**3GPP TSG-CT WG1 Meeting #134-eC1-221450**

**E-meeting, 17th – 25th February 2022**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **4067** | **rev** | **-** | **Current version:** | **17.5.0** |  |
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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:***  | Clarifications on wait timer |
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| ***Source to WG:*** | Samsung |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | MINT |  | ***Date:*** | 2022-02-07 |
|  |  |  |  |  |
| ***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:*** | Change-1Below text gives an impression that only initial registration procedure is allowed when UE selects FPLMN to receive disaster roaming service and wait timer expires, but even the mobility registration is allowed, depending on the UE state. “if the UE does not have a stored disaster roaming wait range, the UE shall perform an initial registration procedure with 5GS registration type value set to "disaster roaming registration" on the selected PLMN; and”Thus its proposed to remove hard coded text and rather just reference to registration procedure section which already describe about 5GS registration type handling etc.Change-2a) After selecting the FPLMN, UE starts disaster roaming wait range timer.b) Currently it says that UE “shall” perform registration at the expiry of the timer. b) But, when the timer is running if the conditions to perform disaster roaming are changed for e.g. UE registers over non-3GPPA or it finds allowable PLMN or broadcast by FPLMN is stopped for disaster roaming there is no need for UE to trigger registration for disaster roaming and timer can be stopped.  |
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| ***Summary of change:*** | 1) Instead of hard coded text its referenced to registration procedure where are all the details of registration type etc already exists.2) Clarified that wait timer needs to be stopped if condition to receive disaster roaming service are not satisfied. |
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| ***Consequences if not approved:*** | a) Spec will state that only initial registration procedure is allowed after wait timer expiry.b) UEs may end up registering for disaster roaming even when the conditions to perform disaster roaming are changed while wait timer is running. |
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| ***Clauses affected:*** | 4.24  |
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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:*** |  |

\*\*\*\*\* changes \*\*\*\*\*

## 4.24 Minimization of service interruption

The UE and the network may support Minimization of service interruption (MINT). MINT aims to enable a UE to obtain service from a PLMN offering disaster roaming service when a disaster condition applies to the UE's determined PLMN with disaster condition.

If the UE supports MINT, the indication of whether disaster roaming is enabled in the UE, the one or more "list of PLMN(s) to be used in disaster condition", disaster roaming wait range and disaster return wait range provisioned by the network, if available, are stored in the non-volatile memory in the ME as specified in annex C and are kept when the UE enters 5GMM-DEREGISTERED state. Annex C specifies condition under which the indication of whether disaster roaming is enabled in the UE, the one or more "lists of PLMN(s) to be used in disaster condition", disaster roaming wait range and disaster return wait range stored in the ME are deleted.

Upon selecting a PLMN for disaster roaming as specified in 3GPP TS 23.122 [6]:

a) if the UE does not have a stored disaster roaming wait range, the UE shall perform a registration procedure for disaster roaming services on the selected PLMN as described in clause 5.5.1; and

b) if the UE has a stored disaster roaming wait range, the UE shall generate a random number within the disaster roaming wait range and start a timer with the generated random number. While the timer is running, the UE shall not initiate registration on the selected PLMN. Upon expiration of the timer, the UE shall perform a registration procedure for disaster roaming services as described in clause 5.5.1 if still camped on the selected PLMN.

The timer started with a generated random number within the disaster roaming wait range is stopped and the UE shall perform a PLMN selection as described in 3GPP TS 23.122 [5], if:

a) the UE has successfully registered over non-3GPP access on another PLMN;

b) the UE has successfully registered with an allowable PLMN; or

c) an NG-RAN cell selected for camping of the selected PLMN broadcasts neither the disaster related indication nor a "list of one or more PLMN(s) with disaster condition for which disaster roaming is offered by the available PLMN" including the determined PLMN with Disaster Condition (see 3GPP TS 23.122 [5]).

Upon determining that a disaster condition has ended and that the UE shall perform PLMN selection as specified in 3GPP TS 23.122 [6]:

a) if the UE does not have a stored disaster roaming wait range, the UE shall perform a registration procedure on the selected PLMN; and

b) if the UE has a stored disaster return wait range, the UE shall generate a random number within the disaster return wait range and start a timer with the generated random number value. While the timer is running, the UE shall not initiate registration on the selected PLMN. Upon expiration of the timer, the UE shall perform a registration procedure if still camped on the selected PLMN.

When the AMF assigns a registration area to the UE registered for disaster roaming services, the AMF shall only include TAIs covering the area with the disaster condition.

\*\*\*\*\* End of changes \*\*\*\*\*