"Basic Guy" v 1.0 User's Manual

Hello, and thanks for downloading my character named "Basic Guy" or "BG" for short. This is a character that I created for doing "physical" acting pieces. I left off the mouth to force myself to focus more on the body language to sell the acting. To be honest, I only put the eyes and eyebrows on for you all… Feel free to turn them off and force yourselves to let go of the need to do facial animation! Anyway, in this manual, I will try to explain how to use/control him.

1) **Basic Guy Control Rig Breakdown:**
- Stretchy limbs
- Stretchy spine
- Dynamic parenting
- fk/ik arm blending/matching
- fk/ik leg blending…sorry no matching yet
- Facial GUI
- Independent hip control

2) **Installation:**
- To use a lot of the "cool" features of this character, you will need some MEL scripts on your computer. After years of rigging characters by hand, I finally came across a guy named Hamish McKenzie (http://www.macaronikazoo.com/) that writes a bunch of really great and useful MEL scripts…and he shares them with the public! He also hosts a support forum for his tools… really great guy! Anyway, one of his scripts happens to be a procedural rigging script. Basic Guy's rig consists of a lot of this script (not all, but a lot). The script is called zooCST.mel and can be found here…or it is also included in the file you downloaded from my site: (http://www.macaronikazoo.com/mel/download/zooToolBox.rar).
- To install unzip/unrar that file and copy all of the scripts into your Maya scripts folder. There are actually a lot of great tools other than zooCST.mel in there… In the download file there are also some files called (dagMenuProc_v6.mel, dagMenuProc_v65.mel and dagMenuProc_v7.mel). This script is crucial for Basic Guy to have complete functionality… Choose the one that refers to the version of Maya that you use and rename it to **dagMenuProc.mel**. **I.e.** The Maya 6 file will go from **dagMenuProc_v6.mel** to **dagMenuProc.mel.** Now copy that renamed file into your Maya scripts folder.
- Next place all of the images here: C:\Documents and Settings\YOUR PROFILE\My Documents\maya\7.0\prefs\icons. Obviously you'll put it in the version of Maya that you are using… I just happen to use Maya 7.0.
- Ok, we should be good to go!!! Fire up Maya and open **basic_Guy_v1_Maya#.ma**

3) **What does what now?**
I'm sure if you're like me, you won't want to read any of the descriptions to the following images. Instead you'll open the file in Maya and push and pull on anything you can get your hands on! That's fine too... preferred even. But, for those that like boring images that have numbers all over the place, hopefully the following images will scratch that itch!☺

