

## **Ancient-Pig's Photoshop texture painting tutorial**

This tutorial is not so much a 'step-by-step' guide on how I create my textures, however more of a 'play-by-play' commentary consisting of a breakdown, describing the phase of the texture I captured at that time. The annotation per frame consists of a complete explanation of what I did, and why I chose to do it. If there are 'a million ways to skin a cat'- please think of this as only one of them...



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Below is the first phase of my texturing - a step I do the same no matter what kind of texture I'm creating. The starting format is one black background layer, one crimson red layer, the UV layout of the geometry, and my dark marking lines on a 4th layer.

When painting alive human skin, I always begin with a base layer of crimson red as a quick representation of the blood beneath. As I build color layers on top of this, I feel that the red always shines through, even if very little, giving skin a plush coloration. 90% of texture creation rests in 'nailing' the colors, and this step seems to always help me get there.

I use the overlaid UV layout as a guide for my dark (never black, always dark dark blue) guide lines which show me where the landmarks of the face are. It's a process of trial and error - repeatedly checking the layout of the lines on the model until I feel they provide a solid structure for me to move forward. This particular case took me a handful of times to get right.

I usually mark sections of the face with lines, and areas that'll receive lighter tints with a closed shape.



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Below is the second phase of my texturing - coloring in the lines! This stage required the least amount of thought, as all the thinking had already been done (drawing lines on the face). All I did here was make a couple skin tone swatches (a mid and light tone), and paint on top of my 'blood' layer. I'm now going to refer to that layer as the 'base layer' from here on out.

As you can see, the crimson is still showing through; more-so in certain places. Something to remember about working a texture in Photoshop is that it can always be changed. These color choices aren't binding in any way- all changing color requires is a simple play with the hue slider.

'Ballpark'n it works.

After the color was laid down, I smoothed it over with the smudge tool. In this case, to get a true smudge, I went into 'Brushes' --> 'Shape Dynamics', and unchecked 'Spacing.' This makes the blend tool blend, instead of pushing color around on the canvas (easier on your computer as well). Albeit, keeping 'Spacing' on has its uses, but not in this stage of the game.



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Continuing work on the base layer, I stayed within the same colors, and painted up forms a little bit- mainly on the lighter end of the spectrum. The goal from here on out was to keep defining and refining. So there was a lot of painting, and just as much smudging with 'Spacing' turned on, to easily push forms around.

I have brought out the cranium, and defined the jaw line a bit more. The SCM muscle of the neck (side of the neck) was hit with the lighter skin tone, as that is a major landmark of the neck.

The upper and lower eyelids were quickly defined by running the lighter skin tone over them. Also brought out another area of importance- the fold of skin on the upper/outside of the eye, where the eyesocket of the skull recedes back in space.

The bridge, tip, and sides of the nose were brought out with the lighter skin tone as well. On this part, I wanted to begin that sense of skin being wrapped directly over bone, which is why I have left the side of the bridge relatively darker than the rest of the nose. The nostril was quickly tagged with a dark 'rose' color.

A quick note about the 'rose' color of the nostril: a dominant theme in my texture creation is to try and keep everything relative. For instance, I didn't choose the 'rose' color by grabbing a color from my swatch palette and adjusting from there. Instead, I eyedropped the pink from the underside of the nose, brought the value and saturation down, and adjusted slightly to higher magenta on the hue slider.

I try not to introduce too many brand new things to my textures, as it makes mine look very random.



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Continuing work on the base layer, I decided the overall appearance was getting too light in value, so I gave it a little more base by sliding the middle handle to the right in the 'Levels' window.

'Defining and refining' was still my top priority at this stage. I began bringing out more landmarks of the skull. Using the 'Polygonal Lasso' tool with feathering set to 4, I made a selection where the eye socket of the skull is. While this portion of the base layer was selected, I ran 'Image' --> 'Adjustments' --> 'Hue/Saturation', slid the hue all the way to cyan, and darkened it a bit. Immediately afterwards, I went to 'Edit' --> 'Fade Hue/Saturation', set the blending mode to 'multiply' at about 5%. This whole process darkened the eye socket area a little, and moved the overall hue relatively to a higher amount of blue.

