**3GPP TSG-RAN WG2 Meeting #109-bis-e *R2-200XXXX***

**Online, 2020-04-20 – 2020-04-30**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.306** | **CR** | **NNNN** | **rev** | **-** | **Current version:** | **16.0.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network |  |

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| ***Title:*** | Allowing PDCP version change without handover | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, Intel Corporation | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2020-04-05 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change 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](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently, not all UEs support PDCP version change of DRBs without handover. The network may then need to assume that all UE require a handover to change PDCP version. PDCP version change with handover may incur additional delays and signalling, compared to PDCP version change without handover.  A new capability bit can be introduced such that a UE can indicate that it does not require a handover to change PDCP version of a DRB and that the network can for such a UE perform PDCP version change without handover. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | A new capability bit is added which indicates whether the UE supports PDCP version change of DRBs without handover.  Implementation of this CR by a UE of earlier releases will not cause compatibility issues. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Network would have to always use handover to change PDCP version even if a handover in some cases may be unnecessary. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.3.1.X (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 36.331 CR 4262 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

Beginning of changes

## Parameters independent of the field *ue-Category* and *ue-CategoryDL / ue-CategoryUL*

### 4.3.1 PDCP Parameters

#### 4.3.1.1 *supportedROHC-Profiles*

This field defines which ROHC profiles from the list below are supported by the UE.

- 0x0000 ROHC uncompressed (RFC 5795)

- 0x0001 ROHC RTP (RFC 3095, RFC 4815)

- 0x0002 ROHC UDP (RFC 3095, RFC 4815)

- 0x0003 ROHC ESP (RFC 3095, RFC 4815)

- 0x0004 ROHC IP (RFC 3843, RFC 4815)

- 0x0006 ROHC TCP (RFC 6846)

- 0x0101 ROHCv2 RTP (RFC 5225)

- 0x0102 ROHCv2 UDP (RFC 5225)

- 0x0103 ROHCv2 ESP (RFC 5225)

- 0x0104 ROHCv2 IP (RFC 5225)

A UE that supports one or more of the listed ROHC profiles shall support ROHC profile 0x0000 ROHC uncompressed (RFC 5795).

'IMS capable UEs supporting voice' shall support ROHC profiles 0x0000, 0x0001, 0x0002 and be able to compress and decompress headers of PDCP SDUs at a PDCP SDU rate corresponding to supported IMS voice codecs.

#### 4.3.1.1A *supportedROHC-Profiles-r13*

This field defines which ROHC profiles from the list below are supported by the UE:

- 0x0000 ROHC uncompressed (RFC 5795)

- 0x0002 ROHC UDP (RFC 3095, RFC 4815)

- 0x0003 ROHC ESP (RFC 3095, RFC 4815)

- 0x0004 ROHC IP (RFC 3843, RFC 4815)

- 0x0006 ROHC TCP (RFC 6846)

- 0x0102 ROHCv2 UDP (RFC 5225)

- 0x0103 ROHCv2 ESP (RFC 5225)

- 0x0104 ROHCv2 IP (RFC 5225)

A UE that supports one or more of the listed ROHC profiles shall support ROHC profile 0x0000 ROHC uncompressed (RFC 5795). This field is only applicable if the UE supports S1-U data transfer or User plane CIoT EPS Optimisation, see TS 36.331 [5], and any *ue-Category-NB*.

#### 4.3.1.2 *maxNumberROHC-ContextSessions*

This field defines the maximum number of header compression context sessions supported by the UE, excluding context sessions that leave all headers uncompressed.

#### 4.3.1.2A *maxNumberROHC-ContextSessions-r13*

This field defines the maximum number of header compression context sessions supported by the UE, excluding context sessions that leave all headers uncompressed. This field is only applicable if the UE supports S1-U data transfer or User plane CIoT EPS Optimisation, see TS 36.331 [5], and any *ue-Category-NB*.

#### 4.3.1.3 *pdcp-SN-Extension*

This field defines whether the UE supports 15 bit length of PDCP sequence number as specified in TS 36.323 [2]. It is mandatory for UEs supporting split bearers and UEs supporting 18 bit length of PDCP sequence number.

#### 4.3.1.4 *supportRohcContextContinue*

This field defines whether the UE supports ROHC context continuation operation where the UE does not reset the current ROHC context upon handover.

#### 4.3.1.5 *pdcp-SN-Extension-18bits-r13*

This field defines whether the UE supports 18 bit length of PDCP sequence number as specified in TS 36.323 [2].

#### 4.3.1.6 *supportedUplinkOnlyROHC-Profiles*

This field defines which ROHC profile(s) from the list below are supported in uplink-only ROHC operation by the UE.

- 0x0006 ROHC TCP (RFC 6846)

A UE that supports uplink-only ROHC profile(s) shall support ROHC profile 0x0000 ROHC uncompressed (RFC 5795).

#### 4.3.1.7 *supportedUDC-r15*

This field defines whether the UE supports the uplink data compression operation as specified in TS 36.323 [2].

A UE that supports the uplink data compression operation shall support 8192 bytes for compression buffer per UDC DRB and support up to 2 UDC DRBs.

#### 4.3.1.8 *supportedStandardDic-r15*

This field defines whether the UE supports UL data compression with SIP static dictionary as defined in TS 36.323 [2].

#### 4.3.1.9 *supportedOperatorDic-r15*

This field defines whether the UE supports UL data compression with operator defined dictionary. If UE supports operator defined dictionary, the UE shall report *versionOfDictionary*, the version number of the dictionary, and *associatedPLMN-ID*, the associated PLMN ID of this operator defined dictionary as defined in TS 36.331 [5]. Note this parameter is not required to be present if the UE is in VPLMN. In this release of specification, UE can only support one operator defined dictionary.

#### 4.3.1.7 *pdcp-Duplication-r15*

This field defines whether the UE supports PDCP duplication.

#### 4.3.1.X *pdcp-VersionChangeWithout-HO-r16*

This field defines whether the UE supports changing the PDCP version of DRBs, from LTE PDCP to NR PDCP and vice versa, without handover. This capability does not concern changing the PDCP version of DRBs from LTE PDCP to NR PDCP in case of bearer termination point change.

End of changes