Fig 1a) "Basic Guy" Body Controls
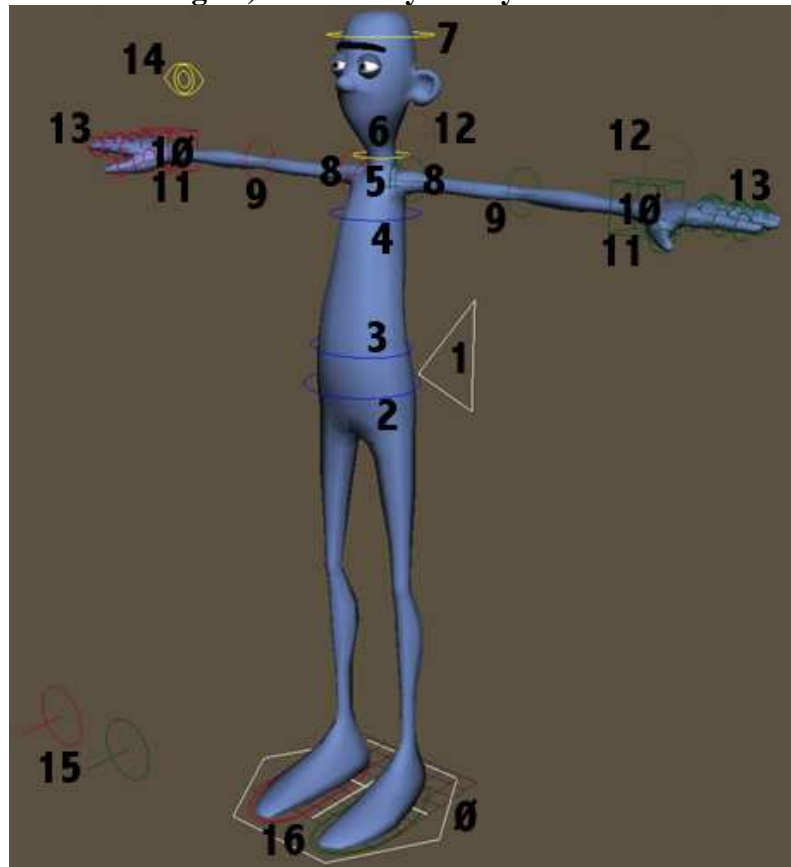
0) **BG_world**- Moves/Rotates whole character in your scene. For positioning at the start of a file. Also has an attribute to change the LOD (Level of Detail) of the character's body.
1) **BG_Root_Ctrl** – Moves/Rotates the main root (Center Of Gravity) of the character around.
2) **BG_Hips_Ctrl**- Moves/Rotates the independent hips
3) **BG_LowBack_Ctrl-** Rotates the lower spine.
4) **BG_Chest_Ctrl –** Rotates the chest. Stretches the spine (Y translation)
5) **BG_clavicle_ctrl_L/R-** rotates the clavicles
6) **BG_neck_ctrl-** Rotates the neck
7) **BG_Head_Ctrl-** Rotates the Head
8) **BG_fk_bicep_ctrl_L/R-** Rotates the fk upper arm
9) **BG_fk_elbow_ctrl_L/R-** Rotates the fk elbow
10) **BG_wrist_ctrl_L/R-** Rotates the fk wrist
11) **BG_arm_ctrl_L/R-** Translates/Rotates the ik arm. They also have the controls for ik blending and stretching control.
12) **BG_elbow_ctrl_L/R-** The pole vector controls for the elbows.
13) **BG_Finger_Ctrls-** Rotate the fingers
14) **BG_eye_aim_ctrl-** controls where the characters eyes are looking.
