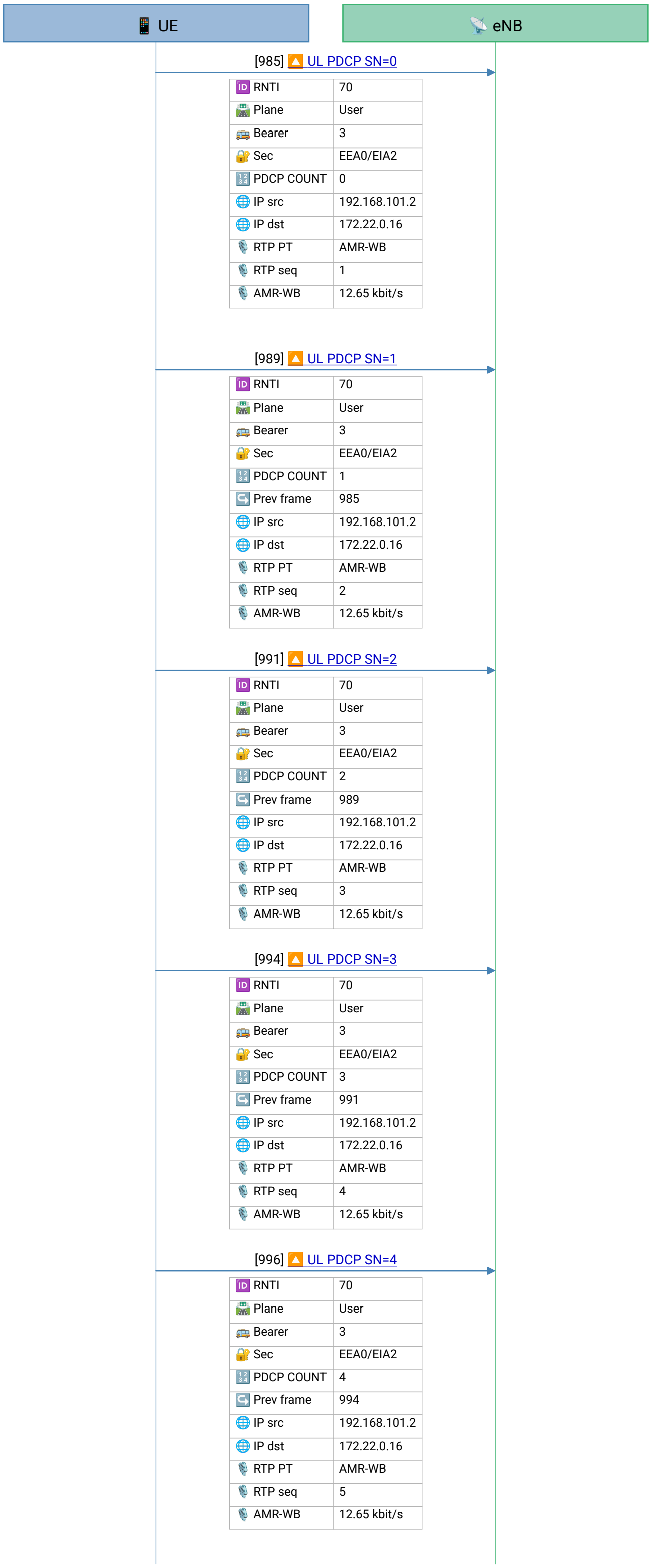
lte-pdcp-voice-bearer.annotated



[Frame 985] The voice bearer's first PDCP PDU. Frame 846 created this PDCP entity when it added DRB 3 for call 1: 12-bit SN, `discardTimer` 100 ms, no header compression. It starts at SN 0, HFN 0.

Uplink `SN=0`, COUNT 0. The user-plane header is 2 bytes: a `D/C` bit set to 1 (data PDU), three reserved bits and the 12-bit SN (TS 36.323 §6.2.3). Then comes the IP packet, 73 bytes, and nothing else. A data bearer has no `MAC-I`: LTE doesn't integrity-protect user-plane traffic between the UE and the eNB (TS 33.401 §5.1.4.1). The PDU is 75 bytes, header plus packet.

