**Project Name: Kinect Motion Capture with Maya (PyMEL)**

**CS5343 Advanced Computer Animation, National University of Singapore**

**Instructor: Kang Kang YIN**

**Student: Ying-Chieh HUANG**

**Special Thanks: Yasutoshi Mori**

**Basic Hardware and Software Requirement**

1. Windows XP or later, 32bit/64bit
2. Kinect hardware
3. OpenNI
4. NITE <http://www.openni.org/>
5. Kinect driver <https://github.com/avin2/SensorKinect>
6. PyMEL <http://code.google.com/p/pymel/>
7. Maya Python API and Pymel on Eclipse Pydev

[http://www.creativecrash.com/tutorials/using-eclipse-as-a-maya-ide](http://www.google.com/url?q=http%3A%2F%2Fwww.creativecrash.com%2Ftutorials%2Fusing-eclipse-as-a-maya-ide&sa=D&sntz=1&usg=AFQjCNHR-DeWWtKxeEovt_eMSuTz_Jc9-A)

**Final Setup before Motion Capture**

1. Copy Python Code of “**mayaKinectCaptureTest.py**”
2. Paste to Maya Script Editor (Python Tab)
3. Select all code
4. Click Middle Mouse Button & Drag it to your own shelf
5. Rename the tool as Kinect and save it
6. Keyin (case sensitive): mayaKinectCaptureTest()

at python commend to activate GUI

1. Double click MayaOpenNIServer.exe
2. Calibrate skeleton by Y post
3. Click “Start server” button
4. Click “Create Skeleton” at GUI to create Skeleton and Camera
5. Click “Connect” button
6. Have fun!

**Activate Gesture and Create Skeleton**

1. Click “OpenCommandPort” button to make sure port is open
2. Wave gesture toward Kinect Sensor

Create skeleton with Inverse Kinematics

1. Click gesture toward Kinect Sensor

Create basic skeleton controlled by Kinect

1. Again, wave gesture toward Kinect Sensor

Re-create skeleton with Inverse Kinematics with nature movement

**Record Motion and Play Recorded Data**

1. Set time slot from 1 to 1000
2. Click “Start Record” button
3. Click “Stop Record” button
4. Click “Disconnect” button
5. Click Play button and play the recorded data

**Setup Camera on Head**

1. Click “Change Perspective” button
2. Switch perspective to camera