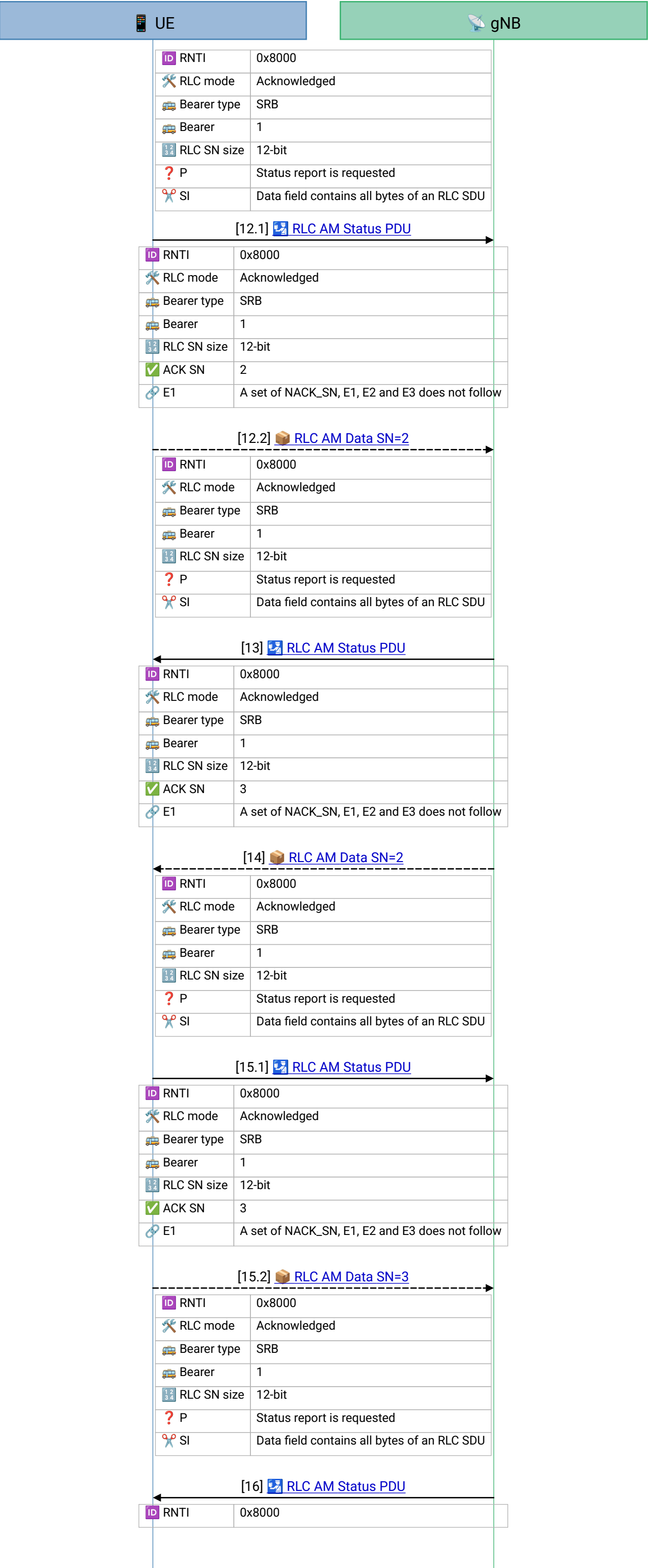




NAS payloads are ciphered with keys this capture does not carry, so the inner detail goes dark; the RLC layer, which never sees plaintext anyway, carries on exactly the same.

[Frame 12.1] Two RLC PDUs, one radio transmission. This frame is a single MAC transport block carrying *both* a 3-byte STATUS PDU and an 85-byte data PDU on the same logical channel. The status half comes first: ACK_SN=2 clears the downlink SN 0 and 1.

Piggybacking control onto a data grant is the normal case, not an optimisation – RLC hands MAC whatever it has, and MAC packs the transport block. The diagram splits the two PDUs into separate arrows so each can be read on its own.

[Frame 12.2] The data half of the same transport block:
uplink SN=2, poll set, an 83-byte SDU carrying a ciphered
NAS message.