15) **BG_knee_ctrl_L/R-** The pole vector controls for the knees.
16) **BG_leg_ctrl_L/R-** Translates/Rotates the ik Leg. They also have the controls for ik blending and stretching control.

Fig 1b) "Basic Guy" Facial Controls
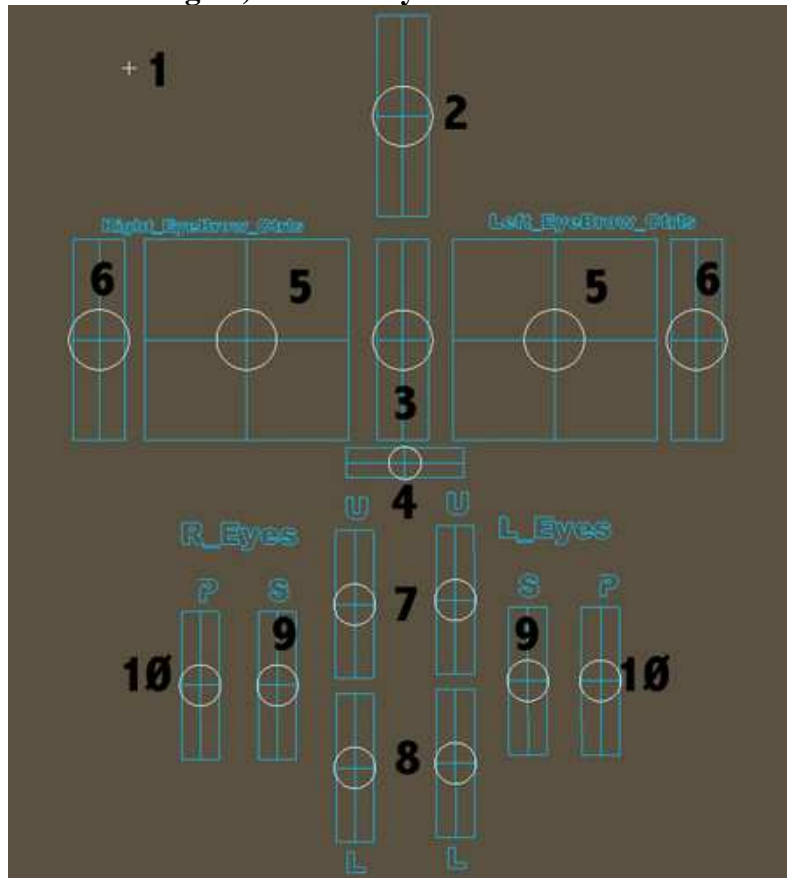
1) **BG_Facial_Ctrls-** Positions/Scales the facial control panel in the world**.** Also has an attribute to switch on and off the facial objects (eyes, eyebrows).
2) **BG_MainBrowCtrl-** Raises and lowers all eyebrow controls
3) **BG_MidBrowCtrl_01-** Raises and lowers the mid brow
4) **BG_MidBrow_Rotate-** Rotates the middle brow control. Helps achieve a smooth transition between brow bends.
5) **BG_L/R_EyeBrowCtrl_01-** Raises, lowers, and slides the Mid left and mid right brow controls.
6) **BG_L/R_EyeBrowCtrl_02-** Raises and lowers the outer left and right brow.
7) **BG_L/R_upLid_ctrl-** Controls the upper eye lids of the character
8) **BG_L/R_LowLid_ctrl-** Controls the lower eye lids of the character
9) **BG_L/R_Squash_Stretch_ctrl-** Squash and Stretch control for the eyes
10) **BG_L/R_Pupil_scale_ctrl-** Controls the pupil size


