TSG-RAN Meeting #17 ***RP-020540***
Biarritz, France, 3 - 6 September 2002

Title: **Agreed CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.323**

Source: **TSG-RAN WG2**

Agenda item: **7.2.3**

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Versio	Versio
R2-022366	agreed	25.323	051		R99	Mapping relation between PDCP and RLC	F	3.9.0	3.10.0
R2-022367	agreed	25.323	052		Rel-4	Mapping relation between PDCP and RLC	A	4.5.0	4.6.0
R2-022368	agreed	25.323	053		Rel-5	Mapping relation between PDCP and RLC	A	5.1.0	5.2.0

3GPP TSG-RAN WG2 #31 ***R2-022366***
Stockholm, Sweden, 19th-23th August, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.323** **CR** **051** ⌘ **rev** **-** ⌘ Current version: **3.9.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Mapping relation between PDCP and RLC
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘
At the RAN2#30 meeting, it was agreed that;
- For a RB having two directions, one AM RLC entity or two UM or TM RLC entities are mapped to one PDCP entity.
- For a RB having only one direction, one UM or TM RLC entity is mapped to one PDCP entity.

Therefore, one PDCP entity should be able to be mapped to one or two RLC entities.

Summary of change: ⌘
1. It is clarified that one PDCP entity is mapped to one or two RLC entities depending on the RB characteristic and RLC mode.
2. Figure 1 is modified to avoid possible misleading that one PDCP entity is associated with only one RLC entity.

Impact analysis:
· Correction to a function where the specification was : ambiguous or not sufficiently explicit. Unclear configuration was clarified.
· Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘
Header Compression protocol in the PDCP sublayer can't receive feedback information if TM or UM RLC is used. This can degrade Header Compression performance, especially for the real-time IP packet data.

Clauses affected: ⌘ 4.2

Other specs Affected:	⌘	Y	N		⌘	
		X		Other core specifications		25.301
			X	Test specifications		

	X	O&M Specifications

Other comments: ⌘

How to create CRs using this form:

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

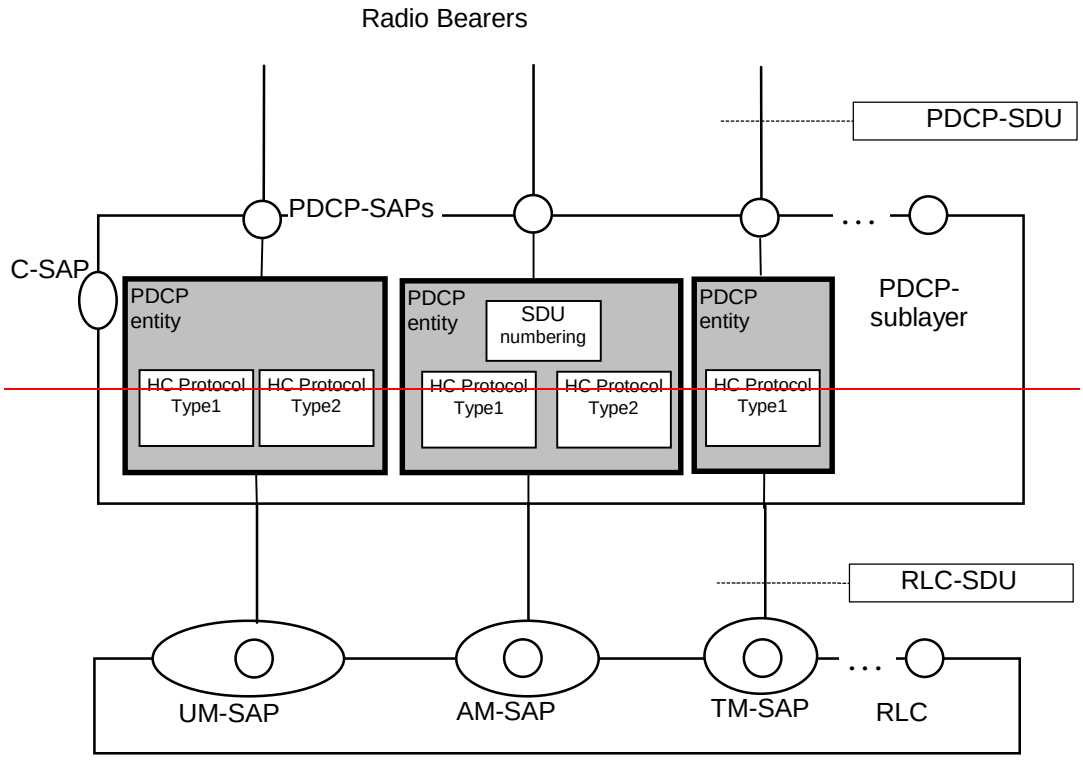
4.2 Overview on sublayer architecture

Figure 1 shows the model of the PDCP within the radio interface protocol architecture. The radio interface protocol architecture is defined in [3]. The PDCP sublayer is defined for the PS domain only.

