**3GPP TSG-** **RAN WG1 Meeting #118 *R1-240xxxx***

**Maastricht, Netherlands, August 19 - 23, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** |  | **rev** |  | **Current version:** | **18.3.0** |  |
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| *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:***  | Correction on S-SSB transmission on non-anchor RB set |
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| ***Source to WG:*** | Moderator (Huawei), Samsung, Huawei, HiSilicon |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | NR\_SL\_enh2-Core |  | ***Date:*** | 2024-08-21 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-18 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | RAN1 made an agreement below that “UE at least attempts to transmit on anchor RB set”.AgreementRegarding “*UE may transmit S-SSB repetition in more than one RB set*”:* …
* UE at least attempts to transmit on anchor RB set
	+ Note: anchor RB set refers to the RB set where S-SSB indicated by *sl-AbsoluteFrequencySSB-r16* locates
* …

If the channel access procedure for transmitting the S-SS/PSBCH blocks fails on the channel including the anchor RB set, a UE may attempt to transmit S-SS/PSBCH blocks only in the non-anchor RB set(s) associated with the resource pool. Such UE behaviour is allowed by previous RAN1 agreement since UE already attempted to transmit on anchor RB set. However, it’s unclear whether such behaviour is allowed by the spec. |
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| ***Summary of change:*** | Clarify that the UE may attempt to transmit S-SS/PSBCH blocks only in the non-anchor RB set(s) associated with the resource pool, if the channel access procedure [15, TS 37.213] for transmitting the S-SS/PSBCH blocks fails on the channel including the anchor RB set. |
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| ***Consequences if not approved:*** | If the channel access procedure for transmitting the S-SS/PSBCH blocks fails on the channel including the anchor RB set, it’s unclear whether a UE can attempt to transmit S-SS/PSBCH blocks only in the non-anchor RB set(s) associated with the resource pool. |
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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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

16.1 Synchronization procedures

============================= Unchanged Text Omitted =================================

For operation with shared spectrum channel access, a UE attempts to transmit at least S-SS/PSBCH blocks in the slots including S-SS/PSBCH blocks in the anchor RB set. The UE may attempt to transmit S-SS/PSBCH blocks only in the non-anchor RB set(s) associated with the resource pool, if the channel access procedure [15, TS 37.213] for transmitting the S-SS/PSBCH blocks fails on the channel including the anchor RB set. The UE applies CP extension to the first symbol of an S-SS/PSBCH block and within the first one or two symbols before the first symbol of the S-SS/PSBCH block according to an index [4, TS 38.211] provided by *sl-CPE-StartingPositionS-SSB*. The UE assumes PRB(s) in an intra-cell guard band [6, TS 38.214] are not used for transmission of S-SS/PSBCH blocks.

============================= Unchanged Text Omitted =================================

For operation with shared spectrum channel access and for each slot that includes S-SS/PSBCH blocks, a UE is provided, by *sl-NumOfAdditionalSSSBOccasion*, a number $N\_{additional}^{S-SSB}$ of additional candidate S-SS/PSBCH block transmission occasions. When the UE determines to transmit S-SS/PSBCH blocks on additional candidate S-SS/PSBCH block transmission occasions, the UE attempts to transmit S-SS/PSBCH blocks at least in the anchor RB set. The UE may attempt to transmit S-SS/PSBCH blocks only in the non-anchor RB set(s) associated with the resource pool, if the channel access procedure [15, TS 37.213] for transmitting the S-SS/PSBCH blocks fails on the channel including the anchor RB set. When $N\_{additional}^{S-SSB}>0$, for S-SS/PSBCH block with index $i\_{S-SSB}$, the UE determines indexes of slots that include the additional candidate S-SS/PSBCH block transmission occasions as $N\_{offset}^{S-SSB}$+$\left(N\_{interval}^{S-SSB}+1\right)⋅i\_{S-SSB}$ +$( N\_{gap}^{S-SSB}+1)⋅(\overbar{i}\_{S-SSB}+1)$, where

- $N\_{gap}^{S-SSB}$ is a slot gap, provided by *sl-GapOfAdditionalSSSB-Occasion*, for determining the additional candidate S-SS/PSBCH block transmission occasions, and

- $\overbar{i}\_{S-SSB}$ is an index of the additional candidate S-SS/PSBCH block transmission occasions, with $0\leq \overbar{i}\_{S-SSB}\leq N\_{additional}^{S-SSB}-1$.

============================= Unchanged Text Omitted =================================