3GPP RAN WG2 Meeting #127 R2-2407628

Maastricht, Netherlands, August 19th – 23rd 2024

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.321** | **CR** | **xxxx** | **rev** | **-** | **Current version:** | **18.2.0** |  |
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| *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:*** | Corrections for Non-terrestrial Networks | | | | | | | | | |
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| ***Source to WG:*** | InterDigital | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_NTN\_enh-Core | | | | |  | | ***Date:*** | | 2024-08-29 |
|  |  | | | |  | | |  | |  |
| ***Category:*** | **F** |  | | | | | | ***Release:*** | | Rel-18 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19) Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Configurations for PUCCH repetition for Msg4 HARQ-ACK include an RSRP threshold *rsrp-ThresholdPUCCHforMsg4HARQACK* and the parameter to enable this feature *numberOfPUCCHforMsg4HARQACK-RepetitionsList*.  According to RAN1 agreement and the RRC parameter list, a UE capable of PUCCH repetition of Msg4 HARQ-ACK reports the capability of PUCCH repetition for Msg4 HARQ-ACK in the following cases:  if *numberOfPUCCHforMsg4HARQACK-RepetitionsList* is configured but *rsrp-ThresholdPUCCHforMsg4HARQACK* is not, or;  if *numberOfPUCCHforMsg4HARQACK-RepetitionsList* and *rsrp-ThresholdPUCCHforMsg4HARQACK* are configured, and the RSRP of the downlink pathloss reference is less than *rsrp-ThresholdPUCCHforMsg4HARQACK*"  However, the current NOTE 3 in Table 6.2.1-2c in TS 38.321 does not include the first case. | | | | | | | | |
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| ***Summary of change:*** | | The NOTE 3 is updated to describe the above cases where a UE may report the capability of PUCCH repetition for Msg4 HARQ-ACK.  **Impact analysis**  Impacted functionality:  PUCCH repetition for Msg4 HARQ-ACK  Inter-operability:  1. if the network supports the change and the UE does not, there is no inter-operability issue foreseen.  2. if the UE supports the change and the network does not, there is no inter-operability issue foreseen. | | | | | | | | |
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| ***Consequences if not approved:*** | | The UE may incorrectly report the capability of PUCCH repetition for Msg4 HARQ-ACK. | | | | | | | | |
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| ***Clauses affected:*** | | 6.2.1 | | | | | | | | |
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|  | | **Y** | **N** |  | | |  | | | |
| ***Other specs*** | |  | **X** | Other core specifications | | |  | | | |
| ***affected:*** | |  | **X** | Test specifications | | |  | | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | |  | | | |
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| ***Other comments:*** | |  | | | | | | | | |

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| ***This CR's revision history:*** | N/A |

<<<<<<<<<<<<<<<<<<<< Change begins >>>>>>>>>>>>>>>>>>>>

### 6.2.1 MAC subheader for DL-SCH and UL-SCH

<<<<<<<<<<<<<<<<<<<< Unchanged text ommited >>>>>>>>>>>>>>>>>>>>

Table 6.2.1-2c: Values of LCID for UL-SCH when the LX field is set to 1

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| Codepoint | Index | LCID values |
| 0 | (216 + 320) | CCCH of size 48 bits for an eRedCap UE |
| 1 | (216 + 321) | CCCH of size 64 bits for an eRedCap UE |
| 2 | (216 + 322) | CCCH of size 48 bits for PUCCH repetition of Msg4 HARQ-ACK, except for an (e)RedCap UE |
| 3 | (216 + 323) | CCCH of size 64 bits for PUCCH repetition of Msg4 HARQ-ACK, except for an (e)RedCap UE |
| 4 | (216 + 324) | CCCH of size 48 bits for PUCCH repetition of Msg4 HARQ-ACK of a RedCap UE |
| 5 | (216 + 325) | CCCH of size 64 bits for PUCCH repetition of Msg4 HARQ-ACK of a RedCap UE |
| 6 | (216 + 326) | CCCH of size 48 bits for PUCCH repetition of Msg4 HARQ-ACK of an eRedCap UE |
| 7 | (216 + 327) | CCCH of size 64 bits for PUCCH repetition of Msg4 HARQ-ACK of an eRedCap UE |
| 8 to 63 | (216 + 328) to (216 + 383) | Reserved |
| NOTE 1: The MAC entity may use the code point corresponding to a given feature or feature combination in Table 6.2.1-2c only if network indicates support for the corresponding feature or feature combination.  NOTE 2: CCCH of size 48 bits and CCCH of size 64 bits are referred to as CCCH and CCCH1, respectively, in TS 38.331 [5].  NOTE 3: For UE capable of PUCCH repetition of Msg4 HARQ-ACK, the MAC entity uses the code points corresponding to PUCCH repetition of Msg4 HARQ-ACK if *numberOfMsg4HARQ-ACK-Repetitions* is configured and *rsrp-ThresholdMsg4HARQ-ACK* is not configured, or if both are configured and the RSRP of the downlink pathloss reference is less than *rsrp-ThresholdMsg4HARQ-ACK.* | | |

<<<<<<<<<<<<<<<<<<<< End of change >>>>>>>>>>>>>>>>>>>>