IAT 884
Lab 7
Computer Vision

Preparation

Read *Computer vision for artists and designers* *by Golan Levin (2006):*
www.flong.com/texts/essays/essay_cvad/

Download JMyron Library for Processing:
http://webcamxtra.sourceforge.net/download.shtml

Installation Instructions
Import library > add library > search “open cv” > click install

If Processing is already running, then restart it.

To import the library into your sketch, choose the menu "Sketch > Import Library > JMyron" and you will see "import JMyron.*;" appear at the top of the sketch. From here, please see the Examples folder for simple ways to see the camera. The most basic example is the "Live cam test" sketch.

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In Class Exercise:

Equipment:

- Digital Camcorder or webcam (available at the library)
- Tripod (Available at the library)
- Firewire Cable (to connect DVCam to the computer)
- Colored Objects (Supplied)
- Laptop

Activity:

Implement a simple camera vision application using colored objects to trigger screen events. These events can be related to absolute positioning of objects, relative positioning in relation to each other, number of objects present, color of the object detected, or any other combination you can think of. I will provide some basic source code for you to work from.

Resources:

- Start up issues: http://mrl.nyu.edu/~perlin/courses/fall2006mm/using-jmyron.html
- JMyron Reference: http://webcamxtra.sourceforge.net/reference.shtml
- JMyron forum: https://sourceforge.net/forum/?group_id=79235
- Processing Compter Vision Application Examples (Japanese Website): www.vision.cs.chubu.ac.jp/VU/html
- Computer Vision Code: www.flong.com/texts/essays/essay_cvad/ (After Article)

Issues with JMyron

For Intel Macs

Note that you'll need to download an Intel build of JMyron's jnilib file to make it work on Intel Macs; you'll get some odd error messages otherwise. That Intel recompile is on the jibberia (aka Kevin Cox) projects page. (Look for the following text):

libJMyron.jnilib compiled for intel macs replace the one in /Applications/Processing/libraries/JMyron/library/ with this one. (I've attached the file to this email)

Windows

Windows might require the often-unpredictable WinVDIG for input; don't blame Processing: blame Apple's now-defunct QuickTime for Java, and the general lack of any Windows/Mac cross-platform library.

Both

One other note: if code for JMyron contains the getForcedWidth() or getForcedHeight() calls, you actually need to *remove* that for the code to execute without throwing an error on Mac. On Windows, you may need to call those somewhere to avoid weird video problems. Don't ask. Video can be a pain.

From: labs.noisepages.com/2008/03/18/must-have-processing-libraries-for-multimedia/