HKUSTx: ELEC1200.1x A System View of Communications: From Signals to Packets (Part 1)

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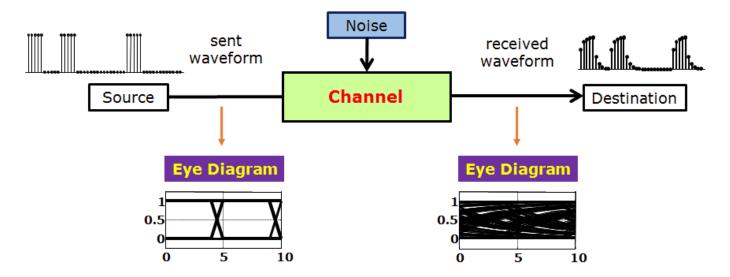
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LAB 5 - OVERALL OBJECTIVES

The exponential channel response will cause intersymbol interference, especially when the bit time is small. The objective of this lab is to investigate the effect of the exponential channel response on the BER performance of a communication system. For that purpose, we shall utilize eye diagram as a measure of the intersymbol interference (ISI) and observe the eye diagram of the received waveforms with different bit times. Then, we shall investigate the effect of the exponential channel response on the BER perforamnce with different bit times (SPB).



There are three tasks in this Lab.

In task 1, you will write a program to generate the eye diagram of the received waveform.

In task 2, you will generate the eye diagrams of the received signals with different bit times to visualize how changes in the bit time affect the bit error rate (BER).

In task 3, you will investigate how changing the sampling point affects the BER.

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