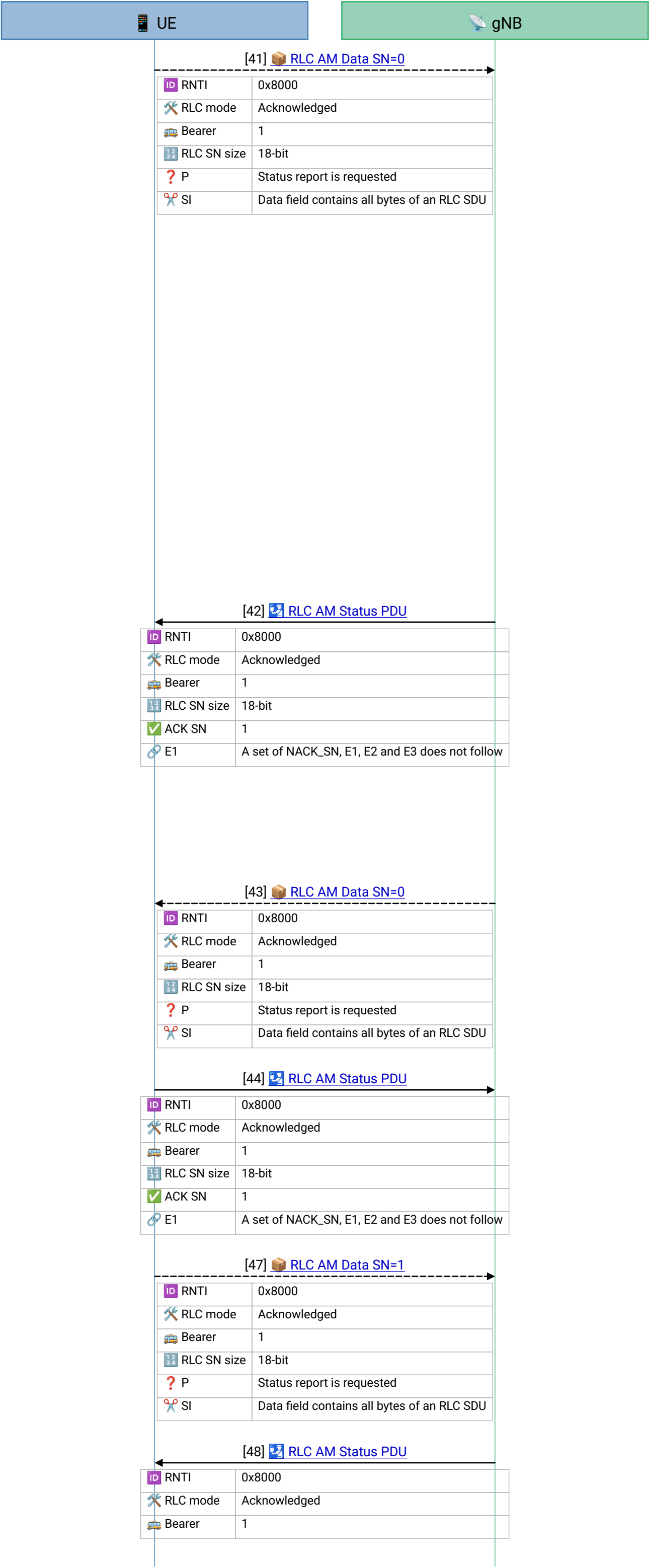
