RadioACKtive

Scenario 1: Everything is OK

* ACK Sent by Server?
  + Yes
* Client Retransmission?
  + No
* Additional Actions:
  + Server processes the data and advances its receive window

Scenario 2: Packet Loss

* ACK Sent by Server?
  + No
* Client Retransmission?
  + Yes, client triggers retransmission after an RTO (Retrasmission Timeout)

Scenario 3: Packet Duplication

* ACK Sent by Server?
  + Yes (But lost)
* Client Retransmission?
  + Yes. The client resends the packet after RTO expires
* Additional Actions:
  + Server discards the duplicate packet (sequence number already acknowledged)

Scenario 4: Packet Corruption

* ACK Sent by Server?
  + No. The server detects corruption via checksum and drops the packet
* Client Retransmission?
  + Yes
* Additional Actions:
  + Corruption is logged (if enabled) for network diagnostics

Scenario 5: Out-of-Order Packet Delivery

* ACK Sent by Server?
  + Yes
* Client Retransmission?
  + No
* Additional Actions:
  + Server reassembles packets once missing segments arrive