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

**E-meeting, January 25 – February 5, 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.211** | **CR** | **<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:***  | Correction on usage of subCarrierSpacingCommon for unlicensed  |
|  |  |
| ***Source to WG:*** | Moderator (Qualcomm), Samsung |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | NR\_unlic-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 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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | In shared spectrum channel access, the bit for subCarrierSpacingCommon in PBCH is repurposed to indicate $N\_{SSB}^{QCL}$, as described in 38.213. However, in current 38.211, the parameter subCarrierSpacingCommon is still referenced.  |
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| ***Summary of change:*** | For shared spectrum channel access, avoid referencing subCarrierSpacingCommon |
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| ***Consequences if not approved:*** | Confusion from undefined subCarrierSpacingCommon |
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| ***Clauses affected:*** | 4.4.4.2, 7.4.3.1 |
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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:*** | **Impact Analysis:** |
|  |  |
| ***This CR's revision history:*** |  |

4.4.4.2 Point A

Point A serves as a common reference point for resource block grids and is obtained from:

- *offsetToPointA* for a PCell downlink where *offsetToPointA* represents the frequency offset between point A and the lowest subcarrier of the lowest resource block, which overlaps with the SS/PBCH block used by the UE for initial cell selection, expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2;

 - for operation without shared spectrum channel access, the lowest resource block has the subcarrier spacing provided by the higher layer parameter *subCarrierSpacingCommon*;

 - for operation with shared spectrum channel access, the lowest resource block has the subcarrier spacing same as the SS/PBCH block used by the UE for initial cell selection;

- *absoluteFrequencyPointA* for all other cases where *absoluteFrequencyPointA* represents the frequency-location of point A expressed as in ARFCN.

7.4.3.1 Time-frequency structure of an SS/PBCH block

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

For an SS/PBCH block, the UE shall assume

- antenna port  is used for transmission of PSS, SSS, PBCH and DM-RS for PBCH,

- the same cyclic prefix length and subcarrier spacing for the PSS, SSS, PBCH and DM-RS for PBCH,

- for SS/PBCH block type A,  and  with the quantities , and $N\_{CRB}^{SSB}$ expressed in terms of 15 kHz subcarrier spacing, and

- for SS/PBCH block type B,  and  with the quantity  expressed in terms of the subcarrier spacing provided by the higher-layer parameter *subCarrierSpacingCommon* and $N\_{CRB}^{SSB}$ expressed in terms of 60 kHz subcarrier spacing;

- the centre of subcarrier 0 of resource block $N\_{CRB}^{SSB}$ coincides with the centre of subcarrier 0 of a common resource block with the subcarrier spacing provided by the higher-layer parameter *subCarrierSpacingCommon* for operation without shared spectrum channel access and same as the subcarrier spacing of the SS/PBCH block for operation with shared spectrum channel access. This common resource block overlaps with subcarrier 0 of the first resource block of the SS/PBCH block.