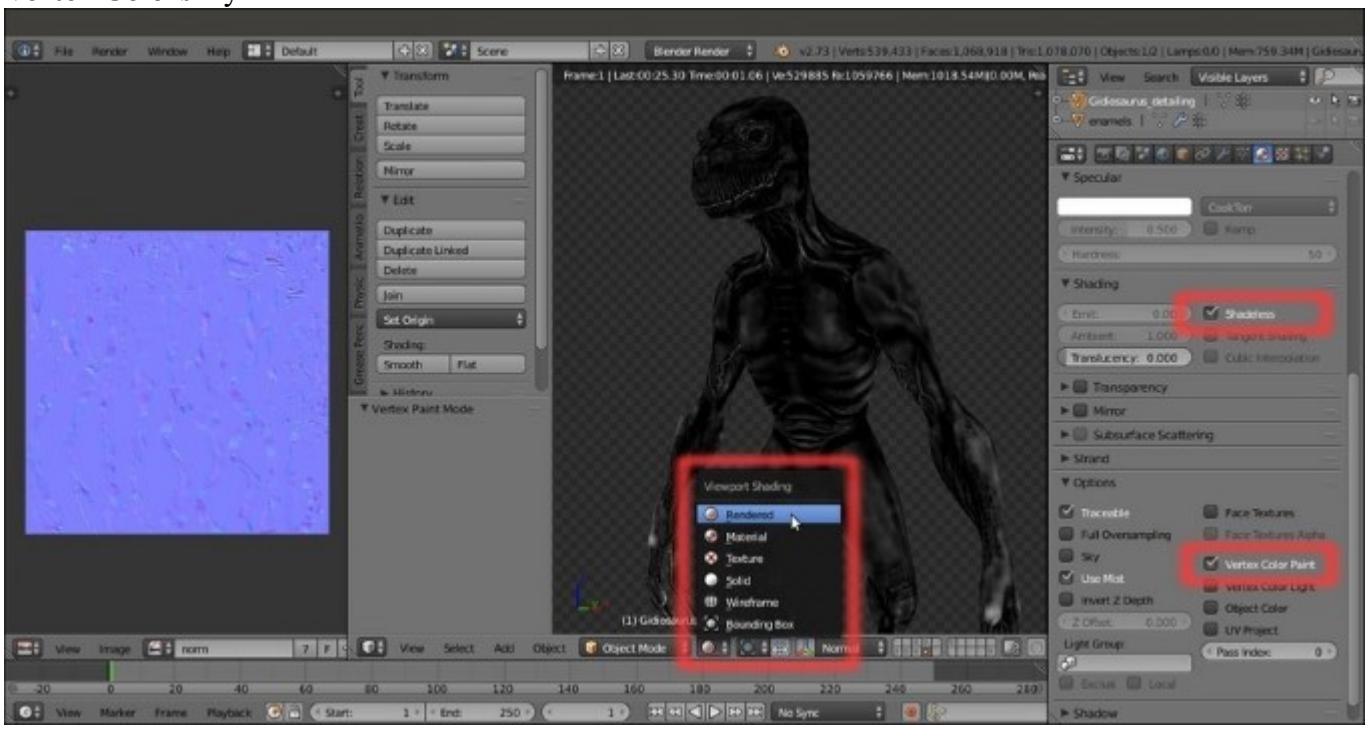
Tweaking the settings for the Dirty Vertex Colors tool

4. Go back in **Object Mode** and then move to the **Material** window, where the **Body** material is already assigned to the high resolution mesh. Scroll down the panel to reach the **Shading** subpanel and enable the **Shadeless** item; then, reach down the **Options** subpanel and enable the **Vertex Color Paint** item:



The Shadeless and the Vertex Color Paint items

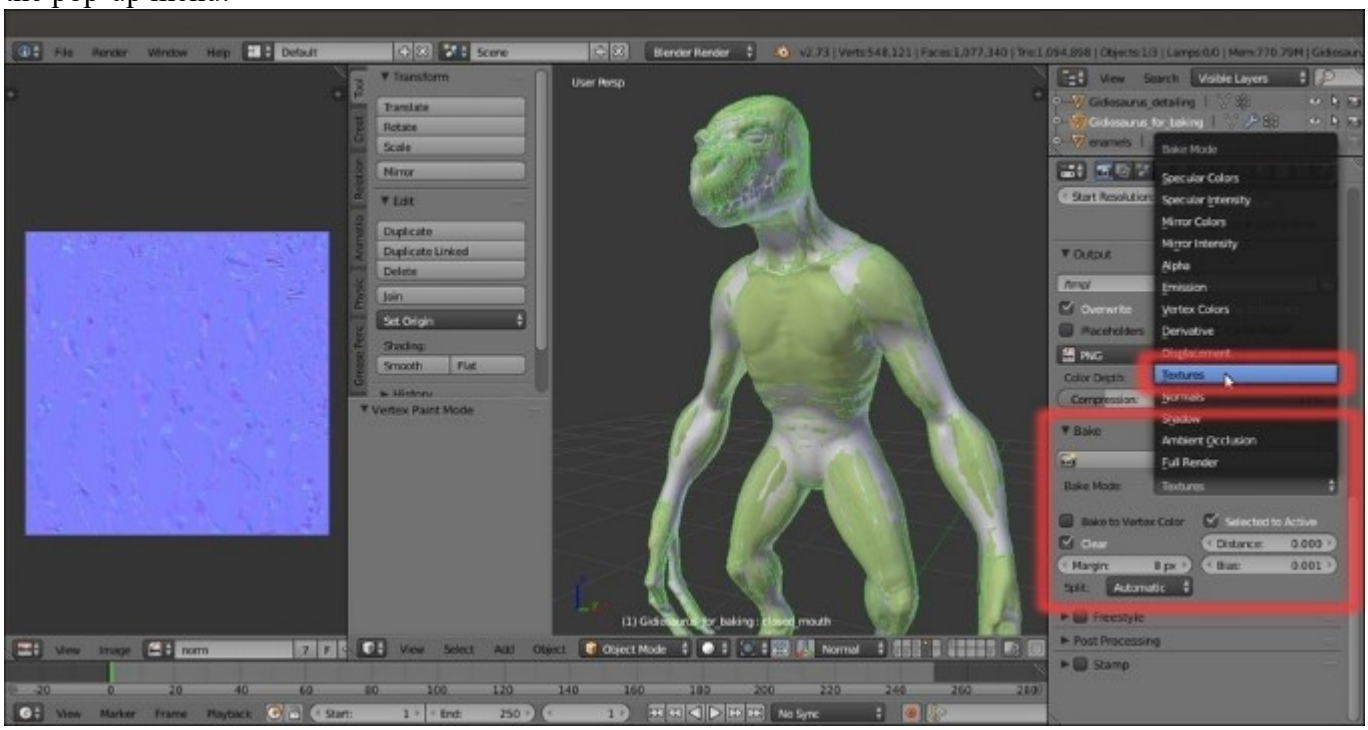
To understand the effect of the items we enabled in the **Material** window, just switch to the **Rendered** viewport shading mode; the mesh surface is self-illuminating and showing the dirty **Vertex Colors** layer:



The Dirty Vertex Colors layer visualized in the Rendered preview

Note that the **Shadeless** item is not actually mandatory for the baking, but is only required to see the object in the **Rendered** viewport shading mode as in the previous screenshot.

5. Also, enable the **4th** scene layer (*Shift*+left-click) and in the **Outliner** window, select the **Gidiosaurus_for_baking** object. Go to the **Object Data** window to be sure that the **UVMap_norm** layer is the active one and then go to the **Render** window and scroll down to the bottom, to the **Bake** subpanel; click on the **Bake Mode** slot to select the **Textures** item from the pop-up menu:

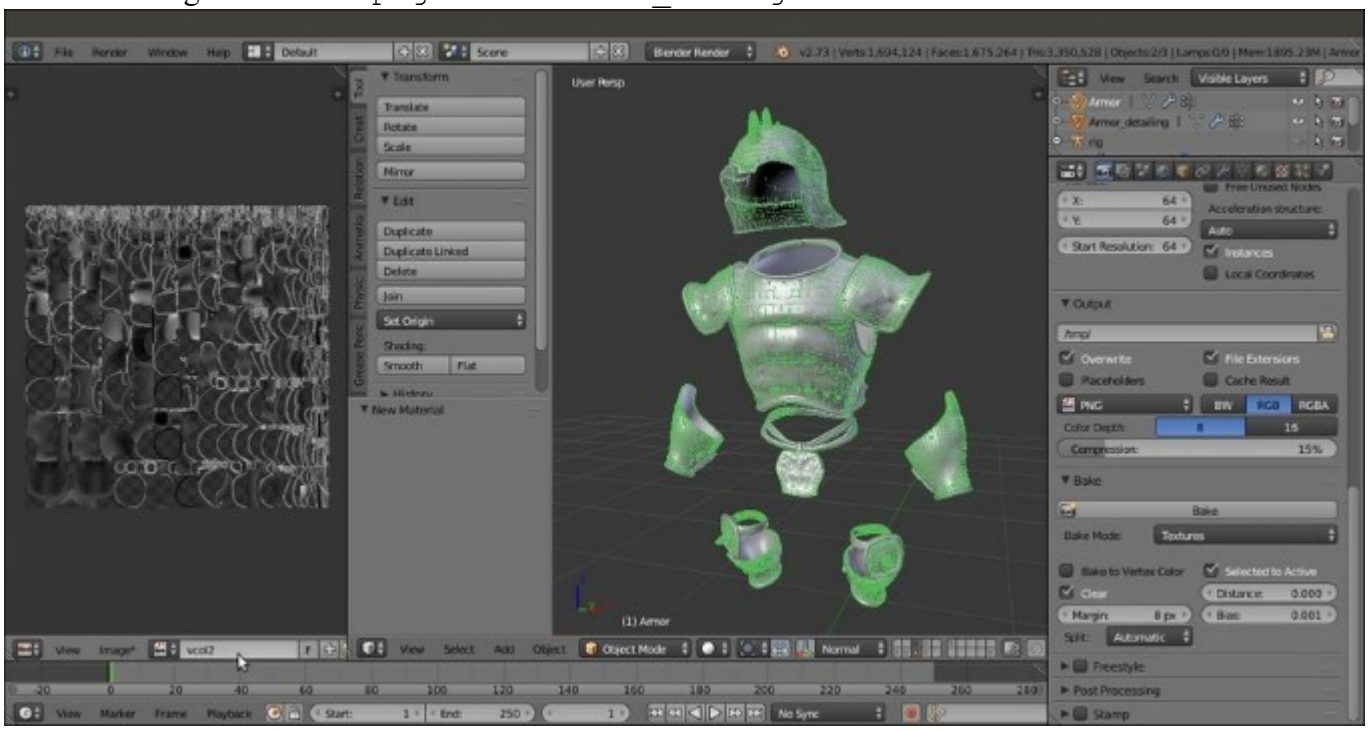


Baking the Dirty Vertex Colors layer to Textures

6. With the **Gidiosaurus_for_baking** object still selected, enter **Edit Mode** and select all the vertices; in the **UV/Image Editor** window, add a new **3072** x **3072** blank image renamed as `vcol`.
7. Go out of **Edit Mode** and in the **Outliner**, select the **Gidiosaurus_detailing** object; then, *Shift*-select the **Gidiosaurus_for_baking** object and go to the **Bake** subpanel under the **Render** window to click on the **Bake** button:

The final baked "vcol.png" image map

8. Save the baked image as `vcol.png` into the `texture_making` folder.
9. Enable the **3rd** scene layer, select the **Armor_detailing** object, and repeat the procedure; save the baked image as `vcol2.png` in the `texture_making` folder and also save the file:



The baked vertex color layer for the Armor

How it works…

The **Vertex Colors** tool can add a color to each vertex of the mesh, so it's actually possible to paint an object without the need for an image texture; the denser the mesh, the better this works.

The **Dirty Vertex Colors** tool uses the proximity and the depth of folds and creases on the mesh surface to calculate grayscale values to be assigned to the vertices; thanks to the **Vertex Color Paint** item, enabled in the **Material** window, this grayscale shows up in the rendering and so it's also possible to bake it into an image.

