

ARQ Protocols

Where are we?

- Stop-and-Wait ARQ: “Safe” and “Live”

Next:

- Can we implement Stop-and-Wait ARQ
- Is Stop-and-Wait ARQ efficient?

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ARQ Protocols

Where are we?

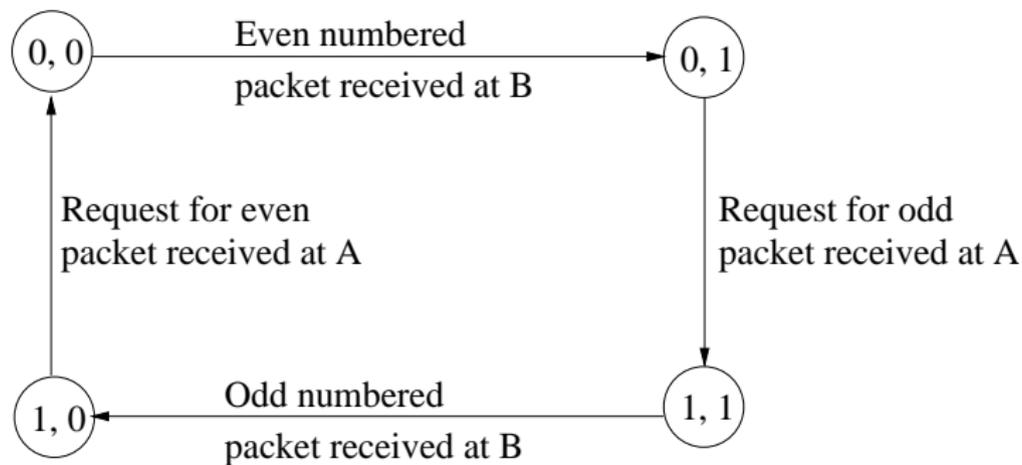
- Stop-and-Wait ARQ: “Safe” and “Live”

Next:

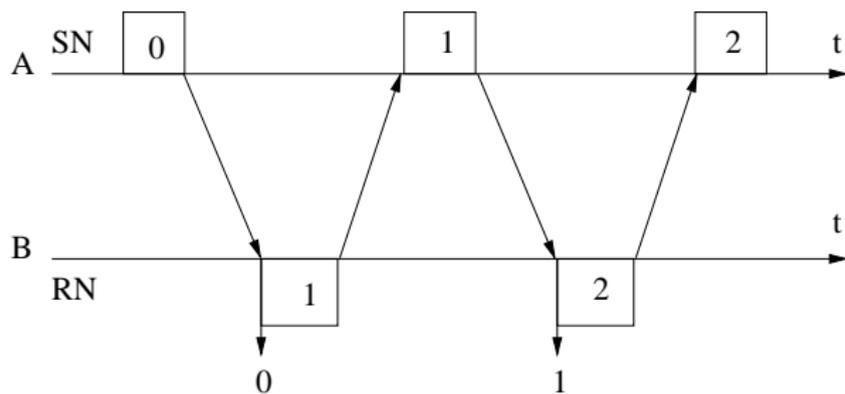
- Can we implement Stop-and-Wait ARQ
- Is Stop-and-Wait ARQ efficient?

Sequence Numbers/Request Numbers

Stop-and-Wait ARQ Using Modulus 2



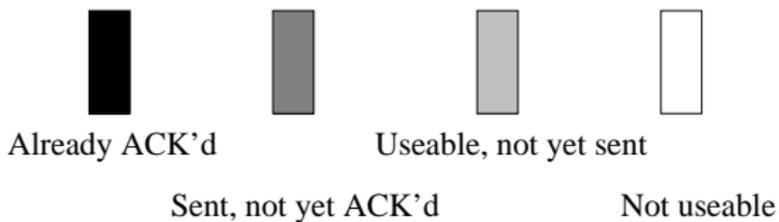
Is Stop-and-Wait Efficient?