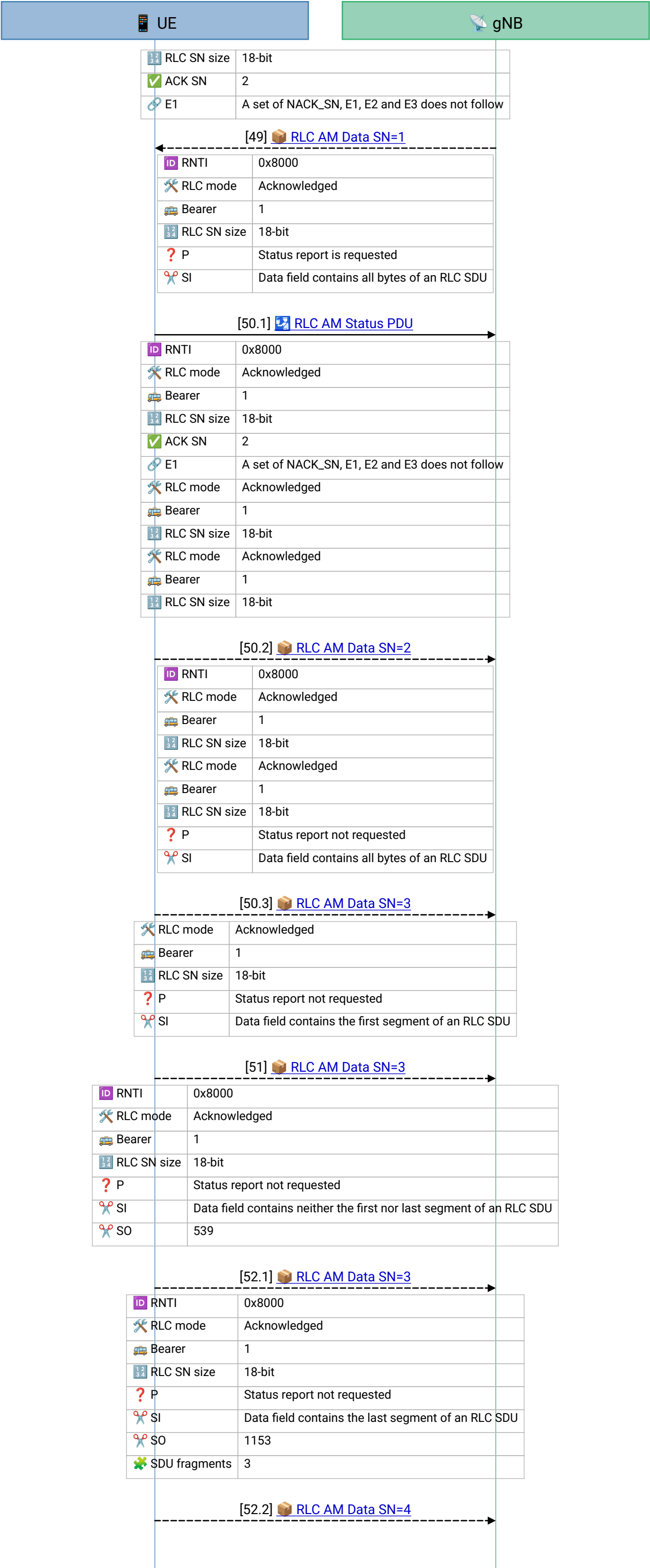
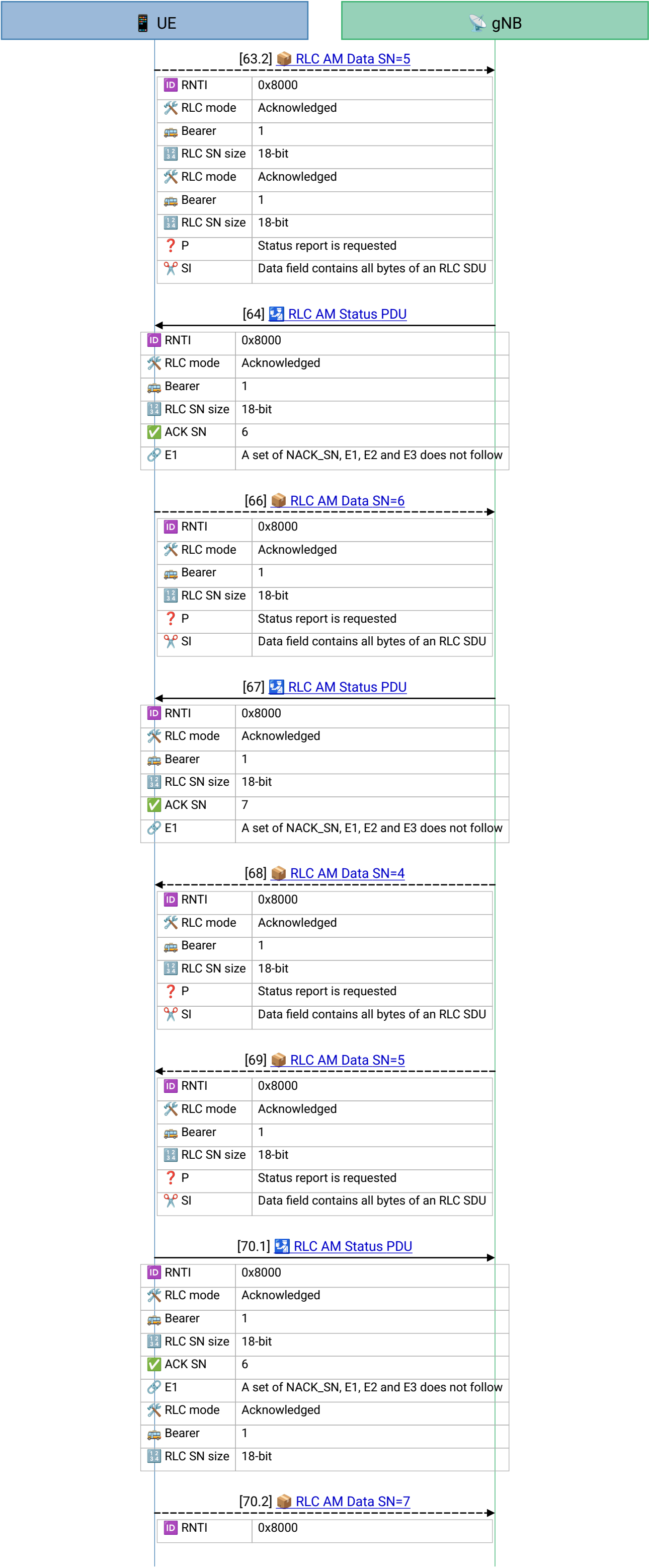