See also

- http://wiki.blender.org/index.php/Doc:2.6/Manual/Materials/Special_Effects/Vertex_Paint
- http://www.blender.org/manual/render/blender_render/materials/special_effects/vertex_paint.html

The Quick Edit tool

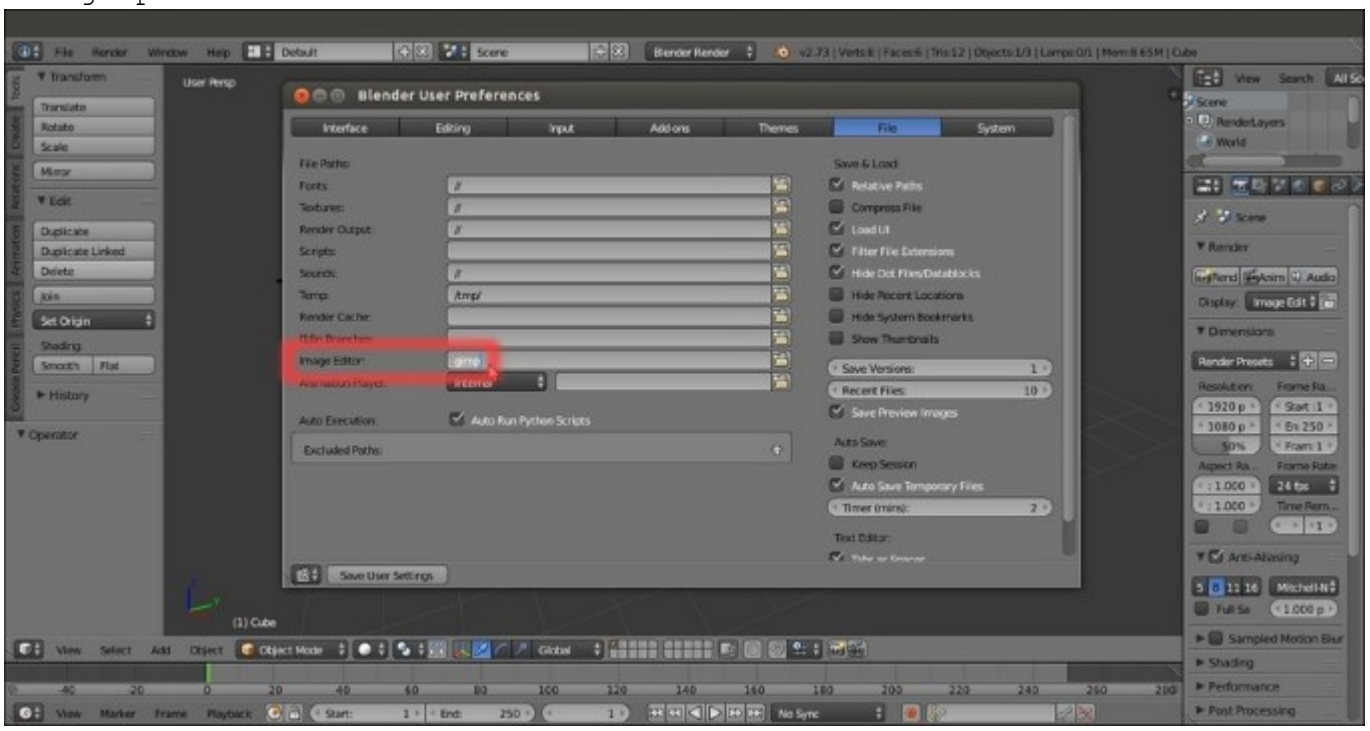
It's time to talk a bit about a very useful Blender tool: the **Quick Edit** tool.

Through this tool, it's possible to export a screenshot of the model in our favorite 2D painting software (**Gimp** or **Photoshop**, or whatever), paint on it using a new alpha background layer, and reassign the painted layer to the model in Blender, which is UV-mapped on the selected UV coordinates layer. All this, in just a few clicks.