4) **Uh, you promised me some "cool" features!!!**
Ok, now that we got through the boring images I can now show you how to use some of what I think to be "cool" features…

4a) Right Click functionality- Remember when you renamed the **dagMenuProc_v#.mel** and placed that file in the scripts folder? Well, by doing that you opened up a whole new way of working with this rig. A lot of the control objects in "Basic Guy" have more control options when you hold down the right button. All right man, make some sense already!! Ok, let me

explain with some images and an example. I am assuming that you have Basic Guy loaded up in Maya at this point… So, first select the left arm control **BG_arm_ctrl_L (#11** in fig 1a).
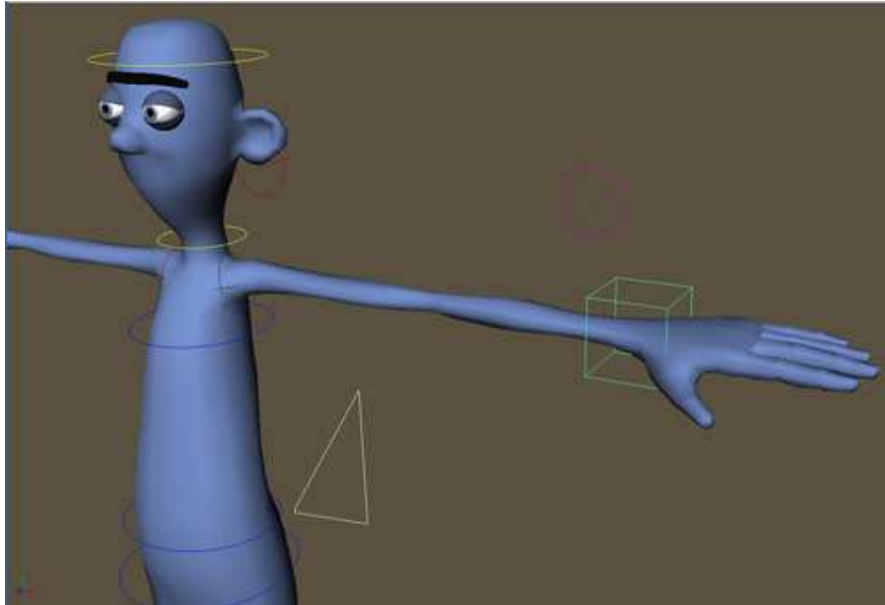
