INTRODUCTION

I wanted to include this documentation because of its instructional value. I had been working all day on a problem regarding Ruth's high feet. I couldn't get the toenails and the high feet to line up when uploaded in-world. Finally, in desperation I posted a request for help in the Google Plus site.

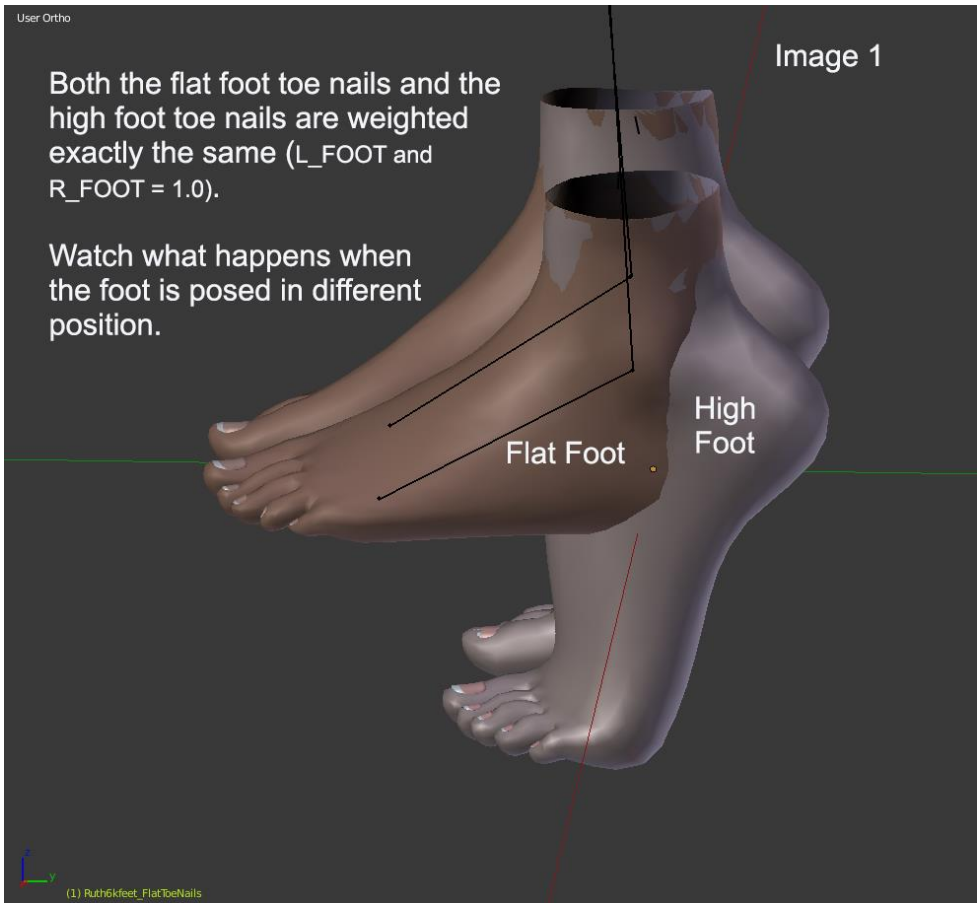
As you'll see, the solution to the problem turned out to be a simple one.

MY POSTING . . .