Getting ready

In our case, we don't actually need to use this tool to refine the textures for the **Gidiosaurus**, so this recipe is going to be just an example. By the way, to fully understand how to use the tool, I suggest you to follow all the steps; just don't save the file at the end (or save it with a different name in a different directory if you want to keep it). So, carry on with the following:

1. Start Blender and call the **User Preferences** panel (*Ctrl* + *Alt* + *U*); go to the **File** tab and, in the **Image Editor** slot (*Path to an image editor*), write the path to your 2D image painting software installation (this is also done by clicking on the open/browse button at the right end of the slot). The path, of course, changes based on your OS; in my case, in **Linux Ubuntu**, it's enough to write `gimp`:



The Image Editor path in the File tab of the User Preferences panel under Linux Ubuntu

2. Click on the **Save User Settings** button at the bottom-left of the panel and close it.

How to do it…

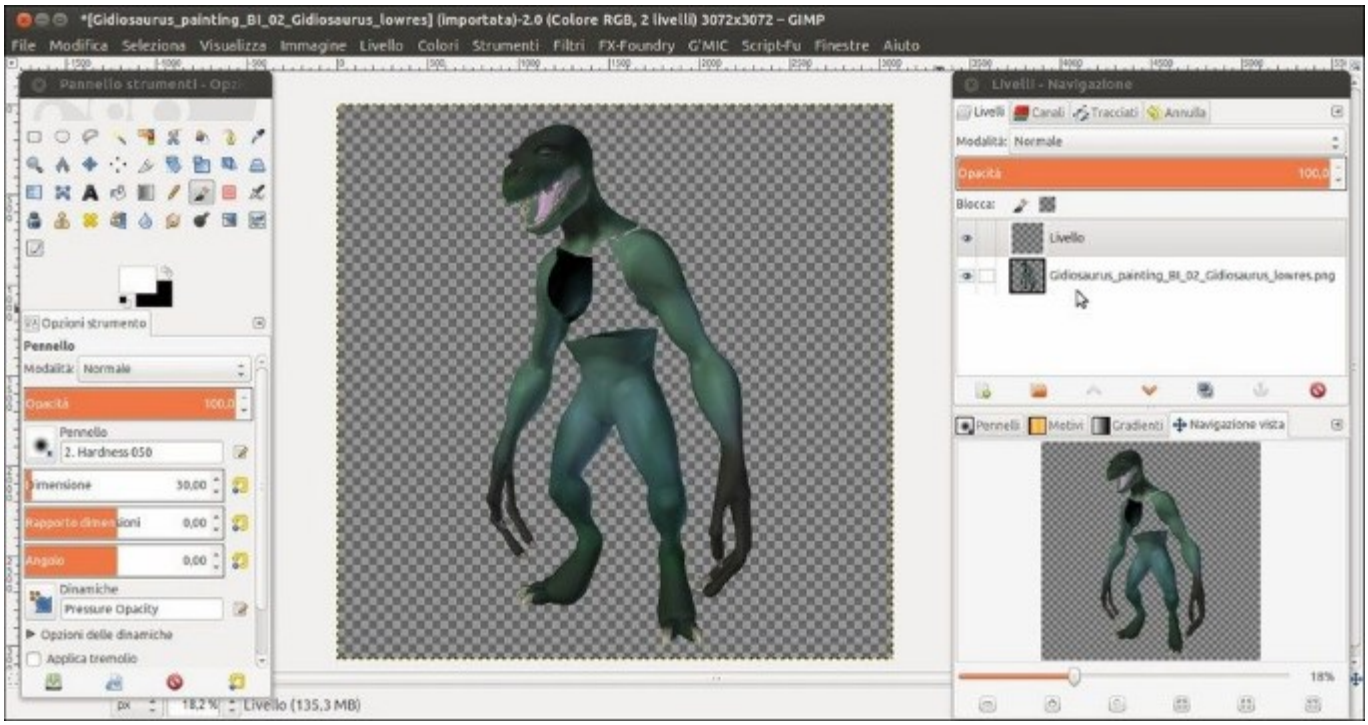
Once you've set the path to the image editor, let's load our **Gidiosaurus** file:

