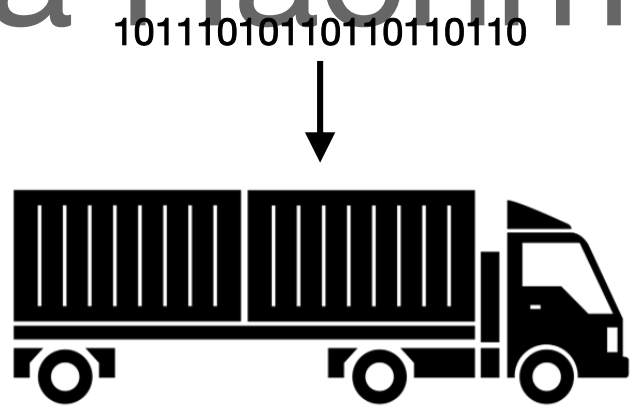


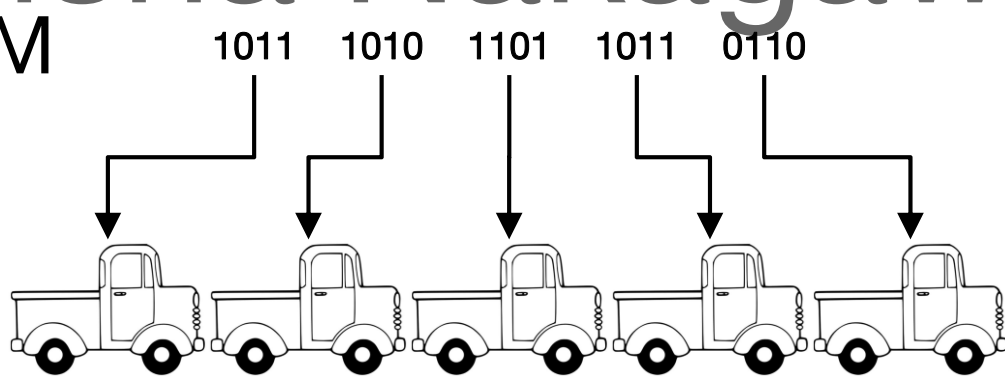
Orthogonal Frequency Division Multiplexing (OFDM)

