Sound, GSL, GNUPLOT, C920 Camera with OpenCV,
Myhdl ,GTKWave compiled, GCC, Python on ZedBoard
11/27/15

Testing on a remote shell running on Ubuntu 12.04.

Speakers are connected to black jack and sound is heard correctly.
aplay speech_dft.wav
Playing WAVE 'speech_dft.wav' : Signed 16 bit Little Endian, Rate 22050 Hz, Mono

ssh -Y 192.168.1.143
uname -a
Linux zedboard 3.12.0 #1 SMP PREEMPT Sat Mar 29 13:42:20 MDT 2014 armv7l GNU/Linux

rpm -qa | sort > zedbrd_pkgs.txt

cd gsl/

. ./setpath
#!/bin/bash
export CFLAGS="-I/usr/include -L/usr/lib -lgsl -lgslcblas -lm"

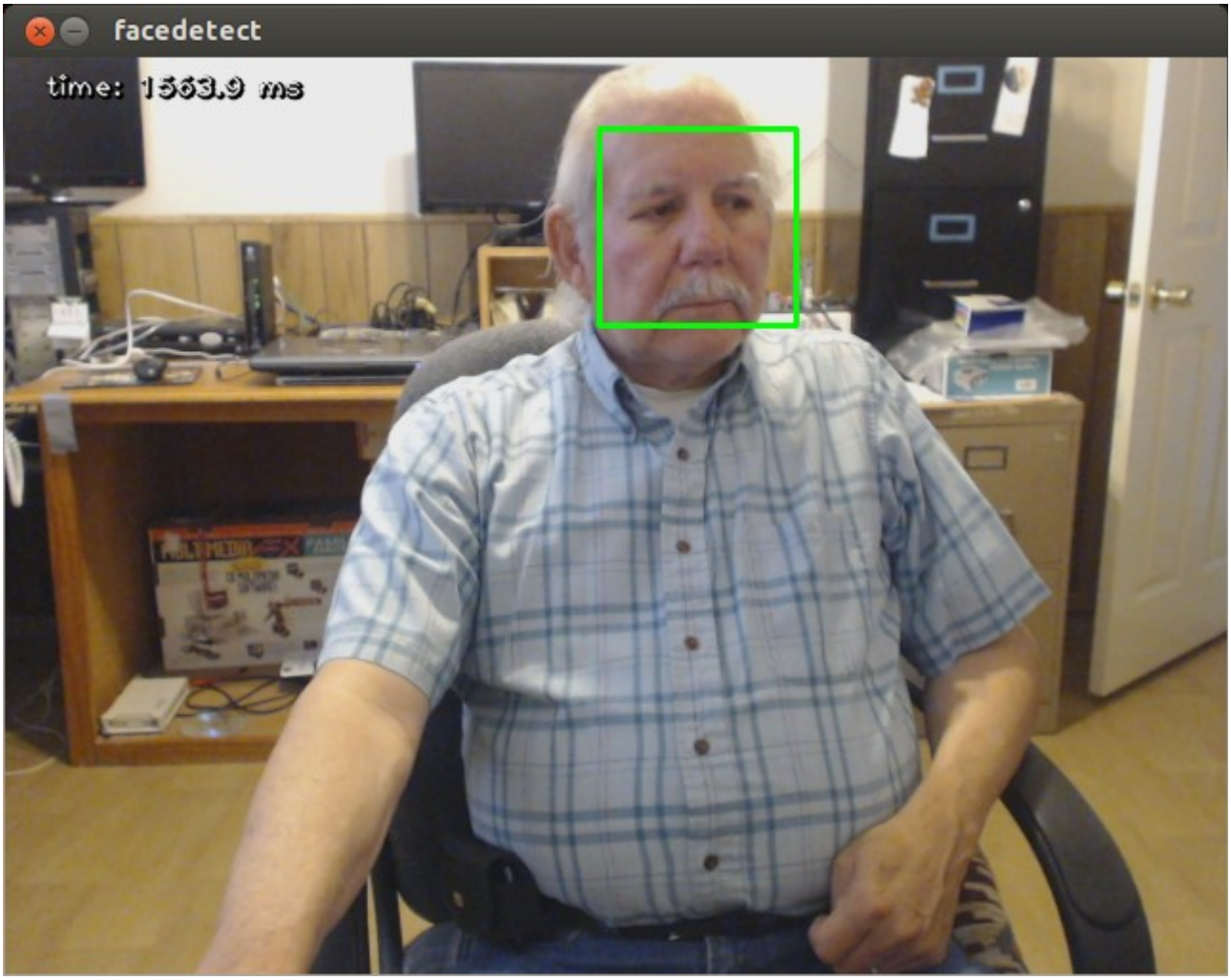
./compile_test_files
#!/bin/bash
gcc ${CFLAGS} sqmatrice.c -o sqmatice
gcc ${CFLAGS} linalg.c -o linalg
gcc ${CFLAGS} poly.c -o poly
gcc ${CFLAGS} testmatrices.c -o testmatrices
./linalg
x =
-4.05205
-12.6056
1.66091
8.69377
root@zedboard:~/gsl# ./poly
z0 = -0.809016994374947673 +0.587785252292473359
z1 = -0.809016994374947673 -0.587785252292473359
z2 = +0.309016994374947507 +0.951056516295152976
z3 = +0.309016994374947507 -0.951056516295152976
z4 = +0.999999999999999889 +0.000000000000000000
root@zedboard:~/gsl# ./testmatrices
m(0,0) = 0.23
m(0,1) = 1.23
m(0,2) = 2.23
m(1,0) = 100.23
m(1,1) = 101.23
m(1,2) = 102.23
m(2,0) = 200.23
m(2,1) = 201.23

```
m(2,2) = 202.23
m(3,0) = 300.23
m(3,1) = 301.23
m(3,2) = 302.23
m(4,0) = 400.23
m(4,1) = 401.23
m(4,2) = 402.23
m(5,0) = 500.23
m(5,1) = 501.23
m(5,2) = 502.23
m(6,0) = 600.23
m(6,1) = 601.23
m(6,2) = 602.23
m(7,0) = 700.23
m(7,1) = 701.23
m(7,2) = 702.23
m(8,0) = 800.23
m(8,1) = 801.23
m(8,2) = 802.23
m(9,0) = 900.23
m(9,1) = 901.23
m(9,2) = 902.23
gsl: ../gsl/gsl_matrix_double.h:275: ERROR: first index out of range
Default GSL error handler invoked.
Aborted
root@zedboard:~/gsl# ./sqmatice
The output file format ofmt %f
will be used in gsl_matrix_fprintf (opointer, m, ofmt)
Initial test matrice
m(0,0) = 2.58
m(0,1) = -3.1
m(0,2) = 4.25
m(1,0) = 3.821
m(1,1) = 4.44
m(1,2) = 5.656
m(2,0) = 1.82
m(2,1) = 7.41
m(2,2) = 3.33
transpose of initial matrice
the matrice needs to be square
3
sizeof of struct m 24
num of rows 3
num of cols 3
m(0,0) = 2.58
m(0,1) = 3.821
m(0,2) = 1.82
m(1,0) = -3.1
m(1,1) = 4.44
```