Every PS domain RAB is associated with one RB, which in turn is associated with one PDCP entity. Each PDCP entity is associated with one or two (one for each direction) RLC entities depending on the RB characteristic (i.e. uni-directional or bi-directional) and RLC mode. The PDCP entities are located in the PDCP sublayer.

Every PDCP entity uses zero, one or several different header compression protocol types. Several PDCP entities may be defined for a UE with each using the same or different protocol type. In this version of the specification, only one header compression protocol type, RFC 2507 [6], is supported.

The PDCP sublayer is configured by upper layer [2] through the PDCP-C-SAP.



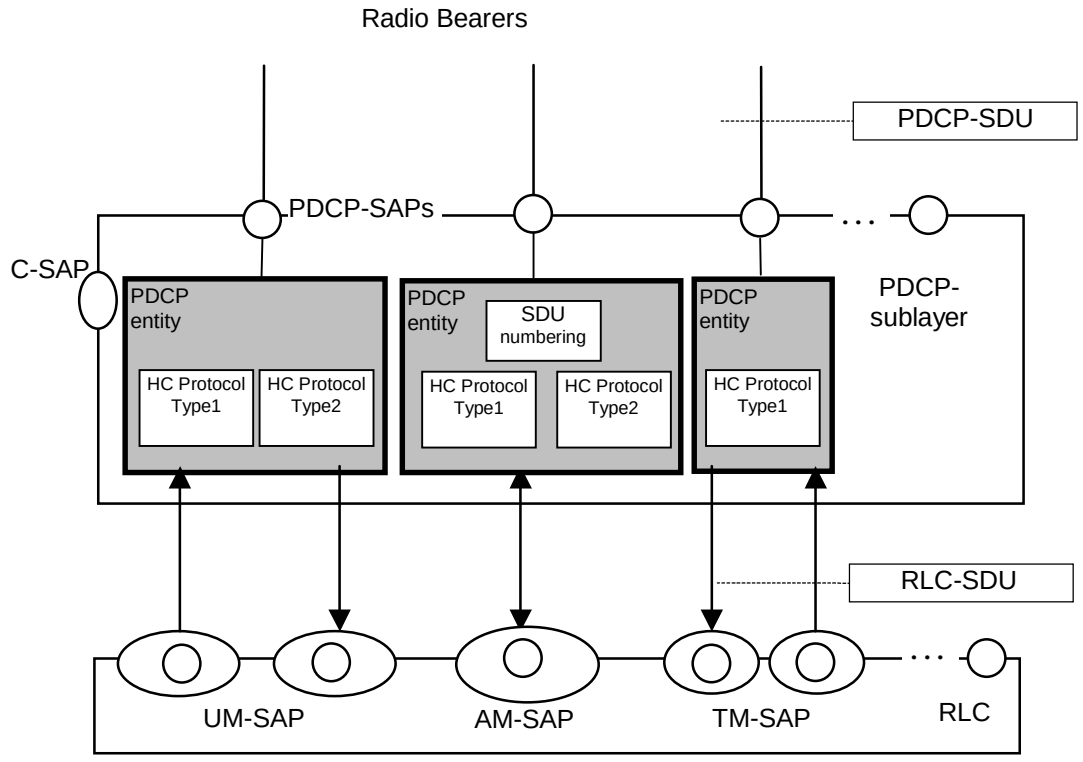


Figure 1: PDCP structure

Figure 1 represents one possible structure for the PDCP sublayer and should not restrict implementation. A PDCP entity is ~~uses~~ mapped to either one AM RLC entity ~~SAP~~ or one or two UM or TM RLC entities ~~SAPs~~. When a PDCP entity is mapped to~~uses~~ two UM or TM RLC entities ~~SAPs,~~ each ~~SAP~~RLC entitiy is used for a different direction.

3GPP TSG-RAN WG2 #31 ***R2-022367***
Stockholm, Sweden, 19th-23th August, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.323** **CR** **052** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Mapping relation between PDCP and RLC
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
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D *(editorial modification)*
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2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	At the RAN2#30 meeting, it was agreed that; - For a RB having two directions, one AM RLC entity or two UM or TM RLC entities are mapped to one PDCP entity. - For a RB having only one direction, one UM or TM RLC entity is mapped to one PDCP entity. Therefore, one PDCP entity should be able to be mapped to one or two RLC entities.
Summary of change:	⌘	1. It is clarified that one PDCP entity is mapped to one or two RLC entities depending on the RB characteristic and RLC mode. 2. Figure 1 is modified to avoid possible misleading that one PDCP entity is associated with only one RLC entity. **Impact analysis:** · Correction to a function where the specification was : ambiguous or not sufficiently explicit. Unclear configuration was clarified. · Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘	Header Compression protocol in the PDCP sublayer can't receive feedback information if TM or UM RLC is used. This can degrade Header Compression performance, especially for the real-time IP packet data.

