**3GPP TSG-CT WG1 Meeting #126-eC1-207015**

**Elbonia, 13-20 November 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.501** | **CR** | **2713** | **rev** | **1** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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 of procedures due to maximum number of PDU session reached | | | | | | | | | |
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| ***Source to WG:*** | BlackBerry UK Ltd. | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc17 | | | | |  | ***Date:*** | | | 2020-10-05 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17)* | |
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| ***Reason for change:*** | | When receiving an indication that a 5GSM message requesting to transfer a connection was not forwarded due to #65 "maximum number of PDU sessions reached", the UE shall shall perform existing procedures in subclause 6.4.1.5.  The UE is not permitted to terminate the active emergency call and select a different domain or to transfer the emergency call to non-3GPP access.  While the network is not expected to return 5GMM cause #65 when the UE requests an emergency PDU session, it can happen and the UE needs to be prepared to handle it correctly. | | | | | | | | |
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| ***Summary of change:*** | | Specify behavior for when a 5GSM message requesting to transfer a connection was not forwarded due to #65 "maximum number of PDU sessions reached". | | | | | | | | |
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| ***Consequences if not approved:*** | | Emergency call failure | | | | | | | | |
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| ***Clauses affected:*** | | 6.4.1.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \*\*\*

#### 6.4.1.5 Handling the maximum number of established PDU sessions

The maximum number of PDU sessions which a UE can establish in a PLMN is limited by whichever is the lowest of: the maximum number of PDU session IDs allowed by the protocol (as specified in 3GPP TS 24.007 [11] subclause 11.2.3.1b), the PLMN's maximum number of PDU sessions and the UE's implementation-specific maximum number of PDU sessions.

If during a UE-requested PDU session establishment procedure the 5GSM sublayer in the UE receives an indication that the 5GSM message was not forwarded because the PLMN's maximum number of PDU sessions has been reached, then the UE determines the PLMN's maximum number of PDU sessions as the number of active PDU sessions it has.

NOTE 1: In some situations, when attempting to establish multiple PDU sessions, the number of active PDU sessions that the UE has when 5GMM cause #65 is received is not equal to the maximum number of PDU sessions reached in the network.

NOTE 2: When the network supports emergency services, it is not expected that 5GMM cause #65 is returned by the network when the UE requests an emergency PDU session.

NOTE 3: There is only one maximum number of PDU sessions for a PLMN regardless of which access the PDU session exists in.

The PLMN's maximum number of PDU sessions applies to the PLMN in which the 5GMM cause #65 "maximum number of PDU sessions reached" is received. When the UE is switched off, when the USIM is removed, or the entry in the "list of subscriber data" for the current SNPN is updated, the UE shall clear all previous determinations representing PLMN's maximum number of PDU sessions. Upon successful registration with a new PLMN, the UE may clear previous determinations representing any PLMN's maximum number(s) of PDU sessions.

If the maximum number of established PDU sessions is reached at the UE and the upper layers of the UE request connectivity to a DNN the UE shall not send a PDU SESSION ESTABLISHMENT message unless an established PDU session is released. If the UE needs to release an established PDU session, choosing which PDU session to release is implementation specific, however the UE shall not release the emergency PDU session.

If the UE needs to release a PDU session in order to request an emergency PDU session, it shall either perform a local release of a PDU session or release a PDU session via explicit signalling. If the UE performs a local release, the UE shall perform a registration procedure for mobility and periodic registration update to indicate PDU session status to the network.

Upon receiving an indication that the 5GSM message was not forwarded because the PLMN's maximum number of PDU sessions has been reached along with the 5GSM message and the 5GSM message is a PDU SESSION ESTABLISHMENT REQUEST message with request type set to "existing emergency PDU session", the UE shall release a PDU session as specified in this subclause and send the PDU SESSION ESTABLISHMENT REQUEST message again.

NOTE 4: Selection of the established PDU session to be released is implementation specific. In one implementation, the above mandate is met by the UE when upper layers of the UE select this PDU session and subsequently request the NAS to send the PDU SESSION ESTABLISHMENT REQUEST message again.