**3GPP TSG-RAN4 Meeting #111 *R4-2409797***

Fukuoka, Japan, May 20th – 24th, 2024

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | **4609** | **rev** | **1** | **Current version:** | **17.13.0** |  |
|  | | | | | | | | |
| *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:*** | (NR\_redcap-Core) Formal CR to Rel-17 TS 38.133: on RedCap Handover | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | MediaTek inc. | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_redcap-Core | | | | |  | ***Date:*** | | | 2024-05-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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:*** | | In August 2022, RAN4 received LS from RAN2 [R2-2206662], which is summarised below:   |  | | --- | | From RAN2 perspective, handover scenario 1 is **supported**.  Scenario 1: Handover to a target cell’s specific Redcap BWP associated with NCD-SSB besides to the initial BWP associated with CD-SSB (i.e. UE directly sync to the NCD-SSB and perform RACH on that BWP)  From RAN2 perspective, handover scenario 2 is **not** **supported**.  Scenario 2: Handover to a target cell’s initial BWP and further switch to the specific Redcap BWP to send the RACH (i.e. UE first sync to the CD-SSB and then autonomously switch to first active BWP to perform RACH) |   Thus, RAN4 added a note ‘(i.e. UE directly sync to the NCD-SSB and perform RACH on that BWP)’, yet this note was removed. However, this note should be added in the RRM spec to avoid confusion. | | | | | | | | |
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| ***Summary of change:*** | | Adding the following sentence: ‘(i.e. UE directly sync to the NCD-SSB and perform RACH on that BWP)’ | | | | | | | | |
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| ***Consequences if not approved:*** | | The Handover requirements for RedCap is not accurate. | | | | | | | | |
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| ***Clauses affected:*** | | 6.1D.1.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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>

## 6.1D Handover for RedCap

### 6.1D.1 NR Handover

#### 6.1D.1.1 Introduction

The purpose of NR handover is to change the NR PCell to another NR cell for RedCap UE. The requirements in this clause are applicable to SA NR.

Handover for a RedCap UE is defined as intra-frequency handover if the center frequency and subcarrier spacing (SCS) of the reference SSB of the serving cell is same as the center frequency and SCS of the reference SSB of the target cell, where:

* The reference SSB of the serving cell is the SSB in the active DL BWP of serving cell
* The reference SSB of the target cell is the SSB in the first active DL BWP of the target cell upon reconfiguration.

The requirements in this clause apply for the following handover scenarios:

* Handover to a target cell’s DL BWP associated with CD-SSB;
* Handover to a target cell’s Redcap specific DL BWP associated with NCD-SSB with RACH on the corresponding Redcap specific UL BWP.

<unimpacted clauses are removed>

<End of Change 1>