3GPP TSG RAN WG1 #107 R1-211xxxx

e-Meeting, Nov 11th – 19th, 2021

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| *CR-Form-v11.2* |
| **CHANGE REQUEST** |
|  |
|  | **36.212** | **CR** |  | **rev** | **-** | **Current version:** | **15.14.0** |  |
|  |
| *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:***  | Fallback DCI for eMTC |
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| ***Source to WG:*** | Moderator (Nordic Semiconductor ASA), Ericsson |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | LTE\_eMTC5-Core |  | ***Date:*** | 2021-11-12 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-15 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | Clarify that all UE-specific RRC-configured UL DCI format fields are only present in USS. |
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| ***Summary of change:*** | Add the clarification “and the DCI is mapped onto the UE-specific search space given by the C-RNTI as defined in [3]” to Resource block assignment DCI field in 6-0A. |
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| ***Consequences if not approved:*** | Size of CSS fallback DCI changes with RRC configuration. |
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| ***Clauses affected:*** | 5.3.3.1.10 |
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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:*** |  |

##### 5.3.3.1.10 Format 6-0A

DCI format 6-0A is used for the scheduling of PUSCH in one UL cell, and for the indication of ACK feedback.

The following information is transmitted by means of the DCI format 6-0A:

- Flag format 6-0A/format 6-1A differentiation – 1 bit, where value 0 indicates format 6-0A and value 1 indicates format 6-1A

- Frequency hopping flag – 1 bit, where value 0 indicates frequency hopping is not enabled and value 1 indicates frequency hopping is enabled as defined in clause 5.3.4 of [2]

- Number of resource units – 2 bits, where value '00' indicates the format 6-0A DCI uses PRB resource allocation, otherwise the DCI format 6-0A uses sub-PRB resource allocation as defined in clause 8.1.6 of [3]. This field is present when *ce-PUSCH-SubPRB-Config* is configured by higher layers and the DCI is mapped onto the UE-specific search space given by C-RNTI as defined in [3]

- Resource block assignment –

- If the format 6-0A DCI uses sub-PRB resource allocation:

- +6 bits for PUSCH as defined in [3]

-  MSB bits provide the narrowband index as defined in clause 5.2.4 of [2]

- 6 bits provide the resource allocation within the indicated narrowband using UL resource allocation type 5 as defined in clause 8.1.6 of [3]

- Else if flexible starting PRB for PUSCH resource allocation is enabled by higher layers with  equal to  and the DCI is mapped onto the UE-specific search space given by C-RNTI as defined in [3], $\left⌈log\_{2}(6N\_{RB}^{UL})\right⌉$ bits for FDD PUSCH and $\left⌈log\_{2}(5N\_{RB}^{UL})\right⌉$ bits for TDD PUSCH provide the resource allocation using UL resource allocation type 0 as defined in clause 8.1.1 of [3]

- Otherwise,+5 bits for PUSCH as defined in [3]:

- If the 5 LSB bits indicate a value not larger than 20

-  MSB bits provide the narrowband index as defined in clause 5.2.4 of [2]

- 5 bits provide the resource allocation using UL resource allocation type 0 within the indicated narrowband

- Otherwise,

- +5 bits provide the resource allocation using UL resource allocation type 4 as defined in clause 8.1.5 of[ 3]

<remaining parts of sub-clause have been omitted >