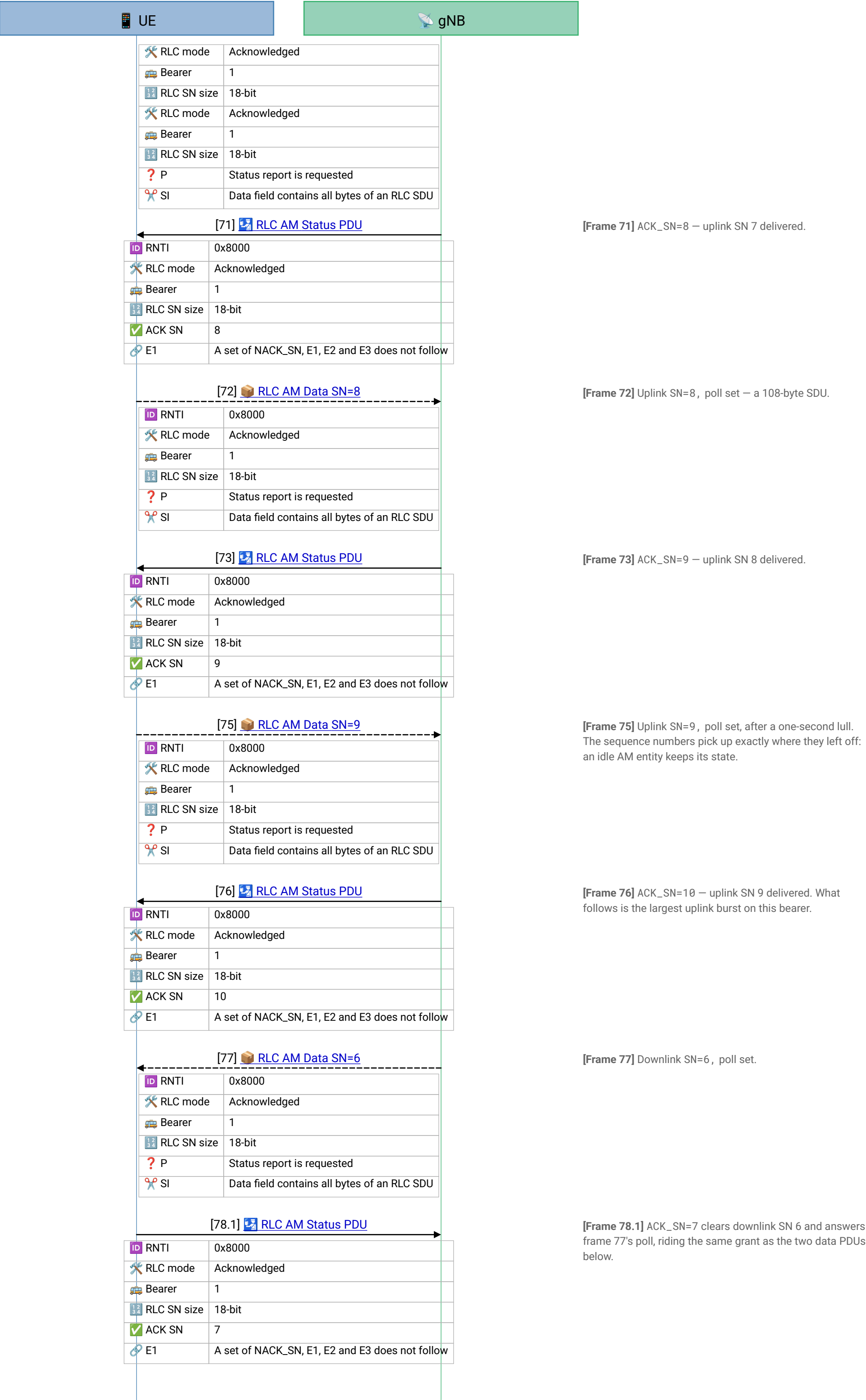
