20SK – Signals and Codes

Lecture 08x – Introduction to Digital Communications (2015/11/20)

Topics discussed:

- An additive white Gaussian noise (AWGN) channel
- Linear Gaussian channel model
- Source-channel separation theorem
- Error correction, channel capacity
- Channel capacity for a band-limited AWGN channel
- Example of channel capacity for POTS line

The relevant literature to study is [1, chapter 1].

Resources

[1] Gallager, R.: Course materials for 6.450 *Principles of Digital Communications I*, Fall 2006. MIT OpenCourseWare (http://ocw.mit.edu/), Massachusetts Institute of Technology.