**3GPP TSG-RAN WG3 Meeting #127bis *R3-25xxxx***

**Wuhan, China, 7 – 11 Apr, 2025**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  | **38.470** | **CR** | **0161** | **rev** | **2** | **Current version:** | 18.4.0 |  |
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| *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:***  | Introduction of Network Energy Saving Enhancement |
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| ***Source to WG:*** | Samsung, Huawei, NEC, CATT, ZTE, Ericsson |
| ***Source to TSG:*** | R3 |
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| ***Work item code:*** | Netw\_Energy\_NR\_enh-Core |  | ***Date:*** | 2025-03-28 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)Rel-20 (Release 20)* |
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| ***Reason for change:*** | This CR introduces the necessary specification changes to support the Network Energy Saving Enhancements. |
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| ***Summary of change:*** | Add the description of the UL WUS Configuration Information exchange to F1 interface management function |
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| ***Consequences if not approved:*** | The Network Energy Saving Enhancements cannot be supported. |
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| ***Clauses affected:*** | 5.2.1 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 38.473 CR 1531TS 38.423 CR 1436 |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** | Rev1: submitted in RAN3 #127bis meeting.Rev2: adding the Editor’s Note. |

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| **Change Begins** |

## 5.2 F1-C functions

### 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. With the gNB-CU Configuration Update function, energy saving with cell activation and cell deactivation can be supported as defined in TS 38.300 [8]. 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-DU Configuration Update functions allow to provide barring exemption for emergency call information at the gNB-DU.

The F1 setup and gNB-DU Configuration Update functions allow to provide barring configuration information for 2Rx XR UEs at the gNB-DU.

The F1 setup and gNB-DU Configuration Update functions allow to provide the UL WUS configuration information of served cell(s) for on-demand SIB1 mode at the gNB-DU.

Editor’s Note: The sentence can be refined, and the final exact wording are FFS.

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.

The F1 TA information transfer function is used to transfer the TA information from the gNB-DU to the gNB-CU and the gNB-CU to the gNB-DU.

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| **Change Ends** |