

Creating toon line using reverse hull theory:

Written by Manuel Armonio

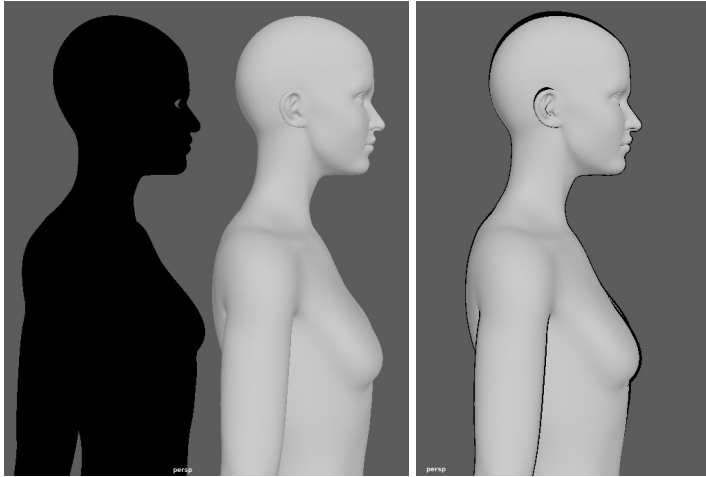
-Using the mesh you've built duplicate it.

-Add a surface shader and color it the color you want.

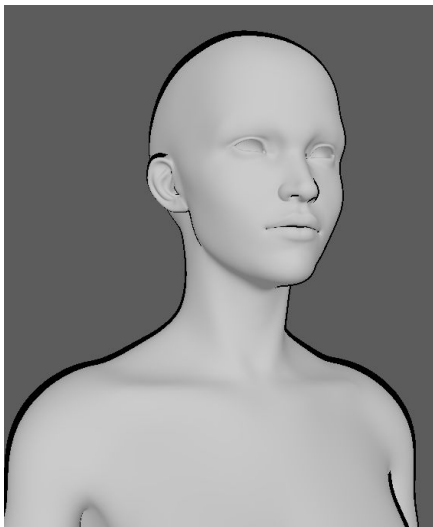
-now select all the points(verts) and do a scale by normal to push out the mesh(expand not contract)

-from there flip the normals (make sure back face culling is activated)

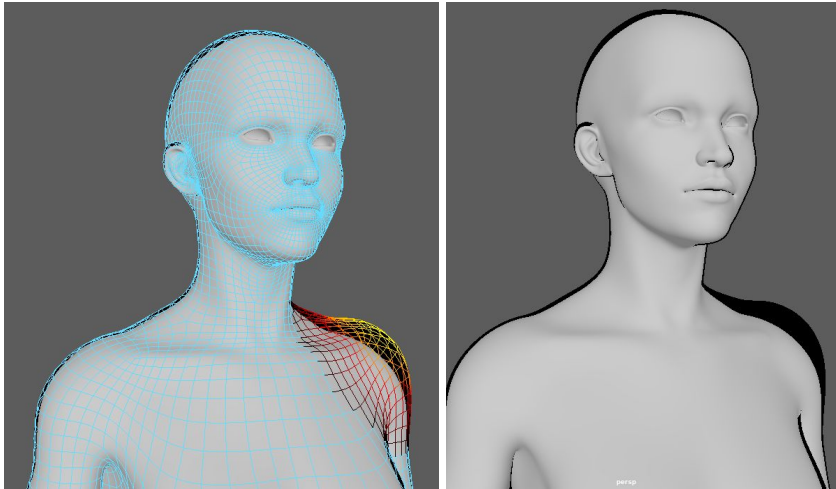
And viola you now have an outline over your mesh.



PROS:The great advantage to this is the ability to shape and sculpt the out lines the way you want by just pulling and pushing vertices.



It can go from subtle like the image above to more extreme like the image below



In addition to that, one can actively edit the lines and treat it as a separate mesh. Whether this is done on shot finaling or on rigging is up to how the user wants.

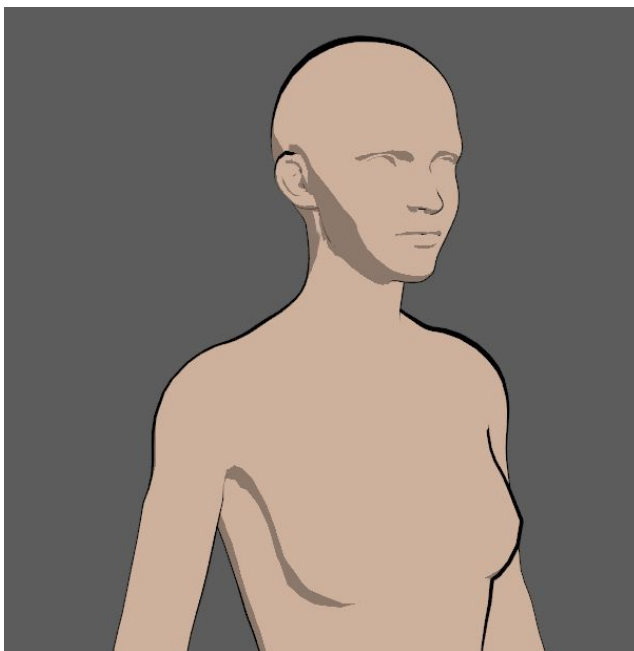
Also it's good to note that the exterior shell lineflow can be completely different. So one can reduce poly count and or have a change of outline shape vs interior form

Cons: I have not experimented enough with this to give a definitive answer yet. certain limitations so far are that since back face culling has to be active. One would have to model everything doublesided.

One also must be careful in terms of how far one can push the line weight look and also internal lines would still have to be modeled separately

applications:

Now combine it with other toon based properties like the ramp shader and you get a more toon like appearance



Note: *due to this being mostly theoretical and tests haven't been fully done to explore where this theory breaks yet this document is still very much a WIP*

By:Manuel Armonio