

Exam presentation

Assignment 2.1 and 3

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Overview

- Assignment 2
 - Eye diagrams
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- Assignment 3
 - Link budget model
 - SNR and P_E
 - Alternative modulations

Eye diagram

- Plot composed by overlaying segments of different bit sequences
- Can be generated with an oscilloscope
- Shows effects of *inter-symbol interference*
- Provides a qualitative measure of the system performance

Eye diagram characteristics

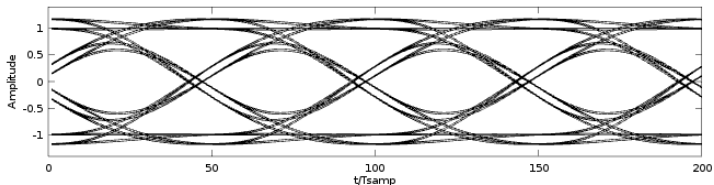


Figure: Eye diagram of BPSK signal

- A Difference between high and low levels
- A_j Difference between A and the eye opening
- T_j Deviations from ideal timing
- T_b Bit time period

Eye diagram at different bandwidths

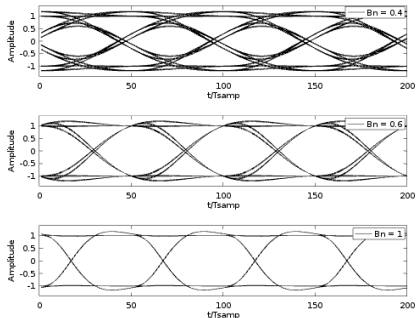


Figure: Eye diagram for normalized bandwidths 0.3, 0.7, 1.2

- Low BW: high amplitude and timing jitter
- High BW: no ISI, chances of higher noise

