Summary: This update will focus on changes to the rigging system, which will facilitate the creation of high quality animation friendly rigs. Rigs will be automatically generated in a consistent manner with little effort on the part of the technical artist. I will describe all of the scheduled updates while providing a rough completion time for each step. The current plan for Geppetto updates can be categorized into three major areas that include…

* The Blueprint UI
* Character Publish
* Animation Modules

# The Blueprint UI – 44 Hours

**Remove Unused Layout Blueprints - 12 Hours Total**

* Remove the hand, head, hip, jaw, neck, and wing. Stick with more generic blueprints such as single joint, and hinge. – 2 Hours
* Test each existing character to make sure this change is non-destructive. – 10 Hours
* Create a set of standard character templates. – 6 Hours

**Add additional blueprints – 16 Hours Total**

* Hinge with single joint. Will be used for the arm and biped leg. – 6 Hours
* Single joint, and single joint segment capable of scale, rotate, and, translate. - 10 Hours

**Color coding for module hooking - 4 Hours Total**

**Investigate a foolproof method for defining game joint names - 12 Hours Total**

# Lock and Publish – 36 Hours

**Combine lock and publish functions** Currently this is a two step procedure that creates the final template ready for rigging. I will combine this into a single function that performs the remainder of the rigging procedure.

* Create a rig template system. This will be an xml file that lists the requirements for a default rig. For example, the template will install give instruction to install FK and IK on an arm if an arm exists in the scene. – 6 Hours
* Write the code that reads from the template and installs all the appropriate animation modules. – 10 Hours
* Set up a standard set of space switches. - 4 Hours
* Remove the rig from containers and save to a rig file. – 8 Hours
* Reference the rig file into a new file that will be used for export and animation. – 2 Hours
* At reference time, place the rig back into containers. This will serve multiple purposes. - 4 Hours.
  + The scene can stay clean.
  + The integral rig components will be contained, name spaced, and hard to break.
  + Other existing systems that were designed with containers in mind will still function.
* Create/Verify the existence of a constant character tree. – 2 Hours

# Animation Modules and System Changes - 49 Hours

* Ik/Fk switching and matching in a more familiar place. – 3 Hours
* Ik arm controlled by a single control. -6 Hours
* External pole vector (I still firmly believe this is not as good as the no flip setup I currently have. I think this is more a problem of education) - 6 Hours
* Re-Enable the dynamic space switching system. – 2 Hours
* Spring IK quadruped leg (Brandon still intends to do this)
* Three joint spine. FK only ☹ - 0 Hours
* Head Lookat control – 2 Hours
* IK/FK clavicle – 0 Hours
* FK shoulder rotation lock. – 0-2 Hours
* Finger attributes in the channel box. – 4 Hours
* Make sure hip, spine, and head share the same orientation. – 1 Hour
* Stretchy limbs with the ability to be stretchy and maintain a bend. ( This may be low priority) – 10 Hours
* Ability to change the rotate pivot of the COG. – 3 Hours
* Remove most everything from the animation UI. Make those attributes available in the channel box. – 10 Hours

**Totals:**

Blueprint UI – 44 Hours

Lock And Publish – 36 Hours

Animation – 49 Hours

Testing, Testing, Testing – 10 Hours

Total: 129 Hours

**Notes**

Dynamic space switching may take care of a few of these items.

I may be able to pull some help from the tools team.

I am sure to run into things that will shift this timeline for better or worse. This is all just my best guess estimated high.