Making of Male Green Frog by Massimo Righi, Italy **Web:** www.massimorighi.com

Introduction

Hi, my name is Massimo Righi and I am freelance CG artist from Italy.

What I'm going to do, is to try and show you the main steps of how I've made my "Male Green Frog" image. I've used Maya 8 for modelling, MentalRay for rendering and Photoshop for the textures.

The goal for me was to not only create a photo-realistic render, but also a 3d model for animation purposes, without the use of ZBrush (or similar software) and without adding any kind of post-work to the final render.

The first thing was to do some research to find some good references, having in mind the final result I wanted to achieve. I wasn't able to find all the views of the same frog that I wanted, so I mixed a lot of different frogs in order to model the main shape.

I've started building the low-poly frog using a simple polygon plane and I've extruded the edges following the reference pics. I've then modelled the main body leaving holes where the legs are connected.
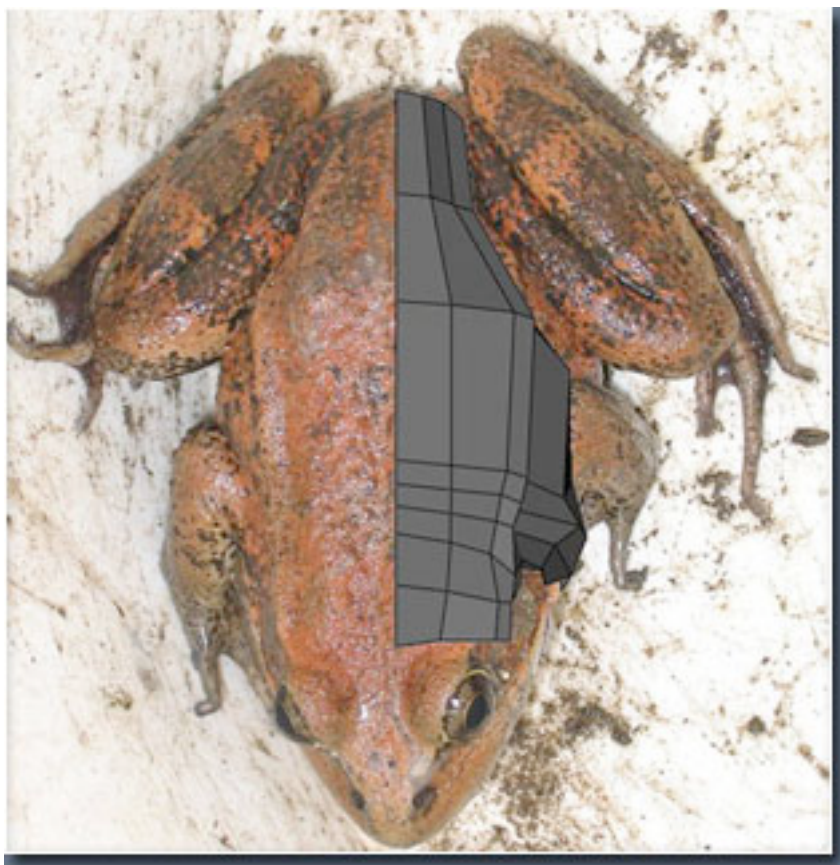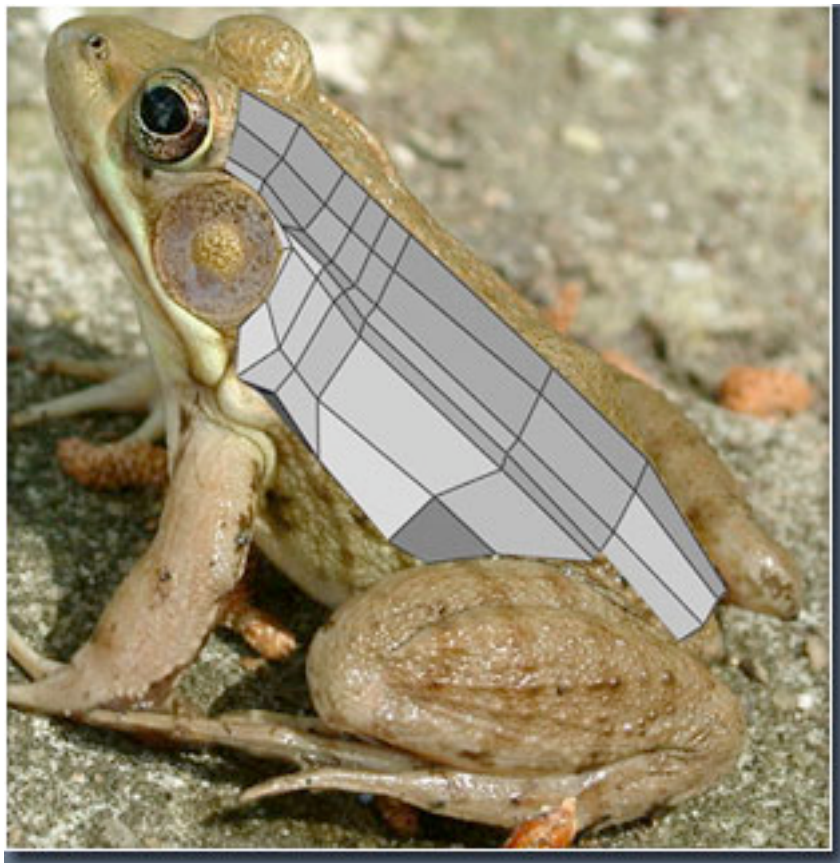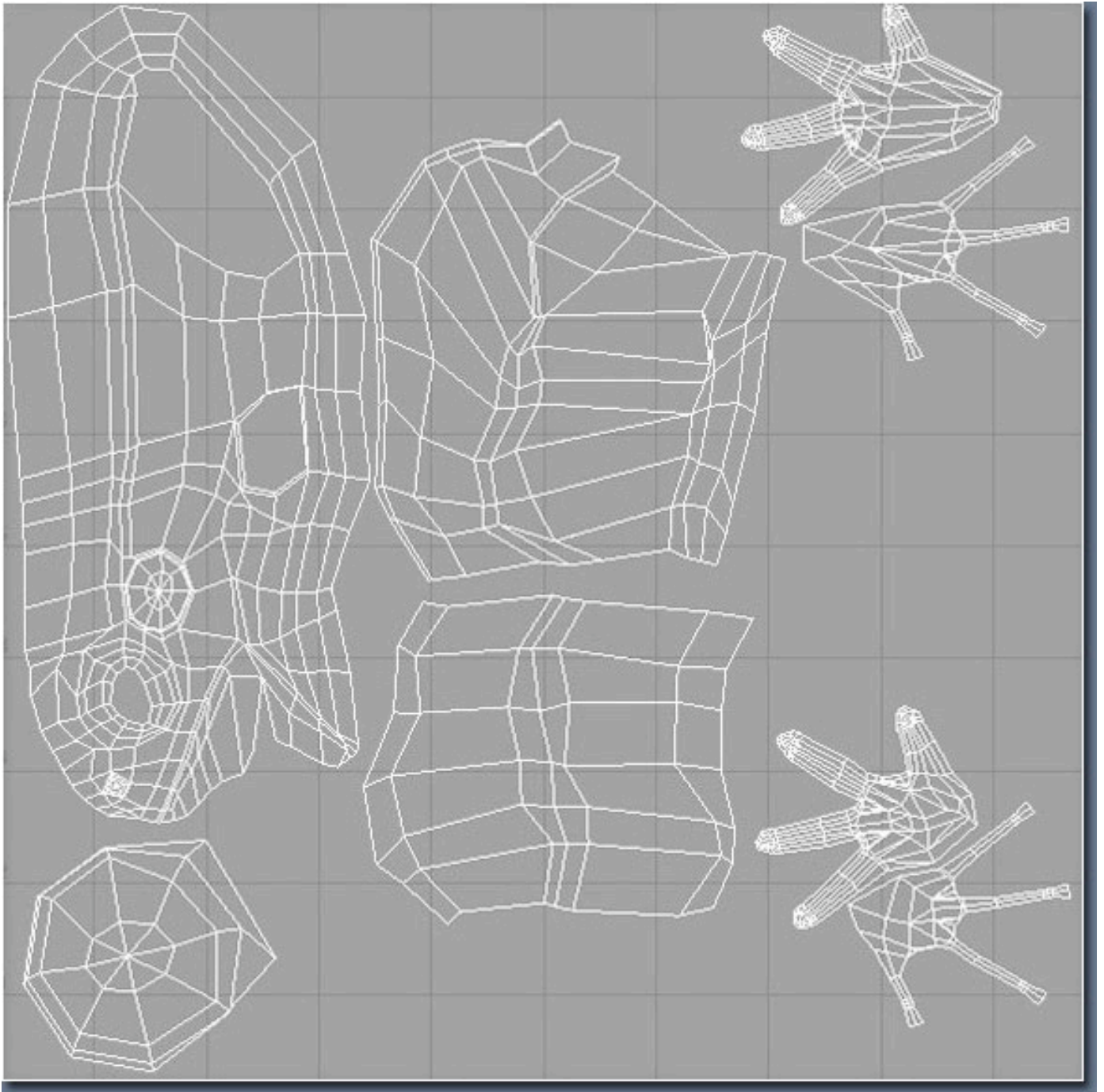
After that, I created the legs and then joined them to the body.
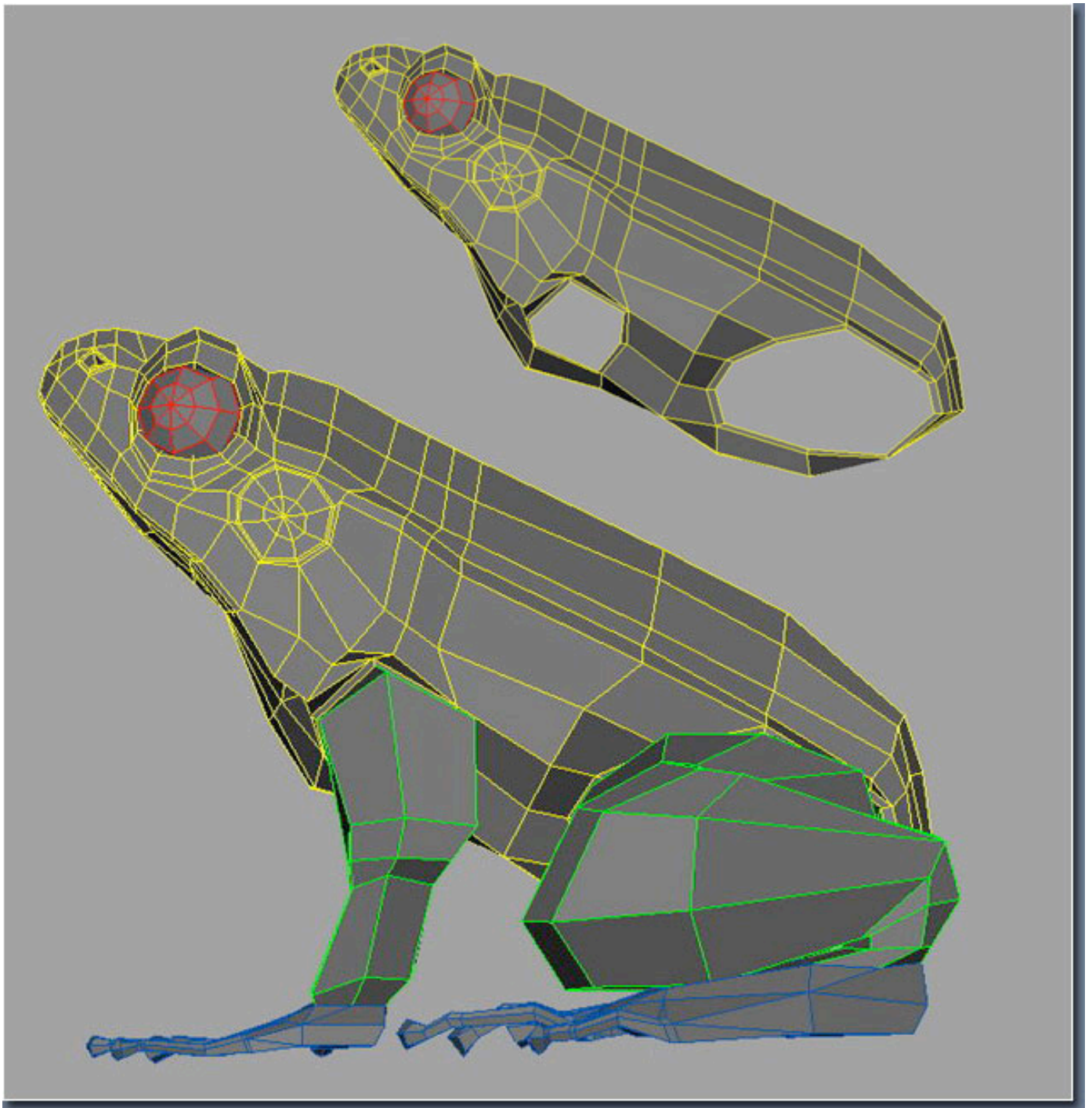
As you can see from the WIP pic below, I've built only half of the frog so that I had only half of the UV map to deal with.
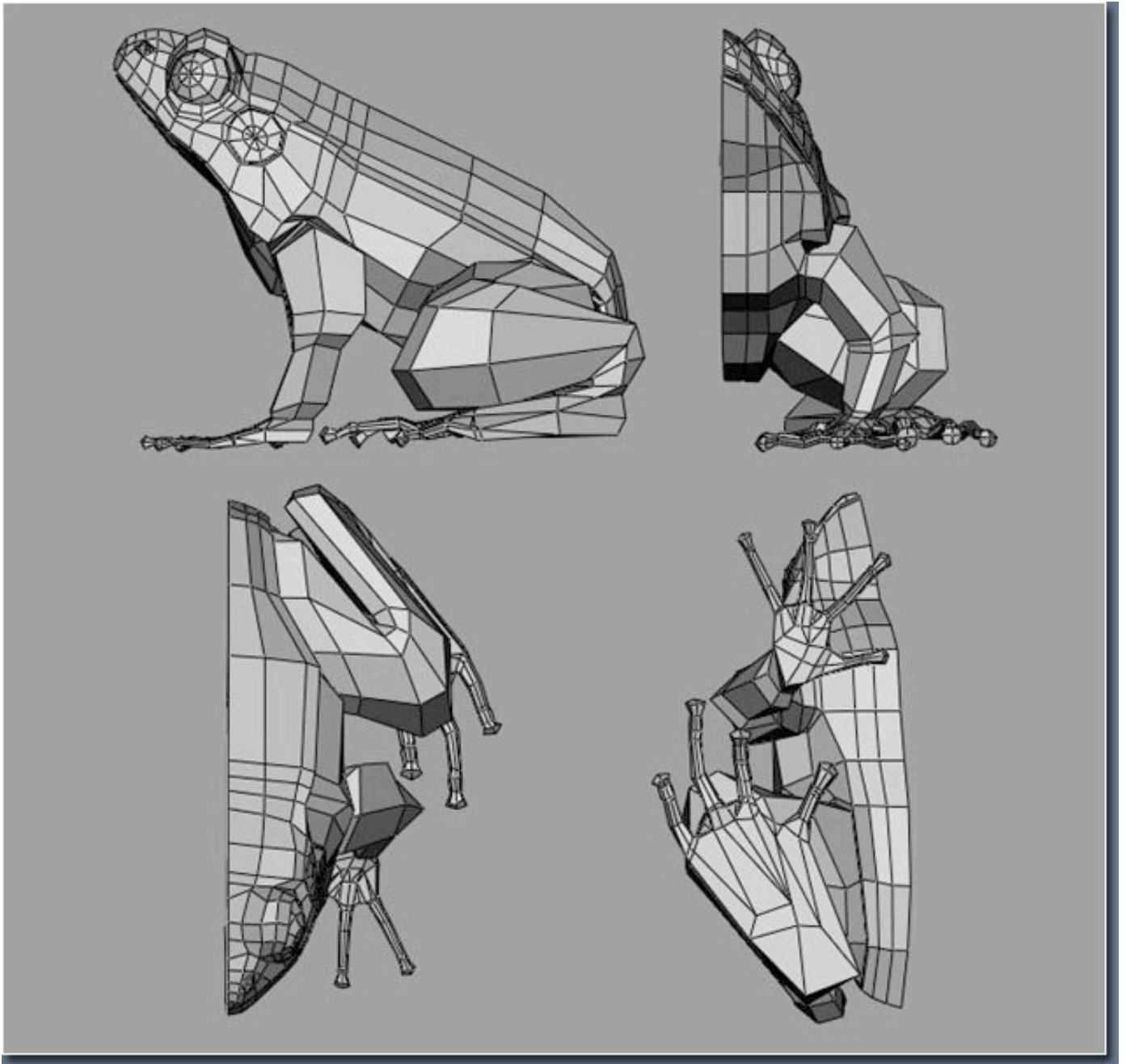
Once happy with the low poly model, it was the time to make the UV map.

