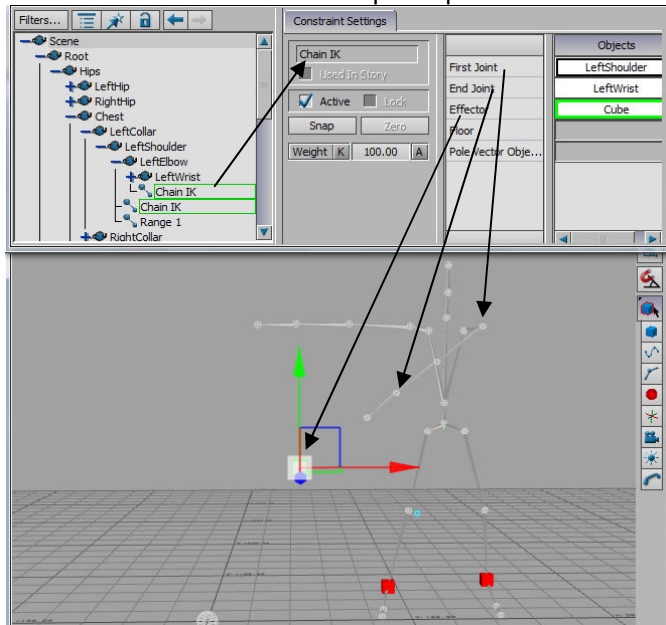


# Setting up a real time digital puppet in Motion Builder

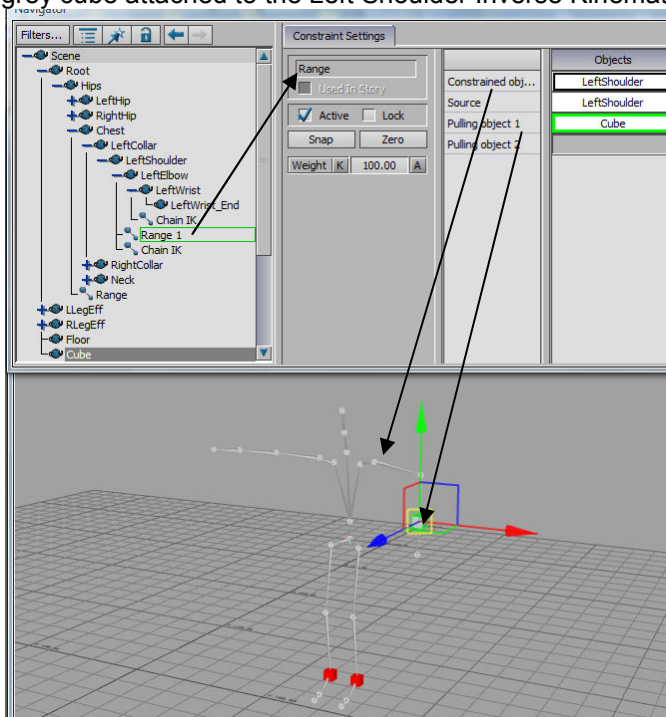
JMG - Fall 2008

This tutorial shows how to set up an interface between a 3D character and a real time input device.

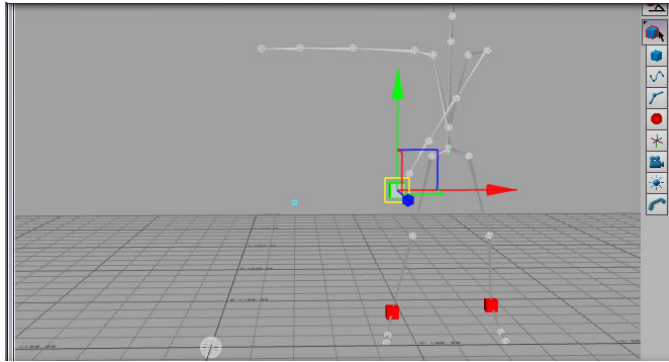


Step 1: Setting up the digital puppet.

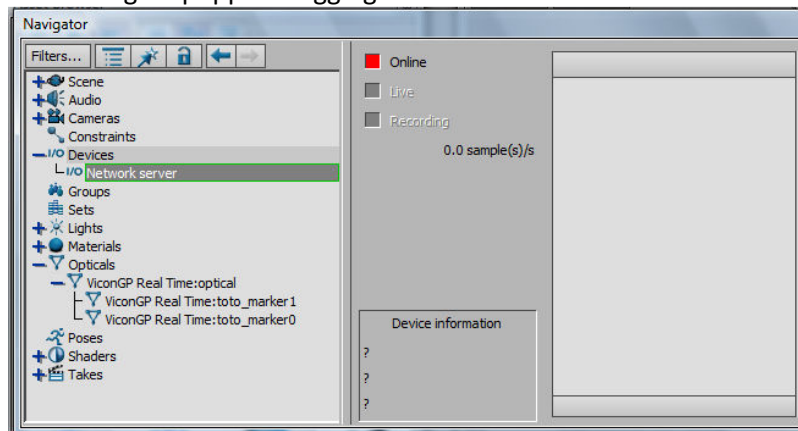
You can create small cubes that will be used as effectors or goals located at the end of the Inverse Kinematic Chain. The cubes are connected to the skeleton hips and shoulders using Inverse Kinematics Chain Constraints. They will control the motion of the skeleton's legs and arms. This illustration shows a grey cube attached to the Left Shoulder Inverse Kinematic Chain.