Clauses affected:	⌘	4.2				
Other specs affected:	⌘	Y: X Y:	N: X	Other core specifications Test specifications	⌘	25.301

	X	O&M Specifications

Other comments: ⌘

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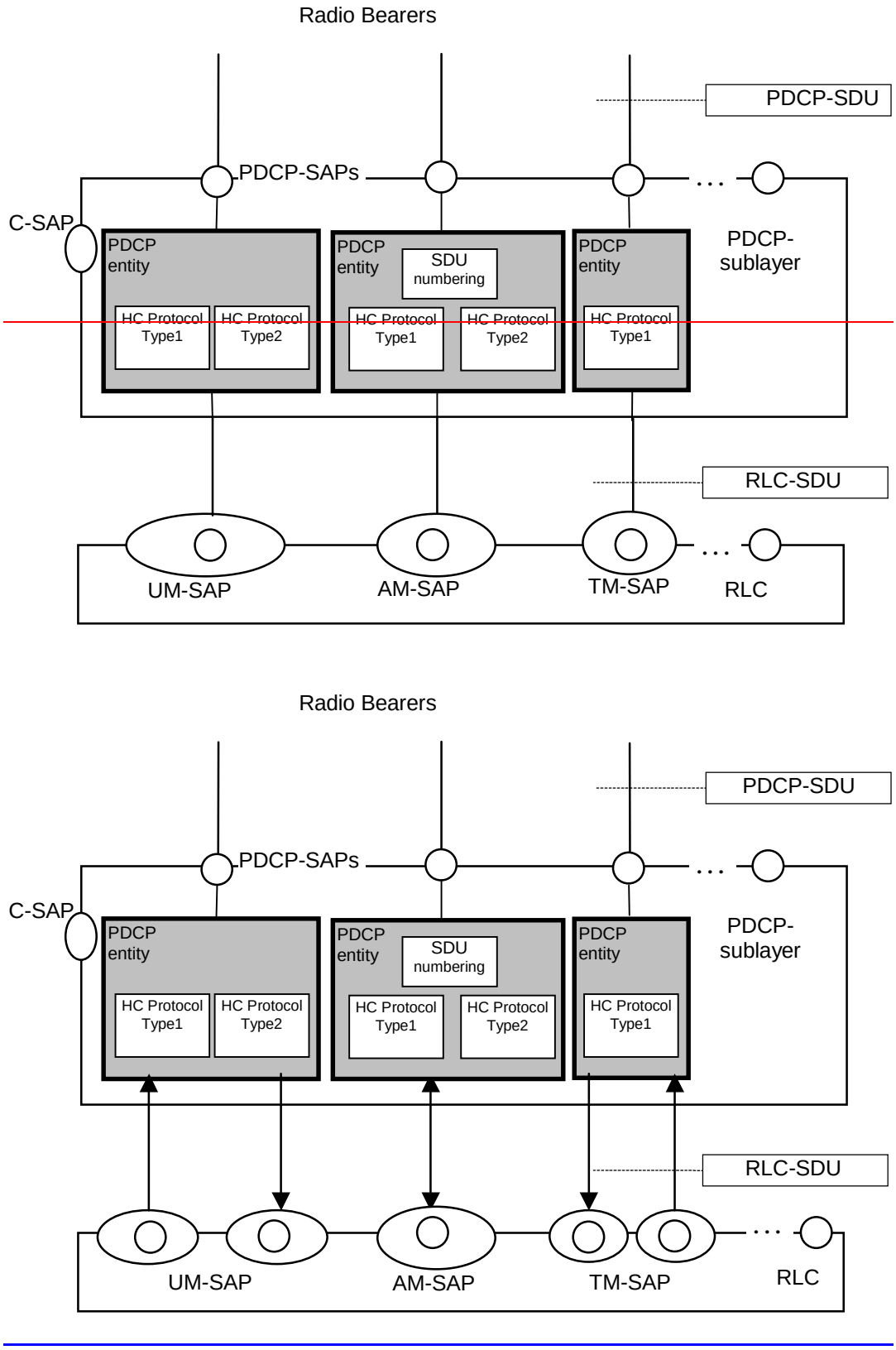
Every PDCP entity uses zero, one or several different header compression protocol types. Several PDCP entities may be defined for a UE with each using the same or different protocol type. In this version of the specification, only two header compression protocol types, RFC 2507 [6] and RFC 3095 [8], are supported.

