**3GPP TSG-RAN WG1 Meeting #104-e *R1-210XXXX***

**E-meeting, January 25th – Feburary 5th, 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **[DRAFT]CHANGE REQUEST** | | | | | | | | |
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|  | **38.213** | **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 | **X** | Core Network |  |

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| ***Title:*** | Restrictions of the slots for S-SSB transmission/reception | | | | | | | | | |
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| ***Source to WG:*** | Moderator (CATT), [NTT DOCOMO], [Huawei, HiSilicon], [vivo], [OPPO], [MediaTek] | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_V2X\_NRSL-Core | | | | |  | ***Date:*** | | | 2021-02-01 |
|  |  | | | |  | |  | | |  |
| ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | One of the agreements in RAN1#101-e is not captured in current specification. It is supposed to be included in the specification for limitation that S-SSB transmission/reception slots should be cell-specific UL resources in Uu.  Agreements:  S-SSB transmission/reception slots are in cell-specific UL resources in Uu. | | | | | | | | |
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| ***Summary of change:*** | | Adding one paragraph to capture the missing agreements to restrict that S-SSB transmission/reception slots are in cell-specific UL resources in Uu. | | | | | | | | |
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| ***Consequences if not approved:*** | | Missing agreements, and S-SSB slots can use any resources in Uu which lead to wrong transmission. | | | | | | | | |
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| ***Clauses affected:*** | | 16.1 | | | | | | | | |
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|  | | **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:*** | |  | | | | | | | | |

**<Unchanged parts are omitted>**

## 16.1 Synchronization procedures

A UE receives the following SL synchronization signals in order to perform synchronization procedures based on S-SS/PSBCH blocks: SL primary synchronization signals (S-PSS) and SL secondary synchronization signals (S-SSS) [4, TS 38.211].

A UE assumes that reception occasions of a physical sidelink broadcast channel (PSBCH), S-PSS, and S-SSS are in consecutive symbols [4, TS 38.211] and form a S-SS/PSBCH block.

For reception of a S-SS/PSBCH block, a UE assumes a frequency location corresponding to the subcarrier with index 66 in the S-SS/PSBCH block [4, TS 38.211], is provided by *sl-AbsoluteFrequencySSB*. The UE assumes that a S-PSS symbol, a S-SSS symbol, and a PSBCH symbol have a same transmission power. The UE assumes a same numerology of the S-SS/PSBCH as for a SL BWP of the S-SS/PSBCH block reception, and that a bandwidth of the S-SS/PSBCH is within a bandwidth of the SL BWP. The UE assumes the subcarrier with index 0 in the S-SS/PSBCH block is aligned with a subcarrier with index 0 in an RB of the SL BWP.

A UE is provided, by *sl-NumSSB-WithinPeriod*, a number of S-SS/PSBCH blocks in a period of 16 frames. The UE assumes that a transmission of the S-SS/PSBCH blocks in the period is with a periodicity of 16 frames. The UE determines indexes of slots that include S-SS/PSBCH block as +, where

- index 0 corresponds to a first slot in a frame with SFN satisfying

- is a S-SS/PSBCH block index within the number of S-SS/PSBCH blocks in the period, with

- is a slot offset from a start of the period to the first slot including S-SS/PSBCH block, provided by *sl-TimeOffsetSSB*

- is a slot interval between S-SS/PSBCH blocks, provided by *sl-timeInterval*

For paired spectrum, an S-SS/PSBCH block can be transmitted/received only in a slot of an UL carrier. For unpaired spectrum, an S-SS/PSBCH block can be transmitted/received only in a slot of which all OFDM symbols are semi-statically configured as UL as per the higher layer parameter *tdd-UL-DL-ConfigurationCommon* of the serving cell if providedor *sl-TDD-Configuration-r16* if provided or *sl-TDD-Config-r16* of the received PSBCH if provided. Or if *tdd-UL-DL-ConfigurationCommon* and *sl-TDD-Configuration* are not provided for a spectrum indicated with only PC5 interface in Table 5.2E.1-1 in [TS 38.101-1], an S-SS/PSBCH block can be transmitted/received in any slot of the spectrum.

**<Unchanged parts are omitted>**