

OFDM Receiver

I am having trouble with this one for now.

I had to solve a ton of problems to get this to a point where it compiles and runs.

But I am not matching golden output yet.

I am assuming QPSK decode function takes the FFT output as input and then says where it needs to be symbol-wise.

So I just made simple if statements:

```
3
4 void qpsk_decode(DTYPE R[SIZE], DTYPE I[SIZE], int D[SIZE])
5
6     //Write your code here
7     int i;
8     for(i = 0; i < SIZE; i++){
9         if (R[i] > 0){
10             if(I[i] > 0)
11                 D[i] = 0;
12             else
13                 D[i] = 2;
14         }
15         if (R[i] < 0){
16             if (I[i] > 0)
17                 D[i] = 1;
18             else
19                 D[i] = 3;
20         }
21     }
```

Unfortunately it is not getting the same results.

```
qpsk_decode.cpp  ofdm_recvr.cpp  ofdm_test.cpp  fft.h  fft.cpp  ofdm_receiver_csim.log
1 INFO: [SIM 2] ***** CSIM start *****
2 INFO: [SIM 4] CSIM will launch GCC as the compiler.
3   Compiling ../../../../ofdm_test.cpp in debug mode
4   Generating csim.exe
5 Reading INPUTS
6 Printing INPUTS
7 Comparing with golden output
8 miss match: i: 2049 golden: 1   output: 0
9 miss match: i: 2050 golden: 2   output: 0
10 miss match: i: 2051 golden: 3   output: 0
11 miss match: i: 2053 golden: 1   output: 0
12 miss match: i: 2054 golden: 2   output: 0
13 miss match: i: 2055 golden: 3   output: 0
14 miss match: i: 2057 golden: 1   output: 0
15 miss match: i: 2058 golden: 2   output: 0
```