**3GPP TSG-RAN WG2 Meeting #121-bis-e *R2-230xxxx***

**Online, 17th – 26th April, 2023**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  | **38.304** | **CR** | **0333** | **rev** | **1** | **Current version:** | **17.4.0** |  |
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| *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 |  | Core Network |  |

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| ***Title:***  | Clarification on sidelink communication resource configuration used by OoC L2 Remote UE  |
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| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_SL\_relay-Core  |  | ***Date:*** | 2023-04-17 |
|  |  |  |  |  |
| ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* *Rel-19 (Release 19)* |
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| ***Reason for change:*** | In current specification, the definition of out-of-coverage for NR sidelink in clause 8.2 is “*If the UE cannot detect any cell on that frequency meeting the S criterion, it shall consider itself to be out-of-coverage for NR sidelink communication on that frequency*.” And according to clause 8.1, a UE which is out-of-coverage for NR sidelink, can perform NR sidelink communication according to:Case 1. SL-PreconfigurationNRCase 2. inter-carrier NR sidelink configuration from the SIB12 of a cellHowever, during L2 U2N relay operation, a Remote UE may not be able to detect any cell but it can still receive SIB12 via the connected Relay UE. In this case, the Remote UE should follow the resource pool configuration in the SIB12 according to TS 38.331, which is not covered by the current two cases in clause 8.1 of TS 38.304. Therefore, clarification is needed. |
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| ***Summary of change:*** | In clause 8.1, * Change *SL-V2X-PreconfigurationNR* to *SL- PreconfigurationNR*;
* Clarify that when a L2 U2N Remote UE is out-of-coverage, the UE shall perform NR sidelink communication according to SIB12 received from the connected L2 U2N Relay UE, but not according to *SL-PreconfigurationNR*.

**Impact analysis**Impacted 5G architecture options:NR SA Impacted functionalityL2 U2N relay, NR sidelink communicationInter-operability:The CR is to align TS 38.304 with TS 38.331. Thus there should be no inter-operability issue. |
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| ***Consequences if not approved:*** | Without the change, the current description may be misunderstood that a L2 U2N Remote UE which is out of coverage, can perform NR sdielink communication according to pre-configuration after receiving SIB12 from the connected L2 U2N Relay UE. |
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| ***Clauses affected:*** | 8.1 |
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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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| START OF CHANGE |

8.1 NR sidelink communication, and V2X sidelink communication, and NR sidelink discovery

The UE may transmit or receive NR sidelink communication if it fulfils the condition(s) defined in TS 38.331 [3], clause 5.8.2. When UE is in-coverage for sidelink operation as defined in clause 8.2, the UE may perform NR sidelink communication according to *SIB12,* and when out-of-coverage for sidelink, the UE may perform NR sidelink communication according to *SL-PreconfigurationNR* or according to *SIB12* of the cell on the frequency which provides inter-carrier NR sidelink configuration, or according to *SIB12* received from the connected L2 U2N Relay UE as specified in TS 38.331 [3]. The UE shall not perform NR sidelink communication according to *SL-PreconfigurationNR* if the UE detects a cell providing NR sidelink configuration or inter-carrier NR sidelink configuration for the frequency UE is interested to perform NR sidelink communication on, or if the UE is a L2 U2N Remote UE and has received *SIB12* from the connected L2 U2N Relay UE.

The UE may transmit or receive V2X sidelink communication if it fulfills the condition(s) defined in TS 36.331[6], clause 5.10.1d. When UE is in-coverage for sidelink operation as defined in clause 8.2, the UE may perform V2X sidelink communication according to *SIB13/ SIB14* of the cell on an NR frequency.

The U2N Remote UE, the U2N Relay UE, or both may transmit NR sidelink relay discovery (i.e., as specified in TS 23.304 [22]) if it fulfills the condition(s) defined in TS 38.331 [3].

For NR sidelink broadcast and groupcast, the UE may obtain SL DRX configuration from *SIB12* (for in-coverage UE, as defined in clause 8.2, in RRC\_IDLE and RRC\_INACTIVE state) or *SL-PreconfigurationNR* (for UE out-of-coverage).

For inter-UE coordination (IUC) information configuration, the UE may obtain it from *SIB12* (for in-coverage UE, as defined in clause 8.2, in RRC\_IDLE and RRC\_INACTIVE state) or *SL-PreconfigurationNR* (for UE out-of-coverage).

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| END OF CHANGE |