**3GPP TSG-RAN WG2 Meeting #121 *R2-2302246***

**Athens, Greece,** **27th Feb – 3rd Mar 2023**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  | **38.300** | **CR** | **0642** | **rev** | **1** | **Current version:** | **17.3.0** |  |
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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:***  | Miscellaneous corrections on TS 38.300 for NR sidelink  |
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| ***Source to WG:*** | CATT, ZTE, Ericsson |
| ***Source to TSG:*** | R2 |
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| ***Work item code:*** | NR\_SL\_enh-Core |  | ***Date:*** | 2023-3-02 |
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| ***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)* *Rel-19 (Release 19)* |
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| ***Reason for change:*** | 1. According to the LS(R1-2212822) received from RAN1 and RAN2 agreements shown as follows, the supported cast type of IUC information needs to be clarified in stage 2.

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| RAN1 Agreement:* The following working assumption is confirmed as follows:
* Working Assumption (RAN1#107bis-e meeting):
* For Scheme 1, following cast type(s) are supported for inter-UE coordination information transmission triggered by a condition other than explicit request reception
* Groupcast/Broadcast for non-preferred resource set~~, FFS for preferred resource set~~
* ~~FFS: Under which conditions groupcast/broadcast can be supported~~
* Unicast for preferred resource set and non-preferred resource set
* ~~FFS: Under which conditions unicast can be supported~~
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In RAN2#121, the following agreements were reached on the cast type of IUC information triggered by condition:

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| RAN2#121 Agreements:* Option 1 is agreed. IUC in GC/BC can be supported with option1.
* We will have a note in MAC. Detailed wordings be handled in MAC CR email discussion.
* Continue the discussion whether we need to capture for a case when there is data to send in GC/BC in separate in a note as part of email discussion [AT121][506].
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TS38.300 should be updated based on the LS in and RAN2 agreements.1. The two terminologies “UE-A” and “UE-B” are used in the description texts on IUC. However, the two terminologies are not defined, and therefore should be avoided to be used.
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| ***Summary of change:*** | 1. In section 16.9.8, add the description of supported cast type of IUC information triggered by condition.
2. In section 16.9.8, removal of terminologies “UE-A” and “UE-B”.

**Impact analysis**Impacted 5G architecture options:  NG-RAN Architecture supporting the PC5 interfaceImpacted functionalityNR Sidelink CommunicationInter-operability:If the network is implemented according to this CR while the UE is not, there is no inter-operability issue.If the UE is implemented according to this CR while the network is not, there is no inter-operability issue.If one UE implements the changes according to the CR but not another UE, there is no inter-operability issue. |
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| ***Consequences if not approved:*** | 1. Supported cast type of IUC information triggerred by condition is not clarified.
2. UEs may have different interpretation to IUC functions as captured in clause 16.9.8. This may affect IUC trigger and report between UEs.
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| ***Clauses affected:*** | 16.9.8 |
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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:*** |  |
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| ***This CR's revision history:*** |  |

START OF CHANGE

### 16.9.8 Inter-UE Coordination (IUC)

The SL UE can support inter-UE coordination (IUC) in Mode 2, whereby a UE sends information about resources to a peer UE, which the peer UE then uses for resource (re)selection. The following schemes of inter-UE coordination are supported:

- IUC scheme 1, where the IUC information sent from a UE to a peer UE is the preferred or non-preferred resources for the peer UE's transmission, and

- IUC scheme 2, where the IUC information sent from a UE to a peer UE is the presence of expected/potential resource conflict on the resources indicated by the peer UE's SCI.

In scheme 1, the transmission of IUC information from a UE can be triggered by an explicit request from a peer UE, or by a condition at the UE. The UE determines the set of resources reserved by other UEs or slots where the UE, when it is the intended receiver of a peer UE, does not expect to perform SL reception from the peer UE due to half-duplex operation. The UE uses these resources as the set of non-preferred resources, or excludes these resources to determine a set of preferred resources and sends the preferred/non-preferred resources to the peer UE. Regarding the IUC information received from the UE, the peer UE's resources for resource (re)selection can be based on both the peer UE's sensing results (if available) and the IUC information, or it can be based only on the IUC information. For scheme 1, MAC CE and second-stage SCI or MAC CE only can be used to send IUC information. For transmission of the explicit request and reporting for IUC information in unicast manner is supported. For IUC information transmission triggered by a condition other than the explicit request, the IUC information indicating preferred resource set is transmitted in unicast manner, and the IUC information indicating non-preferred resource set is transmitted in unicast, groupcast or broadcast manner.In scheme 2, a UE determines the expected/potential resource conflict within the resources indicated by a peer UE's SCI as either resources reserved by other UEs and identified by the UE as fully/partially overlapping with the resources indicated by the peer UE's SCI, or as slots where the UE is the intended receiver of the peer UE and does not expect to perform SL reception on those slots due to half-duplex operation. The peer UE uses the conflicting resources to determine the resources to be reselected and exclude the conflicting resources from the reselected resources. For scheme 2, PSFCH is used to send IUC information.

END OF CHANGE