**3GPP TSG-RAN WG2 #131R2-2506560**

**Bengaluru, India, 25 - 29 August 2025**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.321** | **CR** | **2121** | **rev** | **-** | **Current version:** | **18.6.0** |  |
|  |
| *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:***  | Introduction of NTN Phase 3 enhancements |
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| ***Source to WG:*** | InterDigital |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_NTN\_Ph3-Core |  | ***Date:*** | 2025-09-05 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *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 canbe 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)* |
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| ***Reason for change:*** | Introduction of Release 19 NR NTN phase 3 enhancements |
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| ***Summary of change:*** | This CR captures the agreements of Solutions for NR to support non-terrestrial networks (NTN) in Release 19. Specifically, support for UE to report capability/request of Msg4 PDSCH repetition according to the following agreements from RAN2#131:1. LCID in table 6.2.1-2C when LX field is set to 1 is used for UE to report capability/request of Msg4 PDSCH repetition.
2. RAN2 assumes combination of below features are possible and will define a signalling to support any combination of below features using LCID values in Table 6.2.1-2c:

 - Msg4 PDSCH repetition  - Msg4 HARQ-ACK PUCCH repetition - (e)RedCap |
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| ***Consequences if not approved:*** | No support for Release 19 NR NTN phase 3 enhancements. |
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| ***Clauses affected:*** | 6.2.1 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** | **Y** |  |  Other core specifications  | TS 38.300 CR 1023TS 38.304 CR 0441 r1TS 38.306 CR 1321 r1TS 38.331 CR 5403 r1TS 38.331 CR 5481 |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | N/A |

<<<<<<<<<<<<<<<<<<<< First change begins >>>>>>>>>>>>>>>>>>>>

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

<<<<<<<<<<<<<<<<<<<< Unchanged text is omitted >>>>>>>>>>>>>>>>>>>>

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 | (216 + 328) | CCCH of size 48 bits for PDSCH repetition of Msg4, except for an (e)RedCap UE |
| 9 | (216 + 329) | CCCH of size 64 bits for PDSCH repetition of Msg4, except for an (e)RedCap UE |
| 10 | (216 + 330) | CCCH of size 48 bits for PDSCH repetition of Msg4 of a RedCap UE |
| 11 | (216 + 331) | CCCH of size 64 bits for PDSCH repetition of Msg4 of a RedCap UE |
| 12 | (216 + 332) | CCCH of size 48 bits for PDSCH repetition of Msg4 of an eRedCap UE |
| 13 | (216 + 333) | CCCH of size 64 bits for PDSCH repetition of Msg4 of an eRedCap UE |
| 14 | (216 + 334) | CCCH of size 48 bits for PUCCH repetition of Msg4 HARQ-ACK and PDSCH repetition of Msg4, except for an (e)RedCap UE |
| 15 | (216 + 335) | CCCH of size 64 bits for PUCCH repetition of Msg4 HARQ-ACK and PDSCH repetition of Msg4, except for an (e)RedCap UE |
| 16 | (216 + 336) | CCCH of size 48 bits for PUCCH repetition of Msg4 HARQ-ACK and PDSCH repetition of Msg4 of a RedCap UE |
| 17 | (216 + 337) | CCCH of size 64 bits for PUCCH repetition of Msg4 HARQ-ACK and PDSCH repetition of Msg4 of a RedCap UE |
| 18 | (216 + 338) | CCCH of size 48 bits for PUCCH repetition of Msg4 HARQ-ACK and PDSCH repetition of Msg4 of an eRedCap UE |
| 19 | (216 + 339) | CCCH of size 64 bits for PUCCH repetition of Msg4 HARQ-ACK and PDSCH repetition of Msg4 of an eRedCap UE |
| 20 to 63 | (216 + 340) 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.* |

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