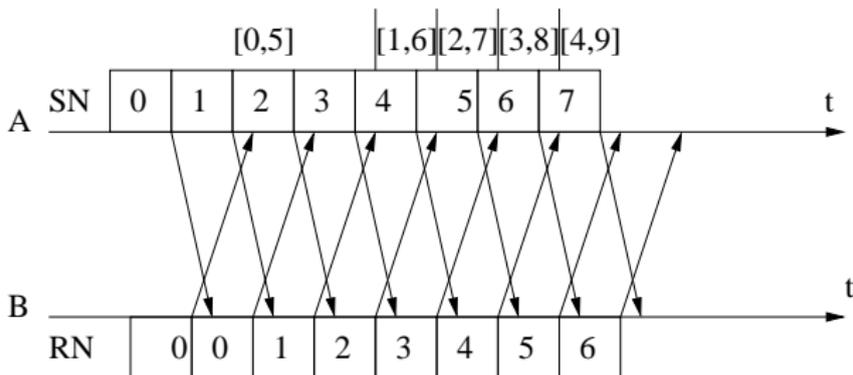
Go-Back n ARQ



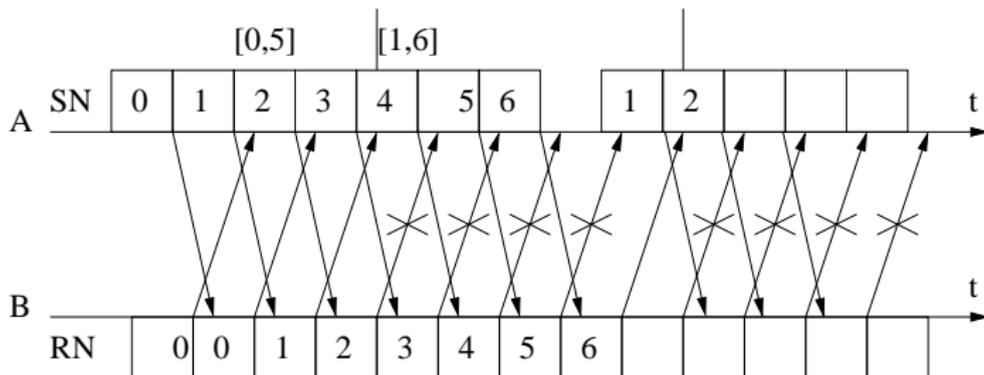
Window size n



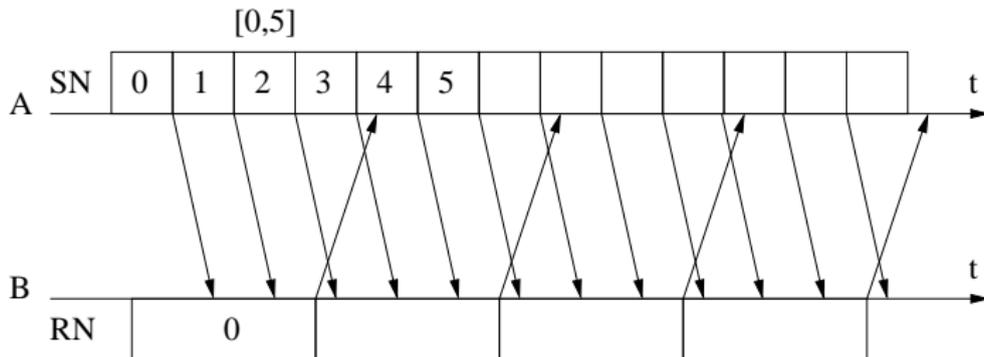
Go-Back n ARQ



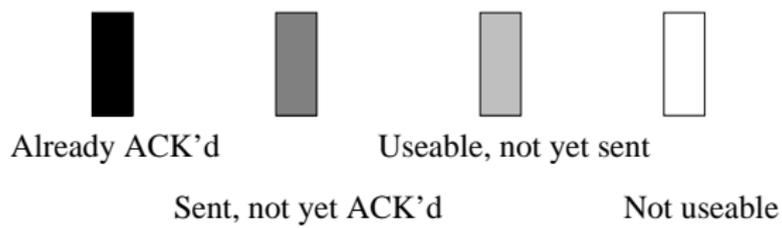
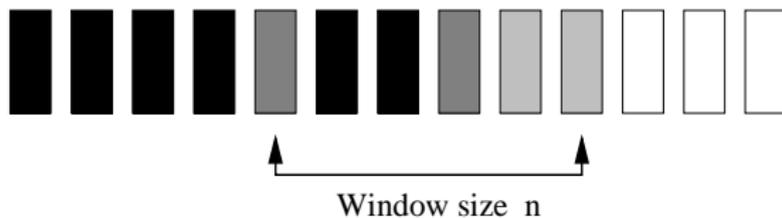
Go-Back n ARQ