1. Load the `Gidiosaurus_painting_BI.blend` file and maximize it as much as possible in the 3D viewport.

   You can use both the **User** or the **Camera** view; it doesn't make any difference for the tool to work. By the way, it would be a good idea to use the **Camera** view so as to have a fixed point of view for any other case.
2. If necessary, press the *T* key to call the **Tool Shelf** panel; select the **Gidiosaurus** object and then go in **Texture Paint** mode.
3. Go to the **External** subpanel under the **Tools** tab; set a size for the screenshot to be exported (by default, it's **512** x **512** pixels; I set it to **3072** x **3072** pixels) and then click on the **Quick Edit** button:

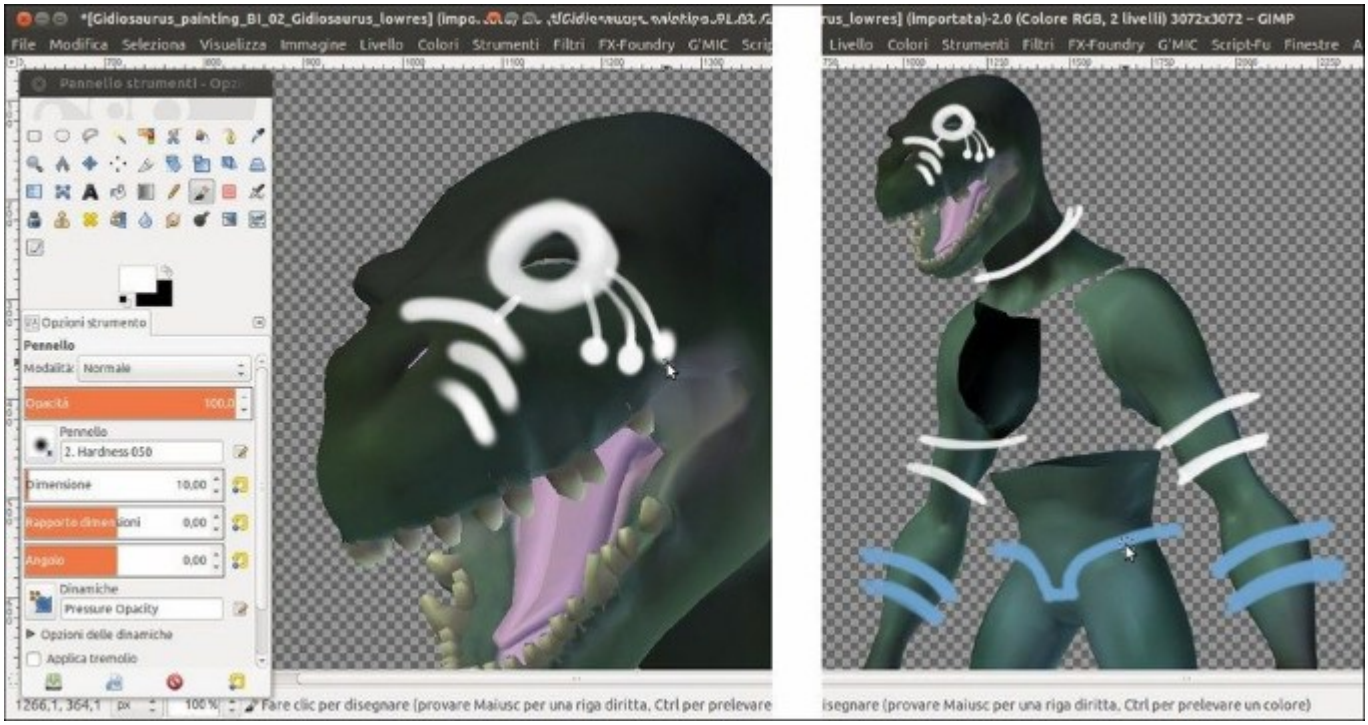
The External Image Editor subpanel

After a while, the image editor automatically starts (in my case, it's **Gimp 2.8**) and opens the screenshot of the model:



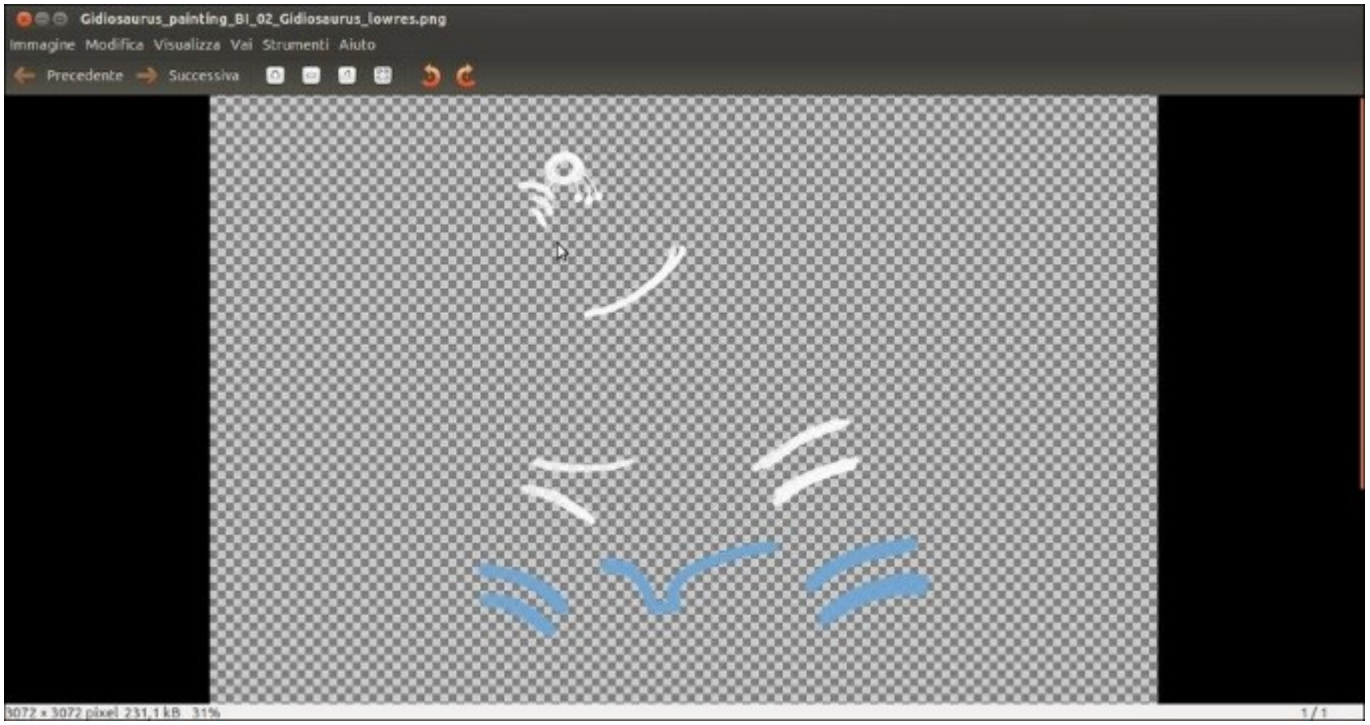
The screenshot previously visible in the Blender Camera view opened in Gimp

4. Add a new transparent layer and start to paint on it, adding some kind of tribal make-up decoration to the **Gidiosaurus**:



Tribal painting on the Gidiosaurus warrior

5. When you are done, deselect the visibility for the export layer and export the transparent painted one *by saving it with the same name as the exported one*. That is, the **Quick Edit** tool exported the screenshot by saving a `.png` image inside the blend file directory with the name `Gidiosaurus_painting_BI_02_Gidiosaurus_lowres.png`; export the painted layer by saving it as `Gidiosaurus_painting_BI_02_Gidiosaurus_lowres.png` as well:



The Gimp layer with the tribal painting "a solo"

