Agenda

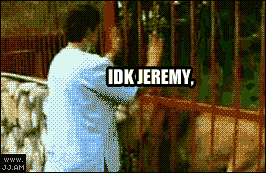
*Date: 11/02/13*

*Location: Brody Collaborative Space - Room 1045*

*Actual Time: 1 pm -* [*sometime*](http://www.youtube.com/watch?v=jqpn2oyEaX8&t=2m7s)

*Planned Length:* [*a while*](https://www.youtube.com/watch?v=QvDem5oyHXc&t=0m8s)

***Silly Picture of the Week:***



***Please add and comment on anything and everything in the agenda!***

|  |  |  |  |
| --- | --- | --- | --- |
| **Team Member(s)** | **Topic** | **Time** | **Goals** |
| ~~Anyone~~ | ~~Announcements~~ | ~~5 min~~ | ~~If any new developments have occurred the team is updated on them~~ |
| ~~Brian~~ | ~~Team Bonding Update~~ | ~~2 min~~ | ~~If there are any new developments on our eventual team bonding plan update the team~~ |
| Brian | Hardware | 20 min | Contact the hardware team and get:   * instructions on how to use the cam. and bracket * info on how consistent getting red eye is * CAD files/ other related documentation   Or schedule a time to get those things |
| Front End | Cool Stuff | The lifespan of Palingenia longicauda | Build Rome. |
| JT and Brian | Crescent Detection | A lot of time | Lay out algorithm; Begin coding (should be pretty dang similar to the code for pupil detection and the code that will be written for tiny white dot detection) |
| Shannon, Shumin and Arvind | TIny White Dot Detection | A lot of time | Lay out algorithm; Begin coding (should be pretty dang similar to the code for pupil detection and the code that will be written for crescent detection) |
| Shannon | Fix Pupil Manual Reset | 20 min | Figure out what’s going wrong when pupils are reset and fix it. |
| Shannon | Recap and Next steps | 5 min. | Meeting progress/ goal accomplishment is recapped. Next steps are outlined so that every team member goes into next week knowing what they are expected to contribute |

# Notes

Hardware team Info:

Skin pigment - european/ latino = lighter skin pigment

Asians are the the hardest

Everything is on dropbox

Flash underneath the camera

for the first - should work with both flashes

Don’t have to rotate the flash at all

- rotate the camera and bracket to take

% of success is really variable

8-9 feet back is ideal

Documentation should be in the in the continuity

Supposed to be handheld

Angle/Distance

Dropbox: <https://www.dropbox.com/sh/8nsmamaiklpvr9l/Fo5xgv4ogH>

# Summary

# TODO

# Whiteboard Pics

# 

# Useful Links

<http://scrumy.com/DVSFall2013>

<http://zetcode.com/wxpython/> #for us GUI guys

<http://wiki.wxpython.org/BoxSizerFromTheGroundUp>

grayscale : gray = cv2.cvtColor(eyeArr, cv.CV\_BGR2GRAY)

- > blur/smooth (or maybe erode and dilate, code for which should be in findPupil)

-> convolve (I don’t know what the call for this is)

While I’m waiting for activeMQ to quit being finicky, this is convolution in openCV

<http://docs.opencv.org/doc/tutorials/imgproc/imgtrans/filter_2d/filter_2d.html>

something we may find useful is importing a namespace so we don’t have to make a bunch of calls to cv instead we can call

using namespace cv2.cv

-> binarize/threshold cv2.threshold(gray, gray, 220, 255, cv2.THRESH\_BINARY)

-> find central white circle (hough circles)

Finding the circles should be the mosttly the same as this code in findPupil:

# Find countours in the image

contours, hierarchy = cv2.findContours(dilate,cv2.RETR\_EXTERNAL,cv2.CHAIN\_APPROX\_NONE)

# Draw the contours in white

cv2.drawContours(dilate,contours,-1,(255,255,255),-1)

if DEBUG:

cv.ShowImage("Contours", cv.fromarray(dilate))

cv.WaitKey(0)

cv.DestroyWindow("Contours")

smooth = cv.fromarray(dilate)

cv.Smooth(cv.fromarray(dilate),smooth,

cv.CV\_GAUSSIAN,APERTURE\_WIDTH,APERTURE\_HEIGHT)

if DEBUG:

cv.ShowImage("Smooth", smooth)

cv.WaitKey(0)

cv.DestroyWindow("Smooth")

cv.Canny(smooth, smooth, CANNY\_THRESHOLD\_1, CANNY\_THRESHOLD\_2)

if DEBUG:

cv.ShowImage("Canny", smooth)

cv.WaitKey(0)

cv.DestroyWindow("Canny")

storage = cv.CreateMat((self.eyePhoto).width, 1, cv.CV\_32FC3)

CIRCLE\_MAX\_RADIUS = self.eyePhoto.width

cv.HoughCircles(smooth, storage, cv.CV\_HOUGH\_GRADIENT, CIRCLE\_RESOLUTION\_RATIO, CIRCLE\_MIN\_DISTANCE,

CIRCLE\_THRESHOLD\_1, CIRCLE\_THRESHOLD\_2, CIRCLE\_MIN\_RADIUS, CIRCLE\_MAX\_RADIUS)

Or for finding the circles you could use the find blobs method in cv (google it, there should be lots of info on it)

Also if you’re testing printing things the format of a cv circle is (Centerx, centery, radius)