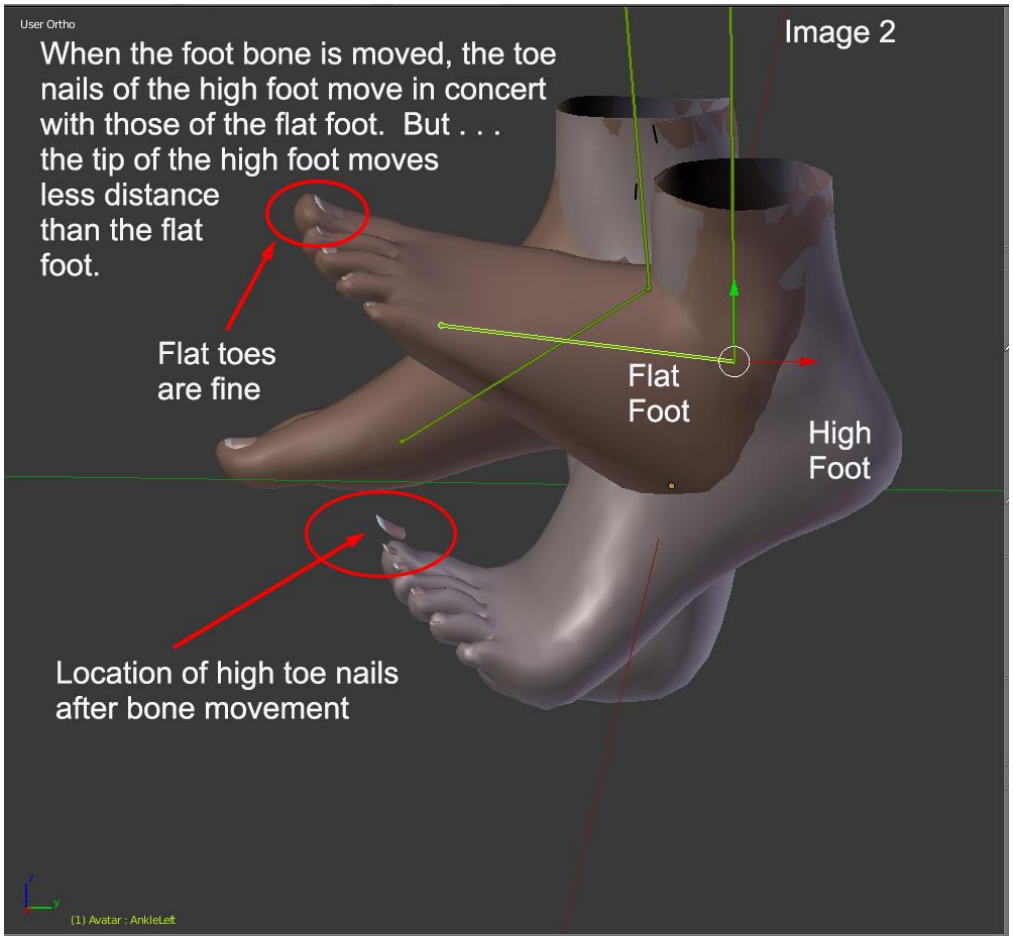
I have completed a set of mesh fingernails, toenails, UV & specularity maps, textures, and a HUD. I think you're going to like the HUD. I've tested it in both OpenSim and Second Life, and all is working. There's one last problem. I'm hoping that +Ada Radius or someone experienced in bone to mesh relationships might have a solution.

I have weighted both the flat and high feet to the foot bone. The flat feet are working great. Absolutely no problem with the flat feet. It's the high feet where the problem lies.

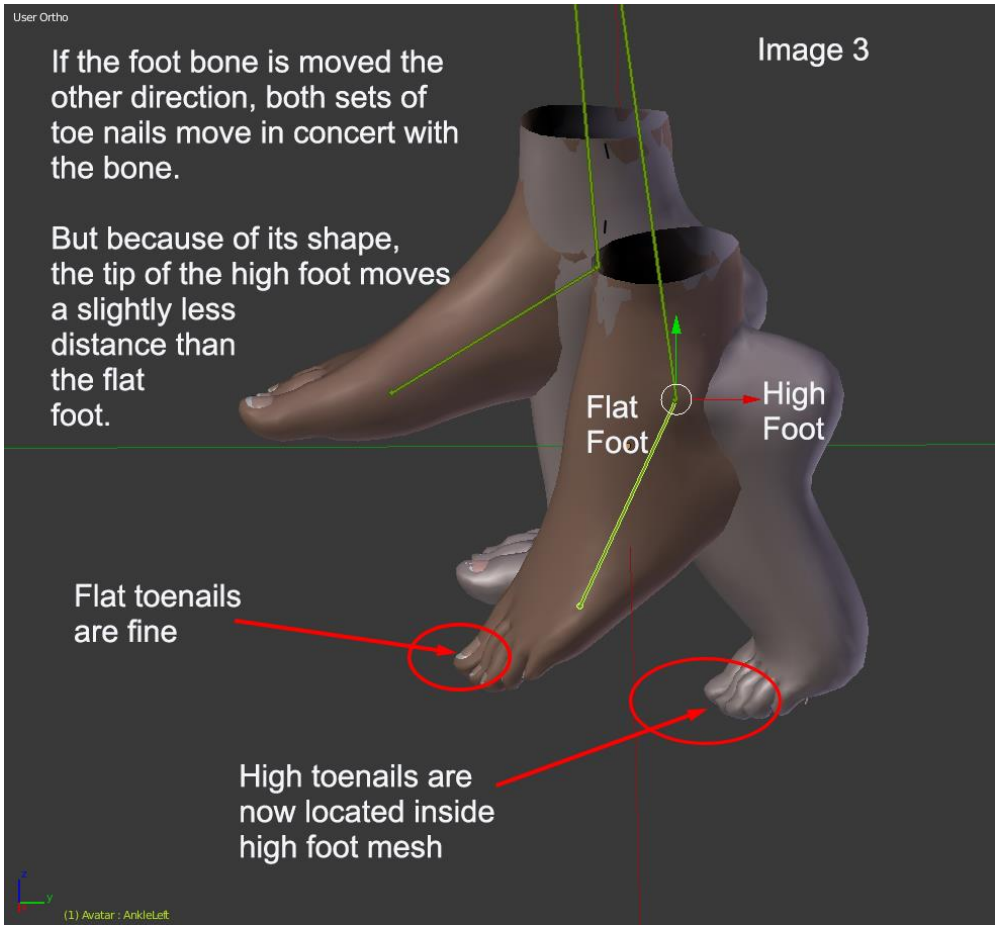
The best way to demonstrate this in Blender. Here are the feet in rest pose . . .



