**3GPP TSG-CT WG1 Meeting #126-eC1-20xxxx**

**Electronic meeting, 15-23 October 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **24.501** | **CR** | **2733** | **rev** | **1** | **Current version:** | **17.0.0** |  |
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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:***  | Restriction in the usage of the 5GSM STATUS message |
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| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | C1 |
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| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2020-10-21 |
|  |  |  |  |  |
| ***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 canbe 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:*** | The following case has been identified:1. The UE sends a PDU SESSION RELEASE COMPLETE message as a response to a PDU SESSION RELEASE COMMAND message from the SMF.
2. The AMF cannot forward the PDU SESSION RELEASE COMPLETE message and hence a DL NAS TRANSPORT message including 5GMM cause #90 "payload was not forwarded" sent to the UE.
3. The UE sends a 5GSM STATUS message with the 5GSM cause #96 "invalid mandatory information".
4. The AMF cannot forward the 5GSM STATUS message and hence a DL NAS TRANPSROT message including 5GMM cause #90 "payload was not forwarded" sent to the UE
5. The UE sends a 5GSM STATUS message with the 5GSM cause #43 "invalid PDU session identity".
6. Infinite repetition of Steps 4 and 5.

The usage of the 5GSM STATUS message is very broad as can be seen from the TS:*The purpose of the sending of the 5GSM STATUS message is to report at any time certain error conditions detected upon receipt of 5GSM protocol data. The 5GSM STATUS message can be sent by both the network and the UE (see example in figure 6.5.1.1).*Thus, there is no means to avoid the case based on the current text.When a 5GSM message is received via a DL NAS TRANSPORT message including a 5GMM cause IE, detailed handling is specified in clause 5.4.5.3 and corresponding 5GSM procedure description. Therefore, there is no need for a 5GSM STATUS message. |
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| ***Summary of change:*** | It is clarified that 5GSM protocol data received via a DL NAS TRANSPORT message including a 5GMM cause IE should not be a trigger for the 5GSM status procedure. |
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| ***Consequences if not approved:*** | The problematic case described above cannot be avoided. |
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| ***Clauses affected:*** | 6.5.1 |
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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 ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

#### 6.3.3.6 Abnormal cases in the UE

The following abnormal cases can be identified:

a) PDU session inactive for the received PDU session ID.

 If the PDU session ID in the PDU SESSION RELEASE COMMAND message belongs to any PDU session in state PDU SESSION INACTIVE in the UE, the UE shall include the 5GSM cause #43 "Invalid PDU session identity" in the 5GSM STATUS message, and set the PDU session ID to the received PDU session ID in the UL NAS TRANSPORT message as specified in subclause 5.4.5.

b) User-plane resources of the MA PDU session on the access indicated in the Access type IE not established.

 If the PDU session is an MA PDU session and has user-plane resources established on a single access different from the access indicated in the Access type IE, the UE shall not diagnose an error, further process the release command and consider the user-plane resources of the MA PDU session on the access indicated in the Access type IE as successfully released.

c) Upon receiving an indication that the 5GSM message was not forwarded due to routing failure along with a PDU SESSION RELEASE COMPLETE message with the PDU session ID IE set to the same value as the PDU session ID that was sent by the UE, the UE shall neither diagnose an error nor further process the release command and shall consider the PDU session as released.