**3GPP TSG-RAN WG4 Meeting # 98-bis-e R4-2106029**

**Electronic Meeting, Apr. 12-20, 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.101-4** | **CR** | **-** | **rev** | **-** | **Current version:** | **16.4.0** |  |
|  |
| *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:***  | Draft CR for 38.101-4: Introduce PSBCH performance requirements for NR V2X |
|  |  |
| ***Source to WG:*** | CATT, GOHIGH |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | 5G\_V2X\_NRSL-Perf |  | ***Date:*** | 2021-04-13 |
|  |  |  |  |  |
| ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | Introduce PSBCH performance requirements for NR V2X |
|  |  |
| ***Summary of change:*** | Add the subsection for PSBCH performance requirements. |
|  |  |
| ***Consequences if not approved:*** | The performance requirements for NR V2X PSBCH would be missing. |
|  |  |
| ***Clauses affected:*** |  |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **X** |  |  Test specifications | TS 38.521-4 |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## *<Start of Change 1>*

## 11.1.4 PSBCH demodulation requirements

#### 11.1.4.1 2Rx requirements

##### 11.1.4.1.1 Minimum requirements

The purpose of the requirements in this subclause is to verify the PSBCH demodulation performance with a single active link.

The minimum requirements are specified in Table 11.1.4.1.1-2 with the test parameters specified in Table 11.1.4.1.1-1. The Sidelink UE 1 is synchronized to SLSS as synchronization reference.

Table 11.1.4.1.1-1: Test Parameters

|  |  |  |
| --- | --- | --- |
| Parameter | Unit | Test 1 |
|  |  |  |
| Active cell(s) |  | 0 |
| Sidelink UE 1 | Sidelink Transmissions |  | SLSS+PSBCH (Note 3) |
| slssid |  | 0 |
| Time offset (Note 1) | μs | 0 |
| Frequency offset (Note 2) | Hz | 0 |
| Synchronization source |  | SLSS |
| Antenna configuration |  | 1x2 Low |
| Note 1: Time offset of Sidelink UE receive signal with respect to GNSS reference timing.Note 2: Frequency offset of Sidelink UE with respect to GNSS reference frequency.Note 3: PSBCH transmits together with corresponding SLSS in the same slot. |

Table 11.1.4.1.1-2: Minimum performance

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test number | Bandwidth (MHz) / Subcarrier spacing (kHz) | PSBCH Reference channel | Propagation condition | Reference value |
| Probability of missed PSBCH (%) | SNR (dB) |
| 1 | 20 / 30 | R.PSBCH.2-1 | TDLA30-180 | 1 | [-0.5] |

## *<End of Change 1>*