To further bring out the eyelids and the bag under the eyes, I selected the mean of the newly created blue'ish skin tone, ran the value slider closer to black, and sketched them in. To get the lighter color at the top of the bottom eyelid, I selected the same mean color, ran the value slider closer to white, upped saturation, and ran the hue slider towards magenta.

The eye socket was defined more by painting a dark skin tone streak at the '5 o'clock' position of the socket.

I quickly landmarked the nostril and top of the chin by selecting those areas with the polygonal lasso tool (no feathering). Once those were selected, I used the smudge tool to push the color to the border of the selection (outside of nostrils, top of chin). Inversing the selection, and doing the same was done as well. The purpose of this was to get clearly defined areas that I can easily see while taking the texture forward.

Smudging color around was done as I saw fit, to further bring out and enhance facial feature shapes.



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Continuing work on the base layer, I decided the overall appearance was getting too pink in hue. To remedy this, I went in to the 'hue/saturation' window and slid the hue bar closer to yellow.

The ear was quickly defined by using the same light and dark skin tones I started the texture with. These initial hues are more to the magenta end of the spectrum, and since I just ran the base layer closer to yellow, it will make for some subtle variation.

Other areas of the texture were lightened by using the light skin tone- mainly on the jawline and eye sockets. The jaw was reading as too dark and saturated (probably from the previous levels adjustment), and the eye was reading like my dude just got dealt a 'shiner.' These areas were painted over with the airbrush set to a low (5-10%) opacity, as to allow old color to show through for more richness.

After stepping back from the monitor and noticing that the texture was consisting predominantly of reds and yellows, I decided to briefly stray from keeping it relative. I ran up a light olive green color, and began adding it to some of the receded areas, using the air brush set to a low opacity, and blending it in further with the smudge tool afterwards. Areas to note are the jaw, the front of the neck, the base of the skull at the back of the head, the inner ear, under the center of the nose, under the brow between the eyesocket and nose, the nostril, and just over the top of the upper eyelid.

The lips received a bit more attention: I defined the bottom of the lower lip with a stroke of the light skin tone. The same was done to the top of the upper lip, to define where that form changes curve from the lip to the face.

A new layer was made on top of the base layer I had been working

on! With the polygonal lasso tool (no feathering), I outlined the shape of the upper lip and filled it 100% opacity with a dark and saturated red. This layer was set to multiply, and the opacity of the layer set very low, as to just slightly darken the upper lip to give the illusion that it recedes into the mouth. This also makes a handy selection layer for later on, in case you are doing work around the upper lip and don't want to effect it (inverse selection!).

The inside of the nostril was painted up a bit with the light skin tone, to make it appear that it recedes up into the skull.

Further smudging was done over the whole texture to further enhance form as I saw fit.



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The first step I made here was to create a subtle overlay layer on the very top of the layer stack. This layer is nothing more than an even grain layer, meant to lend a subtle sense of tactility, and break-up the 'too smooth' look of straight painting. If color is the 'cake' of creating a believable surface, surface detail is what makes the 'icing'.

The method for creating this layer is real simple. Make a layer on top of everything, and fill it 100% with a gray. Run a 'filter' --> "noise" --> 'add noise.' I set my options to 'Gaussian' and 'monochrome.' The blending mode of this layer was set to overlay, and I dialed the layer's opacity down in the neighborhood of 5%.

Next, I wanted to start bringing in some more color to the face. I decided to start with a little red in the cheeks and nose. I created a layer over the base layer, and painted a dark red over the cheeks and nose at 100% opacity. After smudging it around in those areas for a short while, I set the layer blend mode to 'soft light', and dialed down the layer opacity to somewhere around 8%. Keeping elements like this on separate (but manageable) layers allows for easy adjustments down the road.

