**3GPP TSG-RAN WG4 Meeting # 95-e R4-2008591**

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | 684 | **Rev** | **1** | **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:*** | CR of Annex.B for NR V2X side conditions | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | LG Electronics | | | | | | | | | |
| ***Source to TSG:*** | RAN4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_V2X\_NRSL-Perf | | | | |  | ***Date:*** | | | 2020-05-14 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Introduce condtions for NR V2X in B.4 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Resubmission of endorsed Draft CR R4-2005314  Additional changes from R4-2005314 are,   * Remove square bracket from Es/Iot in Table B.4.4-1. * Remove square bracket from B.4.4 title * In Table B.4.4-1,   + PSCCH-RSRP[/PSSCH-RSRP] 🡪 PSCCH-RSRP and/or PSSCH-RSRP   + PSCCH/[/PSSCH] 🡪 PSCCH and/or PSSCH | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Miss condtions for NR V2X | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | B.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.533 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

< START OF CHANGE #1 >

# B.4 Conditions for V2X

## B.4.1 Test parameters for GNSS signals

This clause defines the reference signal power levels of generated salellites for a corresponding GNSS, which will be used in V2X test cases.

Table B.4.1-1: GNSS Referenece Signal Power Parameters

| System | Parameters | Unit | Value |
| --- | --- | --- | --- |
|  | Number of generated satellites per system | - | 6 |
| GPS(1) | Reference signal power level for all satellites | dBm | -128.5 |
| Galileo | Reference signal power level for all satellites | dBm | -127 |
| GLONASS | Reference signal power level for all satellites | dBm | -131 |
| BDS | Reference signal power level for all satellites | dBm | -133 |
| NOTE 1: "GPS" here means GPS L1 C/A, Modernized GPS, or both, dependent on UE capabilities.  NOTE 2: The DUT UE does not need to support all systems. The DUT UE shall support at least one system and will be test for the supported systems. | | | |

## B.4.2 Conditions for PSBCH-RSRP Accuracy Requirements

This clause defines the following conditions for PSBCH-RSRP measurement accuracy requirements applicable for a corresponding operating band.

The conditions are defined in Table B.4.2-1 for FR1.

Table B.4.2-1: Conditions for PSBCH-RSRP measurements in FR1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | NR V2X operating band groups Note1 | Minimum S-SSB\_RP | | | S-SSB Ês/Iot |
| dBm/SCSS-SSB | | | dB |
| SCSS-SSB = 15kHz | SCSS-SSB = 30kHz | SCSS-SSB = 60kHz |
| [NR\_TDD\_FR1\_A] | [-127] | [-124] | [-121] | ≥ -6 |
| [NR\_TDD\_FR1\_I] | [-123] | [-120] | [-117] |
| NOTE 1: NR V2X operating band groups are as defined in Section 3.5 for the corresponding NR operating bands. | | | | | |

## B.4.3 Conditions for Selection/Reselection to Intra-frequency SyncRef UE

This clause defines the S-SSB\_RP and S-SSB Ês/Iot applicable for a corresponding operating band.

The conditions for selection/reselection to intra-frequency SyncRef UE are defined in Table B.4.3-1 for FR1.

Table B.4.3-1: V2X synchronization measurements in FR1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | NR V2X operating band groups Note1 | Minimum S-SSB\_RP | | | S-SSB Ês/Iot |
| dBm/SCSS-SSB | | | dB |
| SCSS-SSB = 15kHz | SCSS-SSB = 30kHz | SCSS-SSB = 60kHz |
| [NR\_TDD\_FR1\_A] | [-121] | [-118] | [-115] | ≥ 0 |
| [NR\_TDD\_FR1\_I] | [-117] | [-114] | [-111] | ≥ 0 |
| NOTE 1: NR V2X operating band groups are as defined in Section 3.5 for the corresponding NR operating bands. | | | | | |

## B.4.4 Conditions for L1 SL-RSRP Accuracy Requirements

This clause defines the following condtions for L1 SL-RSRP measurement accuracy requirements applicable for a corresponding operating band.

The conditions are defined in Table B.4.4-1 for FR1.

Table B.4.4-1: Conditions for L1 SL-RSRP measurements in FR1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | NR V2X operating band groups Note1 | Minimum L1 SL-RSRP | | | Ês/Iot |
| dBm/SCS | | | dB |
| SCS= 15kHz | SCS= 30kHz | SCS = 60kHz |
| [NR\_TDD\_FR1\_A] | [-121] | [-118] | [-115] | ≥ 0 |
| [NR\_TDD\_FR1\_I] | [-117] | [-114] | [-111] |
| NOTE 1: NR V2X operating band groups are as defined in Section 3.5 for the corresponding NR operating bands.  NOTE 2: The parameter Ês/Iot is the Ês/Iot of PSCCH-DMRS and/or PSSCH-DMRS.  NOTE 3: The SCS is for PSCCH and/or PSSCH | | | | | |

< END OF CHANGE #1 >