The following is the code I have written by now.

%% differential only serdes channel simulation

%% setup channel parameters

bit\_rate = 28e9; %bits-per-second

bit\_time = 1/bit\_rate; % second

samples\_per\_bit = 64;

sampling\_rate = bit\_rate \* samples\_per\_bit;

sample\_step = bit\_time / samples\_per\_bit;

seqlength = 10000; % length of random sequence bits

z0\_t = input('Enter the reference impedance: ');

z0\_r = input('Enter the terminal impedance: ');

%% setup IBIS AMI model path and filename

modelpath = 'C:\Users\younger\Documents\MATLAB\\_develop\\_chasim\Qlogic\_Cetus\_wrk';

tx\_amifilename = 'g28\_28g\_tx.ami';

rx\_amifilename = 'g28\_28g\_rx.ami';

tx\_dllfilename = 'G28\_28G\_Tx\_32.dll';

rx\_dllfilename = 'G28\_28G\_Rx\_32.dll';

tx\_amifile = fullfile(modelpath, tx\_amifilename);

rx\_amifile = fullfile(modelpath, rx\_amifilename);

tx\_dllfile = fullfile(modelpath, tx\_dllfilename);

rx\_dllfile = fullfile(modelpath, rx\_dllfilename);

addpath(modelpath)

%% get channel impulse response

addpath('C:\Users\younger\Documents\MATLAB\\_develop\\_chasim\impulse\_response\_oct2012');

addpath('C:\Users\younger\Documents\MATLAB\\_develop\\_chasim\SYZ\_conversions');

s4ppath = 'C:\Users\younger\Documents\MATLAB\\_develop\\_chasim\Qlogic\_Cetus\_wrk';

ads\_s4pname = 'spara1.s4p';

ads\_s4pfile = fullfile(s4ppath, ads\_s4pname);

ads\_s4pstruct = tsnpimporti(ads\_s4pfile);

znp1 = s2z(ads\_s4pstruct);

mv = [1 0 -1 0; 0 1 0 -1; 0.5 0 0.5 0; 0 0.5 0 0.5];

mi = [0.5 0 -0.5 0; 0 0.5 0 -0.5; 1 0 1 0; 0 1 0 1];

for i=1:800

zm(:,:,i) = (mv \* znp1.data(:,:,i)) \* inv(mi);

end

zdd = zm(1:2,1:2,:);

u = [1 0;0 1];

zt = [-2\*z0\_t 0;0 -2\*z0\_r];

for i=1:800

Htrans(:,:,i) = inv(u - zt \* inv(zdd(:,:,i))); % channel transfer function H(jw)

end

hac\_t = ifft(Htrans); % channel impulse response hAC(t)

channel\_impres = hac\_t(:,1,:);

channel\_impres = reshape(real(channel\_impres), 1, 1600);

tinterp = 0:sample\_step:1599\*sample\_step;

plot(tinterp, channel\_impres);

%% IBIS AMI\_Init

%[ impresotx, amiparotx, mhtx, initmsgtx, errtx, errmsgtx ] = amiinit\_1207a(tx\_amifile, tx\_dllfile, channel\_impres, sample\_step, bit\_time);

% plot(tinterp, channel\_impres,'--rs', tinterp, impresotx','-.bo');

