**3GPP TSG-CT WG1 Meeting #123-eC1-202154**

**Electronic meeting, 16-24 April 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.301** | **CR** | **3343** | **rev** | **-** | **Current version:** | **16.4.0** |  |
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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:*** | Condition to ensure that UE does not keep reattempting RLOS attach on a PLMN which has rejected the request | | | | | | | | | |
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| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
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| ***Work item code:*** | PARLOS | | | | |  | ***Date:*** | | | 2020-04-09 |
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| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | The existing handling for rejects received during access to RLOS mostly has the common behaviour that the UE is expected to do a PLMN selection and move to another plmn other than the currently camped PLMN.  Such a behaviour can result in a loop of registration attempts if there are 2 PLMN’s available and if both the PLMN’s are rejecting the RLOS registration requests. The UE will end up moving from one to the other each time after the reject.  To avoid such behaviour, it is necessary that the UE chooses a PLMN on which RLOS access has not already been attempted during the current request from upper layers. | | | | | | | | |
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| ***Summary of change:*** | | Clarify that when doing PLMN selection owing to a reject for RLOS access, the UE Is to choose a PLMN on which it has not already attempted access for RLOS. | | | | | | | | |
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| ***Consequences if not approved:*** | | In some situations the UE might get into a loop of RLOS access attempts on available PLMN’s. | | | | | | | | |
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| ***Clauses affected:*** | | 5.5.1.2.5C, 5.5.3.2.5B, 5.6.1.5B | | | | | | | | |
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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:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\*\*\* Begin change \*\*\*\*\*

##### 5.5.1.2.5C Attach for access to RLOS not accepted by the network

If the attach request for access to RLOS is received by the network and the UE requesting attach is not in limited service state, the MME shall reject the UE's attach request.

If the attach request for access to RLOS cannot be accepted by the network, the MME shall send an ATTACH REJECT message to the UE including EMM cause #35 "Requested service option not authorized in this PLMN" or one of the EMM cause values as described in subclause 5.5.1.2.5.

Upon receiving the ATTACH REJECT message including EMM cause #35, the UE shall enter the state EMM-DEREGISTERED.PLMN-SEARCH and perform a PLMN selection according to 3GPP TS 23.122 [6] to attempt EPS attach for access to RLOS via another PLMN on which the UE has not already received a reject during an attempt to access RLOS.

Upon receiving the ATTACH REJECT message including one of the other EMM cause values, the UE shall perform the actions as described in subclause 5.5.1.2.5. along with the following conditions:

a) if the action for the reject involves searching for a suitable cell in E-UTRAN radio access technology, the UE shall proceed with the action and shall attempt to attach for access to RLOS in the new tracking area, if found; and

b) if the action for the reject involves attempting to select GERAN or UTRAN radio access technology or disabling the E-UTRA capability, the UE shall skip the action for as long as access to RLOS is still needed.

NOTE: How long the UE attempts to access RLOS, the method and duration for which a UE remembers to not re-attempt RLOS access on a PLMN where the request was previously rejected is up to UE implementation.

Then if the UE is in the same selected PLMN where the last attach procedure was attempted and rejected and if timer T3346 is not running, perform a PLMN selection according to 3GPP TS 23.122 [6] to attempt EPS attach for access to RLOS via another PLMN on which the UE has not already received a reject during an attempt to access RLOS.

If the attach request for access to RLOS fails due to abnormal cases b), c) or d) in subclause 5.5.1.2.6, the UE shall perform the procedures as described in subclause 5.5.1.2.6 with the exception that the UE shall skip actions that involve attempting to select GERAN or UTRAN radio access technology and actions that involve disabling the E-UTRA capability, for as long as access to RLOS is still needed.

\*\*\*\*\* Next change \*\*\*\*\*

##### 5.5.3.2.5B Tracking area updating for access to RLOS not accepted by the network

If the tracking area updating request for access to RLOS cannot be accepted by the network, the UE shall perform the procedures as described in subclause 5.5.3.2.5 along with the following conditions:

a) if the action for the reject involves searching for a suitable cell in E-UTRAN radio access technology, the UE shall proceed with the action and shall attempt to perform a tracking area updae procedure or an attach procedure for access to RLOS in the new tracking area, if found, depending on the EMM state.

b) if the action for the reject involves attempting to select GERAN or UTRAN radio access technology or disabling the E-UTRAN capability, the UE shall skip the action for as long as access to RLOS is still needed.

Then if the UE is in the same selected PLMN where the last tracking area updating procedure was attempted and rejected and if timer T3346 is not running, the UE shall:

a) detach locally, if not detached already, perform a PLMN selection according to 3GPP TS 23.122 [6] to attempt EPS attach for access to RLOS via another PLMN on which the UE has not already received a reject during an attempt to access RLOS.

NOTE: How long the UE attempts to access RLOS, the method and duration for which a UE remembers to not re-attempt RLOS access on a PLMN where the request was previously rejected is up to UE implementation.

If the tracking area updating request for access to RLOS fails due to abnormal case a) in subclause 5.5.3.2.6, the UE shall perform the actions as described in subclause 5.5.3.2.6 and inform the upper layers of the failure to access the network.

If the tracking area updating request for access to RLOS fails due to abnormal cases b), c) or d) in subclause 5.5.3.2.6, the UE shall perform the procedures as described in subclause 5.5.3.2.6 with the exception that the UE shall skip actions that involve attempting to select GERAN or UTRAN radio access technology and actions that involve disabling of the E-UTRA capability, for as long as access to RLOS is still needed. Then if the UE is in the same selected PLMN where the last tracking area updating request was attempted, the UE shall:

a) detach locally, if not detached already, perform a PLMN selection according to 3GPP TS 23.122 [6] to attempt EPS attach for access to RLOS via another PLMN on which the UE has not already received a reject during an attempt to access RLOS.

\*\*\*\*\* Next change \*\*\*\*\*

#### 5.6.1.5B Service request procedure for UE attached for access to RLOS not accepted by the network

If the service request for UE attached for access to RLOS cannot be accepted by the network, the UE shall perform the procedures as described in subclause 5.6.1.5. Then if the UE is in the same selected PLMN where the last service request was attempted, the UE shall:

a) detach locally, if not detached already, and perform a PLMN selection according to 3GPP TS 23.122 [6] to attempt EPS attach for access to RLOS via another PLMN.

If the service request for UE attached for access to RLOS fails due to abnormal cases a), b), c) or e) in subclause 5.6.1.6, the UE shall perform the procedures as described in subclause 5.6.1.6. Then if the UE is in the same selected PLMN where the last service request was attempted, the UE shall:

1. detach locally, if not detached already, and perform a PLMN selection according to 3GPP TS 23.122 [6] to attempt EPS attach for access to RLOS via another PLMN on which the UE has not already received a reject during an attempt to access RLOS.

NOTE: How long the UE attempts to access RLOS, the method and duration for which a UE remembers to not re-attempt RLOS access on a PLMN where the request was previously rejected is up to UE implementation.

\*\*\*\*\* End change \*\*\*\*\*