**3GPP TSG-RAN4 Meeting # 95-e**

**Electronic Meeting, 25th May – 5th June. 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **<38.101-1>** | **CR** | **<CR#>** | **rev** | **<Rev#>** | **Current version:** | **16.3.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Revisions on the CR on NR V2X UE RF requirements for single carrier in TS38.101-1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | vivo | | | | | | | | | |
| ***Source to TSG:*** | RAN4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_V2X\_NRSL | | | | |  | ***Date:*** | | | 2020-5-14 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | This draft CR is based on R4-2005229, CR on NR V2X UE RF requirements for single carrier in TS38.101-1.  The frequency shift requirements are defined for NR V2X in FR1, not just for band n47.  Change the wording and make it more compatible with the spec. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Change the applicabilty of frequency shift requirements as ‘For NR V2X’ instead of ‘For NR V2X UE at n47’. | | | | | | | | |
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| ***Consequences if not approved:*** | | Besides n47, other V2X bands (like n38) does not support the frequency shift introduced for NR V2X. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.4E | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**<Start of Changes>**

## 5.4E Channel arrangement for NR V2X

### 5.4E.1 Channel spacing

For NR V2X, the channel spacing requirements in clause 5.4.1 apply for each operating band.

### 5.4E.2 Channel raster

#### 5.4E.2.1 NR-ARFCN and channel raster

For NR V2X, the NR-ARFCN and channel raster requirements in clause 5.4.2.1 apply for each operationg band.

For NR V2X, the reference frequency can be shifted by configuration.

FREF\_V2X = FREF + Δshift + N \* 5 kHz

where

Δshift = 0 kHz or 7.5 kHz indicated in IE (*frequencyShift7p5khz*), and

N can be set as one of following values {-1, 0, 1}, which are signalled by the network in higher layer parameters or configured by pre-configuration parameters.

#### 5.4E.2.2 Channel raster to resource element mapping

For NR V2X, the channel raster to resource element mapping requirements in clause 5.4.2.2 apply for each operating band.

#### 5.4E.2.3 Channel raster entries for each operating band

For NR V2X, the channel raster entries, the channel raster entries requirements in clause 5.4.2.3 apply for each operating band.

The RF channel positions on the channel raster in each NR V2X operating band are given through the applicable NR-ARFCN in Table 5.4.2.3-1, using the channel raster to resource element mapping in subclause 5.4.2.2.

For NR V2X operating band n47, ΔFRaster = *I* × ΔFGlobal, where *I ϵ {1}.* Every *Ith* NR‑ARFCN within the operating band are applicable for the channel raster within the operating band and the step size for the channel raster in Table 5.4.2.3-1 is given as <*I*>.

### 5.4E.3 Synchronization raster for NR V2X

There is no synchronization raster definition for NR V2X for both licensed bands and unlicensed bands.

**<End of Changes>**