For the main (half) body and the leg, I've made 2 cylindrical maps, for the feet I've used 2 planar maps: 1 from the top view and one from bottom view. I've used a simple checker applied to a lambert shader for checking the overall process while tweaking the UV's.

After that I've duplicated the half and combined all ending up with 1.960 polygons, quite good for the low poly model (this then can be used as a cage for the rigging/animation process).

I've than duplicated the frog keeping the low model in another layer, and I've made the higher poly version (about 30.000 poly) doing a polysmooth. Finally I've added some details using the Maya sculpting tools trying always to follow the main reference.
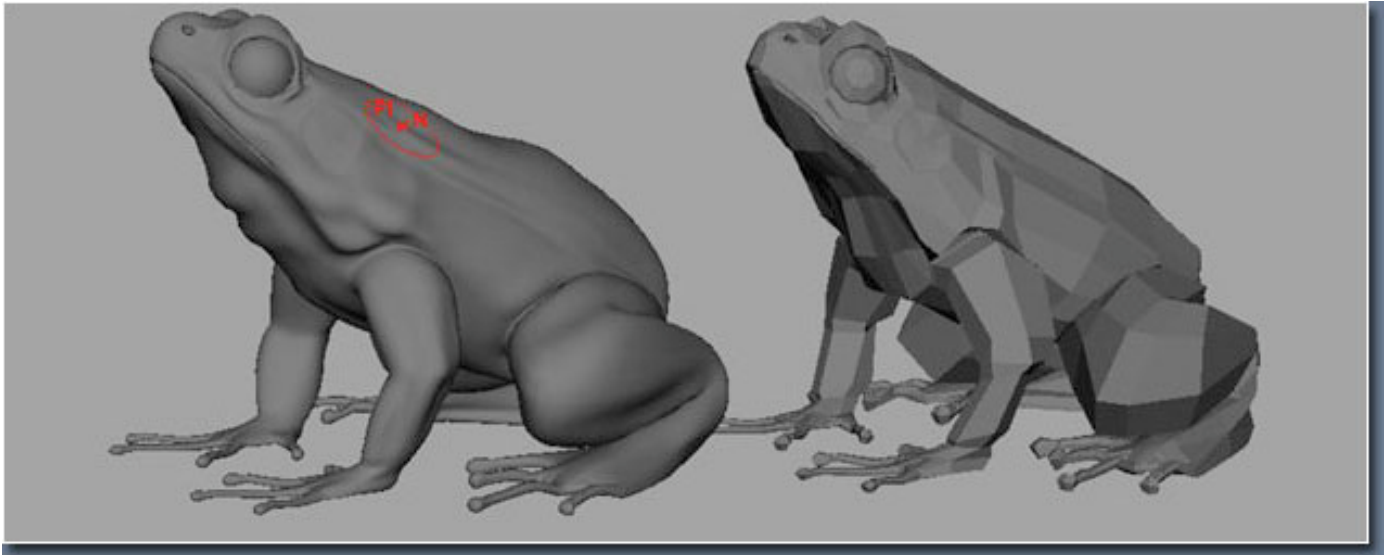

Using photos and freehand (I've used a Wacom tablet) I've made the textures in Photoshop each 2048x2048. I've applied the texture to the frog but I've noticed (I was expecting that :P) that some of the textures seams needed to be adjusted. I've used the built-in maya 3d paint for that, using the clone tool.

