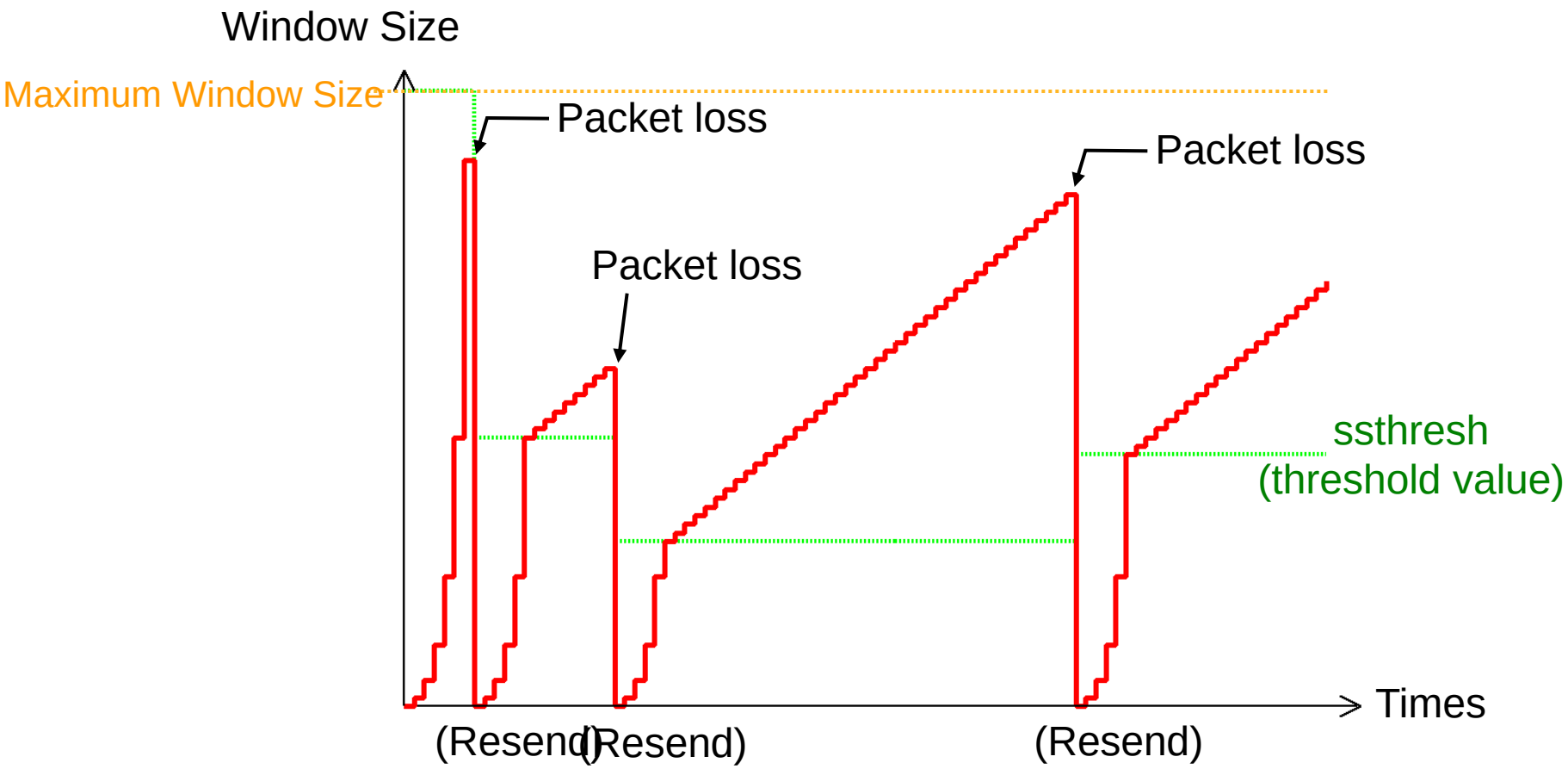
Various TCP2— Reno

Practice 1

Information and Communications Technology
Internet Engineering

Window Control of TCP Tahoe (Review)



TCP Reno：Fast Recovery

- Problem of Tahoe: Window size extremely fall
  (Window size fall into 1)