`Sec`: `EEA0/EIA2` is the UE's security configuration from frame 16, not a sign that this PDU is signed. Only EEA0 applies here, and EEA0 changes no bytes, so the RTP inside reads in the clear: sequence 1, marker bit set, AMR-WB 12.65 kbit/s.

[Frame 989] Uplink `SN=1`, RTP 2, 20 ms later. One speech frame per packet, one PDCP SN per packet.

[Frame 991] Uplink `SN=2`, RTP 3. COUNT keeps pace with SN. BEARER is 2 on this entity (DRB 3 minus 1), so even with the same key and COUNT, its keystream would differ from DRB 1's.

[Frame 994] No header compression. Uplink `SN=3`, RTP 4. Of the 73-byte IP packet, 40 bytes are IPv4, UDP, and RTP headers; the AMR-WB payload is 33. Frame 846 set `headerCompression: notUsed`, so ROHC never shrinks those 40 bytes.

[Frame 996] Uplink `SN=4`, RTP 5.

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[998] UL PDCP SN=5

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	5
Prev frame	996
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	6
AMR-WB	12.65 kbit/s

[Frame 998] Uplink SN=5, RTP 6.

[1000] UL PDCP SN=6

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	6
Prev frame	998
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	7
AMR-WB	12.65 kbit/s

[Frame 1000] Uplink SN=6, RTP 7: the last speech packet of UE 70's talk spurt.

[1003] DL PDCP SN=0

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	0
IP src	172.22.0.16
IP dst	192.168.101.2
RTP PT	AMR-WB
RTP seq	0
AMR-WB	23.85 kbit/s

[Frame 1003] The downlink entity's own SN 0. The relay's stream from UE 71 starts at downlink SN=0, COUNT 0: the eNB's transmitting entity, unrelated to the uplink's counter. UE 71 encodes at 23.85 kbit/s, so its PDUs are 103 bytes against UE 70's 75.

In this direction PDCP SN equals the RTP sequence number all the way through. That is a coincidence: UE 71's stream starts at RTP 0, UE 70's at RTP 1. PDCP doesn't read RTP.

[1004] UL PDCP SN=7

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	7
Prev frame	1000
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	8
AMR-WB	SID (Comfort Noise Frame)

[Frame 1004] Silence. Uplink SN=7, RTP 8: AMR-WB `SID_FIRST`, a silence descriptor. UE 70 has stopped talking. The PDU drops to 49 bytes, 40 of them IP, UDP, and RTP headers. PDCP spends one SN on it like any other packet.

[1007] DL PDCP SN=1

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	1
Prev frame	1003
IP src	172.22.0.16
IP dst	192.168.101.2
RTP PT	AMR-WB
RTP seq	1
AMR-WB	23.85 kbit/s

[Frame 1007] Downlink SN=1, RTP 1.

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📱 UE | 📡 eNB

[1009] 🔽 DL PDCP SN=2

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	2
🔁 Prev frame	1007
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	2
🎙️ AMR-WB	23.85 kbit/s

[Frame 1009] Downlink SN=2, RTP 2.

[1011] 🔽 DL PDCP SN=3

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	3
🔁 Prev frame	1009
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	3
🎙️ AMR-WB	23.85 kbit/s

[Frame 1011] Downlink SN=3, RTP 3.

[1012] 🔼 UL PDCP SN=8

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	8
🔁 Prev frame	1004
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	9
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1012] Uplink SN=8, RTP 9, 60 ms after SID_FIRST: the first SID_UPDATE, with comfort-noise parameters.

[1015] 🔽 DL PDCP SN=4

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	4
🔁 Prev frame	1011
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	4
🎙️ AMR-WB	23.85 kbit/s

[Frame 1015] Downlink SN=4, RTP 4.

[1017] 🔽 DL PDCP SN=5

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	5
🔁 Prev frame	1015
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	5
🎙️ AMR-WB	23.85 kbit/s

[Frame 1017] Downlink SN=5, RTP 5.

📱 UE | 📡 eNB

[1019] 🔽 DL PDCP SN=6

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	6
↪️ Prev frame	1017
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	6
🎙️ AMR-WB	23.85 kbit/s

[Frame 1019] Downlink SN=6, RTP 6: UE 71's last speech packet for now.

