**3GPP TSG-CT WG1 Meeting #136-eC1-223654**

**E-Meeting, 12th – 20th May 2022**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.301** | **CR** | **3755** | **rev** | **1** | **Current version:** | **17.6.0** |  |
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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 | **X** |

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| ***Title:***  | The handling of establishing an emergency PDN connection after WUS negotiation in EPS |
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| ***Source to WG:*** | vivo |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2022-04-24 |
|  |  |  |  |  |
| ***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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | 1. TS 23.401 has specified that the UE and the MME do not negotiate the WUS assistance information in the attach or TAU procedure when the UE has an emergency PDN connection.

There are two below scenarios when the UE has an emergency PDN connection:One: the UE is attached for emergency services and has an emergency PDN connection;The other: the UE initiates the TAU due to mobility when the UE has an emergency PDN connection.The UE and the MME do not negotiate the WUS assistance information due to the emergency PDN connection, as a result, they are still not able to enable the use of the WUS assistance information after the emergency PDN connection is released.In the above scenarios, the UE shall initiate the TAU to request the use of the WUS assistance information after the emergency PDN connection is released.1. Per current specification, the UE and the MME shall not use the WUS assistance information when an emergency PDN connection is established after the UE received the Negotiated WUS assistance information IE during the last attach or TAU procedure.

In fact, this restriction only applies to the emergency session established over 3GPP access. The UE and the MME shall be allowed to use the WUS assistance information upon the successful completion of handover of emergency PDN connection to non-3GPP access. |
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| ***Summary of change:*** | 1. If the UE does not receive the Negotiated WUS assistance information in the attach or TAU procedure due to an emergency PDN connection, the UE shall initiate the TAU procedure after the emergency PDN connection is released to request the use of the WUS assistance information.
2. The UE and the MME shall not use the WUS assistance information when an emergency PDN connection is active over 3GPP.
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| ***Consequences if not approved:*** | The UE and the MME mistakely disable the WUS assistance information when the UE has an emergency PDN connection. |
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| ***Clauses affected:*** | 5.3.21 |
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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:*** |  |

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

### 5.3.21 Wake-up signal assistance

A UE supporting wake-up signal (WUS) assistance can indicate its WUS assistance capability during attach or tracking area updating procedure (see 3GPP TS 23.401 [10]). The UE supporting WUS assistance may include its UE paging probability information in the Requested WUS assistance information IE during an attach or tracking area updating procedure (see 3GPP TS 23.401 [10]). The UE shall not include its UE paging probability information during:

- an attach for emergency bearer services procedure; or

- a tracking area updating procedure for the UE attached for emergency bearer services.

The UE and the network may negotiate the UE paging probability information during an attach or tracking area updating procedure when the UE is not attached for emergency bearer services. The UE paging probability information is an assistance information used to determine the WUS group for paging UE (see 3GPP TS 23.401 [10], 3GPP TS 36.300 [20]).

NOTE: The determination of UE paging probability information is up to UE implementation.

If a UE supporting WUS assistance did not receive the Negotiated WUS assistance information IE during the last attach for emergency bearer services procedure or the last tracking area updating procedure for the UE attached for emergency bearer services over 3GPP access, the UE shall initiate a tracking area updating procedure to request WUS assistance information after the emergency PDN connection is released over 3GPP access.

If the UE is not attached for emergency bearer services and the network accepts the use of the WUS assistance for the UE, the network determines the negotiated UE paging probability information for the UE based on the requested UE paging probability information, if any, local configuration or previous statistical information for the UE, and then indicates the negotiated UE paging probability information in the Negotiated WUS assistance information IE to the UE when accepting the attach or the tracking area updating procedure. The network shall store the negotiated UE paging probability information in the EMM context of the UE for paging.

The UE shall use WUS assistance only if it received the Negotiated WUS assistance information IE during the last attach or tracking area updating procedure. If the UE did not receive the Negotiated WUS assistance information IE during the last attach or tracking area updating procedure, the UE shall not use WUS assistance.

If the network did not accept the request to use WUS assistance, the network shall delete the stored negotiated UE paging probability information for the UE, if available.

When a PDN connection for emergency bearer service is successfully established after the UE received the Negotiated WUS assistance information IE during the last attach or tracking area updating procedure, the UE and the network shall not use WUS assistance information until:

- the successful completion of the PDN disconnect procedure of the PDN connection for emergency bearer services or EPS bearer context deactivation procedure of the EPS bearer context for emergency;

- the UE receives WUS assistance information during a tracking area updating procedure with EPS bearer context synchronization or upon successful completion of a service request procedure, if the UE or the network locally releases the PDN connection for emergency bearer service or

- the successful completion of the handover of the emergency PDN connection to non-3GPP access.

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