Now, if you installed **dagMenuProc.mel** properly, you should see a bunch of options when you hold down the right button. If not, make sure that you renamed the correct file and placed the renamed file into your scripts folder (step 2 for directions). Here is what you should see.
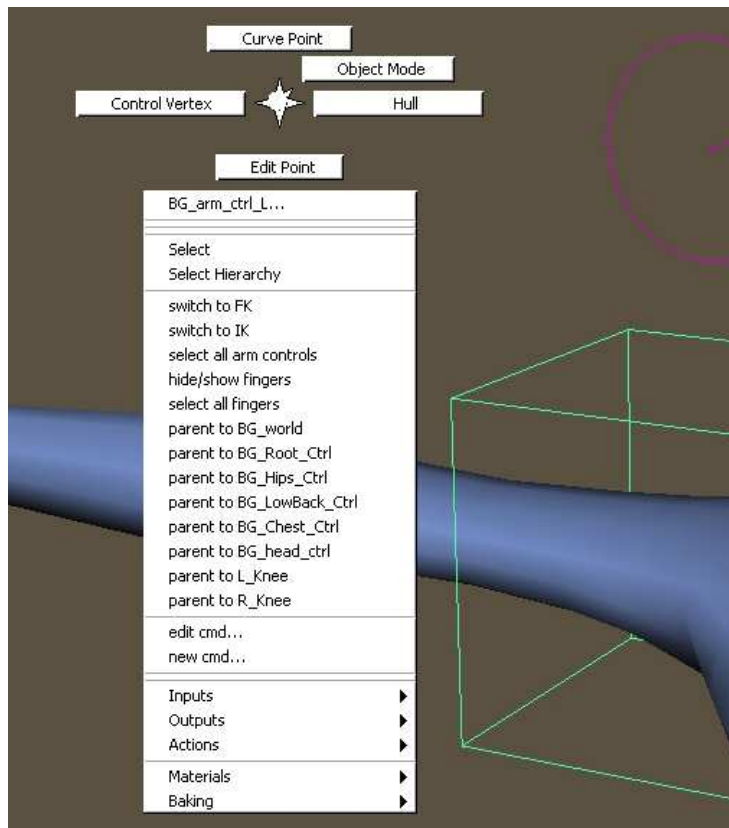

Now move the mouse pointer down to the "hide/show" fingers option. See following image.
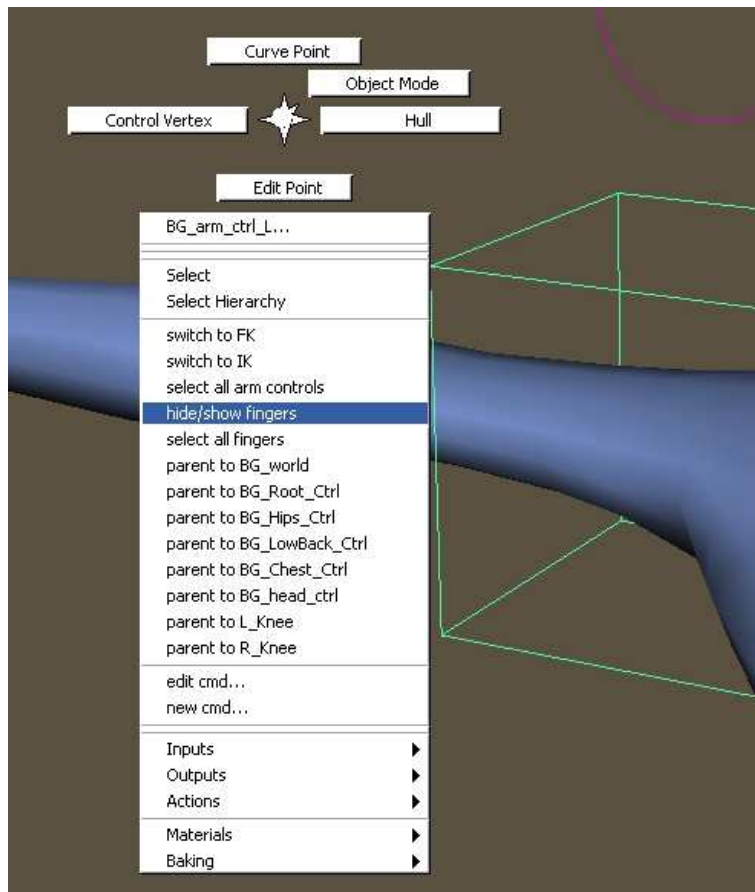
When you release the right button, the finger controls will either appear or disappear. If you're following along with this manual they will disappear… pretty cool huh? Essentially, what you have now is much cleaner and more efficient Maya file. What you will soon find out is that most of the controls have this right click functionality in them.

