**3GPP TSG RAN WG1 #116 R1-240xxxx**

**Athens, Greece, February 26th – March 1st, 2024**

**Agenda item:** 7.1

**Source:** Moderator (Qualcomm Incorporated)

**Title:** Discussion on R1-2401412 & R1-2401410

**Document for:** Discussion and Decision

# R1-2401412

For x1412, the CR was agreed in principle with the following remaining issues:

* Release of applicability.
* Cover page comments.

During the online session, it was mentioned that TEI17 code should not be used. The usage of TEI17 is in line with the CR drafting rules under 21.900, sublcause 6.2 (relevant section pasted below, highlighted added):

Notwithstanding the provisions of clause 4.10.2, TEI<x> is also to be used in a Category F and any related Category A CR(s) which add to or modify TR/TS content introduced in a Release prior to <x> and where no appropriate Release <x> Work Item exists. In this case the code(s) for the Work Item(s) which introduced the relevant TR/TS content shall be used, plus the appropriate TEI<x> code for the first Release in which the CR is introduced. The same TEI<x> shall be used in all mirror (i.e. Category A) CRs.

Example: TR/TS content is introduced into TS 23.456 under the Release 13 Work Item ABCD by means of a Rel-13 CR. Much later, an error is identified in the TR/TS content introduced by that Rel-13 CR which of course appears in the current Release 13 version of 23.456.
According to the provisions of clause 4.10.0, a category F CR would be introduced into the current Release 13 version tagged with Work Item ABCD, together with category A (mirror) CRs to the Release 14, 15, etc versions of 23.456, each also tagged with code ABCD.
However, it is felt that the seriousness of the error does not warrant taking the correction all the way back to Release 13, and so the category F CR is instead written to the current Release 15 version of 23.456. This is tagged with the Work Item codes ABCD and TEI15. Category A CRs are written to the Release 16, etc versions of 23.456, and these are also tagged with Work Item codes ABCD and TEI15.

Based on the received comments, sourcing company modified the cover page as follows, keeping the release as Rel-17 (tracked changes indicate the delta with respect to x1412):

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| *CR-Form-v12.1* |
| **DRAFT CHANGE REQUEST** |
|  |
|  | **38.212** | **CR** | **DRAFT** | **rev** | **-** | **Current version:** | **17.7.0** |  |
|  |
| *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:***  | Clarification on typeA SRS TPC commands for SUL |
|  |  |
| ***Source to WG:*** | Qualcomm Incorporated |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core, TEI17 |  | ***Date:*** | 2024-02-16 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-17 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | In TS 38.212, the following is specified about typeA SRS TPC commands transmitted over DCI format 2\_3: The following information is transmitted by means of the DCI format 2\_3 with CRC scrambled by TPC-SRS-RNTI:- block number 1, block number 2, …, block number  where the starting position of a block is determined by the parameter *startingBitOfFormat2-3* or *startingBitOfFormat2-3SUL-v1530* provided by higher layers for the UE configured with the block. If the UE is configured with higher layer parameter *srs-TPC-PDCCH-Group* = *typeA* for an UL without PUCCH and PUSCH or an UL on which the SRS power control is not tied with PUSCH power control, one block is configured for the UE by higher layers, with the following fields defined for the block:- SRS request – 0 or 2 bits. The presence of this field is according to the definition in Clause 11.4 of [5, TS38.213]. If present, this field is interpreted as defined by Table 7.3.1.1.2-24.- TPC command number 1, TPC command number 2, ..., TPC command number *N*, where each TPC command applies to a respective UL carrier provided by higher layer parameter *cc-IndexInOneCC-Set*Additionally, TS 38.331 includes the following field description for the fields indicating the starting bit:

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| ***startingBitOfFormat2-3***The starting bit position of a block within the group DCI with SRS request fields (optional) and TPC commands. The value 1 of the field corresponds to the first/left most bit of format2-3. The value 2 of the field corresponds to the second bit format2-3, and so on (see TS 38.212 [17], clause 7.3.1 and TS 38.213 [13], clause 11.3). |
| ***startingBitOfFormat2-3SUL***The starting bit position of a block within the group DCI with SRS request fields (optional) and TPC commands for SUL carrier (see TS 38.212 [17], clause 7.3.1 and TS 38.213 [13], clause 11.3). |

The highlighted sentences in TS 38.212 can be seen to be contradictory for the following reasons:* The first sentence states that the starting position of a block is determined by *startingBitOfFormat2-3* or *startingBitOfFormat2-3SUL-v1530*. This, together with the field description in TS 38.331, indicates that two starting positions (and therefore two blocks) are provided, one for the SUL and one for the non-SUL carriers.
* The second sentence states that “one block is configured for the UE by higher layers”, which contradicts the previous bullet.
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| ***Summary of change:*** | Clarify that for typeA SRS TPC command up to two blocks can be indicated by higher layers, one for non-SUL carriers and one for SUL carriers. |
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| ***Consequences if not approved:*** | Specification is contradictory. |
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| ***Clauses affected:*** | 6.2.1.3 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** | Impact analysis: This CR only applies to cases where both SUL and non-SUL carriers are power controlled by DCI format 2\_3 (e.g. this CR does not affect the case where SUL is not configured) |
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| ***This CR's revision history:*** |  |

## Q1.1: For x1412, please provide any comments on the cover page and the target release for applicability:

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| Company | Target release | Comments |
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# R1-2401410

For x1410, no comments were received on the cover sheet during the online session. Companies are encouraged to check the cover sheet (reproduced below without any changes) and provide any comments before approving the final CR.

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| *CR-Form-v12.1* |
| **DRAFT CHANGE REQUEST** |
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|  | **38.214** | **CR** | **DRAFT** | **rev** | **-** | **Current version:** |  |  |
|  |
| *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:***  | Correction on SRS carrier switching prioritization rules |
|  |  |
| ***Source to WG:*** | Qualcomm Incorporated |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core, TEI17 |  | ***Date:*** | 2024-02-18 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-17 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | In Subclause 6.2.1.3, $c\_{1}$ denotes the “target CC” over which SRS CS is transmitted, and $c\_{2}$ the “source CC” which is interrupted during the switch. In the paragraphs describing the prioritization rules, the target CC is incorrectly denoted as $c\_{2}$. |
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| ***Summary of change:*** | Correct the notation $c\_{2}$ to $c\_{1}$.Minor editorial correction (removing underline of $c\_{2}$ in one of the occurrences). |
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| ***Consequences if not approved:*** | Specification is inconsistent with the definition of $c\_{1}$ and $c\_{2}$  |
|  |  |
| ***Clauses affected:*** | 6.2.1.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## Q1.2: Please provide any comments on the cover sheet of x1410:

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| Company | Comments |
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