**3GPP TSG- Meeting #**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *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 on resource pool index | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
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| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | RAN2 introduced mode-1 dedicated discovery resource pool configuration for NR SL discovery transmission, i.e. sl-DiscTxPoolScheduling. However, the current DCI Format 3\_0 cannot schedule any resource in the pool(s) indicated by sl-DiscTxPoolScheduling, since the “Resource pool index” field in DCI format 3\_0 cannot refer to any pool configured by sl-DiscTxPoolScheduling. | | | | | | | | |
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| ***Summary of change:*** | | Clarify that the field size of resource pool index is determined by the total number of transmit resource pools provided by sl-DiscTxPoolScheduling, if configured, and sl-TxPoolScheduling, if configured.  Clarify that DCI size alignment is performed among all tx pools including the ones provided by sl-DiscTxPoolScheduling if configured, and those provided by sl-TxPoolScheduling if configured. | | | | | | | | |
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| ***Consequences if not approved:*** | | .  gNB might not be able to successfully schedule transmissions on a dedicated sidelink discovery resource pool for mode-1 UE. | | | | | | | | |
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| ***Clauses affected:*** | | 7.3.1.4.1 | | | | | | | | |
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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:  If the network implements the change but the UE does not: UE potentially unable to decode DCI format 3\_0 in some cases due to DCI size misalignment between the UE and the network. UE potentially transmitting in the incorrect sidelink resource pool due to misalignment between the UE and the network regarding the interpretation of the resource pool index field in DCI format 3\_0. | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

##### 7.3.1.4.1 Format 3\_0

DCI format 3\_0 is used for scheduling of NR PSCCH and NR PSSCH in one cell.

The following information is transmitted by means of the DCI format 3\_0 with CRC scrambled by SL-RNTI or SL-CS-RNTI:

- Resource pool index – bits, where *I* is the total number of resource pools for transmission configured by the higher layer parameter *sl-TxPoolScheduling*, if configured, and *sl-DiscTxPoolScheduling*, if configured.

- Time gap – 3 bits determined by higher layer parameter *sl-DCI-ToSL-Trans,* as defined in clause 8.1.2.1 of [6, TS 38.214]

- HARQ process number – 4 bits.

- New data indicator – 1 bit.

- Lowest index of the subchannel allocation to the initial transmission – bits as defined in clause 8.1.2.2 of [6, TS 38.214]

- SCI format 1-A fields according to clause 8.3.1.1:

- Frequency resource assignment.

- Time resource assignment.

- PSFCH-to-HARQ feedback timing indicator – bits, where is the number of entries in the higher layer parameter *sl-PSFCH-ToPUCCH,* as defined in clause 16.5 of [5, TS 38.213]

- PUCCH resource indicator – 3 bitsas defined in clause 16.5 of [5, TS 38.213].

- Configuration index – 0 bit if the UE is not configured to monitor DCI format 3\_0 with CRC scrambled by SL-CS-RNTI; otherwise 3 bitsas defined in clause 8.1.2 of [6, TS 38.214]. If the UE is configured to monitor DCI format 3\_0 with CRC scrambled by SL-CS-RNTI, this field is reserved for DCI format 3\_0 with CRC scrambled by SL-RNTI.

- Counter sidelink assignment index – 2 bits

- 2 bits as defined in clause 16.5.2 of [5, TS 38.213] if the UE is configured with *pdsch-HARQ-ACK-Codebook = dynamic*

- 2 bits as defined in clause 16.5.1 of [5, TS 38.213] if the UE is configured with *pdsch-HARQ-ACK-Codebook = semi-static*

- Padding bits, if required

If the total number of transmit resource pools provided in *sl-TxPoolScheduling*, if configured, and *sl-DiscTxPoolScheduling*, if configured, is larger than one, zeros shall be appended to the DCI format 3\_0 until the payload size is equal to the size of a DCI format 3\_0 given by a configuration of the transmit resource pool resulting in the largest number of information bits for DCI format 3\_0.

If the UE is configured to monitor DCI format 3\_1 and the number of information bits in DCI format 3\_0 is less than the payload of DCI format 3\_1, zeros shall be appended to DCI format 3\_0 until the payload size equals that of DCI format 3\_1.