**3GPP TSG-RAN4 Meeting #95-e *R4-200xxxx***

**Electronic Meeting, 25 May – 5 June, 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.133** | **CR** | 6885 | **rev** | **1** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | CR on Multiple SCell activation/deactivation interruption requirements 36133 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_RRM\_Enh-Core | | | | |  | ***Date:*** | | | 2020-05-11 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | RAN4 agreed to introduce requirements for multiple SCell activation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Introduce requirements for multiple SCell activation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | WI objective is not completed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.32, 7.36 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

<Start of Change 1>

## 7.32 Interruptions with EN-DC

### 7.32.1 Introduction

This section contains the requirements related to the interruptions on PCell, and MCG SCell when

NR PSCell is added or released, or

transitions between active and non-active during NR PSCell DRX, or

transitions from NR PSCell non-DRX to DRX, or

SCell in either E-UTRA MCG or NR SCG is added or released, or

SCell(s) in either E-UTRA MCG or NR SCG is activated or deactivated, or

measurements on SCC with deactivated SCell in either E-UTRA MCG or NR SCG, or

a downlink bandwidth part (BWP) and/or an uplink BWP is switched in NR PSCell or in any NR SCell.

The requirements shall apply for EN-DC.

This section contains interruption requirements when the victim cell is PCell or SCell belonging to MCG. Requirements for interruptions where victim cell is the NR PSCell or an NR SCell belonging to SCG are specified in [50].

For a UE which does not support per-FR measurement gaps, interruptions to the PCell or active MCG SCells may be caused by NR PSCell or NR SCells on any frequency range. For UE which support per-FR gaps, interruptions to the PCell or active MCG SCells may be caused by NR PSCell or NR SCells on FR1 only.

<End of Change 1>

<Start of Change 2>

#### 7.32.2.5 Interruptions at SCell activation/deactivation

When one SCell belonging to MCG is activated or deactivated:

- the requirements in clause 7.8.2.8 shall apply.

When one or multiple NR SCell(s) belonging to SCG is activated or deactivated by one single MAC CE command

- an interruption on PCell or activated SCell in MCG shall not exceed X1 subframes for synchronous intraband EN-DC, X1+1 subframes for asynchronous intraband EN-DC, 1 subframe for synchronous interband EN-DC or 2 subframes for asynchronous interband EN-DC. For SCell activation X1 is equal to the duration of the SMTC of the SCell being activated + 1 ms. The interruption is based on assumption that the cell specific reference signals from both cells are available in the same slot.For SCell deactivation X1 is equal to 1ms.

<End of Change 2>

<Start of Change 3>

## 7.36 Interruptions with NE-DC

### 7.36.1 Introduction

This clause contains the requirements related to the interruptions on PSCell and SCG SCells when

transitions between active and non-active during NR PCell DRX, or

transitions from NR PCell non-DRX to DRX, or

SCell in either NR MCG or E-UTRA SCG is added or released, or

SCell(s) in either NR MCG or E-UTRA SCG is activated or deactivated, or

measurements on SCC with deactivated SCell in either NR MCG or E-UTRA SCG, or

a downlink bandwidth part (BWP) and/or an uplink BWP is switched in NR PCell or in any NR SCell.

The requirements shall apply for NE-DC.

This clause contains interruption requirements when the victim cell is PSCell or SCell belonging to SCG. Requirements for interruptions where victim cell is the NR PCell or an NR SCell belonging to MCG are specified in TS 38.133 [50].

For a UE which does not support per-FR measurement gaps, interruptions to the PSCell or active SCG SCells may be caused by NR PCell or NR SCells on any frequency range. For UE which support per-FR gaps, interruptions to the PSCell or active SCG SCells may be caused by NR PCell or NR SCells on FR1 only.

<End of Change 3>

<Start of Change 4>

#### 7.36.2.4 Interruptions at SCell activation/deactivation

When one SCell belonging to SCG is activated or deactivated:

- the requirements in clause 7.8.2.8 shall apply.

When one or multiple NR SCell(s) belonging to MCG is activated or deactivated by one single MAC CE command

- an interruption on PSCell or activated SCell in SCG shall not exceed X1 subframes for synchronous intraband NE-DC, X1+1 subframes for asynchronous intraband NE-DC, 1 subframe for synchronous interband NE-DC or 2 subframes for asynchronous interband NE-DC. For SCell activation X1 is equal to the duration of the SMTC of the NR SCell being activated + 1 ms. The interruption is based on assumption that the cell specific reference signals from both cells are available in the same slot. For SCell deactivation X1 is equal to 1 ms.

<End of Change 4>