[1021] 🔽 DL PDCP SN=7

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	7
↪️ Prev frame	1019
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	7
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1021] Downlink SN=7, RTP 7: SID_FIRST. UE 71 falls silent too.

[1023] 🔽 DL PDCP SN=8

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	8
↪️ Prev frame	1021
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	8
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1023] Downlink SN=8, RTP 8: SID_UPDATE.

[1024] 🔼 UL PDCP SN=9

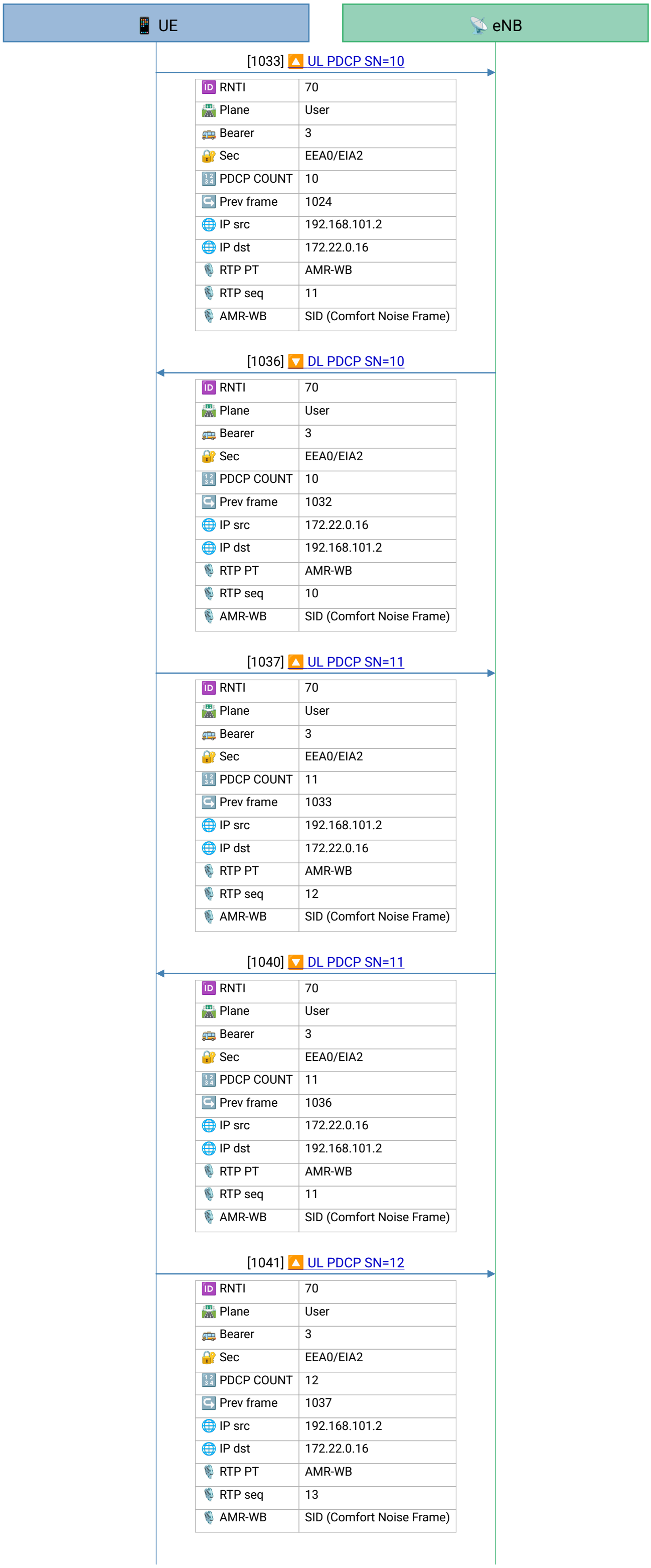
🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	9
↪️ Prev frame	1012
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	10
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1024] Two entities in one transport block. Uplink SN=9, COUNT 9, RTP 10, 160 ms after the last update. The same MAC PDU carries DRB 1's uplink PDCP SN 150 and 151, COUNT 150 and 151. Same UE, same direction, very different counts: each DRB has its own PDCP entity.

[1032] 🔽 DL PDCP SN=9

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	9
↪️ Prev frame	1023
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	9
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1032] Downlink SN=9, RTP 9. From here both directions send one 49-byte SID_UPDATE every 160 ms.



