

ECE 4660

Homework 5

Reading

- Chapters 1 and 2 in Anderson.

Problems

The following problems are based on the reading in Chapter 1 of the Anderson text:

1. Explain the two important reasons for carrier transmission.
2. A new theory of optimal communication was developed in the 1940's and 1950's that worked best with symbolic or "digital" transmission. This theory would have remained an academic curiosity had a new idea not come along. What was this new idea and how did it make digital communications a practical reality.
3. The classic analog communication trade-off is between power and bandwidth. With digital communications, there is a three-way trade-off. What is it?
4. Summarize the 6 reasons Anderson gives for the digital communication revolution. Which one do you think is the dominant reason? Why?