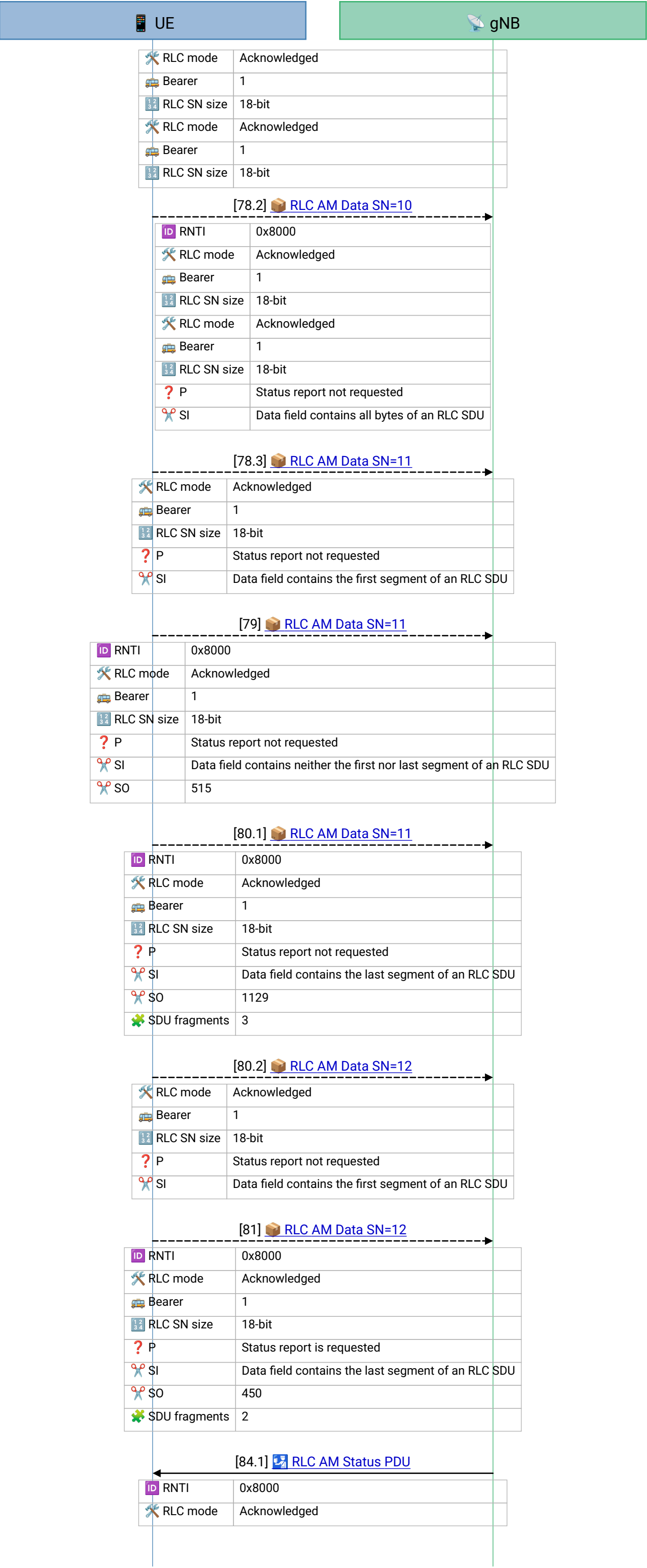












