**3GPP TSG-RAN WG1 Meeting #118R1-24NNNN**

Maastricht, Netherlands, August 19th – August 24th, 2024

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| *CR-Form-v12.1* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.214** | **CR** | **-** | **rev** | **-** | **Current version:** | **18.3.0** |  |
|  | | | | | | | | |
| *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:*** | Corrections for slot offset configuration for SRS with tx hopping in TS 38.214 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Moderator (Ericsson), ZTE Corporation, Sanechips | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_pos\_enh2-Core | | | | |  | ***Date:*** | | | 2024-08-09 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 1. *SRS-PeriodicityAndOffset* can only represent the starting slot offset for periodic and semi-persistent SRS of the first hop. *slotOffset* for aperiodic SRS should also be added. 2. The parameter names *SRS-PeriodicityAndOffset* and *slotOffset* can be shared by both the first hop and remaining hops, it is necessary to distinguish them by *resourceType* in the first hop and *SlotOffsetForRemainingHops* for remaining hops | | | | | | | | |
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| ***Summary of change:*** | | Distinguish the separate periodicity and offset for the first hop and the remaining hops. | | | | | | | | |
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| ***Consequences if not approved:*** | | The periodicity and offset difference between the first hop and the remaining hops cannot be identified. | | | | | | | | |
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| ***Clauses affected:*** | | 6.2.1.4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

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##### 6.2.1.4.1 SRS frequency hopping for positioning

The reduced capability UE may be configured via *SRS-PosTx-Hopping*, subject to UE capability, to perform transmit frequency hopping separate from the UL BWP configuration and outside of the UL BWP, where the UE may be configured with subcarrier spacing, CP and bandwidth that are different from the UL active BWP. The reduced capability UE transmit frequency hopping is configured within one SRS resource for positioning, that may be configured with a bandwidth larger than the maximum bandwidth of the reduced capability UE, in RRC\_CONNECTED or RRC\_INACTIVE mode. The reduced capability UE transmit frequency hopping, may be configured with overlapping or non-overlapping frequency hops in the frequency domain. When the reduced capability UE is configured to perform transmit frequency hopping:

- it expects to be configured with the following parameters:

- starting PRB of the first hop in time domain in *freqDomainShift*

- starting slot offset for the first hop in *resourceType* wherein *SRS-PeriodicityAndOffset* for periodic and semi-persistent SRS and *slotOffset* for aperiodic SRS, starting slot offset for each hop following the first hop in *SlotOffsetForRemainingHops*, and starting symbol for each hop in *startPosition*

- number of symbols in each hop in *nrofSymbols*

- hop bandwidth in *c-SRS*

- number of overlapping resource block(s) between hops, if present, in *overlapValue*

- number of hops in *numberOfHops*.

- it does not expect to be configured with the sum of *startPosition* and *nrofSymbol*s for a hop that exceeds a slot duration.

- it expects to be configured with the same periodicity of each hop of an SRS resource with the transmit frequency hopping.

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