ECE 4331, Fall, 2009

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Class 19

Oct. 29th, 2009

Project

- Due 11/19/09.
- Design your own modulation and demodulation
- Show time signal, eye diagram, and constellation for no noise, SNR=0, SNR=5dB and SNR=10dB. (1 point)
- Calculate BER for SNR=0. SNR=2.5dB and SNR=5dB, compared with theoretic result. Change symb to sufficiently large. (2 point)
- For QPSK and 16QAM, redo the above step (2 point)
- Transmit images (3 point)
  - Test small image first
  - Alignment for both sampling and data
  - Calculate PSNR for SNR=0dB, SNR=2.5dB, and SNR=5dB.
  - Print images
- Timing: sampling at the wrong time. 2 point
  - 1/16, 2/16, … for BER vs. SNR, PSNR vs. SNR

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