- Detect packet loss by duplicate ACK:
  - If reply ACK come, traffic congestion is not very serious

  ⇒ Decrease Window size by a half
  →Avoid Congestion phase
  fast recovery

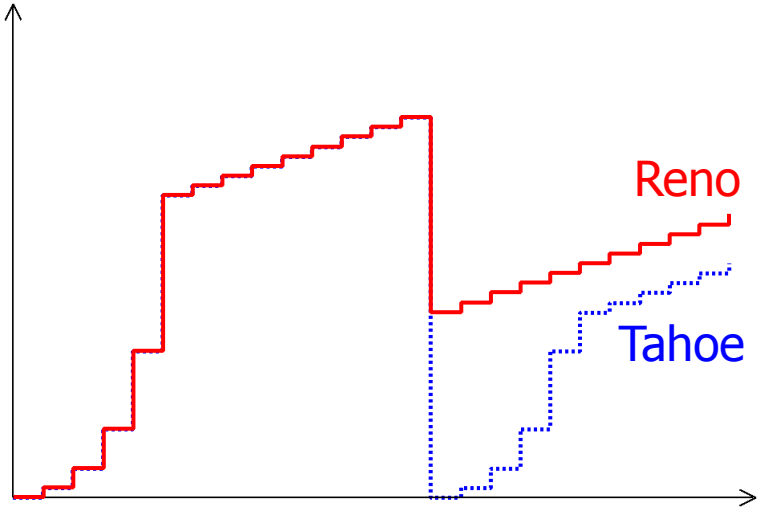
- Detect packet loss by time out
  - Since ACK can not return, traffic congestion is serious:

  ⇒ Window size is fall to 1→Slow start phase

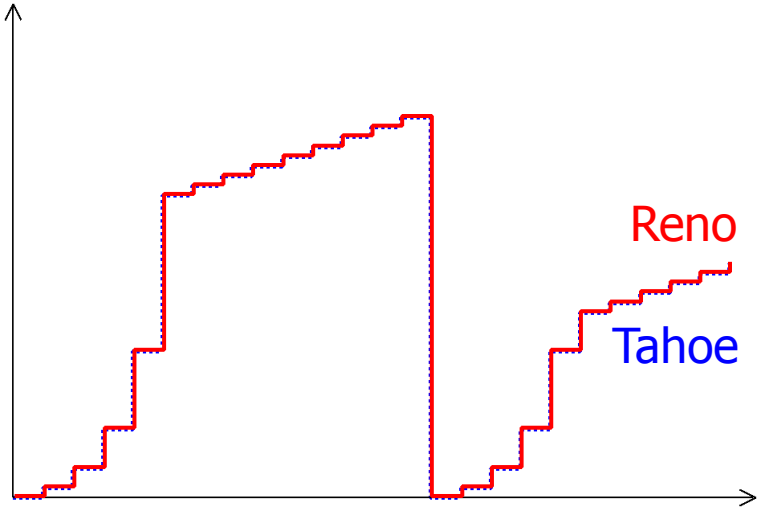
(Similar to Tahoe)