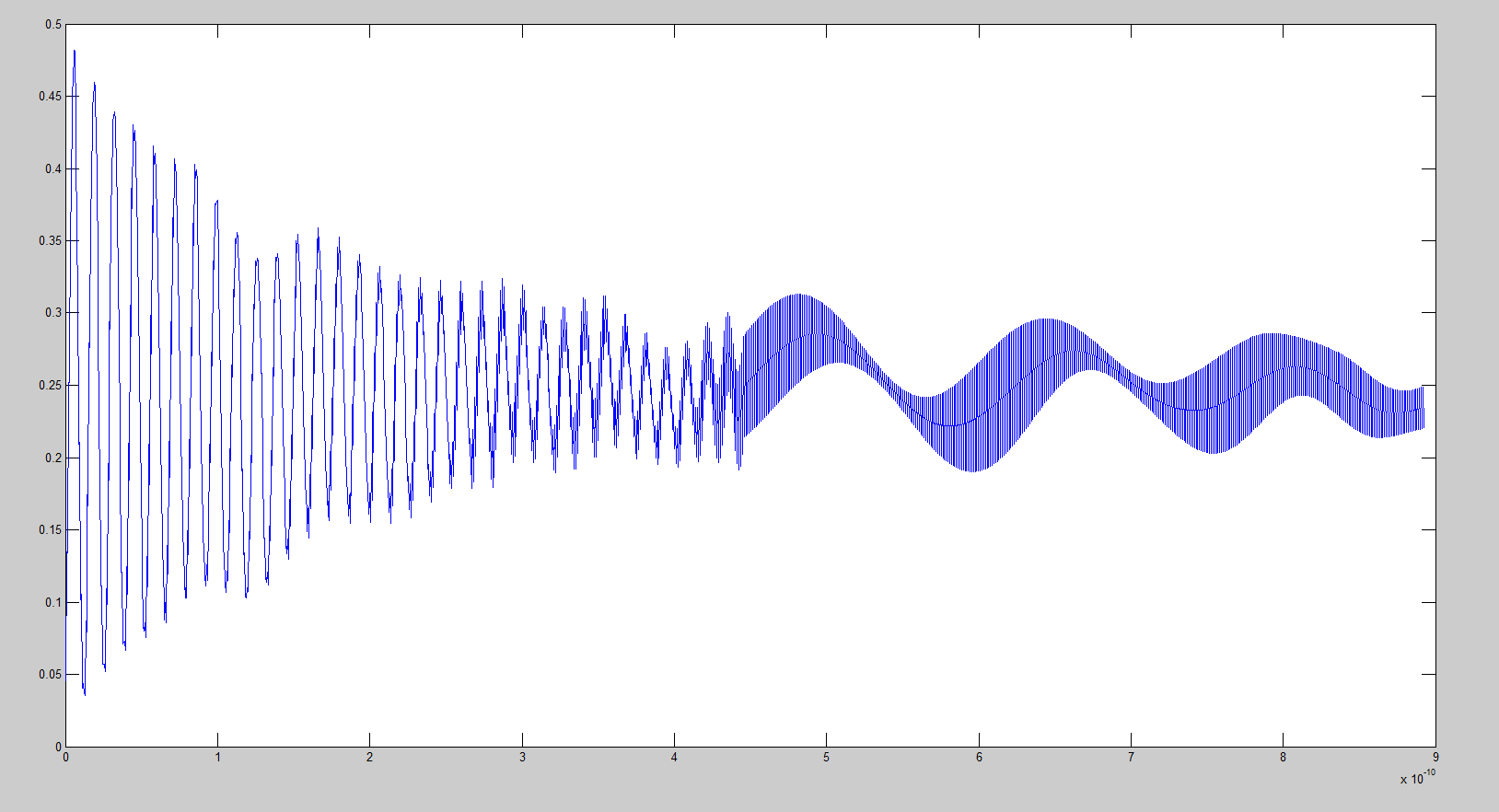
% title('Impulse Response');

% xlabel('Time');