[Frame 1033] Uplink SN=10, RTP 11.

[Frame 1036] Downlink SN=10, RTP 10.

[Frame 1037] Uplink SN=11, RTP 12.

[Frame 1040] Downlink SN=11, RTP 11.

[Frame 1041] What `discardTimer` would look like. Uplink SN=12, RTP 13. The UE starts a 100 ms timer for each packet as it enters PDCP and drops the packet if it hasn't been sent in time (TS 36.323 §5.4): a late voice frame is useless to the listener. The packet already has its SN by then, so a discard would leave a gap in the uplink sequence. There is none: SN 0 to 34 arrive in order, every one.

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[1051] 🔽 DL PDCP SN=12

[Frame 1051] Downlink SN=12 , RTP 12.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	12
↪️ Prev frame	1040
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	12
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1052] 🔼 UL PDCP SN=13

[Frame 1052] Uplink SN=13 , RTP 14.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	13
↪️ Prev frame	1041
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	14
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1055] 🔽 DL PDCP SN=13

[Frame 1055] Downlink SN=13 , RTP 13.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	13
↪️ Prev frame	1051
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	13
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1056] 🔼 UL PDCP SN=14

[Frame 1056] Uplink SN=14 , RTP 15.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	14
↪️ Prev frame	1052
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	15
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1059] 🔽 DL PDCP SN=14

[Frame 1059] Downlink SN=14 , RTP 14.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	14
↪️ Prev frame	1055
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	14
🎙️ AMR-WB	SID (Comfort Noise Frame)

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[1060] UL PDCP SN=15

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	15
Prev frame	1056
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	16
AMR-WB	SID (Comfort Noise Frame)

[Frame 1060] Uplink SN=15, RTP 16.

[1063] DL PDCP SN=15

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	15
Prev frame	1059
IP src	172.22.0.16
IP dst	192.168.101.2
RTP PT	AMR-WB
RTP seq	15
AMR-WB	SID (Comfort Noise Frame)

[Frame 1063] Downlink SN=15, RTP 15.

[1064] UL PDCP SN=16

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	16
Prev frame	1060
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	17
AMR-WB	SID (Comfort Noise Frame)

[Frame 1064] Uplink SN=16, RTP 17.

[1067] DL PDCP SN=16

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	16
Prev frame	1063
IP src	172.22.0.16
IP dst	192.168.101.2
RTP PT	AMR-WB
RTP seq	16
AMR-WB	SID (Comfort Noise Frame)

[Frame 1067] Downlink SN=16, RTP 16.

[1068] UL PDCP SN=17

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	17
Prev frame	1064
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	18
AMR-WB	SID (Comfort Noise Frame)

[Frame 1068] Uplink SN=17, RTP 18.

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[1071] 🔽 DL PDCP SN=17

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	17
↪️ Prev frame	1067
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	17
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1071] Downlink SN=17, RTP 17.

[1072] 🔼 UL PDCP SN=18

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	18
↪️ Prev frame	1068
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	19
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1072] Uplink SN=18, RTP 19.

[1075] 🔽 DL PDCP SN=18

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	18
↪️ Prev frame	1071
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	18
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1075] Downlink SN=18, RTP 18.

[1076] 🔼 UL PDCP SN=19

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	19
↪️ Prev frame	1072
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	20
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1076] Uplink SN=19, RTP 20.

[1079] 🔽 DL PDCP SN=19

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	19
↪️ Prev frame	1075
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	19
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1079] Downlink SN=19, RTP 19.

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📱 UE	📡 eNB

[1080] 🔼 UL PDCP SN=20

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	20
↪️ Prev frame	1076
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	21
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1080] Uplink SN=20, RTP 21.

[1083] 🔽 DL PDCP SN=20

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	20
↪️ Prev frame	1079
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	20
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1083] Downlink SN=20, RTP 20.

[1084] 🔼 UL PDCP SN=21

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	21
↪️ Prev frame	1080
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	22
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1084] Uplink SN=21, RTP 22.

[1087] 🔽 DL PDCP SN=21

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	21
↪️ Prev frame	1083
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	21
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1087] Downlink SN=21, RTP 21.

