

Lecture 34: wireless communications and WiFi

huge difference between input and output

path loss - distance to sender

attenuation - obstacles

multipath - self-interference (good/bad)

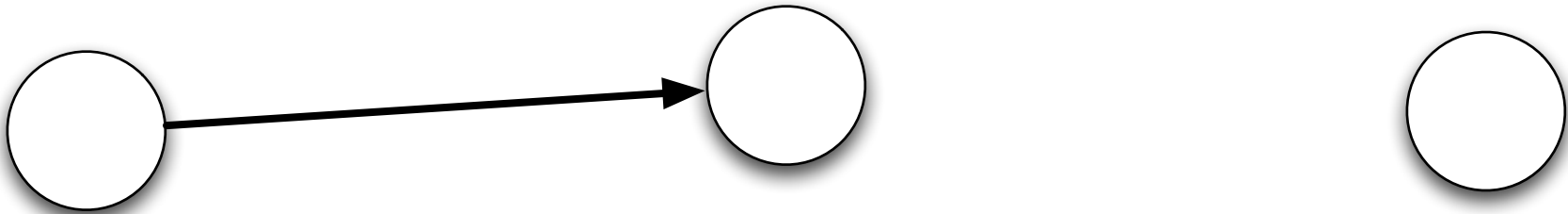
mobility - diversity in signal quality

interference - other transmissions

noise - (thermal noise), cosmic radiation

hidden terminal problem

Hidden terminal problem

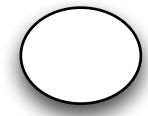
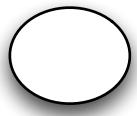


1 dBm = 1 mW

+ tx antenna gain

+ rx antenna gain

-(path loss + attenuation + link margin)



tx power

receiver sensitivity

26 dBm

-94 dBm

120 dB