**3GPP TSG-CT WG1 Meeting #141eC1-232437**

**Online 17– 21 April 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.301** | **CR** |  | **rev** | **3** | **Current version:** | **18.2.1** |  |
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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 | **X** |

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| ***Title:*** | Collision handling for the modification procedure to release the bearer | | | | | | | | | |
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| ***Source to WG:*** | MediaTek Inc. | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
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| ***Work item code:*** | TEI18 | | | | |  | ***Date:*** | | | 2023-04-07 |
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| ***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)* | |
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| ***Reason for change:*** | | The UE can use the MO modification procedure to release bearer resources. E.g. when the precedence conflict as specified in sc 6.4.2.4, d), 2):  *2) When the TFT operation = "Create a new TFT" and two or more packet filters in all TFTs associated with this PDN connection would have identical packet filter precedence values.*  *In case 2, if the old packet filters do not belong to the default EPS bearer context, the UE shall not diagnose an error, shall further process the new activation request and, if it was processed successfully, shall delete the old packet filters which have identical filter precedence values. Furthermore, by means of explicit peer-to-peer signalling between the network and the UE, the UE shall perform a UE requested bearer resource modification procedure to delete the packet filters in the network corresponding to the packet filters it has deleted on the UE side.*  The YELLOW case can be deleting all the packet filters. e.g. all existing packet filters in ebi6 is conflicting with newly added packet filters in ebi7 where both bearers/TFTs are associated with the same PDN connection.  In that case, it’s impossible for the UE to maintain such context anymore, and the modification was sent to the network to sync with the network. The dedicated EPS bearer shall be deleted when the procedure is complete/aborted because there is no TFT associated to the dedicated bearer anymore as specified in the CYAN above. 23.401, 4.7.2.1:  *The EPS bearer traffic flow template (TFT) is the set of all packet filters associated with that EPS bearer. An UpLink Traffic Flow Template (UL TFT) is the set of uplink packet filters in a TFT. A DownLink Traffic Flow Template (DL TFT) is the set of downlink packet filters in a TFT. Every dedicated EPS bearer is associated with a TFT.*  When the UE still needs to release the bearer (e.g. because the TFT may be still empty), the proposed handling allows the UE send TAU to sync with the network, and at the same time the UE will send a modify accept/reject (reject message is used when there is some other problem in the MT modify procedure) message to make the network complete the modify procedure.  *If an EPS bearer context status IE is included in the TRACKING AREA UPDATE REQUEST message, the MME shall deactivate all those EPS bearer contexts locally (without peer-to-peer signalling between the MME and the UE) which are in ESM state BEARER CONTEXT ACTIVE or BEARER CONTEXT MODIFY PENDING on the network side, but are indicated by the UE as being in ESM state BEARER CONTEXT INACTIVE.*  *1) Procedures related to EPS bearer contexts:*  *These procedures are initiated by the network and are used for the manipulation of EPS bearer contexts:*  *- default EPS bearer context activation;*  *- dedicated EPS bearer context activation;*  *- EPS bearer context modification;*  *- EPS bearer context deactivation.* | | | | | | | | |
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| ***Summary of change:*** | | The UE may locally release the bearer when MO/MT modification procedure collision happens and when the MO modification is initiated to release a bearer and when the UE still needs to release the bearer (e.g. because the TFT may be still empty) and at the same time the UE responds with a modify accept/reject message to the network to indicate the procedure is complete. | | | | | | | | |
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| ***Consequences if not approved:*** | | The release procedure for the dedicated is aborted when the MO/MT modification conflict. However, there is no PF/TFT associated to the dedicated bearer anymore and the bearer status will become unsynchronized because such can’t be maintained by the UE. | | | | | | | | |
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| ***Clauses affected:*** | | 6.4.3.5 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

#### 6.4.3.5 Abnormal cases in the UE

Apart from the case described in clause 6.3.3, the following abnormal cases can be identified:

a) Collision of UE requested bearer resource modification procedure and EPS bearer context modification procedure:

If the UE receives a MODIFY EPS BEARER CONTEXT REQUEST message during the UE requested bearer resource modification procedure, the Procedure transaction identity IE of the MODIFY EPS BEARER CONTEXT REQUEST message is set to "No procedure transaction identity assigned" and the EPS bearer indicated in the MODIFY EPS BEARER CONTEXT REQUEST message is the EPS bearer that the UE had requested to modify, the UE shall abort internally the UE requested bearer resource modification procedure, and:

- if the UE had initiated resource release for all the traffic flows for the bearer and the UE still needs to release the bearer, the UE may proceed with the EPS bearer context modification procedure (i.e. respond with a MODIFY EPS BEARER CONTEXT ACCEPT message or a MODIFY EPS BEARER CONTEXT REJECT message) and deactivate the EPS bearer context locally without peer-to-peer signalling between the UE and the MME. In order to synchronize the EPS bearer context status with the MME, the UE may send a TRACKING AREA UPDATE REQUEST message that includes the EPS bearer context status IE to the MME; or

- otherwise, the UE shall enter the state BEARER CONTEXT ACTIVE and proceed with the EPS bearer context modification procedure.

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