[1088] 🔼 UL PDCP SN=22

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	22
↪️ Prev frame	1084
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	23
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1088] Uplink SN=22, RTP 23.

📱 UE | 📡 eNB

[1091] 🔽 DL PDCP SN=22

[Frame 1091] Downlink SN=22 , RTP 22.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	22
↪️ Prev frame	1087
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	22
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1092] 🔼 UL PDCP SN=23

[Frame 1092] Uplink SN=23 , RTP 24.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	23
↪️ Prev frame	1088
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	24
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1095] 🔽 DL PDCP SN=23

[Frame 1095] Downlink SN=23 , RTP 23.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	23
↪️ Prev frame	1091
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	23
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1096] 🔼 UL PDCP SN=24

[Frame 1096] Uplink SN=24 , RTP 25.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	24
↪️ Prev frame	1092
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	25
🎙️ AMR-WB	SID (Comfort Noise Frame)

[1099] 🔽 DL PDCP SN=24

[Frame 1099] Downlink SN=24 , RTP 24.

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	24
↪️ Prev frame	1095
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	24
🎙️ AMR-WB	SID (Comfort Noise Frame)

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[1100] UL PDCP SN=25

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	25
Prev frame	1096
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	26
AMR-WB	SID (Comfort Noise Frame)

[Frame 1100] Uplink SN=25, RTP 26.

[1103] DL PDCP SN=25

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	25
Prev frame	1099
IP src	172.22.0.16
IP dst	192.168.101.2
RTP PT	AMR-WB
RTP seq	25
AMR-WB	SID (Comfort Noise Frame)

[Frame 1103] Downlink SN=25, RTP 25.

[1104] UL PDCP SN=26

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	26
Prev frame	1100
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	27
AMR-WB	SID (Comfort Noise Frame)

[Frame 1104] Uplink SN=26, RTP 27.

[1107] DL PDCP SN=26

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	26
Prev frame	1103
IP src	172.22.0.16
IP dst	192.168.101.2
RTP PT	AMR-WB
RTP seq	26
AMR-WB	SID (Comfort Noise Frame)

[Frame 1107] Downlink SN=26, RTP 26.

[1108] UL PDCP SN=27

RNTI	70
Plane	User
Bearer	3
Sec	EEA0/EIA2
PDCP COUNT	27
Prev frame	1104
IP src	192.168.101.2
IP dst	172.22.0.16
RTP PT	AMR-WB
RTP seq	28
AMR-WB	SID (Comfort Noise Frame)

[Frame 1108] Uplink SN=27, RTP 28.

📱 UE | 📡 eNB

[1111] 🔽 DL PDCP SN=27

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	27
🔁 Prev frame	1107
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	27
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1111] Downlink SN=27, RTP 27.

[1112] 🔼 UL PDCP SN=28

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	28
🔁 Prev frame	1108
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	29
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1112] Uplink SN=28, RTP 29.

[1115] 🔽 DL PDCP SN=28

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	28
🔁 Prev frame	1111
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	28
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1115] Downlink SN=28, RTP 28.

