3GPP TSG SA WG2#164 S2-240xxxx

Maastricht, 19-23 August 2024 (revision of)

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.501** | **CR** | **<CR#>** | **rev** | **-** | **Current version:** | **19.0.0** |  |
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| *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 |  | Core Network | **x** |

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| ***Title:*** | Support of UE served by a MWAB: authorization aspects | | | | | | | | | |
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| ***Source to WG:*** | Nokia | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | VMR\_Ph2 | | | | |  | ***Date:*** | | | REl-19 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | 2024-07-15 |
|  | *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:*** | | This CR introduces text to describe how MWAB is authorized to operate | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | New clause added to describe how the MWAB auuthorized to operate | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incomplete specification | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.X.Y new | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

*FIRST CHANGE*

### 5.X.Y Authorization aspects

There are two aspects related to the authorization of a MWAB. One aspect is the authorization of the MWAB UE to establish a backhaul connectivity in a Backhaul PLMN/SNPN. The other aspect is related to the authorization of the MWAB-gNB to operate as a gNB logically belonging to a PLMN/SNPN which its cell broadcasts (or its cells, if more than one is supported).

#### 5.x.y.1 MWAB-UE authorization to establish BH PDU sessions

The authorization of the MWAB-UE to establish connectivity in a PLMN/SNPN is based on whether it is allowed to register with network slice(s) dedicated to the MWAB-UEs operation in a BH PLMN/SNPN, and whether it can establish BH PDU session(s) in the BH PLMN/SNPN using the dedicated network slice(s). Such dedicated network slices S-NSSAI(s) and PDU sessions DNNs shall be part of the subscription information for the MWAB-UE.

The location and time availability of the dedicated network slice(s) can determine whether a BH PDU session can remain established. Without a BH PDU session, the MWAB gNB cannot operate, hence the time and location availability of the BH PDU session(s) of the MWAB-UE shall be ensured when the MWAB-gNB is expected to operate.

The MWAB-UE authorization supports time based or location-based control. For time-based control, existing time-based network slice subscription control can be reused (including the enhancements in clause 5.15.16). For location-based control, existing mechanism, e.g. service area restriction, LADN based control (see e.g. clauses 5.6.5.and 5.6.5a) can be reused.

#### 5.x.y.2 MWAB-gNB authorization

OAM of the Broadcasted PLMN/SNPN determines when the MWAB-gNB can operate or when it needs to shut down. When the MWAB-gNB is no longer authorized to operate by OAM of the Broadcasted PLMN/SNPN, the MWAB-gNB should hand over the UE(s) it serves to other cells. When the MWAB-gNB stops operating under OAM control, the MWAB-gNB OAM can also cause the MWAB-gNB to request the MWAB-UE to release the BH PDU sessions.

NOTE: It is expected the HPLMN ensures that the BH PDU sessions authorization does not interfere with the ability of the OAM of the Broadcasted PLMN/SNPN to manage the MWAB-gNB.

*End of CHANGES*