**3GPP TSG-RAN WG3 Meeting #123R3-240976**

**Athens, Greece, 26th Feb – 1st Mar 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.470** | **CR** | **0126** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | Correction on beam activation/deactivation for network energy saving | | | | | | | | | |
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| ***Source to WG:*** | Samsung, Ericsson, ZTE, Huawei, CATT, NEC | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Netw\_Energy\_NR-Core | | | | |  | ***Date:*** | | | 2024-02-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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)* | |
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| ***Reason for change:*** | | The gNB CU can provide the cells (*Cells Allowed to be Deactivated List* IE) where the gNB DU is allowed to deactivate the beams via gNB-CU Configuration Update message. The corresponding description is missing. | | | | | | | | |
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| ***Summary of change:*** | | Introduce description that “The gNB-CU Configuration Update function may indicate the cells where the gNB-DU is allowed to deactivate the SSB beams”.  Restructure the energy saving related descriptions to a single block to improve the readbility. | | | | | | | | |
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| ***Consequences if not approved:*** | | The description of the function that the gNB CU can provide the cells where the gNB DU is allowed to deactivate the beams is missing. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.1 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **x** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev0: R3-240228  Rev1: R3-240976, update based on comments. | | | | | | | | |

============ Start change ==============

### 5.2.1 F1 interface management function

The error indication function is used by the gNB-DU or gNB-CU to indicate to the gNB-CU or gNB-DU that an error has occurred.

The reset function is used to initialize the peer entity after node setup and after a failure event occurred. This procedure can be used by both the gNB-DU and the gNB-CU.

The F1 setup function allows to exchange application level data needed for the gNB-DU and gNB-CU to interoperate correctly on the F1 interface, and exchange the intended TDD DL-UL configuration originating from the gNB-DU or destined to the gNB-DU. The F1 setup is initiated by the gNB-DU. The F1 setup function also allows to send the information of a mobile IAB-MT from the co-located mobile IAB-DU to the gNB-CU.

The gNB-CU Configuration Update and gNB-DU Configuration Update functions allow to update application level configuration data needed between gNB-CU and gNB-DU to interoperate correctly over the F1 interface, and may activate or deactivate cells. The gNB-CU Configuration Update function may activate SSB beams of cells. The gNB-CU Configuration Update function may indicate the cells where the gNB-DU is allowed to deactivate the SSB beams. For cross-link interference mitigation, the gNB-CU may coordinate the exchange of intended TDD DL-UL configuration by merging, forwarding and selective forwarding of intended TDD DL-UL configuration(s) between its gNB-DUs, or between its gNB-DUs and other gNBs, gNB-CUs. The gNB-DU Configuration Update function also allows to send the information of a mobile IAB-MT from the co-located mobile IAB-DU to the gNB-CU.

The F1 setup and gNB-DU Configuration Update functions allow to inform the S-NSSAI(s), NSAG(s), CAG ID(s) and NID(s) supported by the gNB-DU.

The F1 setup and gNB-DU Configuration Update functions allow to provide information on either RedCap access configuration, or eRedCap access configuration, or both at the gNB-DU.

The F1 setup and gNB-CU Configuration Update functions allow to inform the NID(s) available at the gNB-CU.

The F1 resource coordination function is used to transfer information about frequency resource sharing between gNB-CU and gNB-DU. In case of split gNB architecture, the gNB-CU may consolidate the outgoing messages from multiple gNB-DUs and distribute the incoming messages to the involved gNB-DUs, to perform resource coordination.

The gNB-DU status indication function allows the gNB-DU to indicate overload status to gNB-CU. In case of IAB, the IAB-donor-DU or IAB-DU can indicate the downlink congestion status to the IAB-donor-CU.

The network access rate reduction function is used to indicate to the gNB-DU that the rate at which UEs are accessing the network need to be reduced.

The F1 removal function is used to remove the interface instance and all related resources between the gNB-DU and the gNB-CU in a controlled manner.

============ End of change ==============