Tahoe and Reno —Window Size—

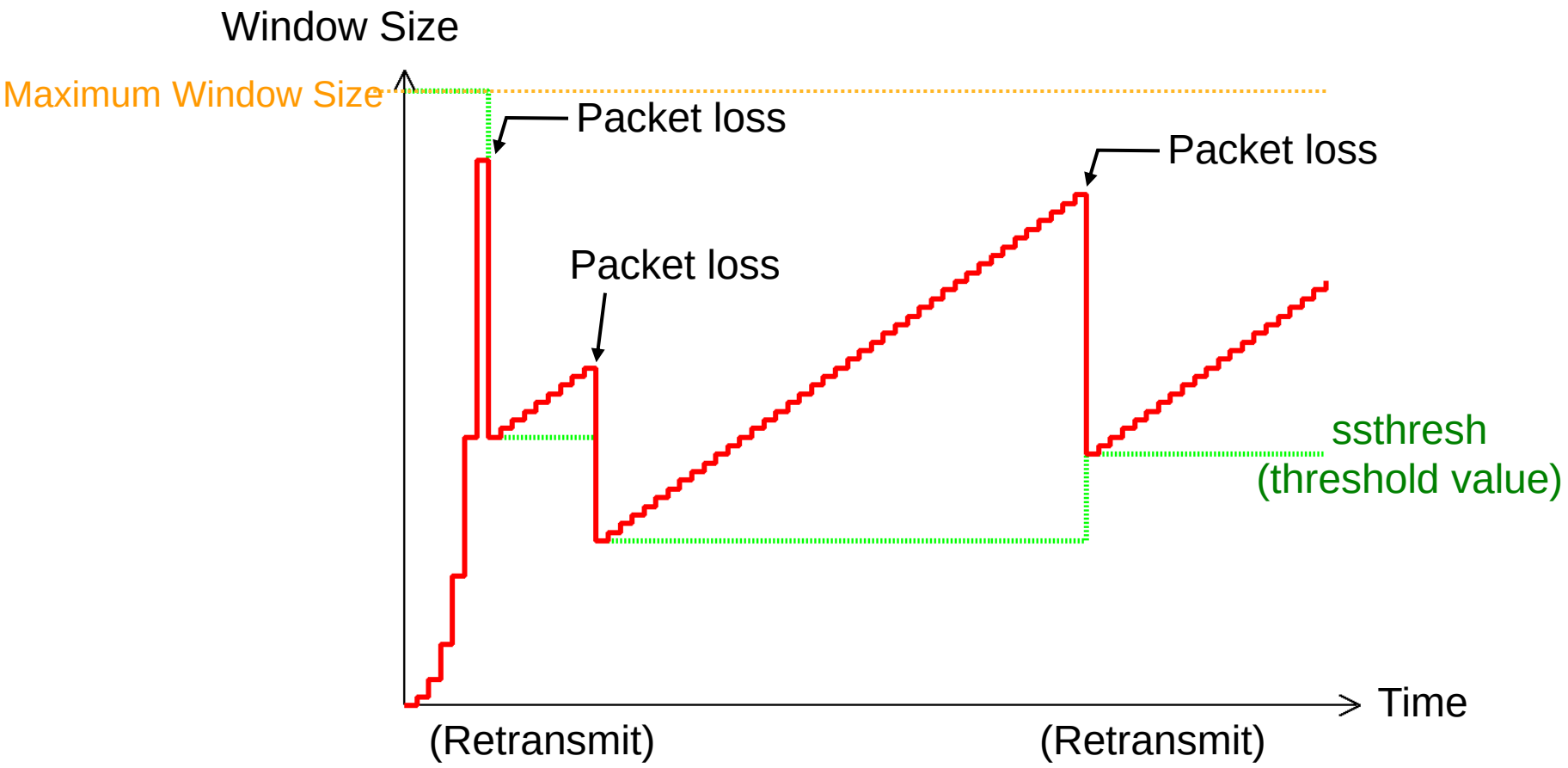
- Detect packet loss by duplicate ACK:
  - Tahoe
    - Window Size→ 1
  - Reno
    - Window Size→ a half



- Detect packet loss by time out:
  - Tahoe
    - Window Size→ 1
  - Reno
    - Window Size→ 1