When the color texture was made I've created the specular, bump and diffuse map from that.
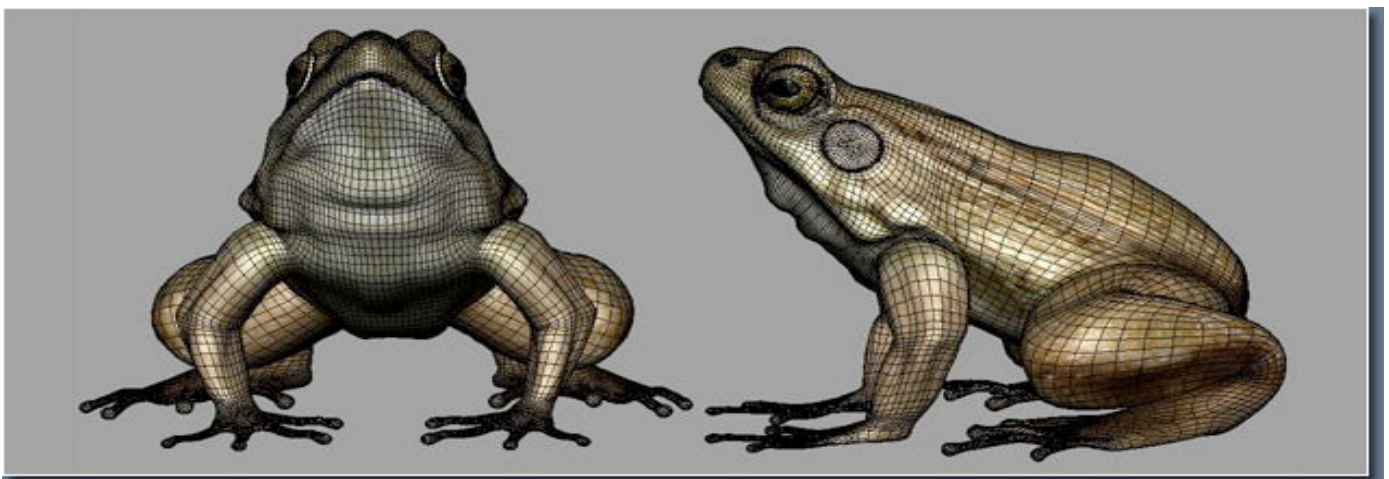
Now was the time for setting up the scene. I've created a simple plane where I placed the frog and I've rotated it about 17° (I've done that for the frog too). For the plane texture I've used a photo made by me, I've cropped it about 1300x900, I've than made the bump.

plane rotated 17°



background plane photo

BUMP

COLOR
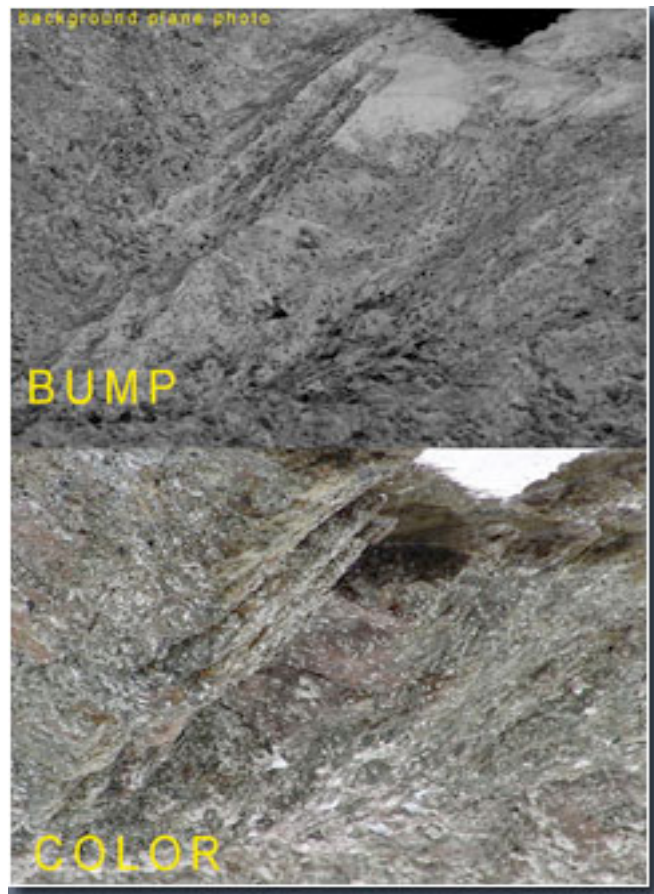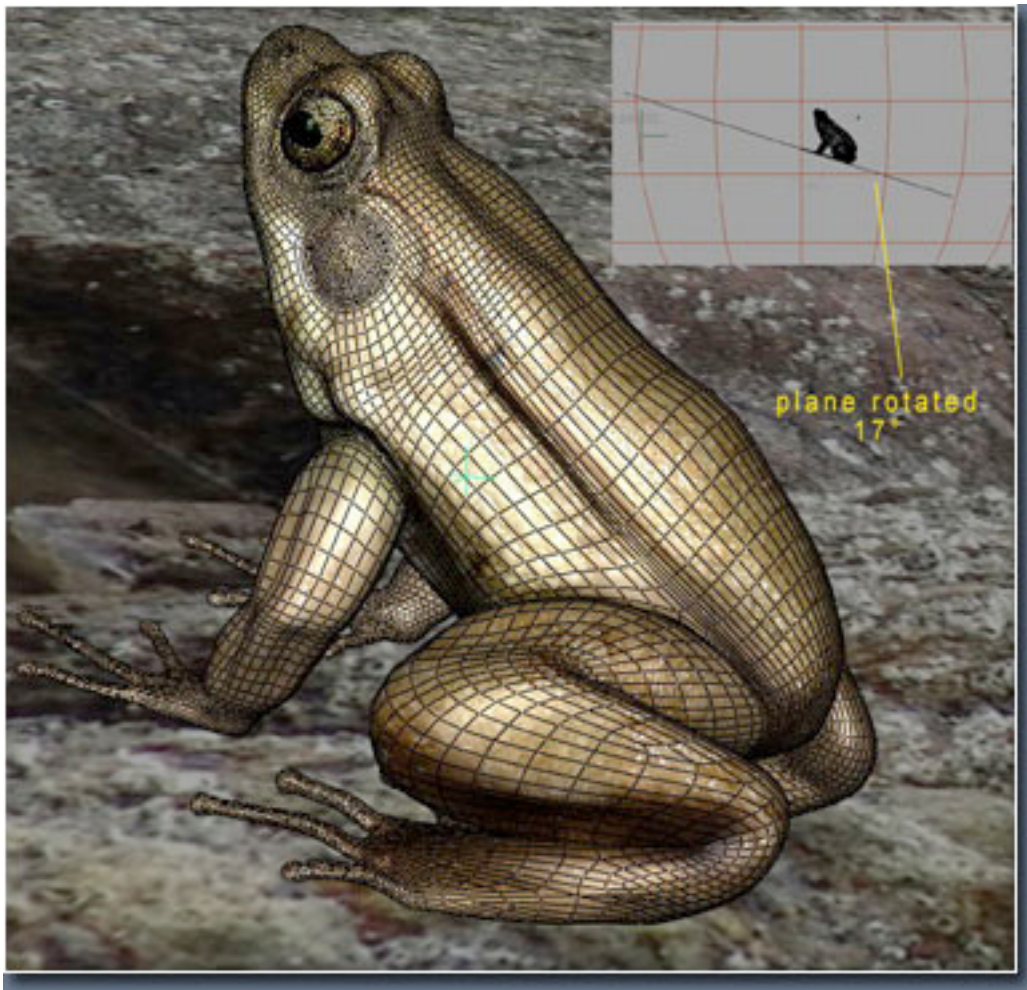
I've created a camera and I've enabled the depth of field on it. As you can see from the grab I've made a distance tool placing one locator in the point of focus on the model and the other locator in the camera lens. I've than parented that locator to the camera