On that same note, I did the exact same thing with the forehead; except painted a mustard yellow instead of a dark red.

Next, I created an additional layer on top of the two soft light layers. On this, I painted a royal blue at 100% opacity on the beard and cranium area. I painted this at 100% opacity so I could easily discern where the beard and hair lines were appearing on the model as I checked it in the viewport. Once I was satisfied with the placement, I set the layer blend mode to 'multiply', and dialed down the opacity to around 6%.

The blue multiply layer is acting as a beard coloration layer. It needed to feel a little more 'scruffy'- so I ctrl+left mouse clicked the newly created multiply layer, created a layer on top of that and made another noise layer (using the same method as before: fill it with gray, go to filter --> noise--> etc..). This layer was also set to multiply, and the opacity at around 10%.

The theory behind my choice of coloration is pretty bland for this example. I've noticed that some caucasian'esque skin types have a distinct yellow, red, blue (forehead, cheeks/nose, beard) color scheme, so I'm just mimicing that for this example.



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Continuing work on the base layer, I smudged a few areas around bring out form. The first area I hit was the inside of the eye socket: I smudged a bit more shape into the underside of the brow, and made one strong smudge down the eye socket shape between the punctum and nose.

The second area I hit was the underside of the neck- an area that had been ignored a bit, was coming off as too dark. I made a quick spray with the lighter skin tone, and evened it out with some play from the smudge tool.

Continuing work in this area on the base layer, I used the polygonal lasso tool (at 4px feathering) to make a selection encompassing the jaw-line shape, from the bottom of the ear to the underside of the chin. I sampled the dark rose color from the upper lip, and sprayed the selected jaw area with a low opacity air brush.

On the multiply layer being used to add red hues to the cheeks and nose, I ran that same color over the upper portion of the ear. This could simulate blood vessels close to the surface of the skin, or burning from the sun (area with sensitive skin), etc)

I wanted to introduce a light sheen to the skin texture. Even though this texture would be used in conjunction with a specular map, I felt a light sheen would mix up the color a bit more, and give the skin surface a greater amount of tactility. To do this, I created a layer at the top of the stack and set the blend mode to 'soft light.' The airbrushed was used with a soft edge brush and low opacity, with a sky blue hue assigned. I lightly brushed over the brow, cheeks, nose, and neck, where I thought light contact would be the most prominent. This layer was smudged around until I saw fit, and then I moved on)



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At this stage I could see that the macro-structure of the texture was essentially complete. Applying the texture to the model and slightly tweaking UV's here and there (mainly around the nostrils and eyelids), I could see that the texture complimented my geometry's form well, and read like a human being. From here on out, it's all detail and refinement.

Something that had been bugging me was the blurriness of the hair line. I went into the multiply layer that has the dark blue stubble color, and solidified the hair line with the smudge tool against a feathered selection. The same was done to the stubble around the lips.

On the base layer, I airbrushed a quick soft stroke of dark color on the upper portion of the brow, right at the base of the forehead. This was to signify where the brow protrudes slightly outward from the head. Using the smudge tool, I shaped it as needed, focused on giving a greater falloff where the dark shade meets the forehead since the change in shape is much less severe there.

Another layer was created just above the base layer. The layer blend mode was set to 'color', and a hard magenta was painted directly on top of the lips. I wanted to bring the lip color away from a brown, and more into the neighborhood of a dark pink. The great thing about making this adjustment on another layer is, if I want to make further color adjustments to this region down the road, all I have to do is play with that one layer rather than destroy the integrity of the painting on the base layer.

Sampling the dark red hue just inside the nostril, I painted crease/crack lines on the lips. What I was envisioning at this stage was to pretend that I was tracing the shape of the lips as if on a wire mesh. This detail was done on another layer created underneath

the lip color layer, to keep color changes consistent down the road. I paid special attention to the criss-cross patterns that occur on some people's lips where the lower lip falls off at the bottom. After the lines were painted, I went in with the smudge and erase tool to make them less uniform.

