**3GPP TSG-CT WG1 Meeting #141e *C1-232835***

**Online 17– 21 April 2023 was C1-232028**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  | **24.501** | **CR** | **5172** | **rev** | **1** | **Current version:** | **18.2.1** |  |
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| *For* [***HELP***](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:***  | Emergency service handling when low layer failure and NW initiated deregistration |
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| ***Source to WG:*** | MediaTek Inc. |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc18 |  | ***Date:*** | 2023-04-20 |
|  |  |  |  |  |
| ***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 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | In 3GPP 24.501, it is not clear about handling of emergency services, when MRU is triggered for either initiating emergency PDU session or emergency services fallback procedure and it is failed due to lower layer failure and network initiated deregistration procedure specificed in subclause 5.5.1.3.7*5.5.1.3.7 Abnormal cases in the UE**e) Lower layer failure, release of the NAS signalling connection received from lower layers or the lower layers indicate that the RRC connection has been suspended without a cell change before the REGISTRATION ACCEPT or REGISTRATION REJECT message is received.**g) Registration procedure for mobility and periodic registration update and de-registration procedure collision.* *If the UE receives a DEREGISTRATION REQUEST message without 5GMM cause value #11, #12, #13 or #15 before the registration procedure for mobility and periodic registration update has been completed, the registration procedure for mobility and periodic registration update shall be aborted and the de-registration procedure shall be progressed*When MRU is failed due to lower layer failure or network initiated deregistration procedure to establish emergency PDU session, then UE shall:* inform to upper layer of failure of the procedure or
* perform de-register locally, if not performed yet and attempt initial registration for emergency services.

When MRU triggered due to emergency services fallback is failed due to lower layer failure or network initiated deregistration procedure, then UE shall:* inform to upper layer of failure of the procedure
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| ***Summary of change:*** | If the mobility and periodic registration update request for initiating an emergency PDU session fails due to abnormal cases e) or g), the UE shall: a) inform the upper layers of the failure of the procedure; or b) perform de-registration locally, if not de-registered already, and attempt initial registration for emergency services.If the mobility and periodic registration update request for initiating an emergency services fallback fails due to abnormal case e) or g) in subclause 5.5.1.3.7, the UE shall inform the upper layers of the failure to access the network. |
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| ***Consequences if not approved:*** | Due to unclear information of handling of emergency call in abnormal case like lower layer failure, collision between emergency services and network initiated deregistration procedure which has impact on user emergency services. |
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| ***Clauses affected:*** | 5.5.1.3.6, 5.5.1.3.6A |
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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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

5.5.1.3.6 Mobility and periodic registration update for initiating an emergency PDU session not accepted by the network

If the mobility and periodic registration update request for initiating an emergency PDU session cannot be accepted by the network, the UE shall perform the procedures as described in subclause 5.5.1.3.5. Then if the UE is in the same selected PLMN where the last mobility and periodic registration update request was attempted, the UE shall:

a) inform the upper layers of the failure of the procedure; or

NOTE 1: This can result in the upper layers requesting implementation specific mechanisms, e.g. procedures specified in 3GPP TS 24.229 [14] can result in the emergency call being attempted to another IP-CAN.

b) perform de-registration locally, if not de-registered already, and attempt initial registration for emergency services.

If the mobility and periodic registration update request for initiating an emergency PDU session fails due to abnormal case b) in subclause 5.5.1.3.7, the UE shall perform the actions as described in subclause 5.5.1.3.7 and inform the upper layers of the failure to access the network.

NOTE 2: This can result in the upper layers requesting implementation specific mechanisms, e.g. procedures specified in 3GPP TS 24.229 [14] can result in the emergency call being attempted to another IP-CAN.

If the mobility and periodic registration update request for initiating an emergency PDU session fails due to abnormal cases c), d), e) or g) in subclause 5.5.1.3.7, the UE shall perform the procedures as described in subclause 5.5.1.3.7. Then if the UE is in the same selected PLMN where the last mobility and periodic registration update request was attempted, the UE shall:

a) inform the upper layers of the failure of the procedure; or

NOTE 3: This can result in the upper layers requesting implementation specific mechanisms, e.g. procedures specified in 3GPP TS 24.229 [14] can result in the emergency call being attempted to another IP-CAN.

b) perform de-registration locally, if not de-registered already, and attempt initial registration for emergency services.

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5.5.1.3.6A Mobility and periodic registration update for an emergency services fallback not accepted by the network

If the mobility and periodic registration update request for initiating an emergency services fallback:

- fails due to an abnormal case described in subclause 5.5.1.3.7, the UE shall perform the procedures as described in subclause 5.5.1.3.7; or

- cannot be accepted by the network as described in subclause 5.5.1.3.5, the UE shall perform the procedures as described in subclause 5.5.1.3.5.

If the mobility and periodic registration update request for initiating an emergency services fallback fails due to abnormal case b) in subclause 5.5.1.3.7, the UE shall inform the upper layers of the failure to access the network.

NOTE 1: This can result in the upper layers requesting implementation specific mechanisms, e.g. procedures specified in 3GPP TS 24.229 [14] can result in the emergency call being attempted to another IP-CAN.

If the mobility and periodic registration update request for initiating an emergency services fallback fails due to abnormal cases c), d), e) or g) or cannot be accepted and the UE does not attempt to select an E-UTRA cell connected to EPC or 5GCN as described in subclause 5.5.1.3.5 and the UE is camped on NR or E-UTRA cell connected to 5GCN in the same PLMN where the last mobility and periodic registration update request was attempted, the UE shall inform the upper layers of the failure of the procedure.

NOTE 2: This can result in the upper layers requesting implementation specific mechanisms, e.g. procedures specified in 3GPP TS 24.229 [14] can result in the emergency call being attempted to another IP-CAN.