**3GPP TSG-RAN4 Meeting #95-eR4-2006195**

**Online, 25th May - 5th Jun 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **38.133** | **CR** | **0626** | **rev** | **-** | **Current version:** | **16.3.0** |  |
|  |
| *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 |  | Radio Access Network | **X** | Core Network |  |

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|  |
| ***Title:***  | CR on multiple SCell activation interruption requirement for R16 |
|  |  |
| ***Source to WG:*** | Apple |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_RRM\_Enh-Core |  | ***Date:*** | 2020-05-02 |
|  |  |  |  |  |
| ***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 canbe 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)* |
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| ***Reason for change:*** | The interruption requirement of multiple SCell activation is missing |
|  |  |
| ***Summary of change:*** | Speficy the interruption requirement of multiple SCell activation in R16 TS38.133 |
|  |  |
| ***Consequences if not approved:*** | The interruption requirement of multiple SCell activation is missing |
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| ***Clauses affected:*** | New section 8.2.1.2.10, 8.2.2.2.7, 8.2.3.2.10, 8.2.4.2.8; revised section 8.2.1.1, 8.2.3.1, 8.2.4.1 |
|  |  |
|  | **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:*** |  |

Start of Change 1

### 8.2.1 EN-DC Interruption

#### 8.2.1.1 Introduction

This clause contains the requirements related to the interruptions on PSCell, and SCell, when

E-UTRA PCell transitions between active and non-active during DRX, or

E-UTRA PCell transitions from non-DRX to DRX, or

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

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

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

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

UL/DL BWP is switched on PSCell or SCell in SCG.

The requirements shall apply for E-UTRA-NR DC with an E-UTRA PCell.

This clause contains interruptions where victim cell is PSCell or SCell belonging to SCG. Requirements for interruptions requirements when the victim cell is E-UTRA PCell or E-UTRA SCell belonging to MCG are specified in TS 36.133 [15].

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

End of Change 1

Start of Change 2

##### 8.2.1.2.10 Interruptions at SCell activation/deactivation with multiple downlink SCells

The requirements in this clause shall apply for the UE configured with PSCell and up to 6 downlink SCell(s).

When multiple SCells in SCG are activated or deactivated by one single MAC CE command:

- an interruption on any serving cell in SCG is specified as in section 8.2.1.2.4.

End of Change 2

Start of Change 3

##### 8.2.2.2.7 Interruptions at SCell activation/deactivation with multiple downlink SCells

The requirements in this clause shall apply for the UE configured with PCell and up to 7 downlink SCell(s).

When multiple SCell is activated or deactivated by one single MAC CE command:

- an interruption on any active serving cell is specified as in section 8.2.2.2.2:

End of Change 3

Start of Change 4

### 8.2.3 NE-DC Interruptions

#### 8.2.3.1 Introduction

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

E-UTRA PSCell transitions between active and non-active during DRX, or

E-UTRA PSCell transitions from non-DRX to DRX, or

E-UTRA PSCell/SCell in SCG or SCell in MCG is added or released, or

E-UTRA PSCell/SCell in SCG or SCell(s) in MCG is activated or deactivated, or

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

PUSCH/PUCCH carrier configuration and deconfiguration in NR MCG, or

UL/DL BWP is switched on PCell or SCell in MCG.

The requirements shall apply for NE-DC with an NR PCell.

This clause contains interruptions where victim cell is PCell or SCell belonging to MCG. Requirements for interruptions requirements when the victim cell is E-UTRA PSCell or E-UTRA SCell belonging to SCG are specified in TS 36.133 [15].

For a UE which does not support per-FR measurement gaps, interruptions to the PCell, E-UTRA PSCell or activated MCG SCells may be caused by EUTRA PSCell, EUTRA SCells or SCells on any frequency range. For UE which support per-FR gaps, interruptions to the PCell, E-UTRA PSCell or activated MCG SCells may be caused by EUTRA PSCell, EUTRA SCells or SCells on the same frequency range as the victim cell.

End of Change 4

Start of Change 5

##### 8.2.3.2.10 Interruptions at SCell activation/deactivation with multiple downlink SCells

The requirements in this clause shall apply for the UE configured with E-UTRA PSCell and up to 6 downlink SCell(s).

When multiple SCells in MCG are activated or deactivated by one single MAC CE command:

- an interruption on any serving cell in MCG is specified as in section 8.2.3.2.4.

End of Change 5

Start of Change 6

### 8.2.4 NR-DC: Interruptions

#### 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 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

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

transitions between active and non-active during DRX, or

transitions from non-DRX to DRX.

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

Editor’s Note: 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. How to specify this is FFS.

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

For a UE which does not support per-FR measurement gaps, interruptions to the PCell and activated SCell may be caused by SCells on any frequency range. For UE which support 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 6

Start of Change 7

##### 8.2.4.2.8 Interruptions at SCell activation/deactivation with multiple downlink SCells

The requirements in this clause shall apply for the UE configured with NR-DC and up to 1 downlink SCell in FR1 and up to 7 downlink SCell(s) in FR2.

When multiple SCell are activated or deactivated by one single MAC CE command in MCG or SCG:

- an interruption on any serving cell in MCG or SCG is specified as in section 8.2.4.2.2.

When multiple SCell are activated or deactivated in both MCG and SCG by two MAC CE commands respectively:

- an interruption on any serving cell in MCG is specified as in section 8.2.4.2.2, and

- an interruption on any serving cell in SCG is specified as in section 8.2.4.2.2.

End of Change 7