

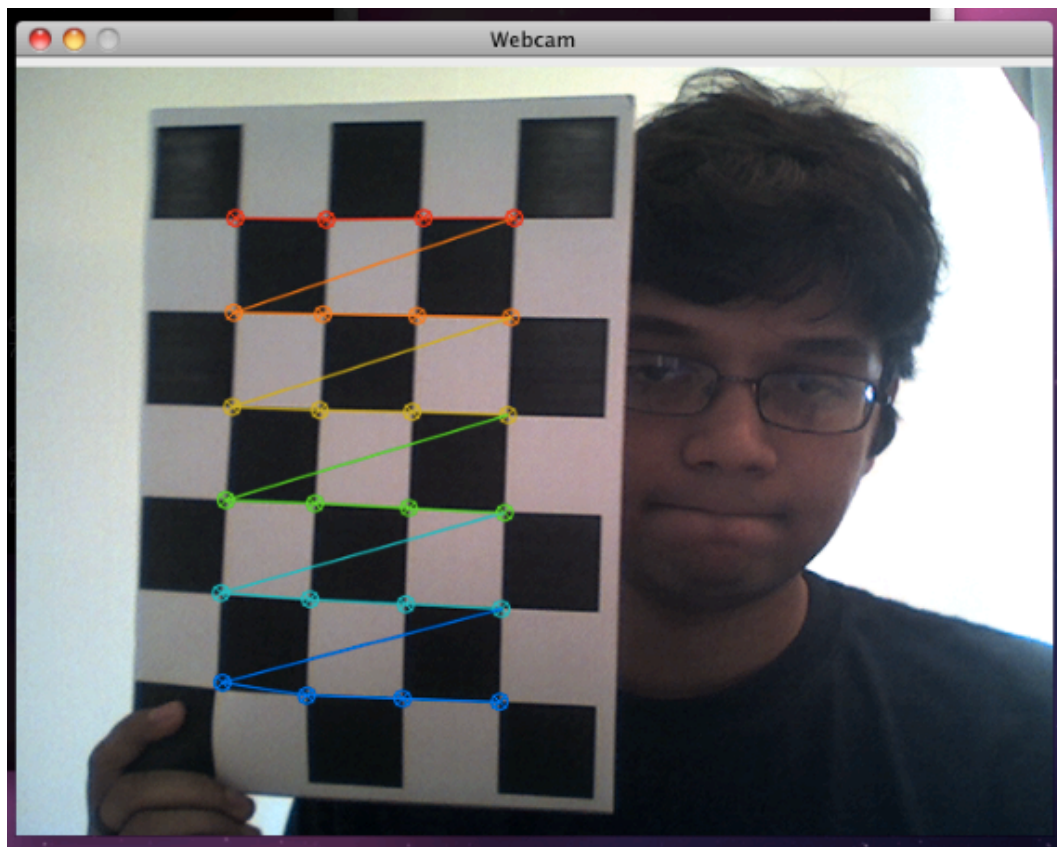
## Assignment #2

### Camera Calibration

**Build:** `g++ calibrate.cc -I/opt/local/include/opencv -L/opt/local/lib -lcv -lhighgui -lcxcore -Wall -o calibrate`

**Run:** `./calibrate [interactive mode]`  
`./calibrate <filenames> [batch mode]`

**Sample Capture:**



## Sample Output:

running cvFindChessboardCorners() ...

```
[filename:grab1.jpg][corners:24]
[filename:grab10.jpg][corners:24]
[filename:grab2.jpg][corners:24]
[filename:grab3.jpg][corners:24]
[filename:grab4.jpg][corners:24]
[filename:grab5.jpg][corners:24]
[filename:grab6.jpg][corners:24]
[filename:grab7.jpg][corners:24]
[filename:grab8.jpg][corners:24]
[filename:grab9.jpg][corners:24]
```

running cvCalibrateCamera2() ...

radial-distortion k1: 0.282965  
radial-distortion k2: -2.42564

tangential-distortion p1: -0.000961077  
tangential-distortion p2: -0.00414703

optical-center cx: 309.457  
optical-center cy: 266.056

focal-length fx: 568.766  
focal-length fy: 570.468

translation matrix -

-0.804426	-2.23347	10.9767
-0.245371	-4.67668	12.0727
-1.73421	-2.75463	11.532
0.440137	-3.67934	10.3697
-0.245234	-3.92763	10.8815
-1.58722	-4.58334	13.0315
-0.174314	-3.86377	10.7701
-1.91233	-3.02099	9.84342
-1.65873	-3.16408	11.1852
-1.62186	-4.22168	11.6252

rotation matrix -

2.17059	2.23004	-0.112666
-1.93627	-2.47248	-0.119806
2.43994	1.77622	-0.319648
1.47373	2.76235	-0.145586
2.11127	2.33192	-0.221869
2.19647	2.23398	0.155469
-1.76472	-2.44493	-0.221389
-2.55277	-1.65887	0.104314
-2.55217	-1.72743	-0.18831
2.34216	2.0185	0.10388

press enter to save the image...

saving undistorted copy as...undistorted\_grab.jpg [done]

## Sample Undistorted Image:

