



KiCapOSC, v0.5, June 2011, www.908lab.de

Summary

KiCapOSC (Kinect Capture through OSC (Open Sound Protocol)) is a Python based plugin for Maxon's Cinema 4D R12. It reads the data stream coming from OSCeleton, a small, open source tool that converts skeletal data coming from the OpenNI framework into an OSC stream. KiCapOSC then takes this data and maps it onto a number of e.g. Nulls (or any other objects).

KiCapOSC is open source. It's written in Python for the Cinema 4D R12 Python API. It also borrows some code from pyoskeleton. It requires the pyOSC library as well (<https://trac.v2.nl/wiki/pyOSC>). A version of it is part of the zipped plugin, so you should not need to install it again.

On the Kinect side you will require the (preferably latest versions) PrimeSense Kinect drivers, as well as the OpenNI framework and OpenNITE middleware (the latter is required for the skeletal data). You will also have to run OSCeleton to stream the data to the plugin. If you are using separate machines, make sure to open port 7110 on your network.

Related links:

<https://github.com/Sensebloom/OSCeleton>
<https://trac.v2.nl/wiki/pyOSC>
<http://gitorious.org/pyoskeleton>
<https://github.com/avin2/SensorKinect>
<http://www.openni.org/downloadfiles/openni-binaries/20-latest-unstable>
<http://www.openni.org/downloadfiles/openni-compliant-middleware-binaries/33-latest-unstable>

Installation:

Unzip the KiCapOSC.zip file into your Cinema4D plugin folder.
Done.

Disclaimer:

Please be aware that this is a work in progress, so there may be some random errors and the eventual spontaneous combustion. Please let me know of any problems you encounter (or any additional features you think should be there).

Usage:

- Make sure OSCeleton is running somewhere in your network with a Kinect camera attached.
- Enter the correct server and port into the plugin - if OSCeleton is running on the same machine as the plugin, you should not have to change anything at all.
- Either click on the "Make Object" button to create a group of objects that the skeletal data will be mapped on, or drag and drop objects from your object manager into the link fields. Note that by default "Make Object" creates Nulls. You can use the "Template" field and drag any kind of objects (Joints for example, or maybe even particle emitters) into it. It will then clone this object and use it instead of nulls.
- Use the Start/Stop Server button to - you guessed it - start and stop the plugin capturing the data.

You can follow info and error messages in the Python console (Python -> Console(Python)) and it may pay to also keep an eye on the output of OSCeleton as well.

- Once your capture is up and running, you can click on "Record continuously" to set keyframes. The plugin keeps on setting a keyframe at the current position in the timeline every time a joint changes its position (so if the Kinect loses track of a joint, no updates are sent and no keys are set - you may have to interpolate those curves later). To record an animation, click the "Record continuously" button and then press play in the timeline. Remember to make the document length long enough, e.g. 1000 frames, otherwise the timeline will loop and overwrite previous keys! The plugin only sets keys for the XYZ position data, since there is no rotation or scale coming from the Kinect.

It would be great if you could let us know of any exciting projects you have used this plugin in!

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