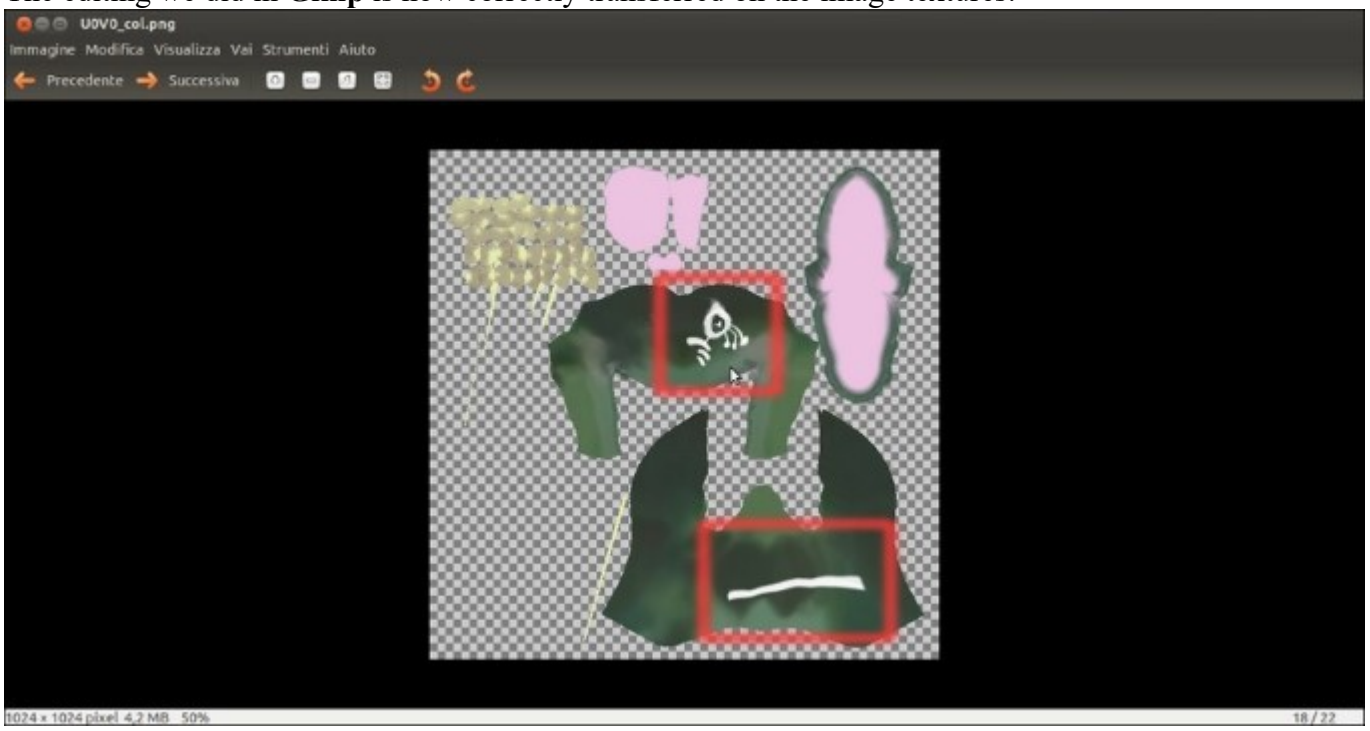
This is necessary for Blender to find it in the next step.

6. Back in Blender, click on the **Apply** button under the **External** subpanel and watch the new layer added to the model in the 3D viewport:

7. To make the textures editing permanent, click on the **Save All Images** button, both under the **Slots** tab and the **Image** item on the **UV/Image Editor** window toolbar:

The tribal painting transferred on the 3D model

The editing we did in **Gimp** is now correctly transferred on the image textures:



The tribal painting transferred on the image map

How it works…

As you have seen, the **Quick Edit** tool worked like a charm on all the **5** different materials assigned to the **Gidiosaurus** model for the painting. Be careful that, at least at the moment, this doesn't seem to work with **nodes materials** (which we'll see in the next chapter).

Chapter 12. Creating the Materials in Cycles

In this chapter, we will cover the following recipes:

- Building the reptile skin shaders in Cycles
- Making a node group of the skin shader to reuse it
- Building the eyes' shaders in Cycles
- Building the armor shaders in Cycles

Introduction

In Chapter 10, *Creating the Textures*, and in Chapter 11, *Refining the Textures*, we have prepared all the necessary texture images for the **Gidiosaurus** skin and for the iron **Armor** (the creation process for some textures, specifically the two textures for the character's **eyes**, hasn't been described, but basically it's a process similar to what we have already seen).

In this chapter, we'll see how to use these textures and how to set up the materials for the **Gidiosaurus** and the **Armor** in the **Cycles Render** engine.

A rendered example of the Cycles' shader final result