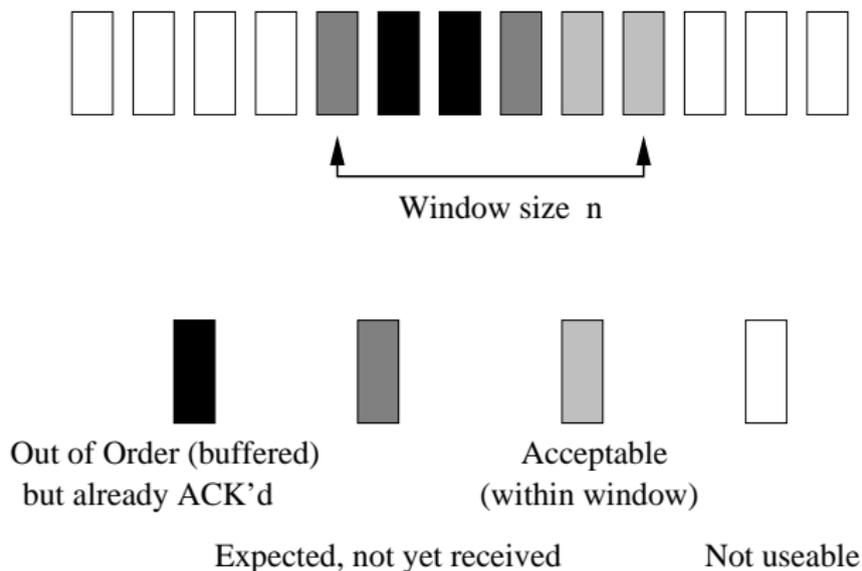
Go-Back n ARQ



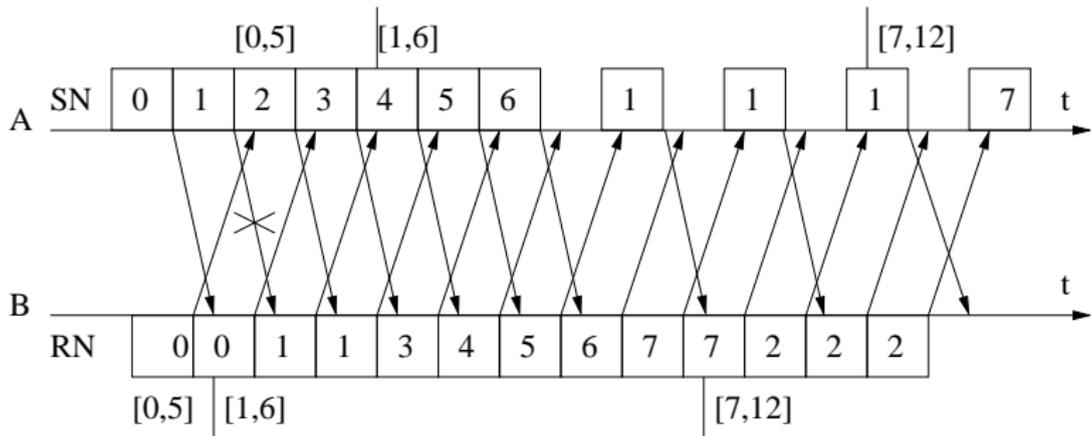
Selective-Repeat ARQ: Sender



Selective-Repeat ARQ: Receiver



Selective Repeat ARQ



Conditions for Modulus m

- Go-Back n ARQ: $m > n$
- Selective Repeat ARQ: $m \geq 2n$