**3GPP TSG-RAN3 Meeting #124 *R3-24xxxx***

**Fukuoka, Japan, May 20th – 24th, 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.401** | **CR** | **0370** | **rev** | **2** | **Current version:** | **17.8.0** |  |
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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:*** | IAB-node authorization | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | CATT, Ericsson, Huawei, ZTE, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IAB\_enh-Core, NR\_IAB-Core | | | | |  | ***Date:*** | | | 2024-5-8 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
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| ***Reason for change:*** | | 1. “Path Switch procedure” used in 8.9.17.2.1 is not correct wording. 2. 8.9.17.2.1 misuses the term “mobile IAB”. | | | | | | | | |
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| ***Summary of change:*** | | Change “Path Switch procedure” in 8.9.17.2.1 to “Path Switch Request procedure”.  In 8.9.17.2.1, the misuse of the term “mobile IAB” is corrected.  ***Impact analysis***  *Impact assessment towards the previous version of the specification (same release):*  *This CR has isolated impact with the previous version of the specification (same release).*  *This CR has impact on the functional point of view, will only impact the RAN handling for the IAB-node authorization.* | | | | | | | | |
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| ***Consequences if not approved:*** | | The wording is not correct or misleading in 8.9.17.2.2 and 8.9.17.3 for IAB authorization in SA. | | | | | | | | |
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| ***Clauses affected:*** | | 8.9.17.1, 8.9.17.2.1, 8.9.17.2.2, 8.9.17.3 | | | | | | | | |
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|  | | **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:*** | | - | | | | | | | | |

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| ***This CR's revision history:*** | * Compared with Rev#0, Rev#1 removes the changes with respect to the handling for IAB-node de-registration. * Rev#1 use “IAB inter-CU topology adaptation” instead of “inter-CU topology adaptation” in 8.9.17.2.1. * Rev#2 removes changes to 8.9.17.2.2 and 8.9.17.3 on referring to 8.9.17.2.1 instead of 8.9.17.1. * Rev#2 adds “NR\_IAB-Core” to WID code. |

-------------------------------------------Start of changes-------------------------------------------

### 8.9.17 IAB-node authorization

#### 8.9.17.1 IAB-node in NSA

During the IAB-node integration procedure, the eNB receives the authorization status of the IAB-node from the EPC. The eNB forwards the authorization status to the IAB-donor-CU in the SGNB ADDITION REQUEST message. If the authorization status is “not authorized”, the IAB-donor-CU neither establishes the backhaul resources nor allocates any BAP address, TNL address or default BAP configuration for this IAB-node.

When the authorization status for the IAB-node changes, the EPC sends an updated authorization status to the IAB-MT’s eNB. The eNB forwards the authorization status to the IAB-donor-CU in the SGNB ADDITION REQUEST message or SGNB MODIFICATION REQUEST message.

In case the updated authorization status is “not authorized”, the IAB-donor-CU performs the following actions in this order: it attempts to hand over the UEs served by the IAB-node to other cell(s), releases the F1 interface towards the IAB-DU, and releases all backhaul resources (including the BAP address, TNL address and default BAP configuration) for this IAB-node.

In case the authorization status is changed back from “not authorized” to “authorized”, the phase 2 and phase 3 of the IAB-node integration procedure as defined in clause 8.12 are carried out.

#### 8.9.17.2 IAB-node with single IAB-donor in SA

##### 8.9.17.2.1 IAB-node is single-connected

During the IAB-node network integration or RLF recovery, the IAB-donor-CU receives the authorization status of the IAB-node from the 5GC. Also, during the IAB inter-CU topology adaptation procedure, the target IAB-donor-CU receives the authorization status of the IAB-node from the source IAB-donor-CU as well as from the 5GC when performing the Path Switch Request procedure. If the authorization status is “not authorized”, the IAB-donor-CU neither establishes the backhaul resources nor allocates any BAP address, TNL address or default BAP configuration for this IAB-node. When the authorization status for the IAB-node changes, the 5GC sends an updated authorization status to the IAB-donor-CU. When the authorization status received by the IAB-donor-CU changes, the IAB-donor-CU performs the SA equivalent of the steps described for NSA in clause 8.9.17.1.

##### 8.9.17.2.2 IAB-node is NR dual-connected

In case the IAB-node is dual-connected to the IAB-donor-CU, the IAB-donor-CU receives the authorization status of the IAB-node from the 5GC. Upon reception of the authorization status, the IAB-donor-CU performs the equivalent of the steps described for NSA in clause 8.9.17.1.

In case the IAB-node is dual-connected to a non-IAB-capable gNB and to an IAB-donor-CU, the MN receives the authorization status of the IAB-node from the 5GC. If the MN is the non-IAB-capable gNB and the SN is the IAB-donor-CU, the MN forwards the authorization status to the IAB-donor-CU in the S-NODE ADDITION REQUEST message or S-NODE MODIFICATION REQUEST message. Upon reception of the authorization status, the IAB-donor-CU performs the SA equivalent of steps described for NSA in clause 8.9.17. 1. If the MN is the IAB-donor-CU and the SN is not the non-IAB-capable gNB, the IAB-donor-CU performs the SA equivalent of the steps described for NSA in clause 8.9.17.1.

#### 8.9.17.3 IAB-node is served by two IAB-donors in SA

In case the IAB-MT only connects to the non-F1-terminating IAB-donor-CU or in case the IAB-MT is NR dual-connected with the non-F1-terminating IAB-donor-CU as the MN, the non-F1-terminating IAB-donor-CU sends the authorization status received from the 5GC to the F1-terminating IAB-donor-CU in the IAB-TRANPORT MIGRATION MODIFICATION REQUEST message. Upon reception of the authorization status, the F1-terminating IAB-donor-CU performs the equivalent of steps described for NSA in clause 8.9.17.1. If the authorization status is “not authorized”, the F1-terminating IAB-donor-CU sends to the non-F1-terminating IAB-donor-CU an IAB TRANSPORT MIGRATION MANAGEMENT REQUEST message requesting the release of all offloaded traffic, after which the non-F1-terminating IAB-donor-CU releases the offloaded traffic and all backhaul resources, BAP address, TNL address and default BAP configuration for the IAB-node.

In case the IAB-MT is NR dual-connected, where the MN is the F1-terminating IAB-donor-CU and the SN is a non-F1-terminating IAB-donor-CU, upon reception of the authorization status, the IAB-node’s authorization procedure follows the same steps as described in clause 8.9.17.2.

-------------------------------------------End of changes-------------------------------------------