**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#_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:***  | Introduction of Release-18 SL Evolution in TS 38.304 |
|  |  |
| ***Source to WG:*** | ZTE |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_SL\_enh2 |  | ***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 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)* |
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| ***Reason for change:*** | This CR introduces the support of Rel18 features for sidelink. |
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| ***Summary of change:*** | Include consideration of SL operation on shared spectrum and SL CA into section 8.1. |
|  |  |
| ***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/TR ... CR ... |
| ***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 *sl-FreqInfoList/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 *sl-FreqInfoList/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