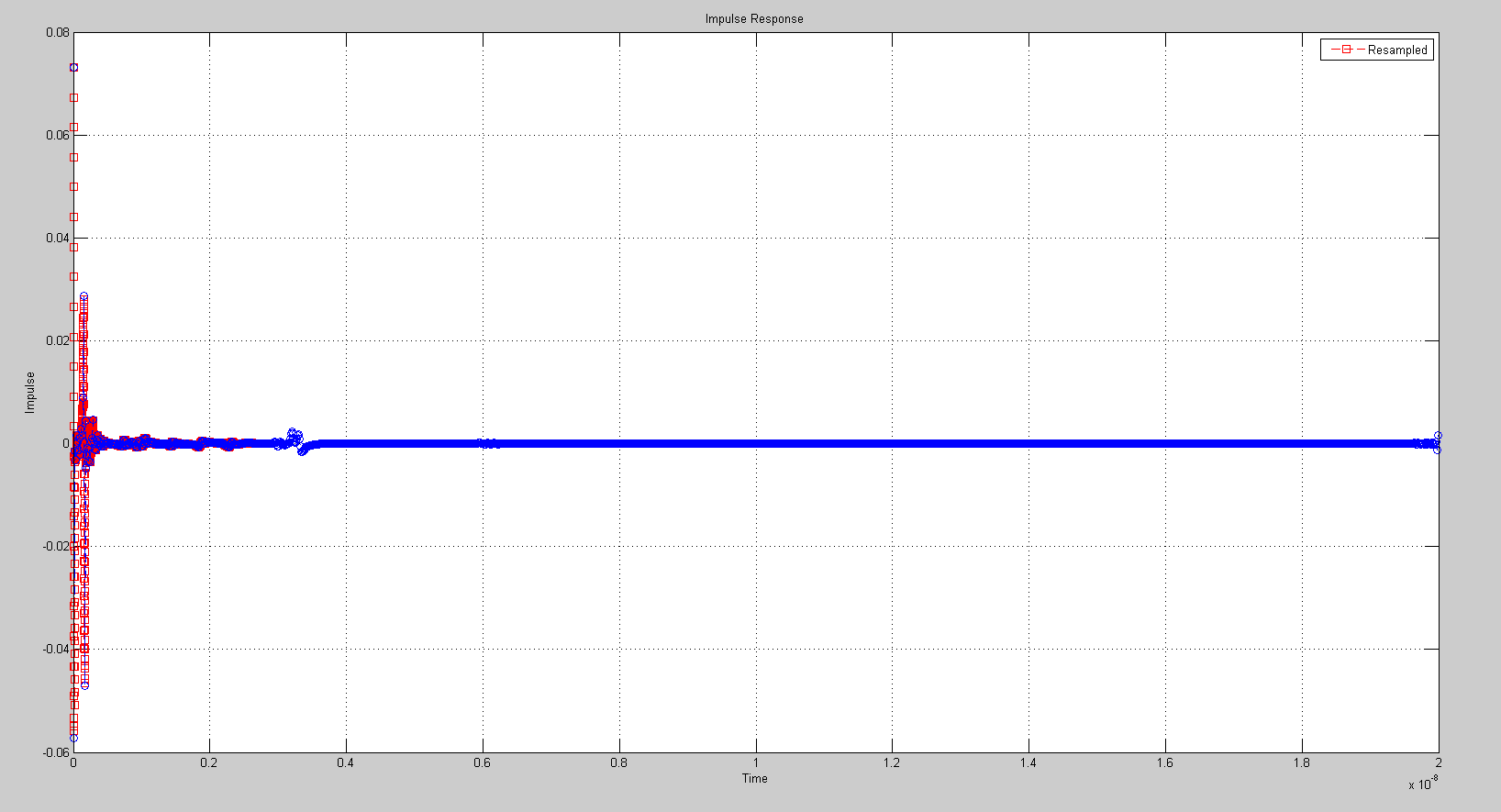
% ylabel('Impulse');

% legend('Whatever');

% grid on;

The channel impulse response looks like this:

I don’t know if this is a good one. When I use the code in amiinit\_1207a\_test\_i7683 to get the impulse response, it looks much different than the one above. Like:



Could you tell me if I made some mistakes?

And another problem, when I run my code in %% IBIS AMI\_Init section, the MATLAB just crashed and forced me to exit. I don’t know how to deal with it. However, I can run amiinit\_1207a\_test\_i7683 without this problem.

I need your help.

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