**3GPP TSG-RAN4 Meeting #112 *R4-241xxxx***

**Maastricht, The Netherlands, 19 – 23 August, 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | 4855 | **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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | CR on RRM core requirements for less than 5MHz BW | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_FR1\_lessthan\_5MHz\_BW-Core | | | | |  | ***Date:*** | | | 2024-08-05 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | There are some issues in SBI reading delay requirements for 12 PRB SSB:   1. For intra-frequency measurement without MG, MGRP should not be considered; instead Kp should be considered. In addition, factor CSSFintra\_less\_than\_5Mhz is not defined anywhere. Technically, there is no reason to define a new CSSF from the existing CSSFintra. 2. For intra-frequency measurement with MG, factor CSSFintra\_less\_than\_5Mhz is not defined anywhere. Technically, there is no reason to define a new CSSF from the existing CSSFintra. Also, it is not always equaling to 1 since the measurement will share MG with inter-frequency layers. 3. For inter-frequency measurement without MG, factor M2 is not defined anywhere. It can be added once RAN4 decides on HST requirements. For now it should be removed to make spec complete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Correct SBI reading delay requirements for 12 PRB SSB for above reasons. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | SBI reading delay requirements for 12 PRB SSB are incorrect. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.2.5.1, 9.2.6.2, 9.3.9.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

<Start of Change 1>

9.2.5.1 Intrafrequency cell identification

<Texts without changes are ommited>

**Table 9.2.5.1-23: Time period for time index detection for a UE operating on a target cell with 12 PRB SSB (Frequency range FR1)**

|  |  |
| --- | --- |
| **DRX cycle** | **TSSB\_time\_index\_intra\_less\_than\_5Mhz** |
| No DRX | max(120ms, ceil(7 x Kp) x SMTC period) |
| DRX cycle≤ 320ms | max(120ms, ceil(1.5 x 7 x Kp) x max(SMTC period,DRX cycle)) |
| DRX cycle>320ms | ceil(7 x Kp) x DRX cycle |
| NOTE 1: FFS When highSpeedMeasInterFreq-r17 | |

<End of Change 1>

<Start of Change 2>

9.2.6.2 Intra-frequency cell identification

<Texts without changes are ommited>

**Table 9.2.6.1-12: Time period for time index detection for a UE operating on a target cell with 12 PRB SSB (Frequency range FR1) (Frequency range FR1)**

|  |  |
| --- | --- |
| **DRX cycle** | **TSSB\_time\_index\_intra\_less\_than\_5Mhz** |
| No DRX | max(120ms, 7 x max(MGRP, SMTC period)) x CSSFintra |
| DRX cycle≤ 320ms | max(120ms, ceil(1.5 x 7) x max(MGRP, SMTC period,DRX cycle) x CSSFintra) |
| DRX cycle>320ms | 7 x max(MGRP, DRX cycle) x CSSFintra |
| Note 1: Void  NOTE 2: FFS When *highSpeedMeasInterFreq-r17* | |

<End of Change 2>

<Start of Change 3>

9.3.9.1 Inter frequency Cell identification

<Texts without changes are ommited>

**Table 9.3.9.1-5: Time period for time index detection for a UE operating on a target cell with 12 PRB SSB (FR1)**

|  |  |
| --- | --- |
| **DRX cycle** | **TSSB\_time\_index\_inter\_less\_than\_5MHz** |
| No DRX | max(120ms, ceil( 6 x Kp )x SMTC period)Note 1 x CSSFinter |
| DRX cycle≤ 320ms | max(120ms, ceil (6 x Kp) x max(SMTC period,DRX cycle)) x CSSFinter |
| DRX cycle>320ms | Ceil( 6 x Kp) x DRX cycle x CSSFinter |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: FFS When *highSpeedMeasInterFreq-r17* | |

<End of Change 3>