[1116] 🔼 UL PDCP SN=29

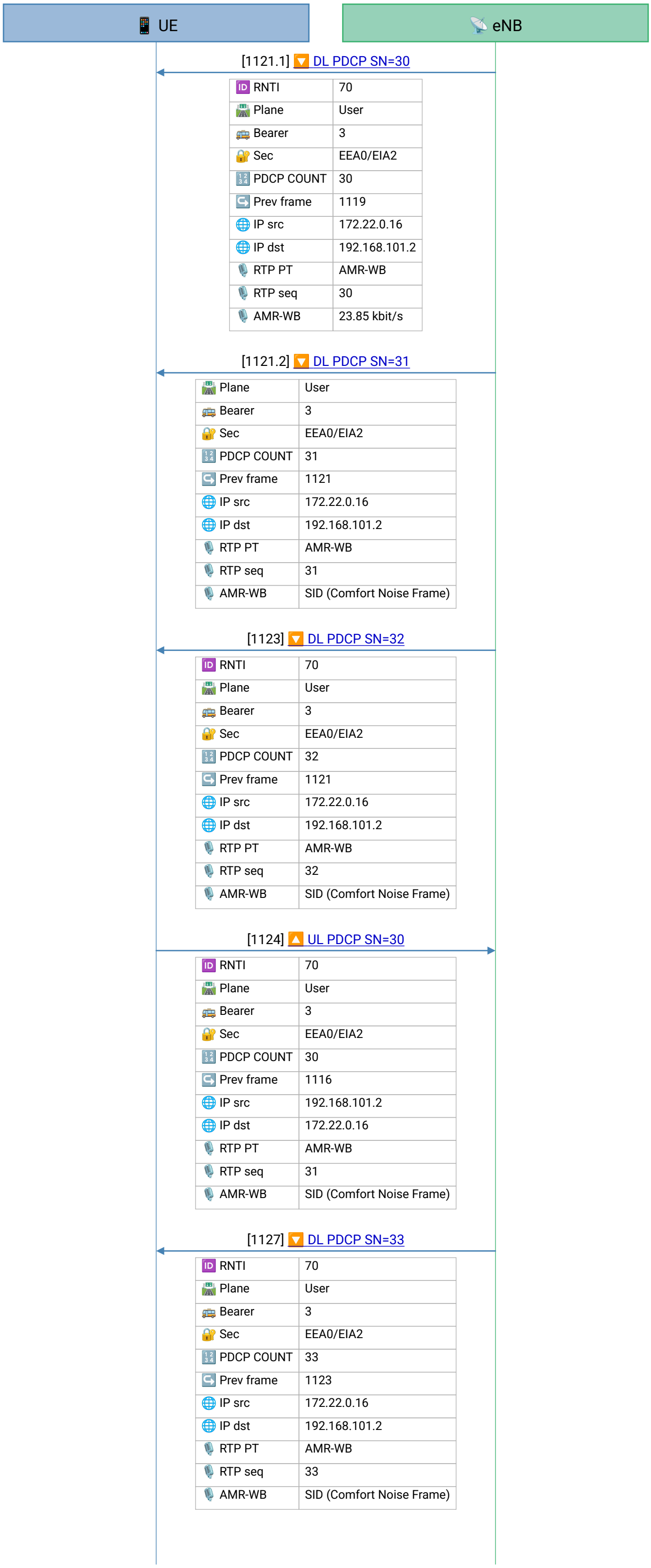
🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	29
🔁 Prev frame	1112
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	30
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1116] Uplink SN=29, RTP 30.

[1119] 🔽 DL PDCP SN=29

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	29
🔁 Prev frame	1115
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	29
🎙️ AMR-WB	23.85 kbit/s

[Frame 1119] A short talk spurt. Downlink SN=29, RTP 29: speech again, 23.85 kbit/s, with the RTP marker bit set for the start of a spurt.