[Frame 78.2] Uplink SN=10, a complete 88-byte SDU, no poll
— the burst is starting.

[Frame 78.3] Uplink SN=11, SI = first segment, 515 bytes of a 1288-byte SDU. Compare with frame 50: the same three-PDU shape, produced by the same rule — fill the grant, split whatever does not fit, poll only at the end.

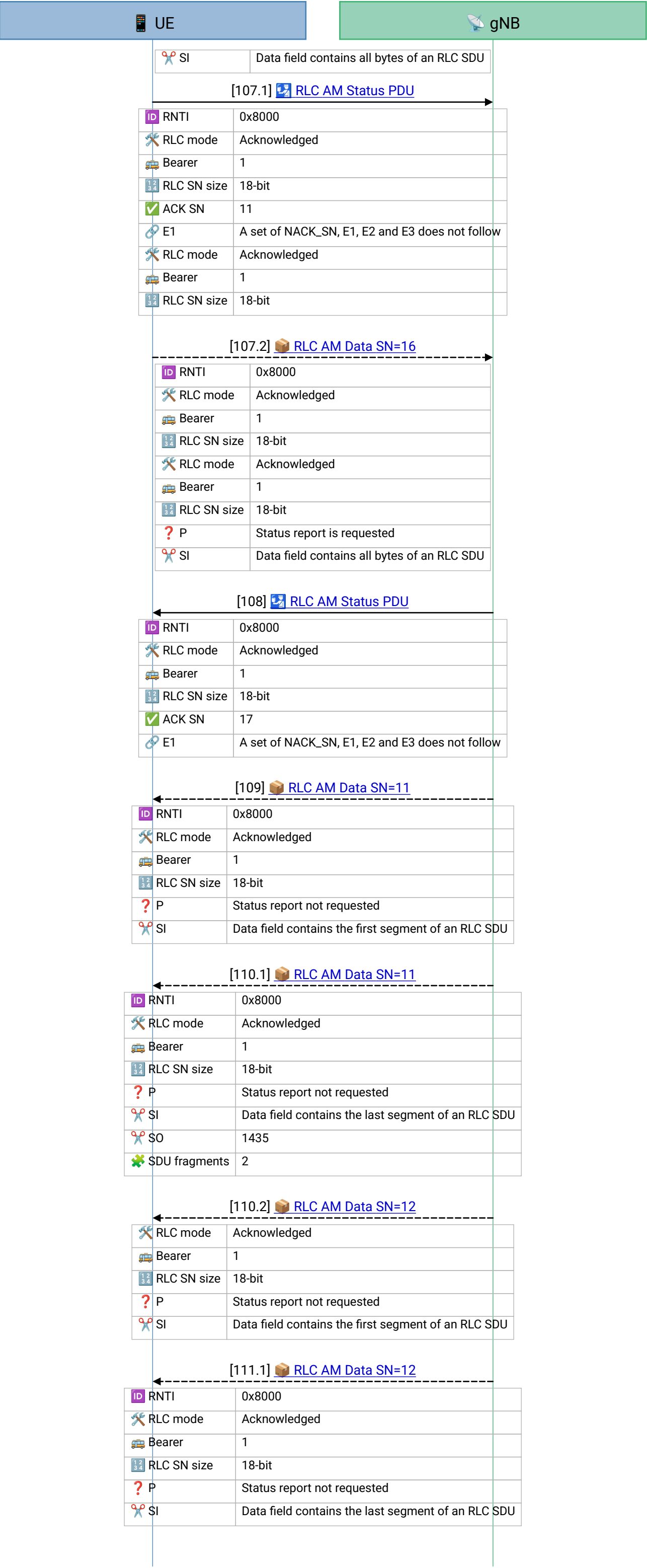
[Frame 79] SN=11 middle segment, S0=515, 614 bytes of payload. No poll.