m(1,2) = 7.41
m(2,0) = 4.25
m(2,1) = 5.656
m(2,2) = 3.33
The identity matrice
m(0,0) = 1
m(0,1) = 0
m(0,2) = 0
m(1,0) = 0
m(1,1) = 1
m(1,2) = 0
m(2,0) = 0
m(2,1) = 0
m(2,2) = 1

cd opencv_python_yocto_raspberry_pi/

python facedetect_my.py The image below was taken with RaspberryPi2B and C920 camera. Results are the same on ZedBoard.



GTKwave compiled on target.

tar xfz gtkwave-3.3.66.tar.gz

cd gtkwave-3.3.66

./configure –disable-tcl

make

make install

cd ../

gtkwave tb.vcd

Myhdl

cd myhdl/

python setup.py install

python test_rs232.py
testCharacterize (__main__.rs232Characterize)
Find min/max tx baud rate tolerance by simulation ... Max tx baudrate: 10160
Min tx baudrate: 9095
ok
testDefault (__main__.rs232Test)
Check default case ... ok
testOddParity (__main__.rs232Test)
Check odd parity ... ok
testParityError (__main__.rs232Test)
Expect a parity error ... ok
testSevenBitsEvenParity (__main__.rs232Test)
Check 7 bits with even parity ... ok