so that when I was moving the camera also the dimension value was changing.
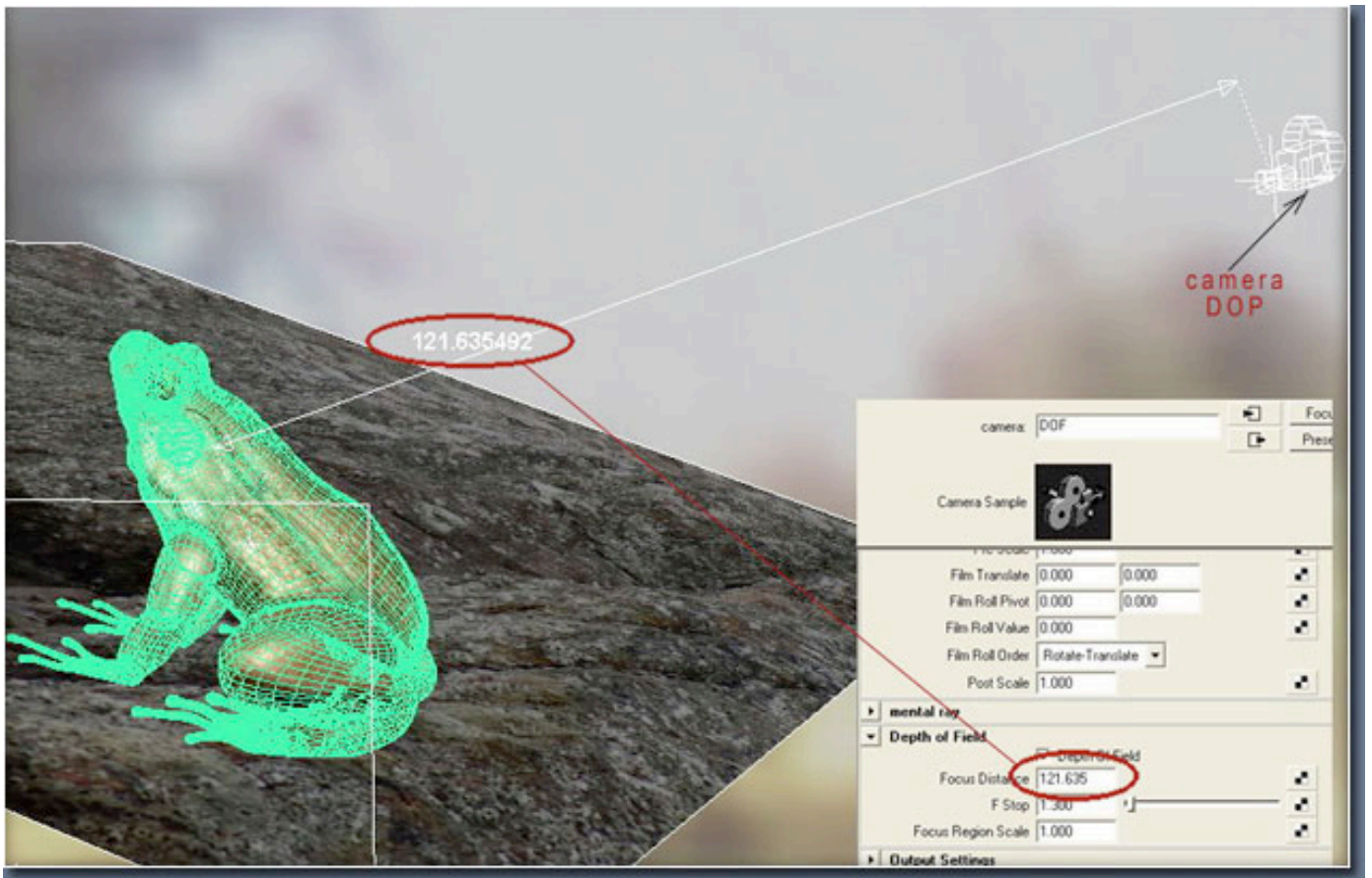
Before working on lighting I've made the shader networks, one for the main frog and one for the eyeballs. After some render test I've decided to use for both cases a blinn shader with a Translucence value=1.
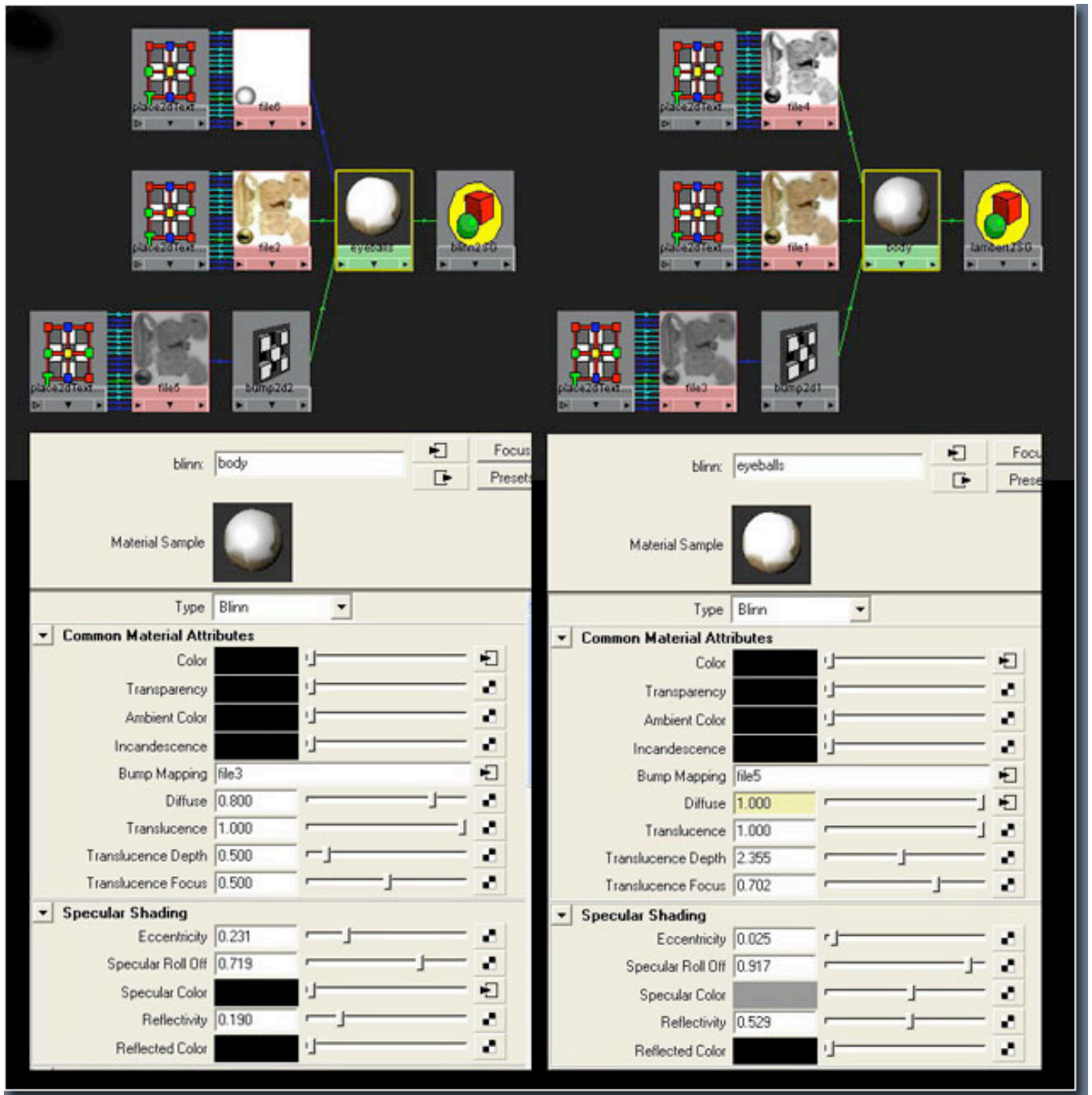
