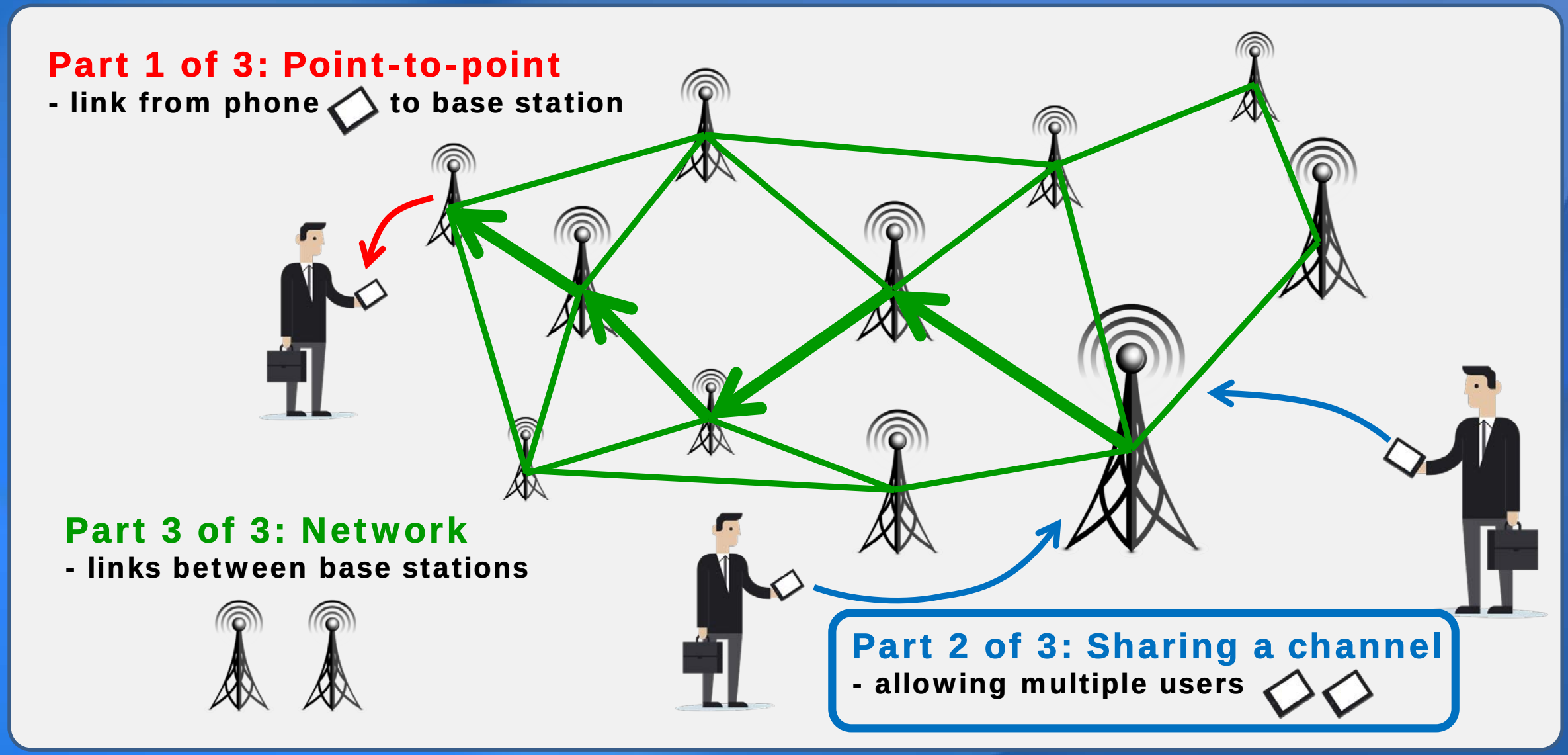
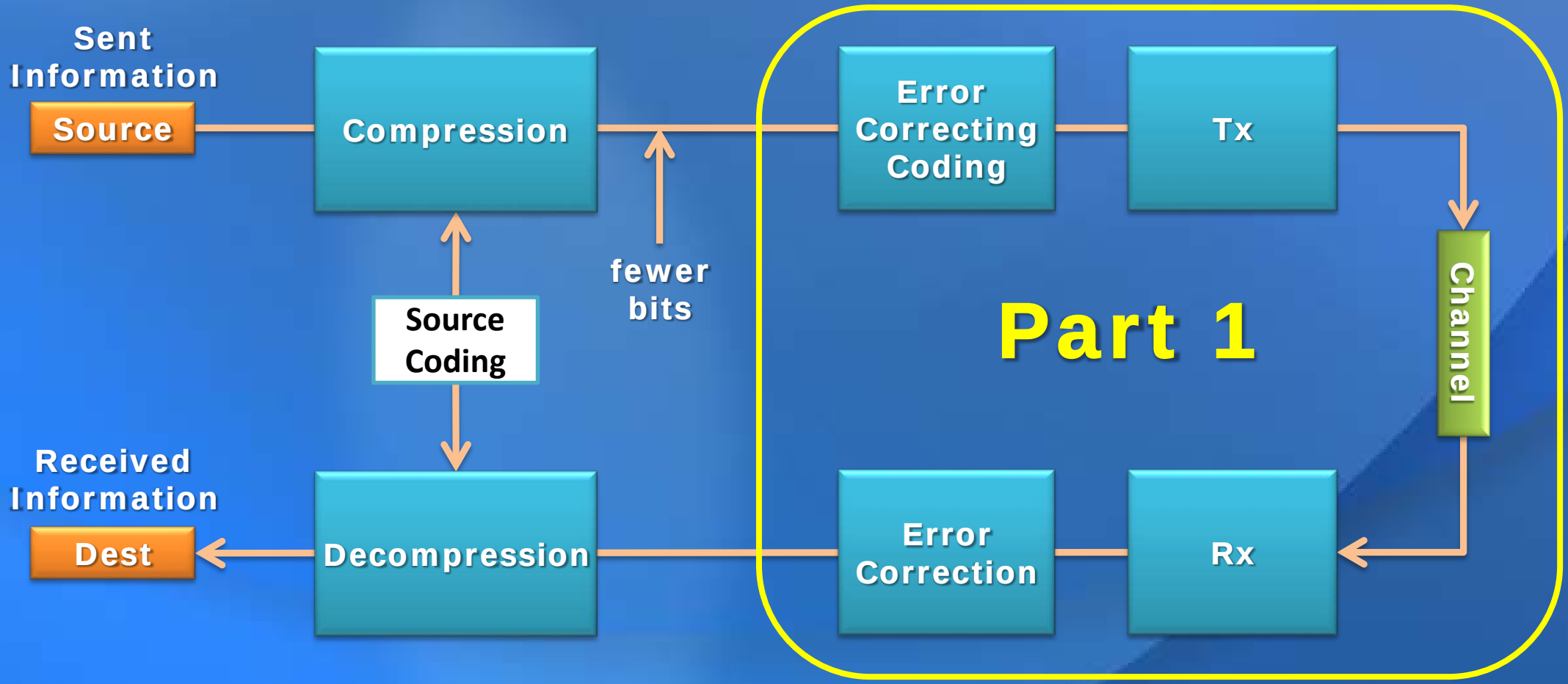
Course Overview

