**3GPP TSG-CT WG1 Meeting #134-eC1-22xxxx**

**E-Meeting, 17th – 25th February 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.301** | **CR** | **3703** | **rev** | **1** | **Current version:** | **17.5.0** |  |
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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 | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Clarify the condition for a PDN connection to support interworking with 5GS | | | | | | | | | |
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| ***Source to WG:*** | MediaTek Inc. | | | | | | | | | |
| ***Source to TSG:*** | CT1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc17 | | | | |  | ***Date:*** | | | 2022-02-23 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Based on TS 23.501 sub-clause 5.17.2.3:  *As a UE option, to support IP address preservation at mobility from EPC to 5GS for PDN connections without 5GS related parameters, a 5GS capable UE may:*  *- Following mobility from GERAN/UTRAN to EPS, release those PDN connection(s) and re-establish them as specified in clause 4.11.1.5.4.1 of TS 23.502 [3] so that they support interworking to 5GS.*  *NOTE 1: It is recommended that a UE using this option does not do this behaviour after every change to EPS in PLMNs that do not support 5GS, nor for APNs that do not support mobility to 5GS; and, that such a UE supports storage of the 5GS related parameters while in GERAN/UTRAN. Whether and how the UE is aware of which PLMNs support 5GS and which APNs do not support mobility to 5GS is out of scope of this specification.*  It is proposed to capture the stage 2 note also in stage 3 to recommend the UE not to release and re-establish the PDN connection if the PLMN/APN cannot support interworking with 5GS. | | | | | | | | |
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| ***Summary of change:*** | | Add a note to clarify that the UE is not recommended to release and re-establish the PDN connection if the PLMN/APN cannot support interworking with 5GS. | | | | | | | | |
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| ***Consequences if not approved:*** | | The UE may try to release and re-establish the PDN connection even if the PLMN/APN cannot support interworking with 5GS. | | | | | | | | |
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| ***Clauses affected:*** | | 6.5.0 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

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

### 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).

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 \* \* \* \*