4b) Dynamic Parenting- Have you ever tried to switch a control objects parent while animating? Chances are that you have and most likely you spent WAY too long trying to match the offset positions between the two objects. But, with dynamic parenting, you can easily switch from one "parent" to the next without a pop in between…Thanks Hamish! Apparently, it's not that hard to set up in MEL, but most of us (yes, "most" of us) that love to animate are usually pretty scared when they see anything that looks like some form of code… Fortunately for us, he has incorporated it into his scripts/tool set. Here is how to use: We'll use the same control object from the previous "lesson" (**BG_arm_ctrl_L**). Ok, let's manipulate his left hand up to look like he is holding his head. Don't spend too much time…it really doesn't have to be pretty. Look at the following image for roughly what we're shooting for.
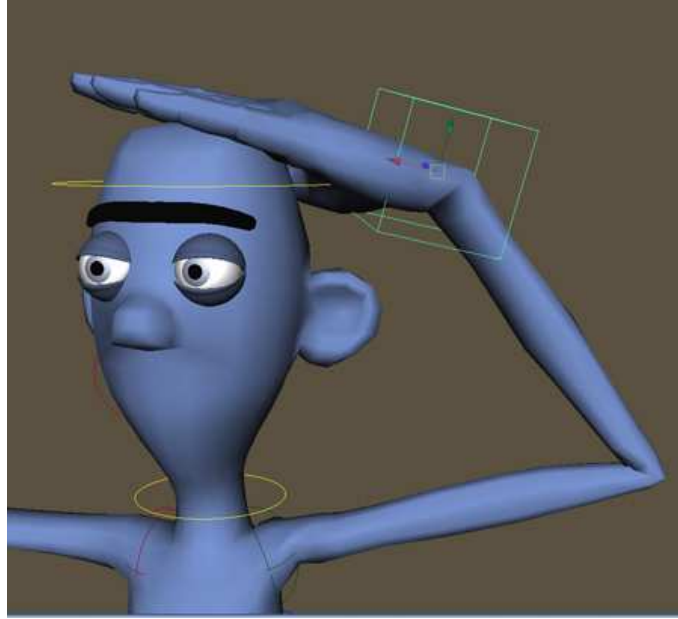
Ok, now select the head control, **BG_head_ctrl** (#7 fig 1a). Rotate the head and watch to see what happens to the left hand.
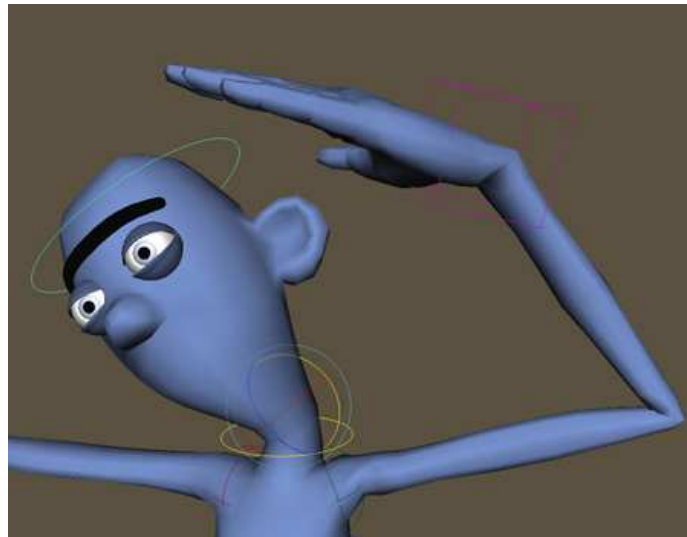
Nothing! The hand stayed where we left it!! What gives man? That's not cool! Relax people!!! Take a deep breath and undo that last head rotation. Now select the left hand control again. Once again, we're going to use the cool right click function. This time though, move the mouse cursor to highlight "**parent to BG_head_ctrl**".
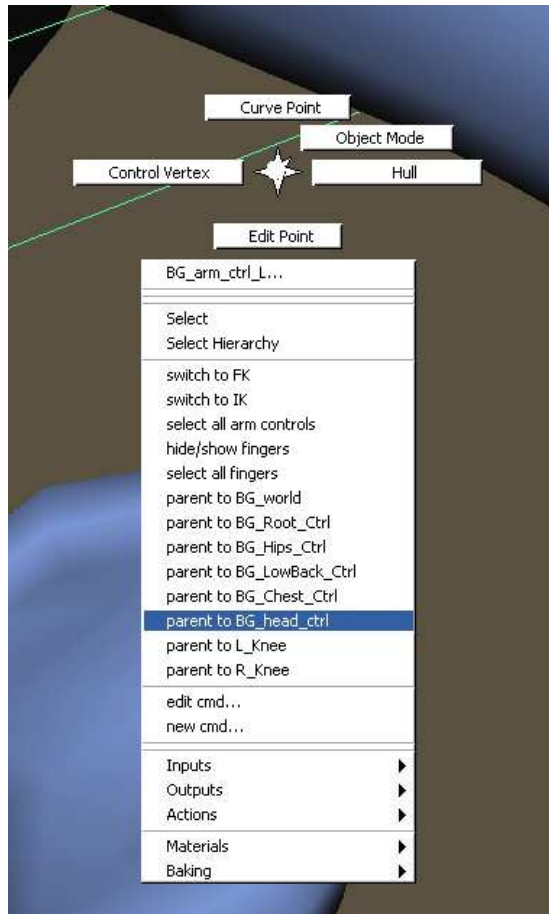
When you release you are telling the left hand control to follow the head control…
Did you see a pop? I sure didn't… Now select the head control again and rotate.

