**3GPP TSG-RAN WG1 Meeting #108-e *R1-22xxxxx***

**E-Meeting, 21 February – 3 March, 2022**

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| --- |
| *CR-Form-v12.1* |
| **[DRAFT] CHANGE REQUEST** |
|  |
|  | **37.985** | **CR** | xxxx | **rev** | **-** | **Current version:** | **16.0.0** |  |
|  |
| *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)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Addition of Rel-16 NR V2X bands to TR 37.985 |
|  |  |
| ***Source to WG:*** | Huawei (editor) |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | 5G\_V2X\_NRSL-Core |  | ***Date:*** | 2022-02-22 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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)* |
|  |  |
| ***Reason for change:*** | Rel-16 NR-V2X operating bands are omitted, but are present for LTE-V2X.Re-use in NR-V2X of the terminology “multi-carrier” from the LTE-V2X clause title may give the impression of carrier aggregation in Rel-16 NR-V2X. |
|  |  |
| ***Summary of change:*** | Addition of supported Rel-16 NR-V2X bands, equivalently to LTE-V2X.Change clause 5.1.3 title to refer to “concurrent operation”, and use the same in NR-V2X. |
|  |  |
| ***Consequences if not approved:*** | Incomplete description of RAN aspects of Rel-16 NR-V2X; inconsistency between descriptions of LTE-V2X and NR-V2X |
|  |  |
| ***Clauses affected:*** | 2, 5.1.3, 6.2.6(new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |   |
| ***affected:*** |  | **X** |  Test specifications |   |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |   |
|  |  |
| ***Other comments:*** |  |
|  |  |

**<Unchanged parts omitted>**

2 References

**<Unchanged parts omitted>**

[20] 3GPP TS 38.300: "NR; NR and NG-RAN Overall Description; Stage 2".

[21] 3GPP TS 38.321: "NR; Medium Access Control (MAC) protocol specification".

[22] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone".

**<Unchanged parts omitted>**

# 5 LTE V2X

**<Unchanged parts omitted>**

5.1.3 Concurrent operation and carrier aggregation

V2X operation is defined in band 47 in TS 36.101 [11, clause 5.5G], which supports single-carrier and multi-carrier operation:

**Table 5.1.3-1: V2X operating band**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **E‑UTRA Operating Band** | **E-UTRA V2X Operating Band** | **V2X UE transmit** | **V2X UE receive** | **Duplex Mode** | **Interface** |
| **FUL\_low – FUL\_high** | **FDL\_low – FDL\_high** |
| 47 | 47 | 5855 MHz |  | 5925 MHz | 5855 MHz |  | 5925 MHz | HD | PC5 |

The V2X sidelink in band 47 can be operated concurrently with Uu FDD bands 3, 5, 7, 8, 20, 28, and Uu TDD bands 34, 39, 41, and 71.

**<Unchanged parts omitted>**

# 6 NR V2X

**<Unchanged parts omitted>**

### 6.2.6 Concurrent operation

NR-V2X operation is defined in bands n38 and n47 in TS 38.101-1 [22, clause 5.2E], which support single-carrier operation:

Table 6.2.6-1: NR-V2X operating bands

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| V2X Operating Band | Sidelink (SL) Transmission operating band | Sidelink (SL) Reception operating band | Duplex Mode | Interface |
|  | FUL\_low – FUL\_high | FDL\_low – FDL\_high |  |  |
| n381 | 2570 MHz | - | 2620 MHz | 2570 MHz | - | 2620 MHz | HD | PC5 |
| n47 | 5855 MHz | - | 5925 MHz | 5855 MHz | - | 5925 MHz | HD | PC5 |
| Note 1: When this band is used for V2X SL service, the band is exclusively used for NR V2X in particular regions. |

The NR-V2X sidelink in band n47 can be operated concurrently with Uu band n71.

## 6.3 V2X sidelink resource allocation

**<Unchanged parts omitted>**