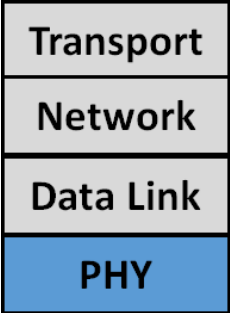
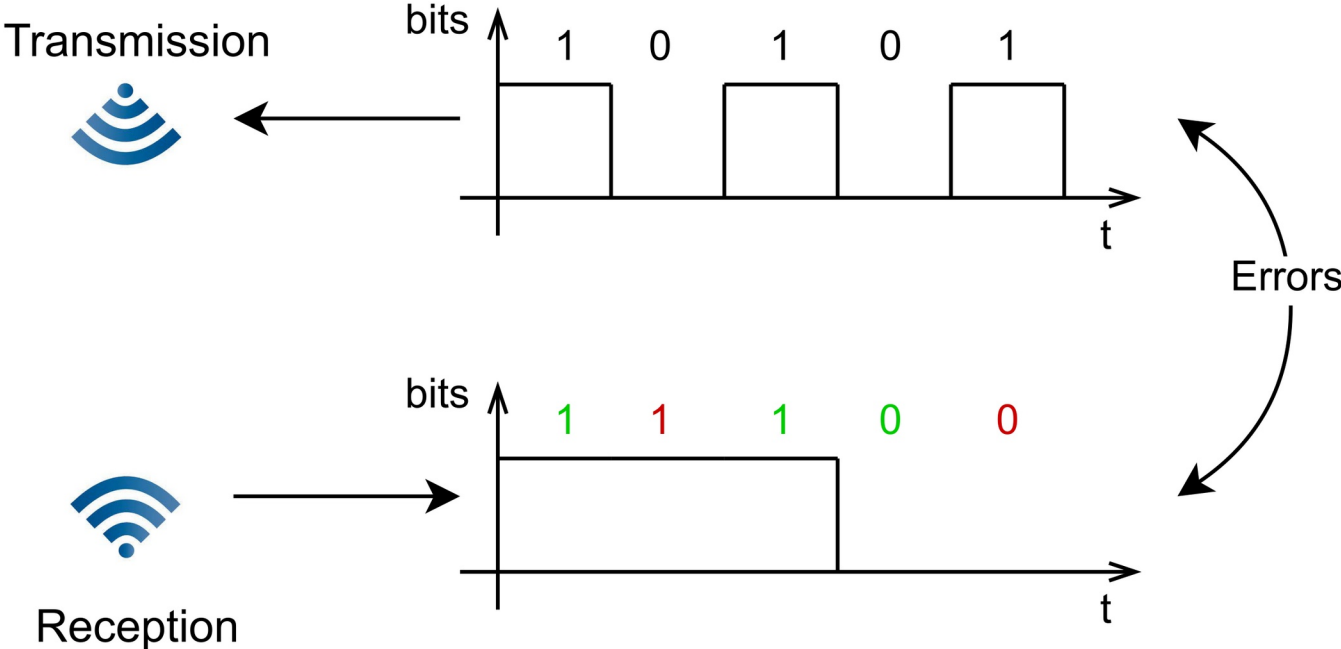


# Lab 1: Bit error patterns using Gilbert-Elliot model

**Objective:** Learn to generate bit errors

**Q&A session:** -

**Deadline:** 28.04.2026 23:59



# Lab 1: Bit error patterns using Gilbert-Elliot model

- To implement in Matlab a bit-error generator according to the Gilbert Elliot-Model.

- Inputs to the program:

- Channel state transition probabilities:

$$p_{gg} = 0.99, p_{bb} = 0.1$$

- Total number of bits to be simulated ( $10^6$ ).

- Outputs from the program

- Sequence of states.
- Bit error rate (BER)
- Histogram regarding the gap-size between consecutive errors.

- Submission (zip file):

- Your code.
- A pdf report with: value for the BER, histogram figure for the gap-size, and your remarks on the findings when comparing to the transition probabilities.

