**3GPP TSG-RAN4 Meeting #111 *R4-2409386***

**Fukuoka, JP, 20th May – 24th May, 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | **-** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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:*** | Draft CR on core maintenanc for R18 LTM | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | MediaTek Inc | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_Mob\_enh2-Core | | | | |  | ***Date:*** | | | 2024-5-12 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | 1. Interruption on MCG due to PSCell switch is missing  2. Current intra-f L1 measurement requirements are not applicable to intra-f neighbor cells of deactivated SCC. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Add requirements of interruption on MCG due to PSCell switch  2. Make it clear that intra-f L1 measurement requirements are not applicable to intra-f neighbor cells of deactivated SCC | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Corresponding RRM requirement would be not accurate or complete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.2.4.1, (new) 8.2.4.2.x, | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **x** |  | Test specifications | | | | TS38.533 | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

Start of Change 1

#### 8.2.4.1 Introduction

This clause contains the requirements related to the interruptions on PCell, PSCell and activated SCell if configured, when

up to 1 SCell in FR1 and up to 7 SCell(s) in FR2 are configured, deconfigured, activated or deactivated when UE is operating in NR-DC (FR1+FR2) or,

up to [4] SCell(s) in FR1 are configured, deconfigured, activated or deactivated when UE is operating in NR-DC (FR1+FR1) or,

a supplementary UL carrier or an UL carrier is configured or de-configured, or

measurements on SCC with deactivated SCell in NR SCG, or

measurements on the deactivated PSCell in NR SCG, or

UL/DL BWP is switched on PCell, PSCell or SCell,

UE-specific CBW is changed on PCell, PSCell or SCell, or

transitions between active and non-active during DRX, or

transitions from non-DRX to DRX, or

CGI reading of an NR neighbour cell with autonomous gaps, or

CGI reading of an E-UTRA neighbour cell with autonomous gaps.

NR SRS carrier based switching, or

NR SRS antenna port switching.

RLM/BFD Measurement on deactivatd NR PSCell, or

NR SCell is activated based on aperiodic CSI-RS, or

PDCCH ordered RACH on target cell in LTM, or

PSCell cell switch.

Note: interruptions at SCell addition/release, activation/deactivation and during measurements on SCC may not be required by all UEs.

The interruptions shall not interrupt RRC signalling or ACK/NACKs related to RRC reconfiguration procedure [2] for SCell addition/release or MAC control signalling [17] for SCell activation/deactivation command.

The requirements shall apply for NR-DC with an NR PCell, PSCell or SCell.

For a UE which does not support per-FR measurement gap, interruptions to the PCell and activated SCell may be caused by SCells on any frequency range. For a UE which supports per-FR gaps, interruptions to PCell, PSCell and activated SCell may be caused by SCells on the same frequency range as the victim cell.

End of Change 1

Start of Change 2

##### 8.2.4.2.x Interruptions at PSCell Cell switch

When PSCell cell switch is triggered using the LTM Cell Switch Command as defined in TS 38.321 [7], the UE is allowed an interruption of up to the duration shown in table 8.2.4.2.x-1 on any activated serving cell in MCG during the cell switch delay.

Table 8.2.4.2.21-1: Interruption duration for PSCell cell switch for inter-band DC

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | NR Slot length (ms) | Interruption length (slots) | | |
|  | of victim cell | Sync | | Async |
| 0 | 1 | 1 | | 2 |
| 1 | 0.5 | 2 | | 3 |
| 2 | 0.25 | Both aggressor cell and victim cell are on FR2-1 | 4 | 5 |
| Either aggressor cell or victim cell is on FR1 | 5 |
| 3 | 0.125 | Aggressor cell is on FR2-1 | 8 | 9 |
| Aggressor cell is on FR1 | 9 |

End of Change 2

Start of Change 3

### 9.14.2 Requirements Applicability

The requirements in the clause 9.14 are applicable to FR1 and FR2-1 for LTM.

The requirements in clause 9.14 apply, provided for the SSB from the neighbor cell configured for intra-frequency L1-RSRP measurement, the following conditions are met:

- The cell is known

- The SSB configured for intra-frequency L1-RSRP measurement is on the same carrier frequency of SSB configured for L3 intra-frequency measurement.

- The SSB resources configured for L1-RSRP measurements are measurable.

- The SSB resource is within active BWP.

An SSB resource configured for L1-RSRP for neigbor cell shall be considered measurable when for each relevant SSB the following conditions are met:

- L1-RSRP related side conditions given in clause [10.1.19] for FR1 and [10.1.20] for FR2-1, respectively, for a corresponding band,

- SSB\_RP and SSB Ês/Iot according to Annex [B.2.4.1] for a corresponding band.

The cell is considered as known if the following conditions are met in this requirement:

- The UE has performed L3 measurement on the target cell during the last 5 seconds, and

- The SSB from the target cell configured for L1 measurement remains detectable according to the cell identification requirements specified in clause 9.2.

Otherwise, the cell is unknown.

End of Change 3