Almost too easy huh? No more days of setting up all these crazy constraint controlled objects! And if you're good at reading between the lines there, you read that you can add these "parents" to props as well… it's all in his scripts (zooCST.mel has a tab where you add the parents)!

NOTE: When you select an object that has dynamic parenting, you will see an attribute in the channel box that is called "Parent". If you try to change the parent in the channel box there WILL be a pop. The right click menu will actually call upon a MEL script when you release the right button to match the positions of the objects. When changing the parent in the channel box the MEL script will not be called…hence the pop.

4c) fk/ik matching- Just like dynamic parenting, this functionality makes it much faster to go between fk and ik and vice versa. And once again, it all happens in the right click menu… See why it is crucial to install the tools? Just because I'm having so much fun adding images, I'll add a few more to demonstrate how easy it really is to swap fk and ik… Once again, select the left hand control (**BG_arm_ctrl_L**). By default I leave the arm in ik mode… so go ahead and right click and highlight "**switch to fk**".
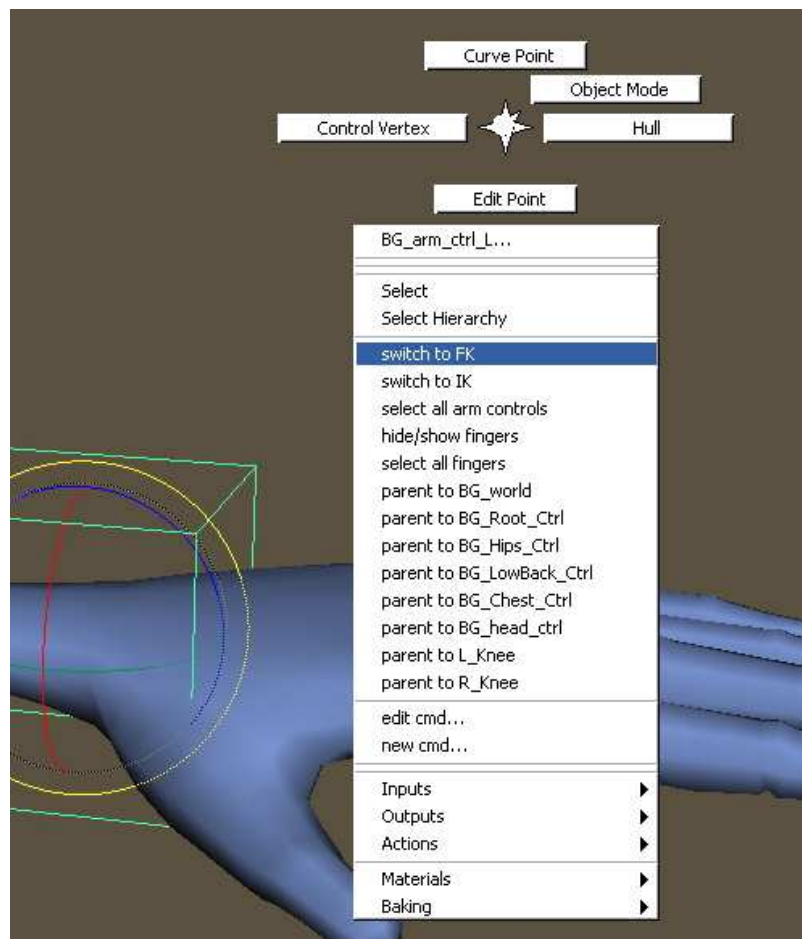

What you'll see happen is that the fk control objects appear and the elbow pole vector control disappears. So, we are now in fk mode.

