**3GPP TSG-RAN WG4 Meeting #116 R4-2509802**

**Bengaluru, India, August 25th – 29th, 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | - | **Rev** | **-** | **Current version:** | - |  |
|  | | | | | | | | |
| *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:*** | draftCR on Rel19 LBCA (Interruption for deactivated SDL SCell measurement) | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Xiaomi | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_LBCA\_Sw-Core | | | | |  | ***Date:*** | | | 2025-8-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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 legacy RRM requirements of interruption needs to be updated because SDL SCell operations in LBCA | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | To update and clarify the interuption requiremetns when SCell activation/deactivation within SDL in LBCA. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The core requirements are not complete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.2.2.2.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.533 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## **--- Start of Change #1 ---**

##### 8.2.2.2.3 Interruptions during measurements on deactivated SCC

Interruptions on PCell or activated SCell(s) due to measurements when an SCell is deactivated are allowed with up to 0.5 % probability of missed ACK/NACK when the configured *measCycleSCell* [2] is 640 ms or longer

- If the PCell or activated SCell(s) is not in the same band as the deactivated SCell, the UE is only allowed to cause interruptions on PCell or activated SCell(s) immediately before and immediately after an SMTC. Each interruption shall not exceed requirement in table 8.2.2.2.2-1.

- If the PCell or activated SCell(s) is non-contiguous to the deactivated SCell in the same FR1 band and UE is capable of *intraBandNR-CA-non-collocated-r18* on this FR1 band and *nonCollocatedTypeNR-CA-r18* is not provided, the UE is only allowed to cause interruptions on PCell or activated SCell(s) immediately before and immediately after an SMTC. Each interruption shall not exceed requirement in table 8.2.2.2.2-1.

- If the PCell or activated SCell(s) is contiguous to the deactivated SCell in the same FR1 band, or if the PCell or activated SCell(s) is non-contiguous to the deactivated SCell in the same FR1 band and UE is not capable of *intraBandNR-CA-non-collocated-r18* or UE is capable of *intraBandNR-CA-non-collocated-r18* and *nonCollocatedTypeNR-CA-r18* is provided, the UE is only allowed to cause an interruption on PCell or activated SCell(s) no earlier than X slots before TSMTC\_duration and no later than X slots after TSMTC\_duration, provided the cell specific reference signals from the active serving cells and the deactivated SCell are available in the same slot, where X and TSMTC\_duration are given by table 8.2.2.2.3-1. The interruption shall not exceed requirements in table 8.2.2.2.3-1.

- If the PCell or activated SCell(s) is in the same FR2 band as the deactivated SCell, the UE is only allowed to cause an interruption on PCell or activated SCell(s) no earlier than X slots before TSMTC\_duration and no later than X slots after TSMTC\_duration, provided the cell specific reference signals from the active serving cells and the deactivated SCell are available in the same slot, where X and TSMTC\_duration are given by table 8.2.2.2.3-1. The interruption shall not exceed requirements in table 8.2.2.2.3-1.

The interruption requirements in table 8.2.2.2.3-1 are not applicable when a UE is configured with NCSG in the same frequency range as the deactivated SCell unless the SMTC on the deactivated SCC is fully non-overlapped with NCSG.

Table 8.2.2.2.3-1: Interruption duration for measurement on deactivated SCC for intra-band CA

|  |  |  |  |
| --- | --- | --- | --- |
|  | NR Slot length (ms) | X (slots) | Interruption length (slots) |
| 0 | 1 | 1 | 2 + TSMTC\_duration \* |
| 1 | 0.5 | 1 | 2 + TSMTC\_duration \* |
| 2 | 0.25 | 2 | 4 + TSMTC\_duration \* |
| 3 | 0.125 | 4 | 8 + TSMTC\_duration \* |
| 5 | 0.03125 | 16 | 32 + TSMTC\_duration \* |
| 6 | 0.015625 | 32 | 64 + TSMTC\_duration \* |
| NOTE 1: TSMTC\_duration measured in subframes is the longest SMTC duration among all above active serving cells and the deactivated SCell to be measured;  NOTE 2: is as defined in TS 38.211 [6]. | | | | |

For a UE supporting *LB-CA via switching* and configured with switch pattern, interruptions on PCell due to the measurement on deactivated SDL SCell are allowed with up to % probability of missed ACK/NACK. Wherein, is the interruption length allowed on PCell due to measurements on deactivated SDL SCell which is equal to (Tuning time in slot level + TSMTC\_duation + Retuning time in slot level),

* + - Tuning time from PCell to SCell is equal to the RRC configured switching gap from PCell to SCell *LBCA-SwitchingGap-Duration-PCelltoSCell-r19*
    - Returning time from SCell to PCell is equal to the RRC configured switching gap from SCell to PCell, *i.e., LBCA-SwitchingGap- SCelltoPCell-r19*

-----------------unchanged text omitted---------------------

## **--- End of Change #1 ---**