[Frame 80.1] SN=11 last segment, S0=1129, which is 515 + 614. Reassembly: 3 fragments, 1288 bytes, as 515 + 614 + 159.

[Frame 80.2] Uplink SN=12 opens immediately in the same transport block: SI = first segment, 450 bytes of a 988-byte SDU. Still no poll.

[Frame 81] SN=12 last segment, S0=450, 538 bytes — a 2-fragment, 988-byte reassembly. The poll finally goes up. From frame 78 to here, six transmissions carried three SDUs, and exactly one of them asked for a report.

[Frame 84.1] Thirteen SDUs acknowledged in three bytes.
ACK_SN=13 : everything below SN 13 is delivered, which sweeps up the whole frame 78 to 81 burst, arriving 2.8 ms after the poll. Cumulative acknowledgment is the reason RLC AM's control overhead does not grow with the data rate.



[Frame 107.1] ACK_SN=11 – downlink SN 10 delivered.

[Frame 107.2] Uplink SN=16, poll set, piggybacked.

[Frame 108] ACK_SN=17 — uplink SN 16 delivered. The downlink is about to show that it segments too.

[Frame 109] The gNB segments. Downlink SN=11, SI = first segment, no poll: a 1499-byte SDU meets a grant with room for a 1438-byte RLC PDU, so 1435 bytes go now and 64 bytes wait. Everything the uplink runs taught applies unchanged here — segmentation is symmetric, because both ends run the same AM logic against whatever their scheduler offers. Frame 90 sent a 1223-byte SDU whole; this one is 276 bytes larger and gets cut. That is the entire difference.

[Frame 110.1] SN=11 last segment, SO=1435, the remaining 64 bytes – a 2-fragment, 1499-byte reassembly.

[Frame 110.2] Downlink SN=12 starts in the same transport block: SI = first segment, 1364 bytes of another 1499-byte SDU.

[Frame 111.1] SN=12 last segment, S0=1364, 135 bytes – 2 fragments, 1499 bytes.