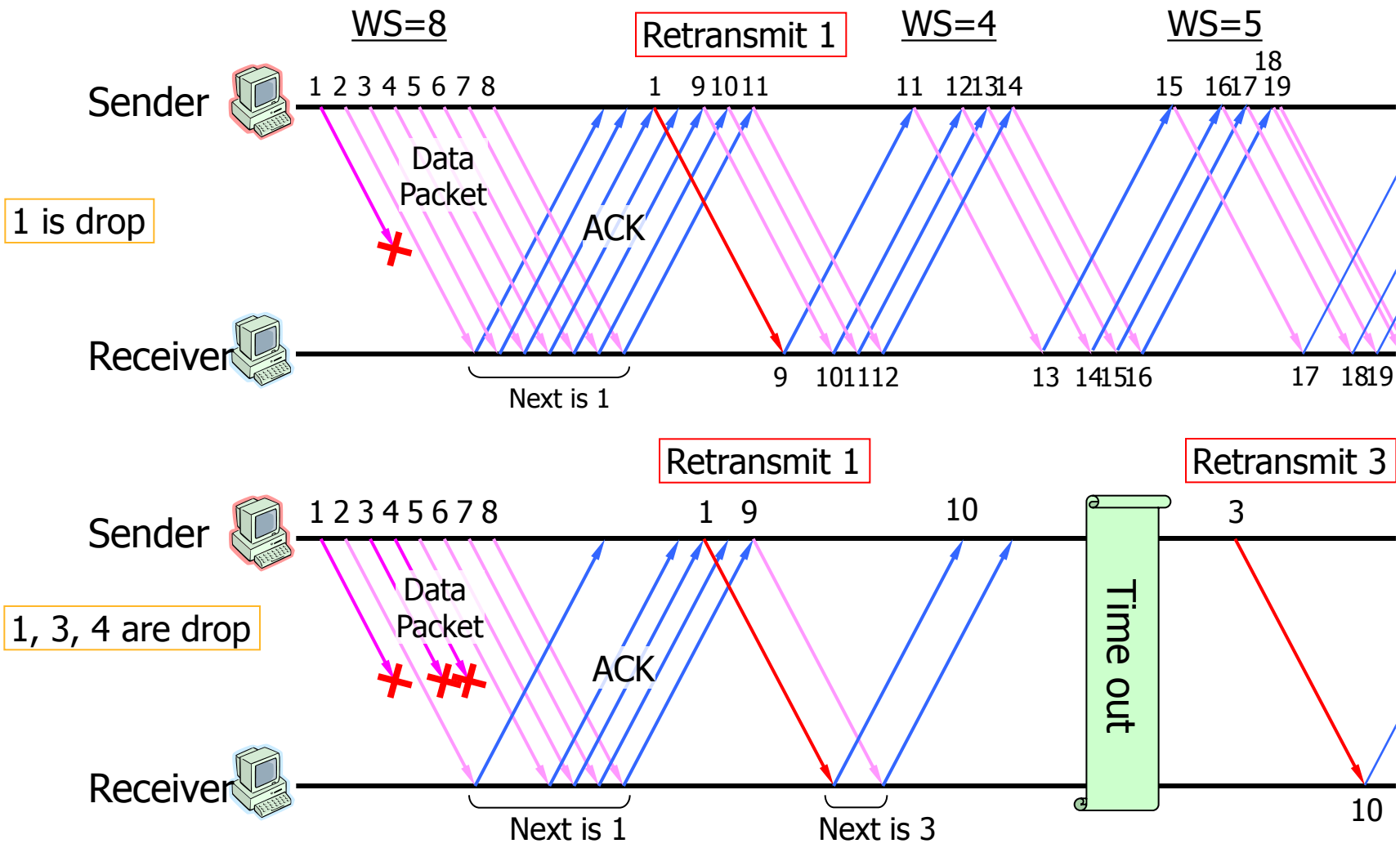


Summarize of TCP Window Control (Reno)



Reno doesn't perform well case

WS: Window Size



Duplicate ACK is not enough ! → Time out → Retransmit

TCP …… ?

- How to combine the reliability and efficiency? (which is efficiently retransmit?)
- Which is the best algorithm to define the window control according to network state
- What is approach to solve problem for each typical network

Wired		Wireless (Including satellite)		Ad Hoc
TCP Tahoe TCP Reno TCP Newreno TCP SACK TCP Vegas ECN	HighSpeed TCP FAST TCP Hamilton-TCP Scalable TCP BIC-TCP CUBIC-TCP TCP Aflica MulTCP Adaptive-TCP LTCP Hybla	TCP-Peach TCP-Westwood Freeze-TCP ILC-TCP JTCP TCP Veno TCP-Casablanca TCP-DCR TCP-Jersey TCP-Probing TCP-Santa Cruz Delayed Duplicate ACK	I-TCP M-TCP METP Snoop ELN EBSN BA-TCP	Ad hoc TCP DelAck ELFN TCP-ADA TCP-DOOR TCP-Feedback TCP-Bus Fixed RTO Split TCP DDA

Experiment 2-2