Modeling Guidelines

Technical Constraints

Part	Tri Count
Mouths	1000-3000
Eyes	300-1300
Graspers	700-1700
Movement	500-1700

- All models are built facing down the –Y axis.
- The world origin in each Maya file serves as the pinning or attachment point to other surfaces for each of your models. Object pivots have no bearing, though it's a good habit to reset the pivot if it isn't at world origin.
- It is generally safer to model the geometry in the desired scale and in the bind pose position.
- Geometry should have no holes, or must be watertight. No open faces anywhere.
- Make sure all polygons are no larger than quads (4 sided faces). Any polygons with more than 4 edges will be triangulated by the engine and might have strange shading artifacts. It is better to quad it yourself. Tris are fine.
- Keep future deforms and animations in mind as you model your parts to ensure that you have enough model detail in areas that will be stretched or severely deformed.
- Make sure your file does not have extra layers or contain any empty nodes or groups. There should be a single mesh in the file named according to the file name. This is the primary mesh.
- Make sure Hard and Soft edges have been explicitly defined (using **Edit Polygons->Normals->Soften/Harden<** in modeling mode). Try to keep all edges soft unless there is a visual need for hard edges, since hard edges break the tri-strip and is slightly more expensive. Before defining the hard/softness of the edges, you might try to **Unlock Normals** to alleviate any strange shading problems.
- Delete any extra geometry or move it from the default layer to another layer that you've renamed. Everything that exists in the default layer will automatically be included in the exported data.
- Delete the:*_hierarchy and:*_world object set nodes before saving and checking in. Often these nodes are left over from an older version of the exporter, and for some reason the new export doesn't seem to remove these.
- Export the model and view it in the game **Exporting And Viewing**; adjust the positioning in world space in Maya and view in game until it's positioned optimally (it should embed nicely into any metaball surface – check against existing parts of that type). Freeze transforms after each object level move.
- (pupils/irises/highlights – separately modeled)