**3GPP TSG RAN WG1 #120** **R1-25xxxxx**

Athens, Greece, February 17th – 21st, 2025

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| *CR-Form-v12.2* |
| **DRAFT CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** |  | **rev** |  | **Current version:** | **18.5.0** |  |
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| *For* [***HELP***](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:***  | Rel-18 editorial corrections for TS 38.213 |
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| ***Source to WG:*** | Samsung |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | , NR\_cov\_enh2-Core, NR\_SL\_enh2-Core |  | ***Date:*** | 2025-02-24 |
|  |  |  |  |  |
| ***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 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | 1. Misaligned RRC parameter names with TS 38.331 v18.4.0 in Clauses 7.7.1 and 16.5, and missing RRC parameter in Clause 7.7.1.
2. Unclear whether the numbers of preamble repetitions indicated in *FeatureCombinationPreambles* of *RACH-ConfigCommon* are associated with each supported feature combination combination in Clause 8.1.
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| ***Summary of change:*** | 1. Align RRC parameter names with TS 38.331 v18.3.0 in Clauses 7.7.1 and 16.5, and add missing RRC parameter in Clause 7.7.1.
2. Clarify that the numbers of preamble repetitions indicated in *FeatureCombinationPreambles* of *RACH-ConfigCommon* are associated with each supported feature combination in Clause 8.1.
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| ***Consequences if not approved:*** | Ambiguous/incomplete specifications. |
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| ***Clauses affected:*** | 7.1.1, 8.1, 16.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ... |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\* Unchanged text is omitted \*\*\*

7.1.1 UE behaviour

\*\*\* unchanged text omitted \*\*\*

For active UL BWP$b$ of carrier $f$ of serving cell $c, i$f a UE is not provided *twoPHRMode*, and is provided

- two SRS resource sets in *srs-ResourceSetToAddModList* or *srs-ResourceSetToAddModListDCI-0-2* with usage set to 'codebook' or 'nonCodebook',

- *dl-OrJointTCI-StateList* or *TCI-UL-State* and is indicated a first *TCI-State* or *TCI-UL-State* and a second *TCI-State* or *TCI-UL-State*, and

- *multipanelSchemeSDM* or *multipanelSchemeSFN*

the UE provides one Type 1 power headroom report and one configured maximum output power associated with the first *TCI-State* or *TCI-UL-State* for an actual PUSCH transmission using a spatial domain filter corresponding to the first *TCI-State* or *TCI-UL-State* and using a spatial domain filter corresponding to the second *TCI-State* or *TCI-UL-State.*

If a UE provides a Type 1 power headroom report for an activated serving cell based on an actual PUSCH transmission, is provided *phr-AssumedPUSCH-Reporting*, and *dynamicTransformPrecoderFieldPresenceDCI-0-1* or *dynamicTransformPrecoderFieldPresenceDCI-0-2* is set to enabled for the active UL BWP of the serving cell, the UE provides

- $P\_{CMAX,f,c}(i)$ based on any applicable maximum output power reduction for an assumed PUSCH transmission with transform precoder enabled, if supported, if transform precoder is disabled for the actual PUSCH transmission, or

- $P\_{CMAX,f,c}(i)$ based on any applicable maximum output power reduction for an assumed PUSCH transmission with transform precoder disabled, if supported, if the transform precoder is enabled for the actual PUSCH transmission,

where all other parameters used for the calculation of $P\_{CMAX,f,c}(i)$ of the assumed PUSCH transmission are same as for the actual PUSCH transmission.

\*\*\* unchanged text omitted \*\*\*

8.1 Random access preamble

\*\*\* unchanged text omitted \*\*\*

For a PRACH transmission with $N\_{preamble}^{rep}$ preamble repetitions, a set consists of $N\_{preamble}^{rep}$ valid PRACH occasions that are consecutive in time, use same frequency resources, and are associated with same one or more SS/PBCH block index(es), and each SS/PBCH block index is associated with same preamble indexes in all valid PRACH occasions within the set.

For a PRACH transmission with preamble repetitions, a time period, starting from frame 0, is the smallest integer number of association pattern periods such that at least one set of valid PRACH occasions for each of the $N\_{Tx}^{SSB}$ SS/PBCH block indexes can be determined within the time period for all configured number of preamble repetitions for each supported feature combination provided in each *RACH-ConfigCommon*. The set(s) of valid PRACH occasions for each configured number of preamble repetitions repeats every time period.

Within a time period, for set(s) of $N\_{preamble}^{rep}$ valid PRACH occasions for a PRACH transmission with $N\_{preamble}^{rep}$ preamble repetitions

\*\*\* unchanged text omitted \*\*\*

16.5 UE procedure for reporting HARQ-ACK on uplink

\*\*\* unchanged text omitted \*\*\*

For reporting HARQ-ACK information on uplink corresponding to one or multiple PSSCH transmissions with a corresponding SCI format with the field 'HARQ feedback enabled/disabled indicator' set to disabled, the UE generates HARQ-ACK information with the contents instructed by higher layer. The priority value of the HARQ-ACK information is same as the priority value of the PSSCH transmission.