Ran 5 tests in 19.002s

OK

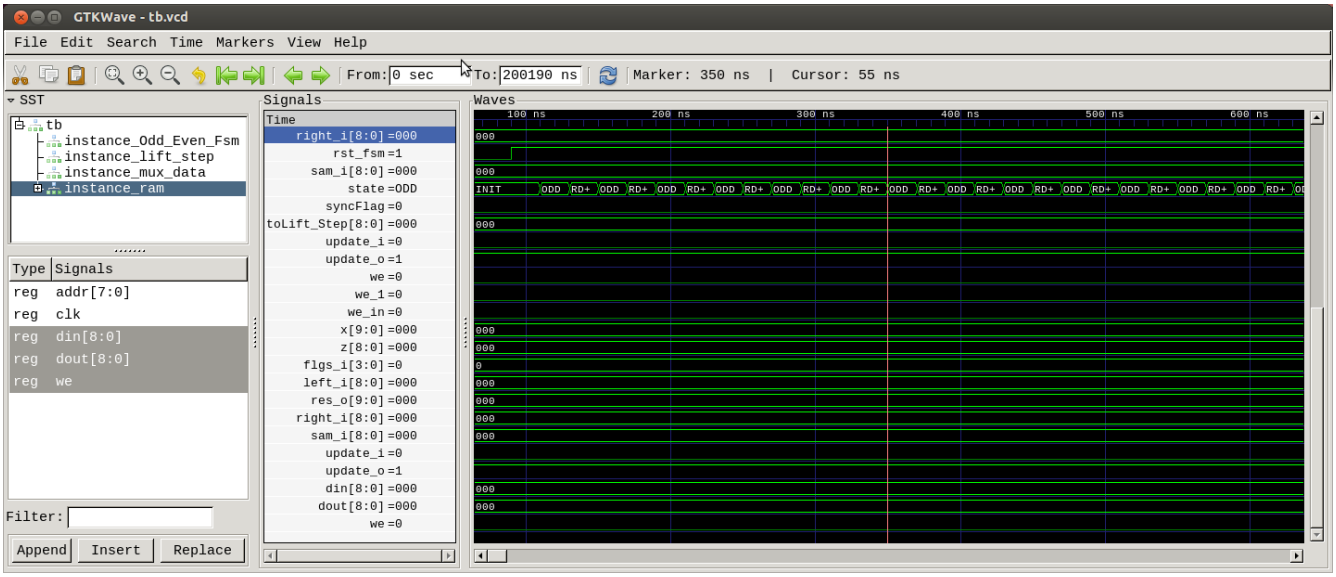
Using the repository jpeg-2000-test

cd jpeg-2000-test/ipython_fixbv/test_lifting_jpeg_step

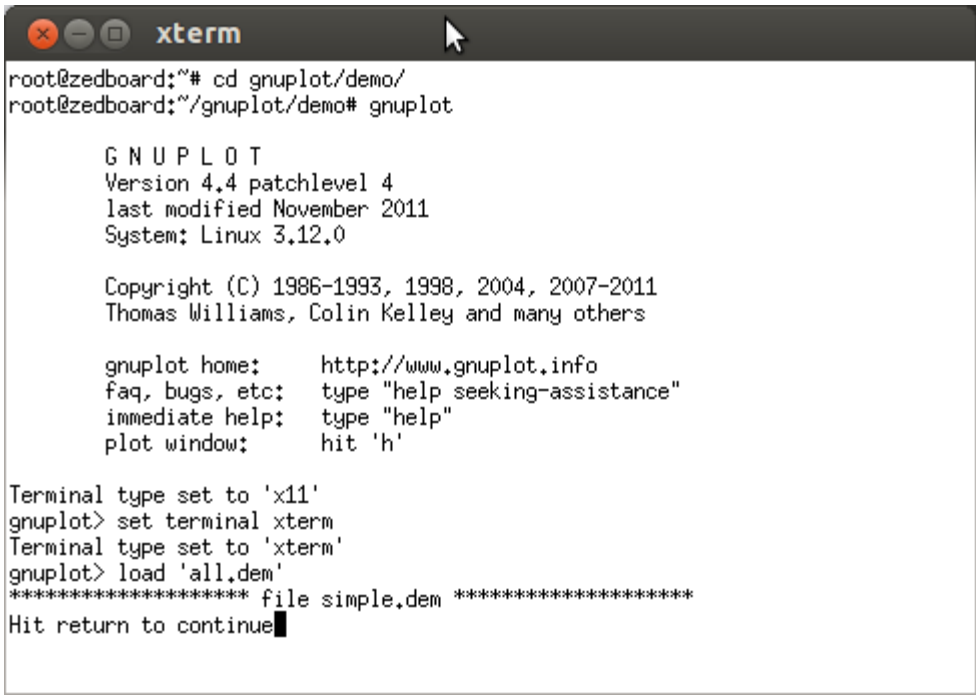
python odd_even_fsm.py
190 muxsel_i 0 rst_fsm 1
200190
root@zedboard:~/jpeg-2000-test/ipython_fixbv/test_lifting_jpeg_step# gtkwave tb.vcd
Gtk-Message: Failed to load module "canberra-gtk-module"

