**3GPP TSG-RAN WG2 Meeting #124 R2-2313609**

**Chicago, US, Nov. 13th – 17th, 2023**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.304** | **CR** | **0359** | **rev** | **1** | **Current version:** | **17.6.0** |  |
|  | | | | | | | | |
| *For* ***[HELP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <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:*** | Introduction of Release-18 SL Evolution in TS 38.304 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SL\_enh2-Core | | | | |  | ***Date:*** | | | 2023-11-23 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | ***B*** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | This CR introduces the support of Rel18 features for sidelink. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Include consideration of SL operation on shared spectrum and SL CA into section 8.1. | | | | | | | | |
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| ***Consequences if not approved:*** | | Rel18 features for sidelink are not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 8.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.300 CR0728  TS 38.321 CR1695  TS 38.323 CR0126  TS 38.331 CR4391 | | |
| ***affected:*** | |  | **x** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | **R2-2311943** | | | | | | | | |

START OF CHANGE

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 36.104: "Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) radio transmission and reception".

[3] 3GPP TS 36.101: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio transmission and reception".

[4] 3GPP TS 36.213: "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures".

[5] 3GPP TS 36.212: "Evolved Universal Terrestrial Radio Access (E-UTRA); Multiplexing and channel coding".

[6] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[7] 3GPP TS 38.213: "NR; Physical layer procedures for control".

[8] 3GPP TS 38.214: "NR; Physical layer procedures for data".

[9] 3GPP TS 38.300: "NR; NR and NG-RAN Overall Description; Stage 2".

[10] 3GPP TS 38.212: "NR; Multiplexing and channel coding".

[11] 3GPP TS 38.211: "NR; Physical channels and Modulations".

[\*] 3GPP TS 37.213 :“Physical layer procedures for shared spectrum channel access”

NEXT CHANGE

# 8 Sidelink Operation

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

The UE may transmit or receive NR sidelink communication/discovery 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/discovery according to *SIB12,* and when out-of-coverage for sidelink, the UE may perform NR sidelink communication/discovery 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/discovery 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/discovery 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 for non L2 U2N Remote UE out-of-coverage, as defined in clause 8.2, on the frequency which the UE is configured to perform NR sidelink communication/discovery and which is included in *sl-FreqInfoList* in *SIB12*, or on the frequency which the UE is configured to perform NR sidelink communication and which is included in *FreqInfoListSizeExt* in *SIB12*) or *SL-PreconfigurationNR* (for non L2 U2N Remote UE out-of-coverage, as defined in clause 8.2, on the frequency which the UE is configured to perform NR sidelink communication/discovery and which is not included in *sl-FreqInfoList* in *SIB12*, or on the frequency which the UE is configured to perform NR sidelink communication and which is not included in *FreqInfoListSizeExt* in *SIB12*).

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 for non L2 U2N Remote UE out-of-coverage, as defined in clause 8.2, on the frequency which UE is configured to perform NR sidelink communication and which is included in *sl-FreqInfoList*/*sl-FreqInfoListSizeExt* in *SIB12*) or *SL-PreconfigurationNR* (for non L2 U2N Remote UE out-of-coverage, as defined in clause 8.2, on the frequency which UE is configured to perform NR sidelink communication and which is not included in *sl-FreqInfoList*/*sl-FreqInfoListSizeExt* in *SIB12*).

For NR sidelink operation with shared spectrum channel access, Type1 and Type2 (2A/2B/2C) channel access procedures specified in TS 37.213[\*] are used. The UE may obtain parameters used for detection of sidelink consistent LBT failures from *SIB12* or *SL-PreconfigurationNR.*

For NR sidelink operation, UE may use more than one carriers and/or PDCP duplication in sidelink mode 2 if it fulfils the condition(s) defined in TS 38.331 [3].

END OF CHANGE