A UE does not expect to be provided PUCCH resources or PUSCH resources to report HARQ-ACK information that start earlier than $T\_{prep}=$ $\left(N+1\right)∙\left(2048+144\right)∙κ∙2^{-μ}∙T\_{c}$ after the end of a last symbol of a last PSFCH reception occasion if *sl-NumPSFCH-Occasions* is not (pre-)configured, or of a last candidate PSFCH reception occasion if *sl-NumPSFCH-Occasions* is (pre-)configured, from a number of PSFCH reception occasions if *sl-NumPSFCH-Occasions* is not (pre-)configured, or from a number of candidate PSFCH reception occasions if *sl-NumPSFCH-Occasions* is (pre-)configured, that the UE generates HARQ-ACK information to report in a PUCCH or PUSCH transmission, where

- $κ$ and $T\_{c}$ are defined in [4, TS 38.211]

- $μ=min⁡(μ\_{SL},μ\_{UL})$, where $μ\_{SL}$ is the SCS configuration of the SL BWP and $μ\_{UL}$ is the SCS configuration of the active UL BWP on the primary cell

- $N$ is determined from $μ$ according to Table 16.5-1

Table 16.5-1: Values of $N$

|  |  |
| --- | --- |
| $$μ$$ | $$N$$ |
| 0 | 14 |
| 1 | 18 |
| 2 | 28 |
| 3 | 32 |

For DCI format 3\_0, if present, the PSFCH-to-HARQ feedback timing indicator field values map to values for a set of number of slots provided by *sl-PSFCH-ToPUCCH* as defined in Table 16.5-2.

Table 16.5-2: Mapping of PSFCH-to-HARQ feedback timing indicator field values to numbers of slots

|  |  |
| --- | --- |
| PSFCH-to-HARQ feedback timing indicator  | Number of slots  |
| 1 bit | 2 bits | 3 bits |  |
| '0' | '00' | '000' | 1st value provided by *sl-PSFCH-ToPUCCH* |
| '1' | '01' | '001' | 2nd value provided by *sl-PSFCH-ToPUCCH* |
|  | '10' | '010' | 3rd value provided by *sl-PSFCH-ToPUCCH* |
|  | '11' | '011' | 4th value provided by *sl-PSFCH-ToPUCCH* |
|  |  | '100' | 5th value provided by *sl-PSFCH-ToPUCCH* |
|  |  | '101' | 6th value provided by *sl-PSFCH-ToPUCCH* |
|  |  | '110' | 7th value provided by *sl-PSFCH-ToPUCCH* |
|  |  | '111' | 8th value provided by *sl-PSFCH-ToPUCCH* |

With reference to slots for PUCCH transmissions and for a number of PSFCH reception occasions if *sl-NumPSFCH-Occasions* is not (pre-)configured, or candidate PSFCH reception occasions if *sl-NumPSFCH-Occasions* is (pre-)configured, ending in slot $n$, the UE provides the generated HARQ-ACK information in a PUCCH transmission within slot $n+k$, subject to the overlapping conditions in clause 9.2.5, where $k$ is a number of slots indicated by a PSFCH-to-HARQ feedback timing indicator field, if present, in a DCI format indicating a slot for PUCCH transmission to report the HARQ-ACK information, or $k$ is provided by *sl-PSFCH-ToPUCCH* for a transmission scheduled by a DCI format or for a SL configured grant type 2, or by *sl-PSFCH-ToPUCCH-CG-Type1* for a SL configured grant type 1. $k=0$ corresponds to a last slot for a PUCCH transmission that would overlap with the last PSFCH reception occasion if *sl-NumPSFCH-Occasions* is not (pre-)configured, or the last candidate PSFCH reception occasion if *sl-NumPSFCH-Occasions* is (pre-)configured, assuming that the start of the sidelink frame is same as the start of the downlink frame [4, TS 38.211].

For a PSSCH transmission by a UE that is scheduled by a DCI format, or for a SL configured grant Type 2 PSSCH transmission activated by a DCI format, the DCI format indicates to the UE that a PUCCH resource is not provided when a value of the PUCCH resource indicator field is zero and a value of PSFCH-to-HARQ feedback timing indicator field, if present, is zero. For a SL configured grant Type 2 PSSCH transmission without a corresponding PDCCH, the DCI format activating the SL configured grant Type 2 indicates to the UE that a PUCCH resource is not provided when a value of the PUCCH resource indicator field is zero and a value of PSFCH-to-HARQ feedback timing indicator field, if present, is zero. For a SL configured grant Type 1 PSSCH transmission, a PUCCH resource can be provided by *sl-N1PUCCH-AN* and *sl-PSFCH-ToPUCCH-CG-Type1*. For transmission of HARQ-ACK information corresponding only to a SL configured grant Type 2 PSSCH transmission, including the PSSCH transmission(s) associated with the corresponding activation DCI format 3\_0, a UE can be provided a PUCCH resource by *sl-N1PUCCH-AN-Type2*. If a PUCCH resource is not provided, the UE does not transmit a PUCCH with generated HARQ-ACK information from PSFCH reception occasions.

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