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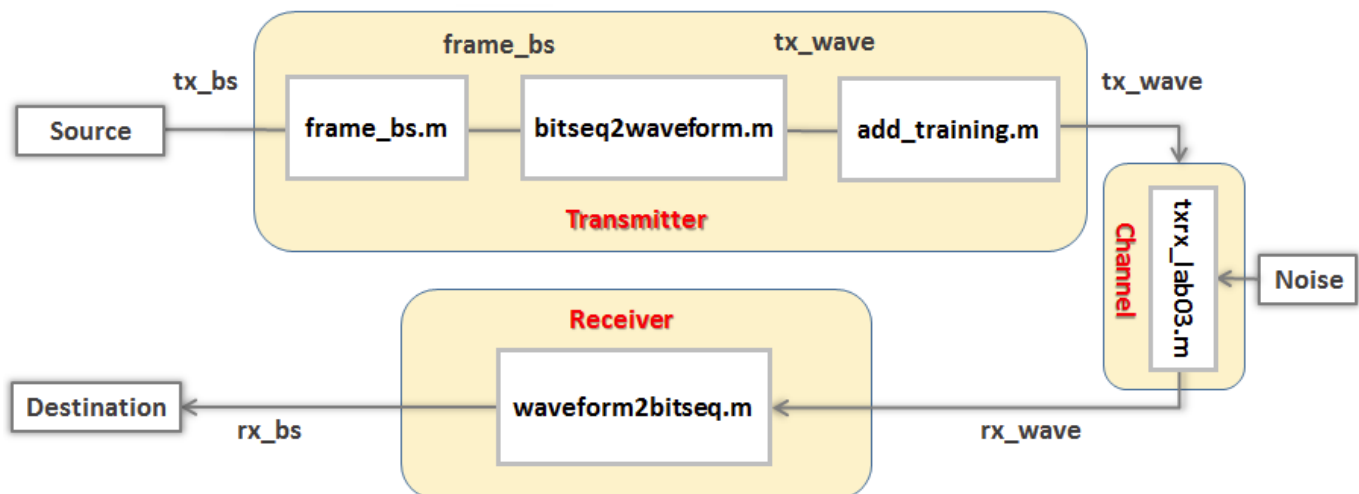
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LAB 4 - PERFORMANCE EVALUATION (SANDBOX)

In this task, you will evaluate the performance of a communication system operating at various bit rates. To adjust the bit rate, you will change the bit time in samples per bit (SPB).



```

1 tx_bs=rand(1,1280)>0.5; % generate sequence of 1280 random bits
2
3 SPBlist = 1:15;          % list of bit times to test
4 num_SPB = length(SPBlist); % number of bit times to test
5 BER = zeros(1,num_SPB); % initialize bit error rate array
6
7 for i = 1:num_SPB,      %generate the SPB list
8     SPB = SPBlist(i);
9     tx_wave = format_bitseq(tx_bs,SPB); % create waveform following protocol
10    rx_wave = txrx_lab03(tx_wave);      % simulate channel
11    rx_bs = waveform2bitseq_lab04(rx_wave,SPB); % decode received waveform
12    BER(i) = compute_BER(tx_bs,rx_bs); % compute the BER
13 end
14
15 figure(1);

```

Correct

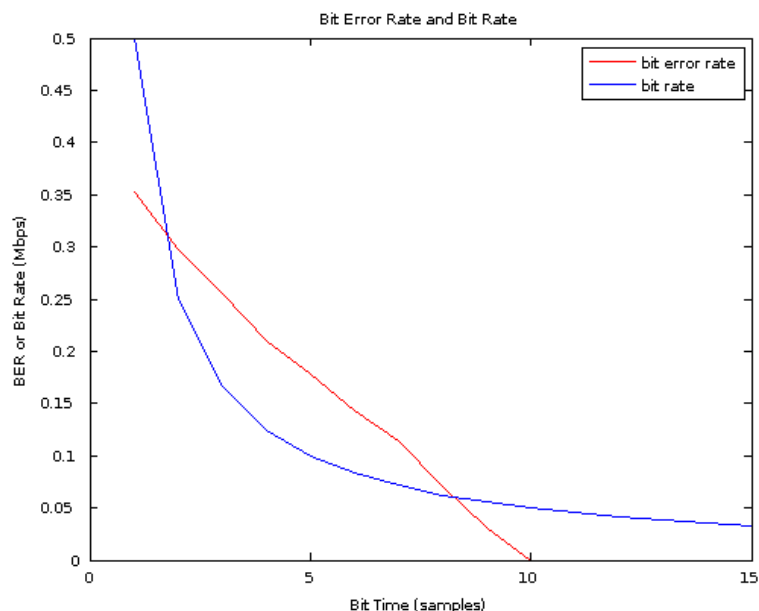
```

bitrate = 0.5./SPBlist;
plot(SPBlist,BER,'r');
hold on;
plot(SPBlist,bitrate,'b');

```

Help

Figure 1



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