**3GPP TSG-CT WG1 Meeting #137-eC1-22xxxx**

**E-Meeting, 18th – 26th August 2022 (was C1-224742)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.301** | **CR** | **3769** | **rev** | **1** | **Current version:** | **17.7.0** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Correction to condition to trigger TAU for local release of PDN connection | | | | | | | | | |
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| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | CT1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc18 | | | | |  | ***Date:*** | | | 2022-08-24 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Upon inter-system change from 2G/3G to 4G, for any PDN connection that has been transferred and does not have corresponding 5G parameters (such as PDU session ID), if the UE supports N1 mode, the UE may decide to deactivate EPS bearer contexts for such PDN connection(s) locally and use Tracking Area Update (TAU) request to align EPS bearer contexts with the network.  In order for the UE to align EPS bearer contexts with the network using TAU procedure, the UE has to either support EMM-REGISTERED without PDN connection or have at least one PDN connection still active. | | | | | | | | |
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| ***Summary of change:*** | | Limit using of TAU procedure to align EPS bearer context deactivated locally at UE side to the case of: a) UE supports EMM-REGISTERED without PDN connection or b) last PDN connection is not deactivated | | | | | | | | |
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| ***Consequences if not approved:*** | | A UE which does not support EMM-REGISTERED without PDN connection will perform local release of all PDN connections and the use TAU to align such behavior with the network which will result in unnecessary failure of TAU procedure. | | | | | | | | |
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| ***Clauses affected:*** | | 6.5.0 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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\* \* \* First Change \* \* \* \*

## 6.5 UE requested ESM procedures

### 6.5.0 General

The UE's maximum number of active EPS bearer contexts in a PLMN is determined by whichever is the lowest of the maximum number of EPS bearer identities allowed by the protocol (as specified in 3GPP TS 24.007 [12] clause 11.2.3.1.5), the PLMN's maximum number of EPS bearer contexts in S1 mode and the UE's implementation-specific maximum number of EPS bearer contexts.

NOTE 1: Clauses 6.5.1.4 and 6.5.3.4 specify how the UE determines the PLMN's maximum number of EPS bearer contexts in S1 mode.

In earlier versions of the protocol, the maximum number of simultaneously active EPS bearer contexts was limited by lower layer protocols to 8.

In the present version of the protocol, the UE and the network may support a maximum number of 15 EPS bearer contexts.

A UE supporting signalling for a maximum number of 15 EPS bearer contexts shall support the extended range or EPS bearer identities from 0 to 15 (as specified in 3GPP TS 24.007 [12] clause 11.2.3.1.5). The UE indicates support of signalling for a maximum number of 15 EPS bearer contexts by setting the 15 bearers bit in the UE Network Capability IE.

A network supporting signalling for a maximum number of 15 EPS bearer contexts shall support the extended range or EPS bearer identities from 0 to 15 (as specified in 3GPP TS 24.007 [12] clause 11.2.3.1.5). The network indicates support of signalling for a maximum number of 15 EPS bearer contexts by setting the 15 bearers bit in the EPS network feature support IE.

NOTE 2: A UE and a network not supporting signalling for a maximum number of 15 EPS bearer contexts will treat the EPS bearer identity values 1 to 4 as 'reserved' values.

For a UE in NB-S1 mode, the UE's implementation-specific maximum number of active user plane radio bearers is 2 (as defined in 3GPP TS 36.300 [20]) when the UE sets the Multiple DRB support bit to "Multiple DRB supported" during attach or tracking area updating procedures, and 1 otherwise.

Upon an inter-system change from N1 mode to NB-S1 mode in EMM-IDLE mode for the UE operating in single-registration mode, if:

a) the number of active default EPS bearer contexts in the UE is larger than the UE's implementation-specific maximum number of active user plane radio bearers; and

b) the UE is using user plane CIoT EPS optimization;

the UE shall locally deactivate at least one default EPS bearer context such that the total number of active default EPS bearer contexts that remained does not exceed the UE's implementation-specific maximum number of active user plane radio bearers. In this case, choosing which EPS bearer context to deactivate is implementation specific. The UE shall then include the EPS bearer context status IE in the TRACKING AREA UPDATE REQUEST message.

Upon the inter-system change from A/Gb mode or Iu mode to S1 mode, for any PDN connection that has been transferred, if the PDN connection is not associated with a PDU session ID and the UE supporting N1 mode decides to enable the transfer of the PDN connection from S1 mode to N1 mode, the UE may first initiate the UE requested PDN disconnection procedure and then the UE requested PDN connectivity procedure for such PDN connection(s). As an implementation option, the UE may deactivate all EPS bearer contexts for such PDN connection(s) locally, and if the last PDN connection is not deactivated or the UE supports EMM-REGISTERED without PDN connection, the UE shall include the EPS bearer context status IE in the TRACKING AREA UPDATE REQUEST message of the tracking area updating procedure upon inter-system change from A/Gb mode or Iu mode to S1 mode, and then initiate UE requested PDN connectivity procedure for such PDN connection(s).

NOTE 3: Upon the inter-system change from A/Gb mode or Iu mode to S1 mode, if a PDN connection does not support interworking with 5GS and the UE determines that the PLMN or the APN cannot support interworking with 5GS, it is recommended that a UE does not release and re-establish the PDN connection in order to enable interworking with 5GS for the PDN connection. Whether and how the UE determines the PLMN or the APN can support interworking with 5GS is implementation specific.

\* \* \* End of Changes \* \* \* \*