If you move the foot bone upward, the toe nails of both the flat and high feet move in concert - as they should. All is well. But because of its shape, the tips of the high feet move a slightly less distance than the tips of the flat feet. The result is that the high toe nails appear to move up and away from the high foot mesh (as shown in the illustration below).



If you move the foot bone downward, the toe nails of both feet move at the same rate. Again, all good. But the tips of the high feet, again move a slightly less distance. The result is that the toe nails appear to slide into the high foot mesh (as shown in the next illustration).



Although, it seems that the high foot stays mostly rigid in-world, it does move somewhat in animations. My main problem, at this point, is that when I upload the mesh in-world, this coordination problem between bone and mesh becomes apparent. Upon upload, the high toe nails end up being off-set slightly above the high foot mesh (even though the nails are properly positioned in Blender as in illustration #1).

This occurs in both SL and OS. (Again, the flat feet nails are just fine in-world - and they work as expected in various animation poses.)

We could go back to making the toe nails a part of the foot mesh and change color by using a material. But the HUD is pretty cool. You can select between natural looking toe nails or color the nails by selecting pre-loaded colors or using a color picker. You can even add polish (more about that later). It seems like there must be a way of coordinating the high foot mesh with the bone movement. Any ideas?

(One last note: If you'd like to examine things, I've uploaded my most recent Blender file. You'll find it in the following directory in GitHub: Ruth >> Mesh >> Avatar Ruth >> Sundance >> Fingernail Project. The blender file is based on Ada's Ruth, version 1.9. I have not changed any of Ada's work, weighting or otherwise. Only fingernails and toenails.)

HERE’S SHIN INGEN’S RESPONSE:

I just took a quick look to see if I can spot the difference between the High and Flat feet.

I noticed that they are weighted differently. Flat feet are weighted heavier on the foot area (RED) versus the weights of the High feet (bluish). The one (1) or Red of the toenails will move differently when animated on top of the bluish colored weights.

I think to make them work we need to correct the weights of the High feet and make it the same as the Flat Feet.

AND HERE’S WHAT I HAD TO SAY AFTER TRYING SHIN’S IDEA

That's it! Thank you. Thank you +Shin Ingen ! I've been pulling my hair out all day. I can't believe that it was that simple. It was right there in front of me - and I never thought to check the feet. I kept thinking it was the toenails. The toenails. The toenails. My day suddenly brightened! I did a quick and dirty weighting of the high feet and upon uploading . . . yep . . . problem solved.

THE SOURCE FILE

You’ll see the change of weighting by examining the blender file included in GitHub.

THE MORAL . . .

Sometimes when you’ve been deeply involved into the details of a project, you miss the whole picture. That’s where a little help from friends comes in handy.