

20SK – Signals and Codes

Lecture 1 – Introduction to Digital Communications (2015/10/01)

Topics discussed:

- Digital communication systems, binary interface between source and channel
- Source coding/decoding and channel coding/decoding
- Reasons why communication systems now usually contain a binary interface between source and channel (i.e., why digital communication systems are now standard)
- Standardized interfaces and layering
- Source coding/decoding layer for a waveform source
- Entropy of a discrete signal source, examples

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.