For the lighting setup I've used an HDRI probe and 3 lights: 1 point-light (raytrace shadow) and 2 spotlights.
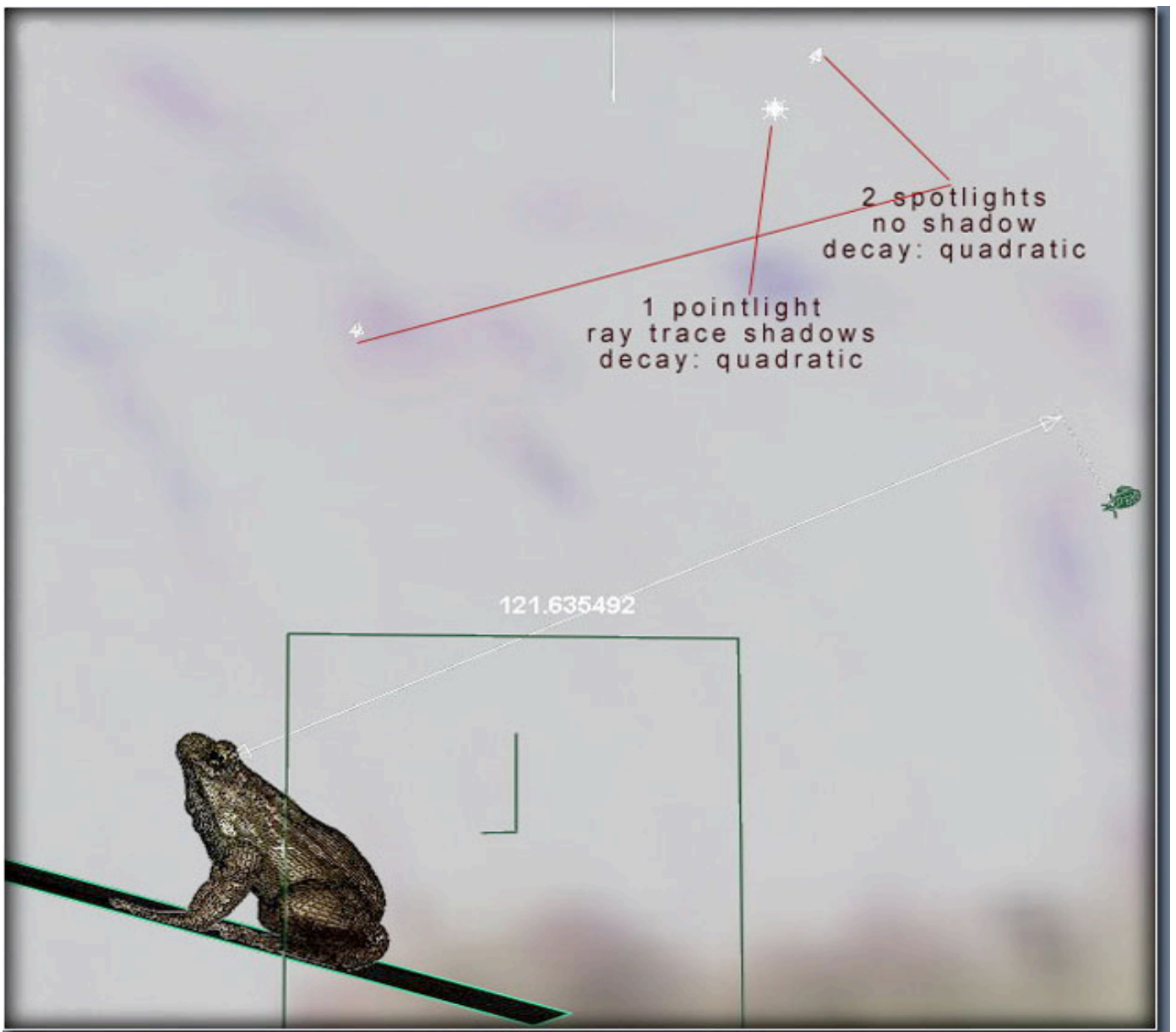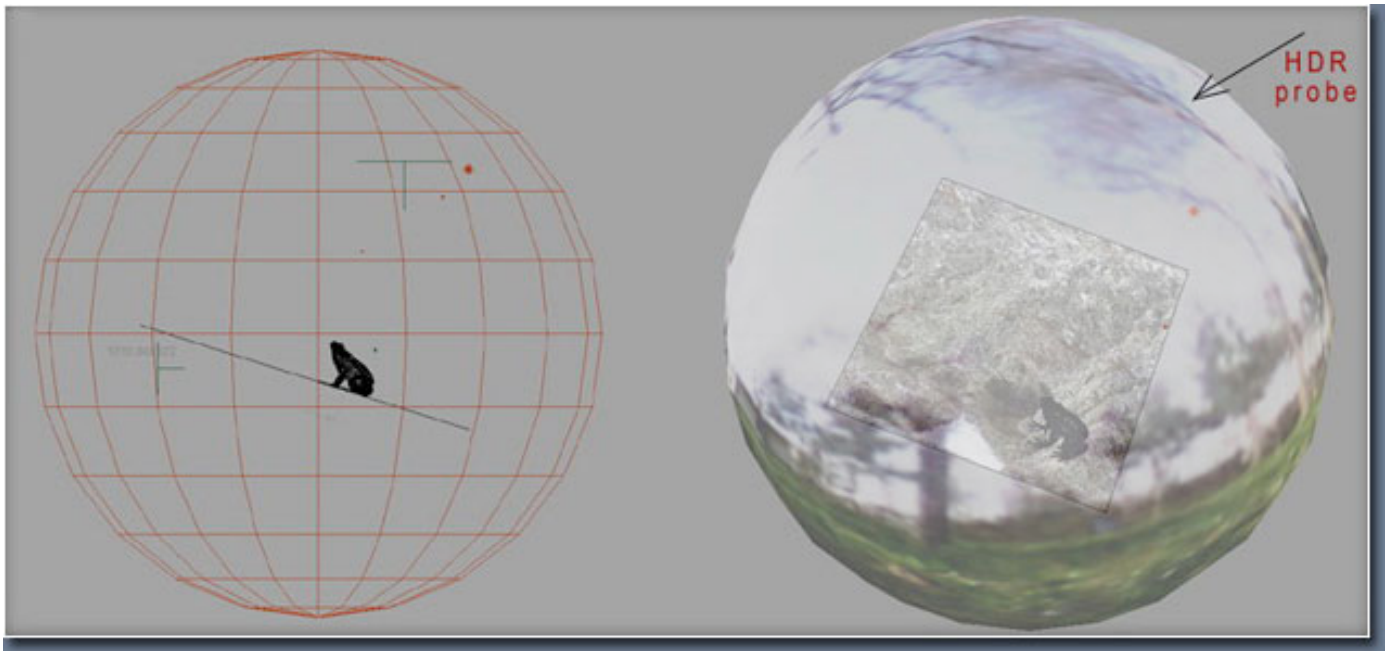
For the MentalRay render settings I've used a mitchell filter with a sample level min=1 max=3, Ray tracing and Final-Gather.

Here is the final render of the frog.

I want to thanks all for reading, hoping it will be some way helpful:)