Lisa Hachmann, Anisha Nakagawa, Paige Pfenninger

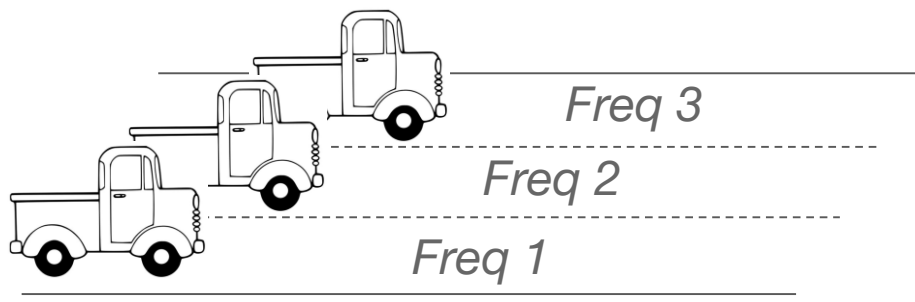
Other modulation methods



OFDM

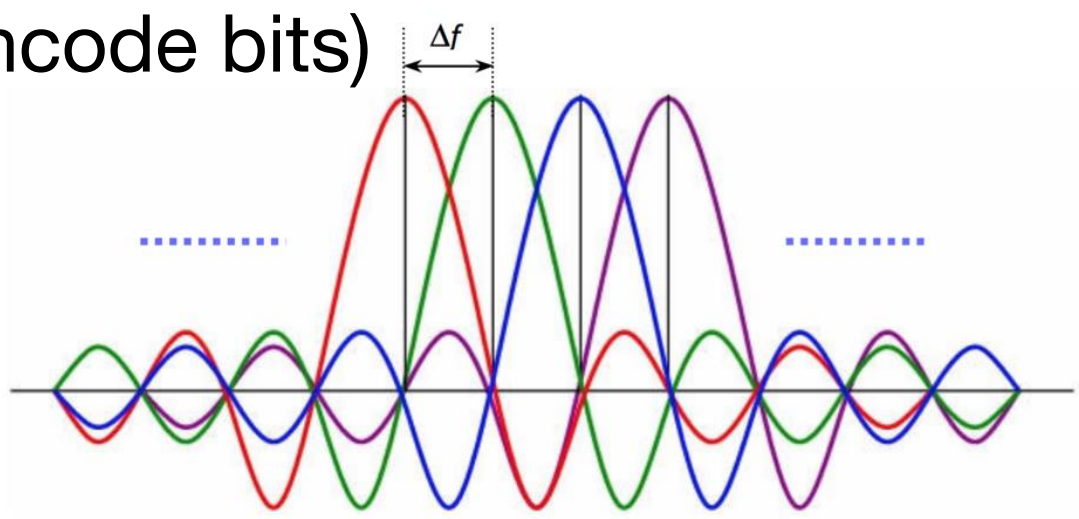


OFDM over multiple frequencies

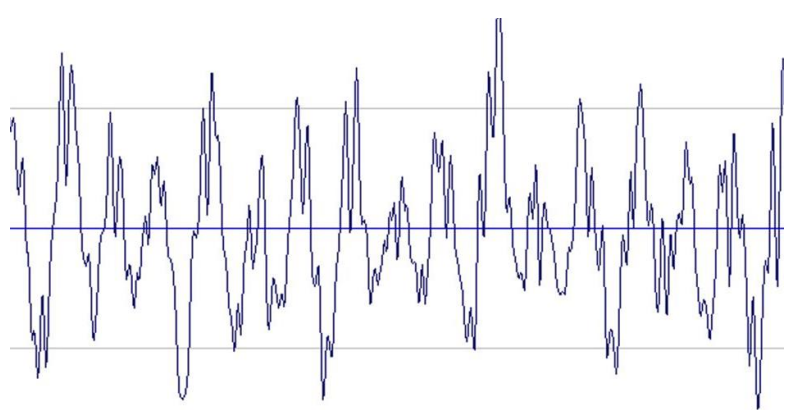


OVERVIEW IN CONTINUOUS TIME

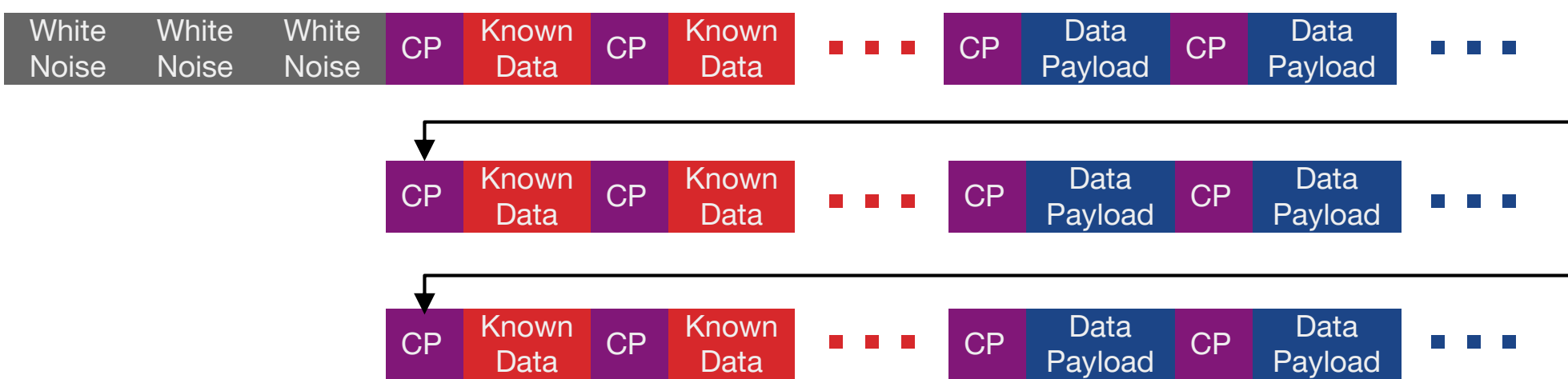
Orthogonal Frequency Carriers (encode bits)



Transmit in Time



Data Structure



TRANSMITTER



Transmitted String:

Orthogonal-Frequency-Division Multiplexing (OFDM) is a method of modulating data



Time for transmission: 0.0032 s
Total bits sent: 2352
Total data sent: 960
Data Rate: 300,000 bits/s
Bit Error Rate: 0.104%

RECEIVER



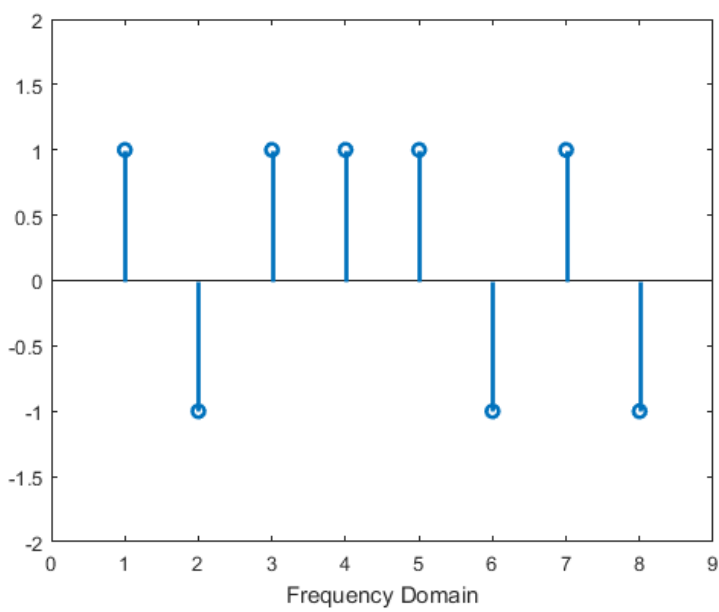
Received String:

Orthogonal-Frequency-Division Multiplexing (OFDM) is a method of modulating data



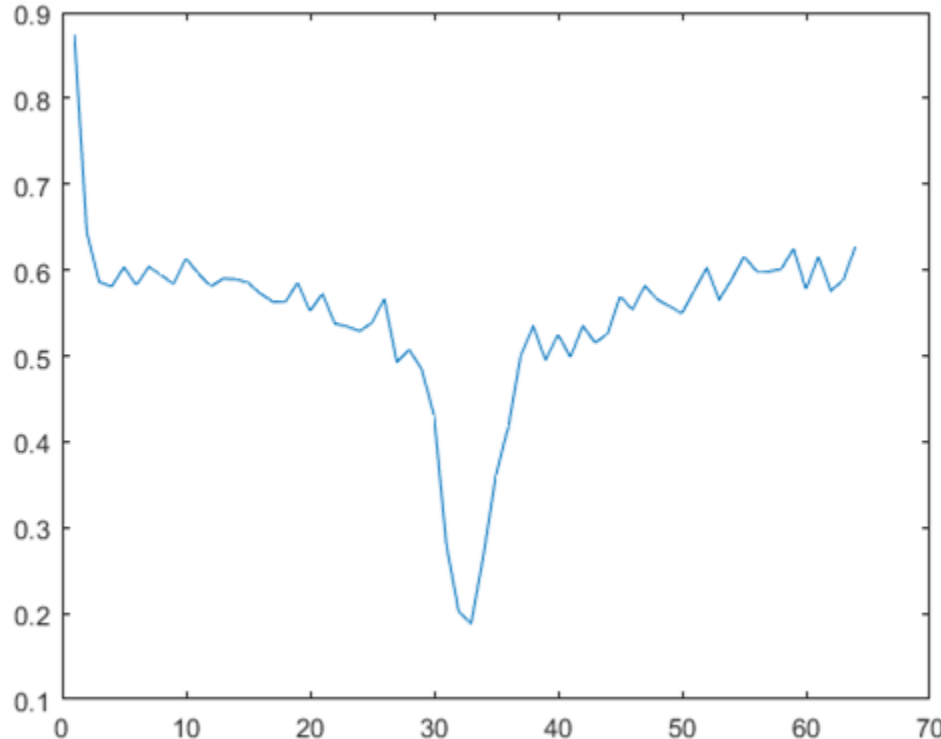
IMPLEMENTATION IN DISCRETE TIME

Data in Frequency



Encode data in frequency domain, which correspond to “cosines”. Each bit here represents a different cosine frequency.

Channel Estimation



Received Data

