E6712: Homework 3

Due date: March 29, 2005

1. Write a simulation program to evaluate the error-rate performance of the intersymbol-interference channel with the transfer function $F(D) = (1 - D)/\sqrt{2}$ with bipolar inputs -1 and 1 in the range of $E_b/\mathcal{N}_0$ from 0 to 12dB. Plot the results on the same graph with a BPSK error-rate curve using the logarithmic scale for the error probability axis.

2. Write a simulation program to evaluate the error-rate performance of the intersymbol-interference channel with the transfer function $F(D) = (1 - D)(1 + D)^3/\sqrt{10}$ with bipolar inputs -1 and 1 in the range of $E_b/\mathcal{N}_0$ from 0 to 12dB. Plot the results on the same graph with BPSK error-rate curve using the logarithmic scale for the error probability axis.