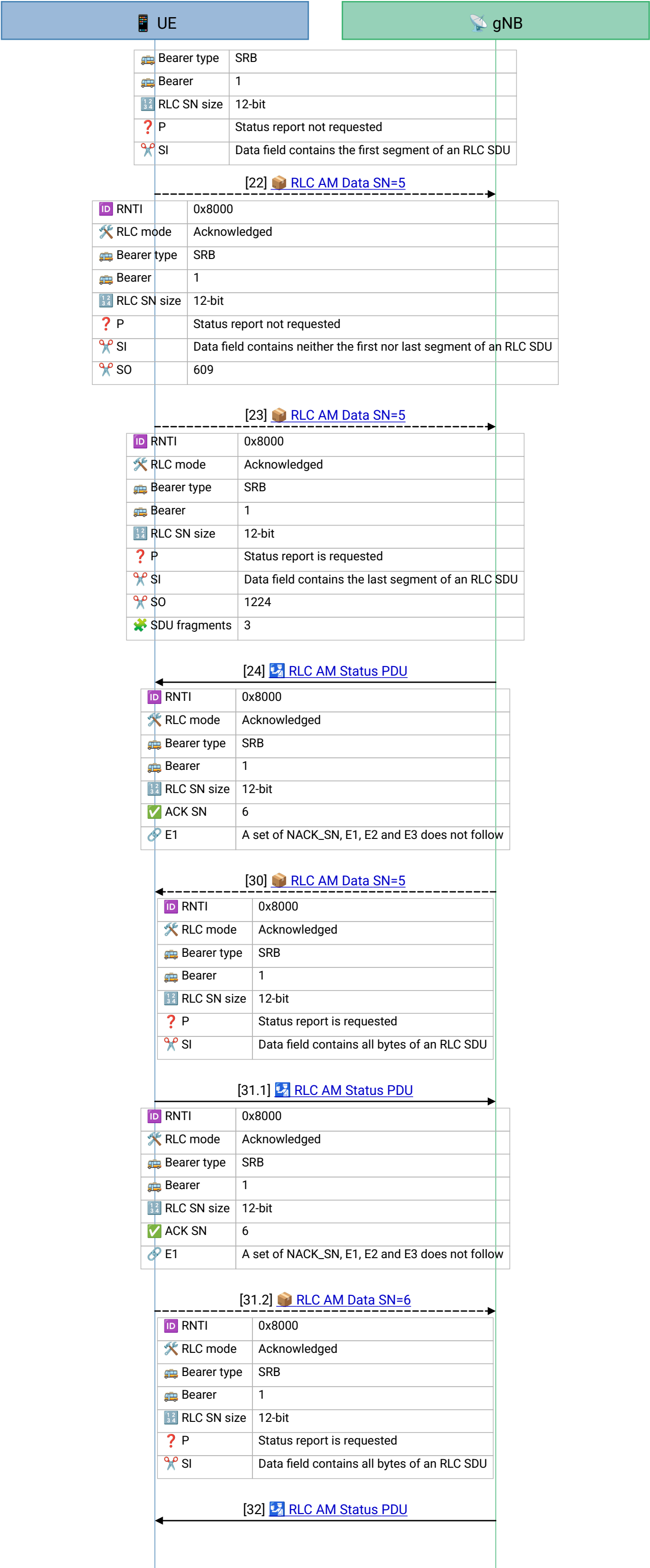
[Frame 13] ACK_SN=3 – uplink SN 0 through 2 acknowledged.

[Frame 14] Downlink SN=2, another DLInformationTransfer with a NAS payload.