You will get better motions if you also apply the Range Constraint to the cubes.



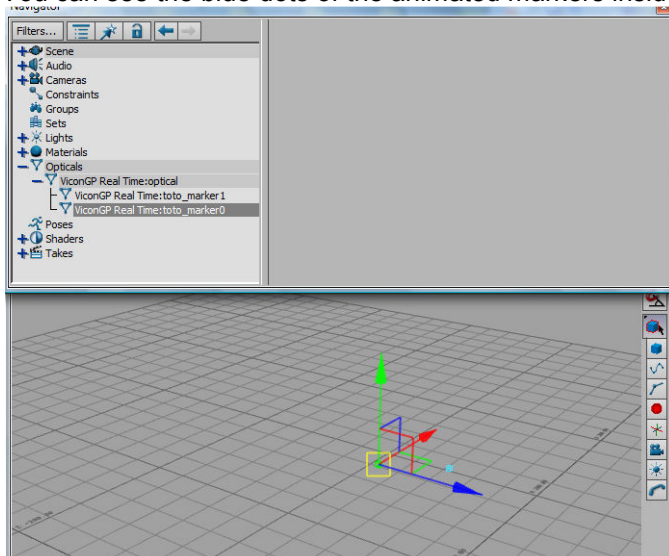
Test the digital puppet dragging the cube with the Move tool

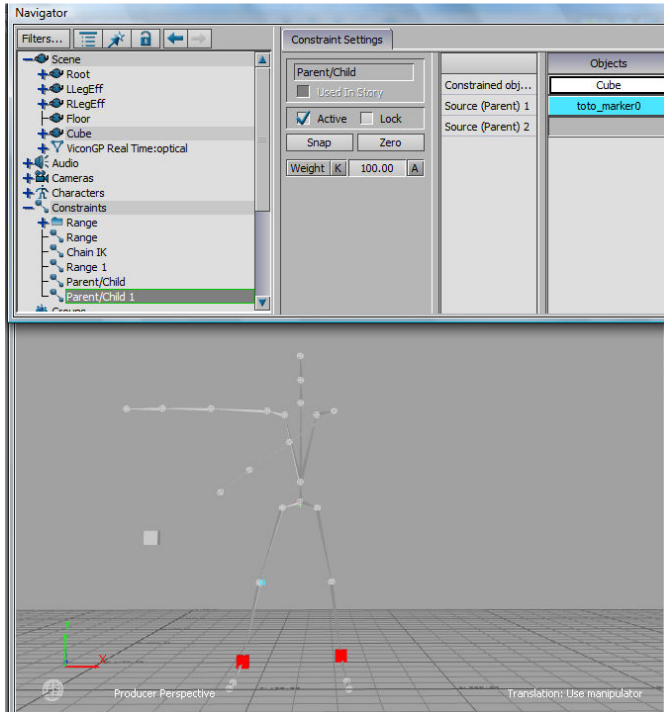
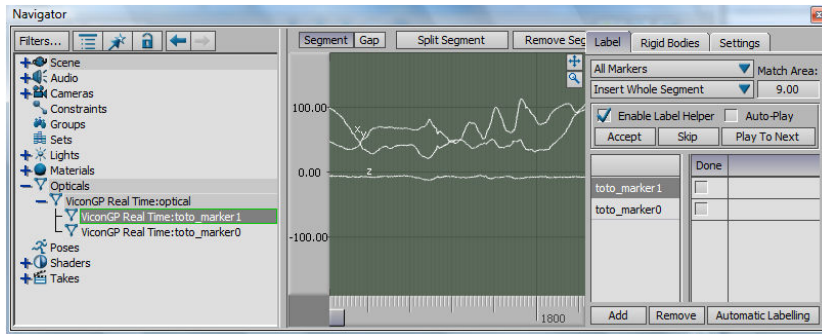


Step 2: If you work on-line with an input device, make sure that your device is connected to Motion Builder via the Network server (Go to Asset Browser > Templates > Devices > Network Server > Drag in Navigator or Viewer).

If you work off-line, you can skip this step. Go to File > Merge > Open a pre-recorded fbx file showing moving markers for testing purpose.

You can see the blue dots of the animated markers inside the Viewer window





Step 3: Create a Parent-Child Constraint. ( Go to Asset Browser > Templates > Constraints > Parent/Child, drag in Navigator or Viewer) Select one marker, DRAG + ALT key the marker on the Constraint Settings, Objects. Connect the markers and the cubes using a Parent-Child Constraint between each marker and each cube

Step 4: Run the input device. The blue markers drive the skeleton of the digital puppet in real time.