How to transmit information wirelessly?

How to transmit information wirelessly?



Source Coding



Types of Source Coding

Lossless Compression (Topic 2)

- Output exactly same as input.
- Usually used for digital content
- Key Concept: Entropy

Lossy Compression (Topic 4)

- Output “similar” to input
- Often used for audio and video
- Key concept: Frequency domain analysis (Topics 3 & 6)

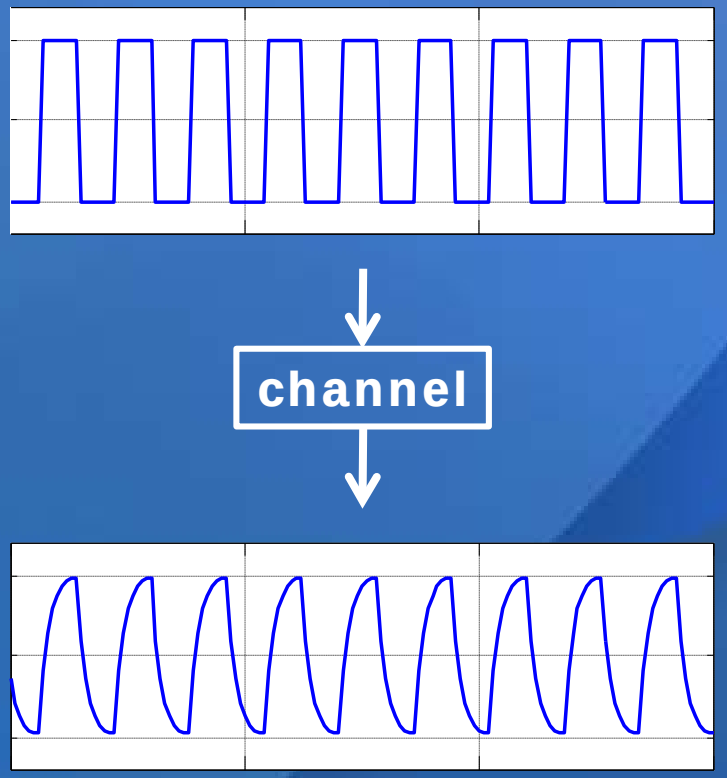
Filtering

(Topic 5)

input = ■ + · + • + ●

output = 100% ■ + 90% ·

+ 10% • + 1% ●



Sharing a Channel

- Sharing a channel is known as multiplexing.
- Multiplexing methods
  - Space-division
  - Time-division
  - Code-division
  - Frequency-division
    - Topic 7: Modulation
    - Topic 8: Demodulation
    - Topic 9: IQ Modulation