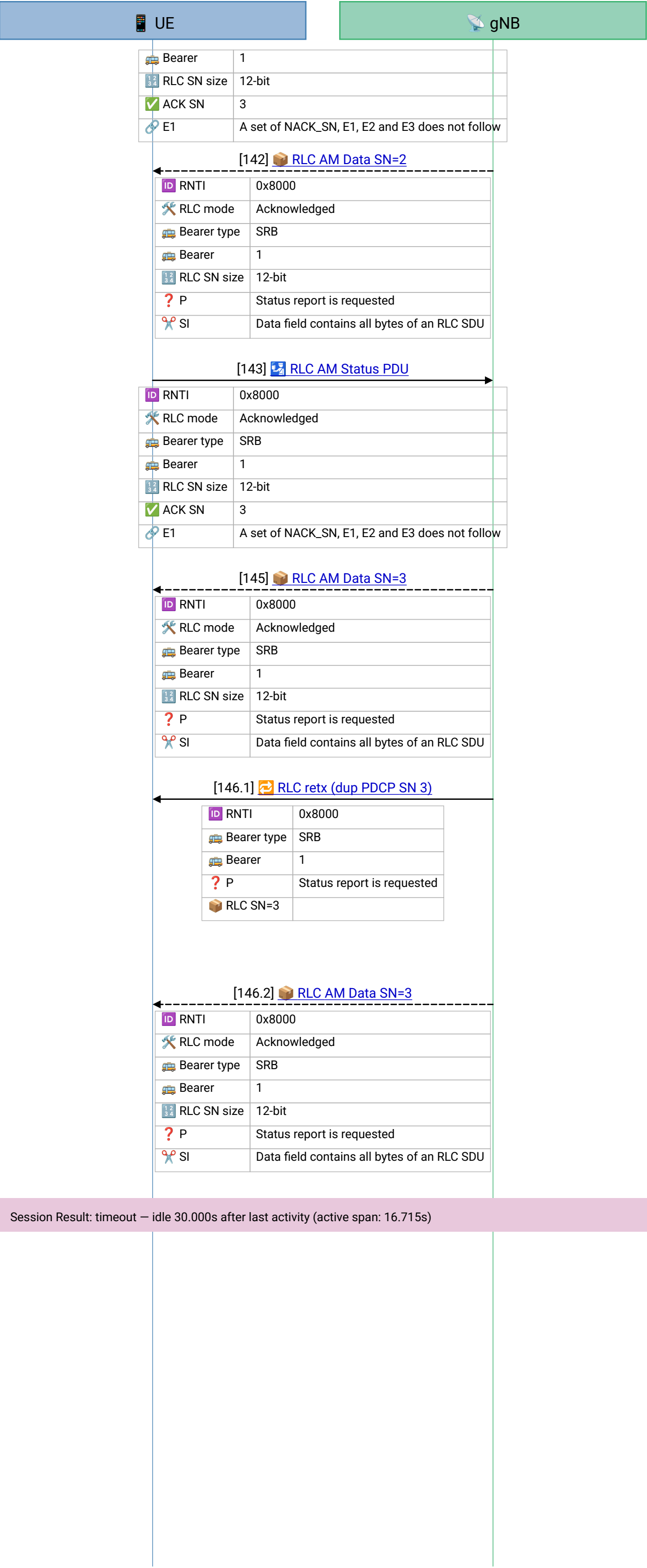
[Frame 15.1] ACK_SN=3 clears downlink SN 0 through 2, piggybacked ahead of the data PDU below, exactly as in frame 12.

[Frame 15.2] Uplink SN=3, poll set – a 19-byte SDU.

[Frame 16] ACK_SN=4 – uplink SN 3 is in.







[Frame 142] Downlink SN=2, poll set.

[Frame 143] The last acknowledgment on this bearer.
ACK_SN=3, E1=0: downlink SN 0 through 2 delivered,
nothing missing. Every status report in the session has now
been a clean cumulative ACK – 22 of them, not one NACK
between them.

[Frame 145] Downlink SN=3, poll set – an 8-byte signaling SDU. The status that would clear it never arrives.

[Frame 146.1] The second retransmission closes the session – and confirms the first. PDCP flags a repeat of PDCP SN 3, and the interval from frame 145 is **44.9 ms**: the same figure, to within 21 microseconds, as the gap between frames 128 and 129. Two independent firings of the same default `t-PollRetransmit`, on two different RRC connections, with no NACK anywhere in between.

That is the honest summary of RLC ARQ on this bearer. Both retransmissions were driven by silence, not by a reported loss: the poll timer expired, so RLC re-sent. The radio link itself never dropped a single PDU.

[Frame 146.2] The generic view of that same single transmission — SN=3, SI = all bytes, P set. The session ends here, mid-ARQ, with one PDU still outstanding and its retransmission timer already reloaded. Nothing further arrives on this connection: the next frame on the air is a fresh random-access 32 seconds later, opening a third connection.