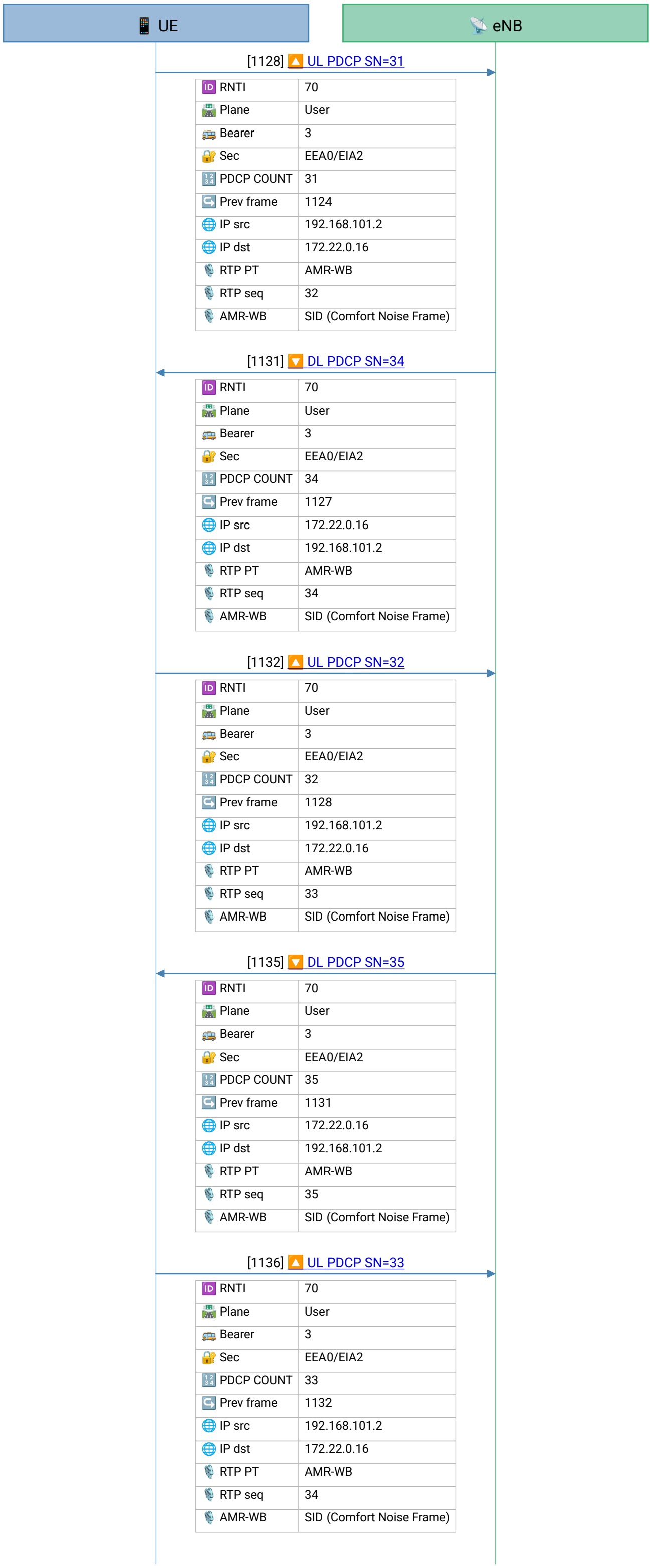
[Frame 1121.1] Two PDCP PDUs in one RLC PDU. Downlink SN=30, RTP 30: speech. RLC packed this PDU and the next one into a single UM PDU, RLC SN 30.

[Frame 1121.2] Downlink SN=31, RTP 31: SID_FIRST, same frame. PDCP gives each packet its own SN and COUNT however RLC carries them. From here the downlink RLC SN runs one behind the PDCP SN: RLC numbers PDUs on the air, PDCP numbers packets.

[Frame 1123] Downlink SN=32, RTP 32: back to SID_UPDATE.

[Frame 1124] Uplink SN=30, RTP 31.

[Frame 1127] Downlink SN=33, RTP 33.



[Frame 1128] Uplink SN=31 , RTP 32.

[Frame 1131] Downlink SN=34 , RTP 34.

[Frame 1132] Uplink SN=32 , RTP 33.

[Frame 1135] Downlink SN=35 , RTP 35.

[Frame 1136] Uplink SN=33 , RTP 34.

📱 UE | 📡 eNB

[1139] 🔽 DL PDCP SN=36

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	36
🔁 Prev frame	1135
🌐 IP src	172.22.0.16
🌐 IP dst	192.168.101.2
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	36
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1139] Downlink SN=36 , RTP 36: the last downlink PDU. 37 PDUs, SN 0 to 36, no gap.

[1140] 🔼 UL PDCP SN=34

🆔 RNTI	70
🛣️ Plane	User
🚌 Bearer	3
🔐 Sec	EEA0/EIA2
🔢 PDCP COUNT	34
🔁 Prev frame	1136
🌐 IP src	192.168.101.2
🌐 IP dst	172.22.0.16
🎙️ RTP PT	AMR-WB
🎙️ RTP seq	35
🎙️ AMR-WB	SID (Comfort Noise Frame)

[Frame 1140] The entity's last PDU. Uplink SN=34 , RTP 35. 35 uplink PDUs, SN 0 to 34, no gap and no repeat. A 12-bit SN wraps after 4,096 PDUs, about 82 s of nonstop speech at one packet per 20 ms. This call used 37, so the HFN never left 0 and COUNT equals SN on all 72 PDUs.

Frame 1146 releases DRB 3, and this entity and its COUNTs go with it. Call 2's bearer, DRB 4, starts again at SN 0 (frame 1311).

Session Result: incomplete - mid-capture (duration: 4.360s)