**3GPP TSG-RAN WG2 Meeting # 131R2-25xxxxx**

**Bangalore, India, Aug 25th -29th, 2025**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.331** | **CR** | **5464** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Corrections on the startSFN of the UTW | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE Corporation, Ericsson, vivo, Qualcomm, Samsung, Nokia, Lenovo | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_pos\_enh2-Core | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***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 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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Based upon RAN1 LS input in R1-2504854:  *parameter start SFN is not needed for UTW for positioning SRS frequency hopping. The parameter periodicityAndOffset-r18 and periodicityAndOffset-Ext-r18 for UTW already cover the startSFN and they indicate the periodicity in slots and the offset of the starting slot with respect to SFN#0 slot#0.*  Thus the parameter *startSFN* should be dummified and field description *periodicityAndOffset* needs to be updated to reflect that the start SFN is with respect to offset from SFN#0 slot#0.  Also RAN2 agrees to add the UTW formula to the RRC field descriptions:   |  | | --- | | Agreement:  The definition of the UTW boundaries is captured in RRC field descriptions, including the formula which will be added once we have the RAN1 reply on startSFN. The CR in R2-2502080 will be implemented in the next meeting (removal of section 5.32 from MAC). | | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * Field *startSFN* has been dummified * Field description of *periodicityAndOffset* is updated by adding *periodicityAndOffset-Ext* and UTW formula * Fix some typos and redundant information   Impacted 5G architecture options: NR SA  Impacted functionality:  SRS for Positioning with Tx Frequency Hopping  Inter-operability:  If UE implements the CR and NW does not   * NW may perform measurement at wrong time   If NW implements the CR and UE does not   * UE may transmit SRS at wrong time | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Error will persist in specification. UE may wrongly interpret the starting time of the UTW | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

*Beginning of Changes*

### 6.3.2 Radio resource control information elements

#### ***<Skipped unmodified changes>***

#### – *SRS-PosTx-Hopping*

The IE *SRS-PosTx-Hopping* specifies the uplink Tx frequency hopping configuration for SRS for positioning transmission.

*SRS-PosTx-Hopping* information element

-- ASN1START

-- TAG-SRS-PosTx-Hopping-START

SRS-PosTx-Hopping-r18 ::= SEQUENCE {

srs-PosConfig-r18 SRS-PosConfig-r17,

bwp-r18 BWP OPTIONAL, -- Need R

inactivePosSRS-TimeAlignmentTimer-r18 TimeAlignmentTimer OPTIONAL, -- Need M

inactivePosSRS-RSRP-ChangeThreshold-r18 RSRP-ChangeThreshold-r17 OPTIONAL, -- Need M

srs-PosUplinkTransmissionWindowConfig-r18 SetupRelease { SRS-PosUplinkTransmissionWindowConfig-r18 } OPTIONAL, -- Need M

...

}

SRS-PosUplinkTransmissionWindowConfig-r18 ::= SEQUENCE {

dummy INTEGER(0..1023),

windowPeriodicityAndOffset-r18 CHOICE {

periodicityAndOffset-r18 SRS-PeriodicityAndOffset-r16,

periodicityAndOffset-Ext-r18 SRS-PeriodicityAndOffsetExt-r16

},

duration-r18 ENUMERATED {sl1,sl2,sl4,sl6},

...

}

-- TAG-SRS-PosTx-Hopping-STOP

-- ASN1STOP

|  |
| --- |
| *SRS-PosTx-Hopping* field descriptions |
| ***Bwp***  For RRC\_CONNECTED state, it indicates the frequency region outside of active BWP for SRS for positioning frequency hopping. For RRC\_INACTIVE state, it indicates the BWP configuration for SRS for positioning frequency hopping. |
| ***inactivePosSRS-RSRP-ChangeThreshold***  RSRP threshold for the increase/decrease of RSRP for time alignment validation as specified in TS 38.321 [3]. |
| ***inactivePosSRS-TimeAlignmentTimer***  TAT value for SRS for positioning transmission during RRC\_INACTIVE state as specified in TS 38.321 [3]. The network always configures this field when *srs-PosRRC-Inactive* is configured. |
| ***srs-PosConfig***  Provides the SRS configuration to be used for frequency hopping. |
| ***srs-PosUplinkTransmissionWindowConfig***  Used to setup and release the configuration of the periodic uplink transmission window for SRS for positioning with Tx frequency hopping in RRC\_CONNECTED state.. |

|  |
| --- |
| *SRS-PosUplinkTransmissionWindowConfig* field descriptions |
| ***duration***  Indicates the duration of the uplink transmission window for SRS for positioning with Tx frequency hopping. Value *s1* indicates 1 slot, *s2* indicates 2 slots and so on. |
| ***periodicityAndOffset, periodicityAndOffset-Ext***  Indicates the periodicity and slot offset with respect to SFN#0 slot#0 for uplink transmission window for SRS for positioning with Tx frequency hopping. The UL transmission window starts in the first symbol of the slot for which the following condition is satisfied:  CURRENT\_slot modulo (periodicity) = slot offset  where CURRENT\_slot = current SFN × number of slots per frame + slot number in the frame, and number of slots per frame refers to the number of consecutive slots per frame as specified in TS 38.211[16]. |
| ***dummy***  This field is not used in the specification. If received it shall be ignored by the UE. |

*End of Changes*