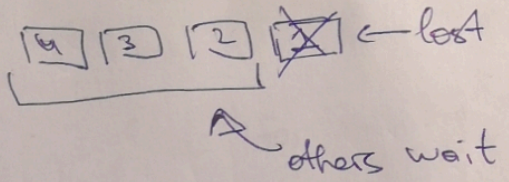
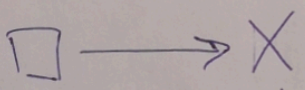
UDP

No Head-of-line Blocking! (H



UDP/TCP



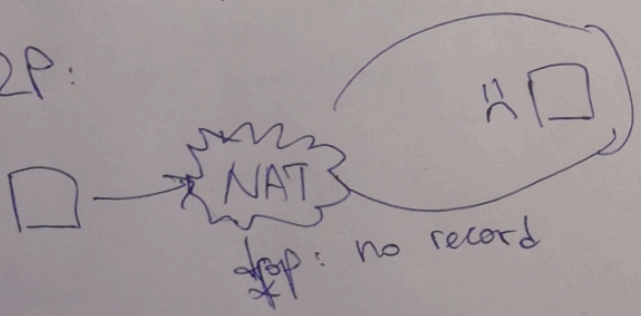
packet dpop

why?

may be NAT dropped your record

fix: keepalive

P2P:



Channel capacity:

bitrate of the channel ← signal

$$C = BW \cdot \log_2\left(1 + \frac{S}{N}\right)$$

BW ← bandwidth available (hertz)

N ← noise

Bandwidth

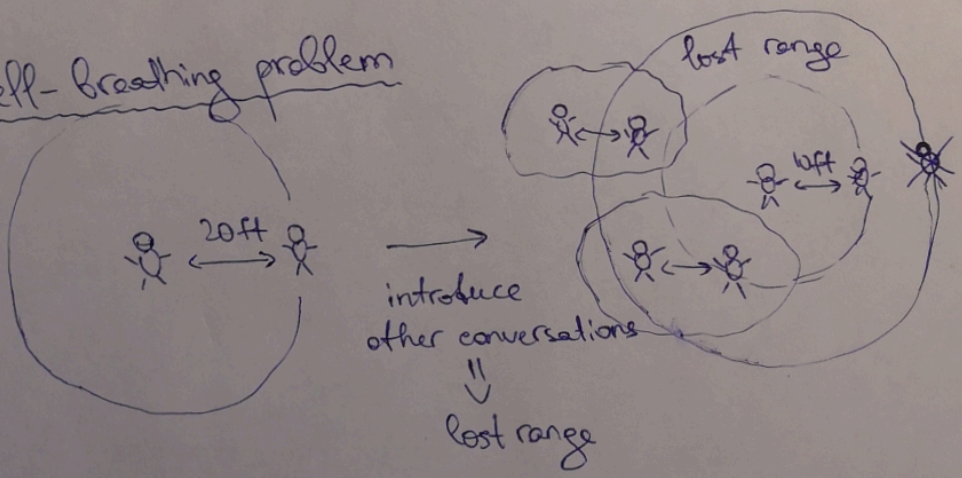
~~x2~~ x2 BW for wireless technology => x2 bitrate

Low-frequency: travel farther, require large antennas, many clients competing for access.

High-frequency: won't travel far, can transfer more data

Signal power

Cell-breathing problem



Near-far problem

capturing strong signal makes it impossible for the receiver to detect weaker signal

Real-World analogy: crowded party.

modulation scheme matters: bits 01001 → radio waves