Once the lines were complete, I made a copy of the lip line layer, inversed it, set it to 'soft light', and lowered the opacity. I then moved the entire layer to the right by one pixel's distance. This was an easy way to simulate a highlight to the cracks I just made. Further finessing was done on the 'soft light' layer, using the airbrush at a low opacity, set to a sky blue color.

A 'multiply' layer was created, and set to a relatively low opacity. I selected a dark, cold blue from my palette (the layer is 'multiply' - so it'll change the color according to the color underneath. Still keeping things relative)), and painted in shadows underneath the nose, lower lip, corner of the mouth, and between the eye and nose. These shadows were kept faint, so as not to appear too domineering 'in-game'. It would look funny if there were a hard light coming from below, but the figure had a dark, hard shadow underneath his nose.

This layer was made to keep the form balanced. Remember, I made a 'soft light' layer for the skin sheen, where I thought light would be most apparent once it hit the model in a default environment. This layer is for where I think the light will not hit. It accentuates the form)



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As I continued to work on this texture, my wife happened to walk in. Upon glancing at the progress I had made, she remarked 'he looks like he's wearing lipstick.' Good thing I had set the lip color on a separate layer! All I had to do was delete that layer, and it was fixed.

Well now that she's had her say, back to work! I wanted to even out the tones in the scalp, as the bulk of the form for this model will be portrayed via the in-game lighting. I quickly airbrushed the light skin tone over that region of the base layer, and smoothed it over with the smudge tool (no spacing).

The next step I took was finalizing the ear. The macro-forms were already laid down, but I could tell they needed a little adjustment. I used the smudge tool (spacing on) to push and pull the geography of the inner ear into shape - thickening areas, and sharpening areas. Once that was complete, I used a soft edge brush and painted areas a light sky blue on the soft light layer used for skin sheen. The main item I focused on while doing this was thinking about where light would be hitting these folding surfaces, and where it would be reflecting off the waxy ones. The important thing to get away from when painting an ear is thinking of it as a bunch of lines. You need to think of it as volumes folding over each other. Having a visual reference at hand helps immensely (Google!).

Final touches to the ear were made with the burn tool: I accentuated the external auditory canal, and ran a polygonal lasso along the inner edge of the helix; giving it a quick once-over with the burn tool to make it stand out.

I began painting fine wrinkles around the face; first by marking them off with thick, dark lines on a temporary layer. After going

back and forth between my 3d app and Photoshop, determining the lines were in the right spots, I ran the opacity of that layer down to 10% to use as a guide for painting.

I created a new layer, and set the blending options to 'Bevel and Emboss' (setting as shown below). I sampled a deep red from the ear, and using the airbrush, painted thin lines that followed the contours of the face. Starting at the corner of the eye, swooping out and up across the forehead, the top of the chin, and cross hatching on the neck. I dialed down the layer's opacity to 17%, and continued painting faint lines following the same patterns. Fine tuning with some smudges, I called the wrinkles 'done.'

Since this skin depicts a fairly young man, he wouldn't have deep set wrinkles in his skin just yet. If I were painting an older person, I would not use this bevel/emboss technique, but would rather paint the larger wrinkle forms directly on to the base layer.

I adjusted the base layer slightly higher on the magenta side.

Styles

Blending Options: Custom

Drop Shadow

Inner Shadow

Outer Glow

Inner Glow

**Bevel and Emboss**

Contour

Texture

Satin

Color Overlay

Gradient Overlay

Pattern Overlay

Stroke

**Bevel and Emboss**

**Structure**

Style: Inner Bevel

Technique: Chisel Hard

Depth: 1000 %

Direction:  Up  Down

Size: 250 px

Soften: 0 px

**Shading**

Angle: 96 °



Use Global Light

Altitude: 37 °

Gloss Contour:  Anti-aliased



Highlight Mode: Screen

Opacity: 89 %

Shadow Mode: Multiply

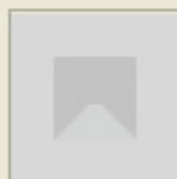
Opacity: 0 %

OK

Cancel

New Style...