The PDCP sublayer is configured by upper layer [2] through the PDCP-C-SAP.



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3GPP TSG-RAN WG2 #31 ***R2-022368***
Stockholm, Sweden, 19th-23th August, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.323** **CR** **053** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Support for bi-directional radio bearer
Source:	⌘	TSG-RAN WG2.
Work item code:	⌘	TEI
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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Consequences if not approved: ⌘

Header Compression protocol in the PDCP sublayer can't receive feedback information if TM or UM RLC is used. This can degrade Header Compression performance, especially for the real-time IP packet data.

Clauses affected: ⌘ 4.2

Other specs affected: ⌘	Y	N		
	X		Other core specifications	⌘ 25.301
		X	Test specifications	

	X	O&M Specifications

Other comments: ⌘

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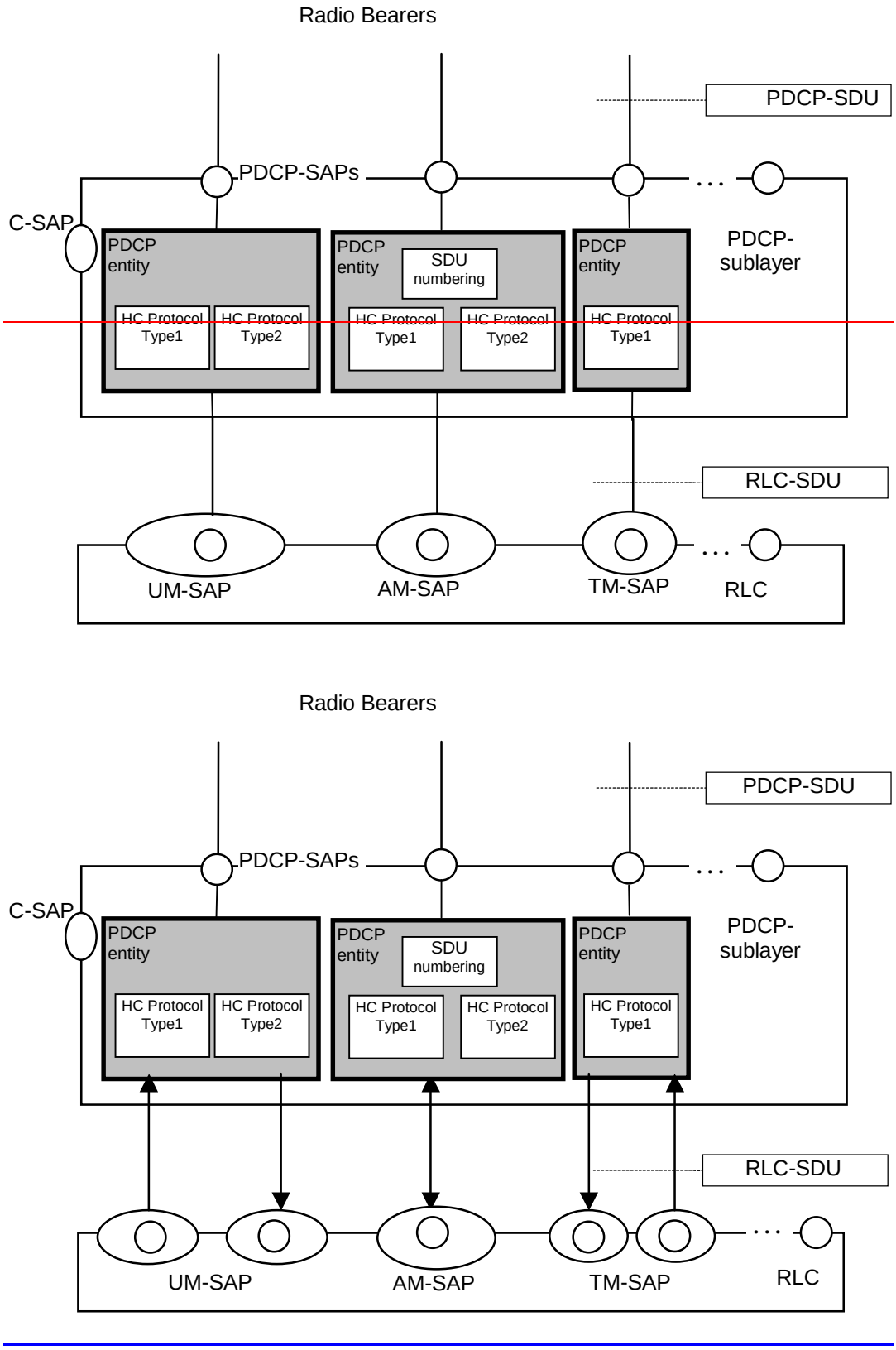

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