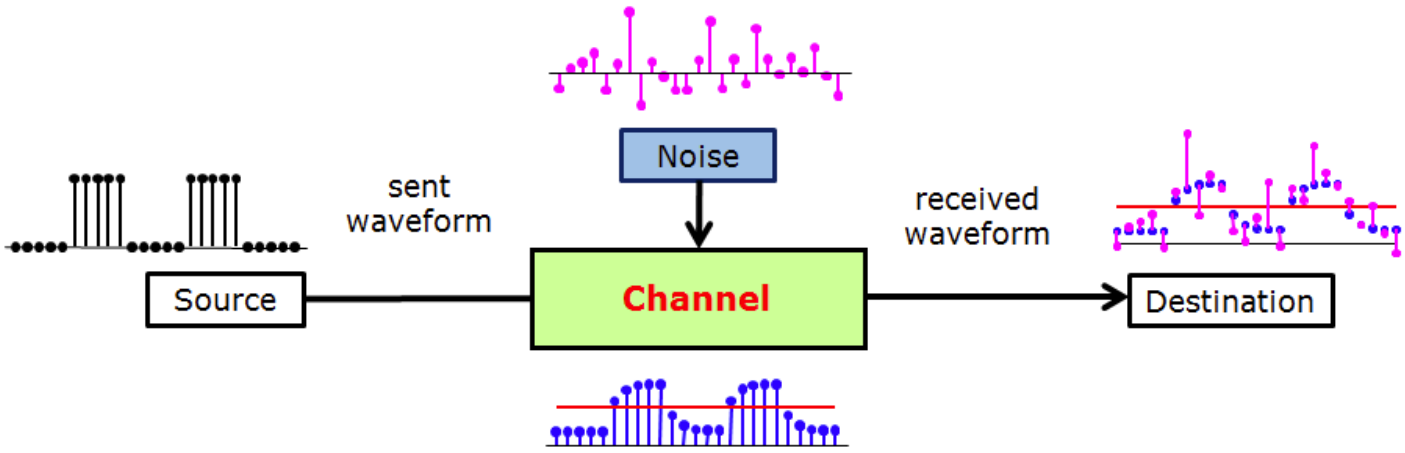
LAB 7 - OVERALL OBJECTIVES

In this lab, you will characterize how the input to the channel, the transmission distance and the noise affect the distribution of the signal received at the output of the communication channel.



There are four tasks in this Lab.

In task 1, you will write a program to visualize the statistical distribution of the channel output when the bit input is "0" using a histogram.

In task 2, you will compare the histograms computed from different numbers of samples to the predicted histogram assuming the noise samples come from a Gaussian distribution.

In task 3, you will compare the distributions of the received signals when the input bits are "0" and "1".

In task 4, you will investigate how the histograms of the received signals vary as the transmission distance changes.

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