GTKWave Analyzer v3.3.66 (w)1999-2015 BSI

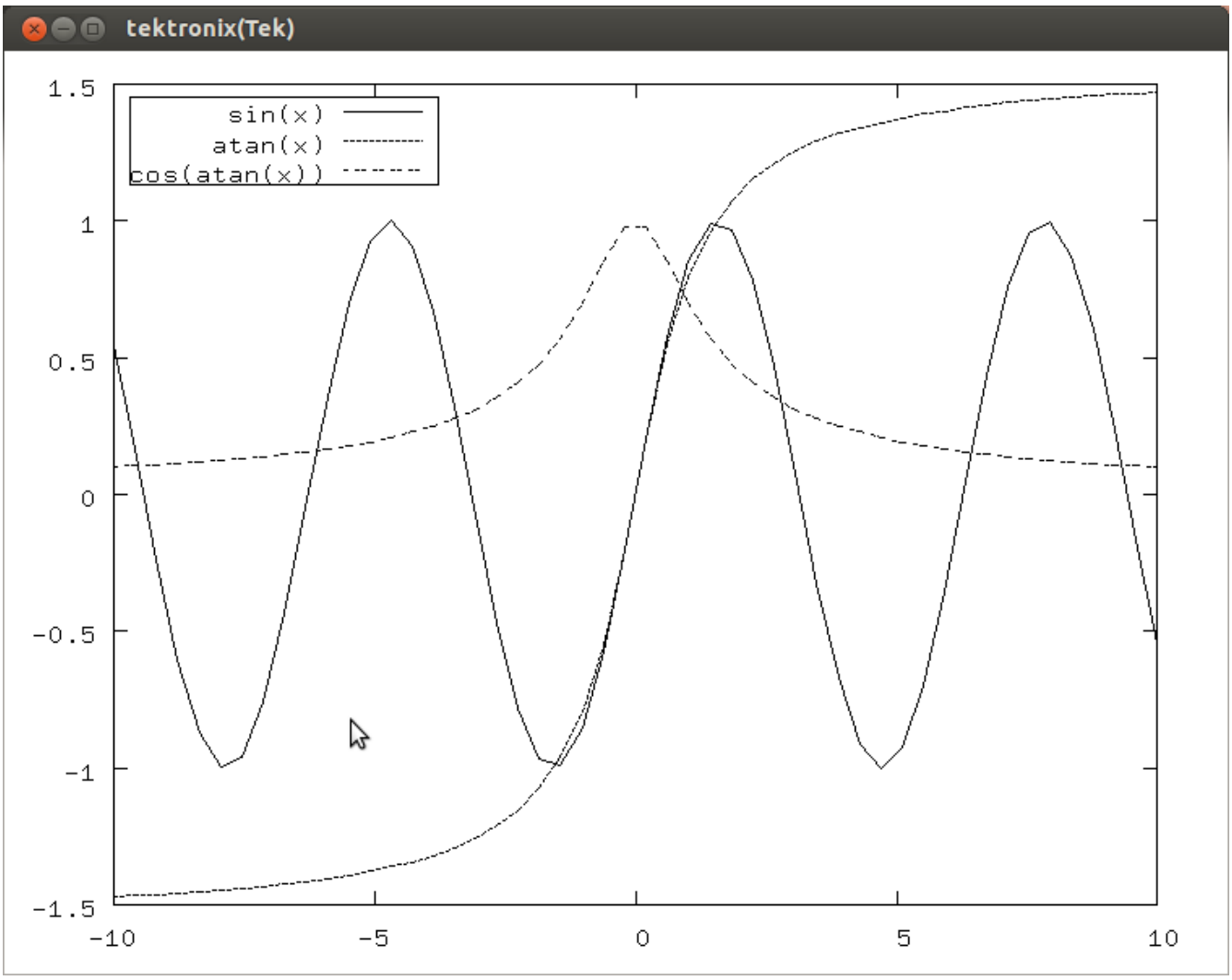
[0] start time.
[200190] end time.



Running gnuplot from xterm



plot1 of demo


tektronix(Tek)
sin(x)
atan(x)
cos(atan(x))
1.5
1
0.5
0
-0.5
-1
-1.5
-10
-5
0
5
10

plot2 of demo