**3GPP T****SG-RAN WG3 Meeting #108-e R3-204423**

**Online, 1st - 10th June 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0116** | **rev** | **4** | **Current version:** | **16.1.0** |  |
|  | | | | | | | | |
| *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:*** | s | | | | | | | | | |
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| ***Source to WG:*** | CMCC, Huawei, ZTE, Nokia, Nokia Shanghai Bell，CATT, Samsung, Ericsson, Qualcomm Incorporated, LG Electronics, NTT DOCOMO | | | | | | | | | |
| ***Source to TSG:*** | RAN3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SON\_MDT-Core | | | | |  | ***Date:*** | | | 2020-06-15 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Addition of SON features | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add RACH optimisation function and MRO procedure in CU-DU split architecture | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The related description of RACH optimisation function and MRO procedure in CU-DU split architecture is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.X, 8.X | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.473 CR 0441 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS 38.300 CR | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev 1: Add description of “a limited set of” neighbour cell’s PRACH configurations  Rev 2: resubmitted to RAN3#107bis-e  Rev 3: resubmitted to RAN3#108-e  Rev 4: capture the agreed TP in R3-204319 and add more co-source companies | | | | | | | | |

*Start of the first change*

7.X RACH Optimisation Function

The RACH Optimization Function in non-split gNB case is specified in TS 38.300 [2].

In case of split gNB architecture, RACH configuration conflict detection and resolution function is located at the gNB-DU. To perform RACH optimisation at gNB-DU, gNB-CU sends the RACH report reported by the UE to gNB-DU via F1AP signalling. The gNB-DU signals the PRACH configuration per-cell to gNB-CU. The gNB-CU may forward a limited set of neighbour cell’s PRACH configurations received from neighbour gNB-CU to the gNB-DU to resolve the configuration conflict.

*End of first change*

*Start of the second change*

## 8.x Self-optimisation

## 8.x.y Overall procedures for MRO

The following clauses describe the overall procedures for MRO involving F1.

### 8.x.y.1 Signalling of RLF information from gNB-CU to gNB-DU

The signalling flow for signalling of RLF information from gNB-CU to gNB-DU is shown in Figure 8.y.1-1, where the example where NG-RAN nodes exchange the RLF Report via the Xn: FAILURE INDICATION message has been considered.



Figure 8.x.y.1-1 Example of signalling of RLF information from gNB-CU to gNB-DU in NG RAN

1. A UE with a logged RLF Report connects to a cell in gNB2 and it signals the RLF Report to gNB2 by means of the RRC UE Information Request/Response procedures.

2. The gNB2 sends an Xn: Failure Indication to gNB1-CU where the UE may have previously been connected prior to the connection failure. This includes also the RLF Report.

3. The gNB1-CU sends the F1: Access and Mobility Indication message to the gNB1-DU, including the RLF Report.

It is also possible for the gNB-CU receiving the RLF Report from the UE to signal it directly to the gNB-DU by means of the F1: Access and Mobility Indication procedure.

*End of second change*