STROMOHAB INTERNAL MEMO

DATE: 20/03/09

TO: PHIL JEPSON, M ZHAO

CC: ADAR PELAH

FROM: MAT GILBERT

RE: RUNNING THE MOTION CAPTURE ENGINE ON APLAP01

Instructions for using the MCE
- Mat Gilbert 20/03/09

The MCE is currently located on the desktop of the Stromohab user area, on APLAP01. It is still in the form of a Visual Studio solution, as it is not yet robust enough for full publication. To start the MCE, open the project solution file, and execute from with the IDE debug environment.

Problems to watch out for

1) The Optitrack cameras are a little temperamental, and occasionally the MCE software will appear to hang when executed. This happens because the USB hubs have hung – to fix this problem follow these steps:

    i)   Close the MCE by pressing the stop button within the IDE.
    ii)   Unplug both USB cables from the laptop (they're typically plugged into the two slots on the right hand side).
    iii)   Switch off the power to the USB hubs – this can be done using the red switch on the extension socket currently located to the right hand side of the large Apple monitor.
    iv)   Wait approximately 5 seconds.
    v)   Switch the power to the hubs back on.
    vi)   Plug both USB cables back in. If the laptop sound is switched on, you should hear 6 USB device connection sounds (one for each camera connected).
    vii)   After the sounds have stopped playing, attempt to run the MCE again. If it still hangs, repeat the process. If still having problems, restart the machine.

This problem occurs due to a lack of error checking facilities available in the PointCloud .dll. Hopefully this is something that they will resolve in future releases (or we will produce an in-house custom solution).

An additional note – if the MCE is working correctly, it will display a "connected" message, and a "cameras started" message in its status bar. Additional connection and received command information is written to the output window of the IDE (via System.Diagnostics.Debug.WriteLine).

2) If the cameras have to be moved/unplugged for any reason, recalibration will be required – see the NaturalPoint Arena documentation for details on how to do this. The MCE will then have to be told where to look for the new calibration file – when the MCE is running, browse to the file via the appropriate button. This will automatically load the new profile. Alternatively, if you are comfortable modifying the source code, the default calibration file path can be set by changing the default value of *textBoxCalibrationFilePath.Text*, on MainForm.