Ok, now select the fk arm controls and rotate the arm into another position.
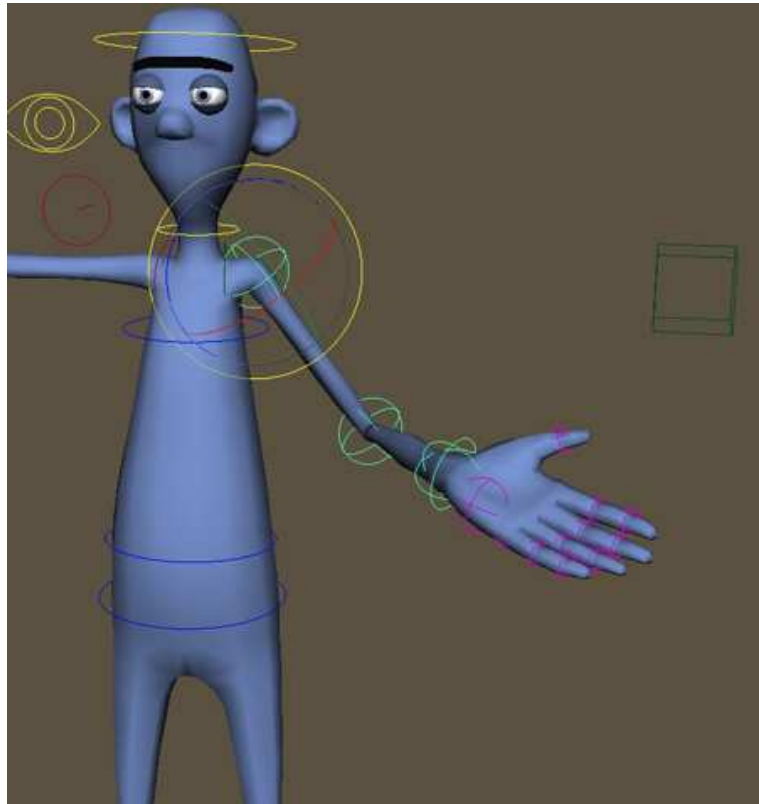
Next, right click any of the **fk** controls and highlight "**switch to ik**". **WARNING:** You'll get an error if you select the **BG_arm_ctrl_L** and try to switch back to ik… I'm not really sure why.
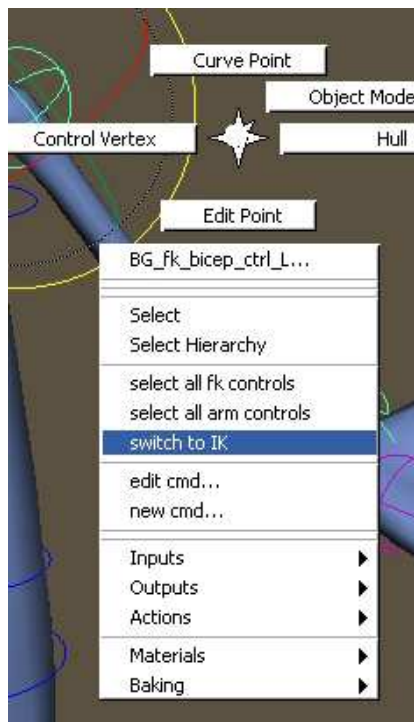
What will happen when you release the right button is that the ik controls will match the positions of the fk controls. And once again, you're in the ik mode for the left arm. How sweet is that!?!?!
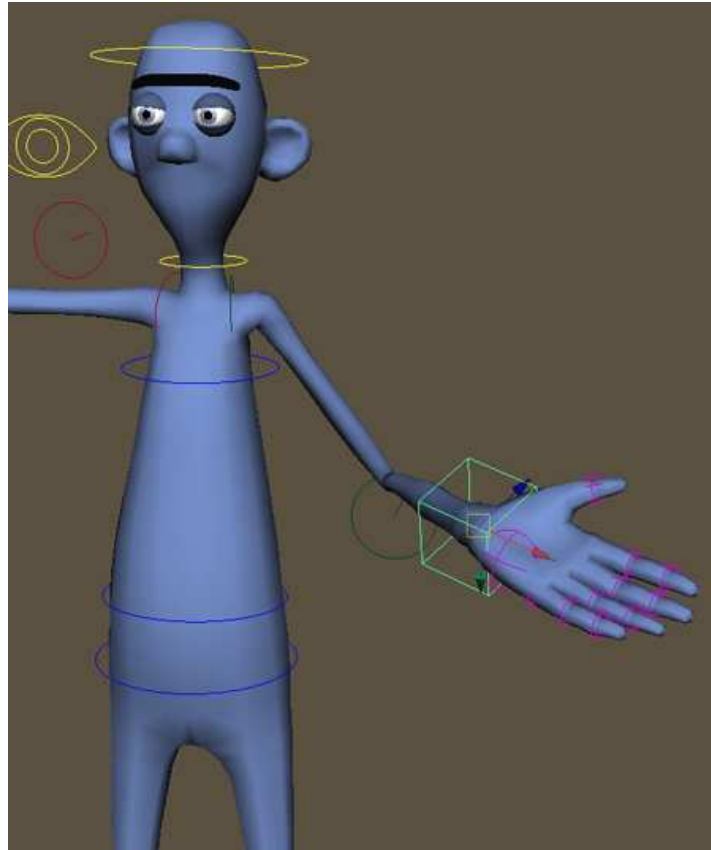
Of course there are those that prefer the ability to "blend" between fk and ik mode. So you will find on the **BG_arm_ctrl_L** control an attribute called "**IK Blend**". I think the attribute name says it all…

Well, that's more or less how to use "Basic Guy". Hopefully, you find him to be a useful character that you can use to create some fun physical animations with! However, all that I ask of you is that you give me credit for creating him… That's not too much to ask right? Happy animating!!

Basic Guy Limitations:
- Unfortunately, with all of the "stretchy" parts of the character, scaling in not an option…unless you want to delete the rig, do your scaling, and then re-rig. With zooCST.mel it really isn't that much of a pain!
- You can't blend between parents… Not really sure why you'd want to with the matching and all, but some people really like to blend.
- He has no mouth… yeah, he knows that too;) That's ok, I plan on adding more of my characters and the rest all have mouths… This file is meant to make you focus on body language to sell the acting.