Preview





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I created another 'Bevel and Emboss' layer for the veins at the temple of the head using settings similar to those found on the previous page. Picking a deep green for the vein color, I used a hard edged brush and drew the squiggly lines at the temple. After dialing this layer down to a lower opacity, I went into those lines with the eraser and smudge tool (spacing on) to give them the appearance of getting nearer/farther from the surface of the skin. I also made a small vein on the ear.

Another layer was created for painting the eyebrow. Using a soft edged brush, I painted a solid dark brown to mark where the eyebrow would go. After smudging (spacing on) the shape around a bit, once I was satisfied with the placement, I ran the opacity of this layer down to 10%.

I create my eyebrows in multiple layers. After studying them for a bit (do I have a life?), I could see that they are made of specific sections of differing directional hair flow. Look at your eyebrows in the mirror, and notice how some hairs flow directly in the line of the brow, others opposite of this, and some go straight up.

Starting on a new layer, I used a hard edged brush equipped with a dark brown color to paint the small hairs that go straight up, closest to the nose. Creating a new layer on top of that, I painted hairs that went away from the nose at a '10 o' clock' direction. Creating a layer on top of that, I painted 'wispy' hairs that flowed perpendicular to the nose- almost pointing straight to the ear. On a new layer underneath all these, I lightly painted faint hairs that flow around the more prominent hairs of the eyebrow.

That's my eyebrow in a nutshell... the diagram below may explain it better. In that example, each layer is indicated by a distinct color:



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Imperfections are what makes the skin come to life! It's a shame this doesn't happen until the end- all the people who have glanced at your work in progress as they walk by probably think 'this guy sucks.' But when this stage of the texture comes into play, people usually stop and dish out the compliments.

I created the freckling in 3 layers - one for the large blotches, a second for the medium-sized harder edged blotches, and a third for the distinctly round freckles.

For the first and second layers, I filled each layer in 100% with a brown- the first layer's brown had more red, and the second had more yellow. For both layers, I ran a 'Filter' --> 'Artistic' --> 'Sponge', playing with the various settings to get the shapes I desired. From there, I ran the opacity down on both layers, and began erasing areas away with a large-sized, soft eraser brush.

For the third layer, I simply selected a burgundy color found on the texture map, used a hard round brush, and mouse-clicked all over the texture. Once that was done, I dialed the opacity of the layer down, and began erasing, the same as the previous two layers.

It's easy enough to say, 'well he cheated by using filters.'

Fair enough, however the hard part of creating this aspect of the texture is in knowing exactly what I need to get the desired effect. It's simple to run filters on a painting all day long, but to utilize them to produce an effect you have 100% control over, is something much more than 'cheating.'

To heighten the illusion of 'fair' skin, I ran up the opacity of the redness layer for the cheeks, ear, and nose.

The base layer was hue shifted more to yellow.

I created a new layer and airbrushed a starting shape for the beard. After smudging the shape around a bit, I began the beard painting process as described below.





Loosely painted directional lines with a soft edged brush equipped with a dark, mustard color. These lines were smoothed over with the smudge tool (spacing on) set to 100% (large sized soft brush)



On the same layer, I painted finer lines- introducing desaturated pinks and greens to he mix. These lines were smoothed over with the smudge tool (spacing on) set to 100% (medium sized soft brush)



On the same layer, I painted 1 pixel lines with a very desaturated midtone violet. These lines were smoothed over with the smudge tool (spacing on) set to 50% (1px sized brush). On a new layer beneath the beard layer, I speckled bits of dark green to give a sense of depth (hue and value).

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The final result is seen below.

Thank you for taking the time to read this synopsis on texture creation. I hope these pages have introduced you to new techniques that will prompt you to explore methods of your own.

Your thoughts? Requests? Hate mail? You can contact me here:  
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