**3GPP TSG-RAN WG1 Meeting #116 R1-23xxxxx**

**Athens, Greece, February 26 – March 1, 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.211** | **CR** | **xxxx** | **rev** | **-** | **Current version:** | **17.6.0** |  |
|  | | | | | | | | |
| *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:*** | Alignment of parameter names | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_redcap | | | | |  | ***Date:*** | | | 2024-03-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | * The higher-layer parameter *initialUplinkBWP-RedCap* is missing in clause 5.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * Adding the higher-layer parameter *initialUplinkBWP-RedCap* to clause 5.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | * Incomplete specifications | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

### 5.3.2 OFDM baseband signal generation for PRACH

The time-continuous signal  on antenna port for PRACH is defined by

where  and

-  is given by clause 6.3.3;

-  is the subcarrier spacing of the initial uplink bandwidth part during initial access. Otherwise,  is the subcarrier spacing of the active uplink bandwidth part;

- is the largest value among the subcarrier spacing configurations by the higher-layer parameter *scs-SpecificCarrierList*;

-  is the lowest numbered resource block of the initial uplink bandwidth part and is derived by the higher-layer parameter *initialUplinkBWP* or *initialUplinkBWP-RedCap* during initial access. Otherwise,  is the lowest numbered resource block of the active uplink bandwidth part and is derived by the higher-layer parameter *BWP-Uplink*;

- is the frequency offset of the lowest PRACH transmission occasion in frequency domain with respect to physical resource block 0 of the active uplink bandwidth part. The quantity is given by the higher-layer parameter *msgA-RO-FrequencyStart* if configured and a type-2 random-access procedure is initiated as described in clause 8.1 of [5, TS 38.213], otherwise by *msg1-FrequencyStart* as described in clause 8.1 of [5 TS 38.213];

-  is the PRACH transmission occasion index in frequency domain for a given PRACH transmission occasion in one time instance as given by clause 6.3.3.2;

-  is the number of resource blocks occupied and is given by the parameter allocation expressed in number of RBs for PUSCH in Table 6.3.3.2-1.

- is the start CRB index of uplink RB set corresponding to the quantity . The UE assumes that the RB set is defined as when the UE is not provided *IntraCellGuardBandsPerSCS* for an UL carrier as described in Clause 7 of [6, TS 38.214]

- is the index of the RB set which contains the lowest PRACH transmission occasion in frequency domain indicated by . The UE may assume that is configured such that each PRACH transmission occasion is fully contained within an RB set.

-  and  are given by clause 6.3.3

- where

- for ,

- for kHz, is the number of times the interval overlaps with either time instance 0 or time instance  in a subframe

The starting position of the PRACH preamble in a subframe (for ) or in a 60 kHz slot (for kHz) is given by



where

- the subframe or 60 kHz slot is assumed to start at ;

- a timing advance value shall be assumed;

- and are given by clause 5.3.1;

-  shall be assumed for kHz, otherwise the value of corresponds to kHz and the symbol position  is given by

where

-  is given by the parameter "starting symbol" in Tables 6.3.3.2-2 to 6.3.3.2-4;

-  is the PRACH transmission occasion within the PRACH slot, numbered in increasing order from 0 to  within a RACH slot where  is given Tables 6.3.3.2-2 to 6.3.3.2-4 for and fixed to 1 for ;

-  is given by Tables 6.3.3.2-2 to 6.3.3.2-4;

-  is given by

- if kHz, then 

- if kHz and either of "Number of PRACH slots within a subframe" in Tables 6.3.3.2-2 to 6.3.3.2-3 or "Number of PRACH slots within a 60 kHz slot" in Table 6.3.3.2-4 is equal to 1, then , otherwise

- if kHz and

- the "Number of PRACH slots within a 60 kHz slot" in Table 6.3.3.2-4 is equal to 1, then for kHz and for kHz, or

- the "Number of PRACH slots within a 60 kHz slot" in Table 6.3.3.2-4 is equal to 2, then for kHz and for kHz.

If the preamble format given by Tables 6.3.3.2-2 to 6.3.3.2-4 is A1/B1, A2/B2 or A3/B3, then

- if , then the PRACH preamble with the corresponding PRACH preamble format from B1, B2 and B3 is transmitted in the PRACH transmission occasion;

- otherwise the PRACH preamble with the corresponding PRACH preamble format from A1, A2 and A3 is transmitted in the PRACH transmission occasion