**3GPP TSG-CT WG1 Meeting #137-eC1-22xxxx**

**E-Meeting, 18th – 26th August 2022 *(was C1-224817)***

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **4540** | **rev** | **1** | **Current version:** | **17.7.1** |  |
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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:***  | Correction on eDRX handling in 5GS |
|  |  |
| ***Source to WG:*** | vivo |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2022-08-05 |
|  |  |  |  |  |
| ***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 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:*** | 1. TS 23.501 specifies the behaviour of the UE and the AMF when the UE has PDU Session(s) associated with emergency services as below:

*When the UE has PDU Session(s) associated with emergency services, the UE and AMF follow regular discontinuous reception as defined in clause 5.4.5 and shall not use the extended idle mode DRX.*In SA2 spec, the UE and the AMF use DRX and shall not use eDRX. However, CT1 spec does not cover the case where the UE and the AMF shall not use eDRX. The forbidden behavior should be stated explicitly.1. In the registration process, the behaviour of the UE has be specified:

*If the UE supports eDRX and requests the use of eDRX, the UE shall include the Requested extended DRX parameters IE in the REGISTRATION REQUEST message.*However such support indication is missing in the description of Requested extended DRX parameters IE. The correction on Requested extended DRX parameters IE needs to be implemented. |
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| ***Summary of change:*** | 1. Specify that the UE and the AMF shall not use eDRX when the UE has PDU Session(s) associated with emergency services.
2. Add the missing condition in the description of Requested extended DRX parameters IE.

Backwards compatibility analysis:The change has no impact on the signalling interface, so there is no backwards compatible issue on the change of this CR. |
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| ***Consequences if not approved:*** | Inconsistent with SA2 requirement and there is no explicit limit on the use of eDRX. The UE may use eDRX when the UE has emergency PDU, which has negative impact on emergency services. |
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| ***Clauses affected:*** | 5.3.16, 8.2.6.22 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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

### 5.3.16 Extended DRX cycle for UEs in 5GMM-IDLE and 5GMM-CONNECTED mode with RRC inactive indication

Extended DRX (eDRX) cycle is supported for a UE in N1 mode. When eDRX is requested by the UE and accepted by the network:

- if the UE is not in NB-N1 mode, eDRX is used when the UE is in 5GMM-IDLE mode or in 5GMM-CONNECTED mode with RRC inactive indication; or

- if the UE is in NB-N1 mode, eDRX is used when the UE is in 5GMM-IDLE mode.

The UE may request the use of eDRX cycle during a registration procedure by including the Requested extended DRX parameters IE (see 3GPP TS 23.501 [8] and 3GPP TS 23.502 [9]). The UE shall not request the use of eDRX during a registration procedure for emergency services. The UE may use the extended idle mode DRX cycle length stored in the USIM (see 3GPP TS 31.102 [22]) when requesting the use of eDRX.

The UE and the network may negotiate eDRX parameters during a registration procedure when the UE has an emergency PDU session.

The network accepts the request to use the eDRX by providing the Negotiated extended DRX parameters IE when accepting the registration procedure. The UE shall use eDRX only if it received the Negotiated extended DRX parameters IE during the last registration procedure and the UE does not have an emergency PDU session.

NOTE: If the UE wants to keep using eDRX, the UE includes the Extended DRX parameters IE in each registration procedure.

If the UE received the Negotiated extended DRX parameters IE during the last registration procedure, upon successful completion of the PDU session release procedure of the emergency PDU session, the UE shall resume eDRX.

If the network has provided the Negotiated extended DRX parameters IE during the last registration procedure, upon successful completion of the PDU session release procedure of the emergency PDU session, the network shall resume eDRX.

If the UE or the network locally releases an emergency PDU session, the UE or the network shall not use eDRX until the UE receives eDRX parameters during a registration procedure with PDU session context synchronization or upon successful completion of a service request procedure with PDU session context synchronization.

If the UE did not receive the Negotiated extended DRX parameters IE, or if the UE has an emergency PDU session, the UE shall use the stored UE specific DRX parameter, if available, and shall not use eDRX.

If the network did not accept the request to use eDRX, or if the UE has an emergency PDU session, the network shall use the stored UE specific DRX parameter, if available, and shall not use eDRX.

If the network provided the Negotiated extended DRX parameters IE and also assigned a new 5G-GUTI for the UE as described in subclause 5.5.1.3.4 during the last registration procedure, the network shall use the stored UE specific DRX parameter, if available, with the old 5G-GUTI and use the eDRX provided by the network with the new 5G-GUTI until the old 5G-GUTI can be considered as invalid by the network (see subclauses 5.4.4.4 and 5.5.1.3.4).

\* \* \* Next Change \* \* \* \*

#### 8.2.6.22 Requested extended DRX parameters

The UE shall include this IE if the UE supports eDRX, the UE needs to use extended DRX or change the extended DRX parameters.

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