**3GPP TSG-CT WG1 Meeting #138-eC1-22xxxx**

**E-Meeting, 10th – 14th October 2022 (was C1-225631)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.122** | **CR** | **0979** | **rev** | **1** | **Current version:** | **18.0.0** |  |
|  | | | | | | | | |
| *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:*** | Manual PLMN selection to HPLMN/EHPLMN when MS supports CAG | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated, Apple, MediaTek Inc | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc18 | | | | |  | ***Date:*** | | | 2022-10-11 |
|  |  | | | |  | |  | | |  |
| ***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 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | CR0942 added unnecessary requirement during manual network selection mode which was not the intention of the legacy exception for going back to HPLMN/EHPLMN. Also, it allowed the MS to select non-allowed CAG cell which the user never gave consent or explicitly allowing.  The exception is improved for MS supporting CAG to follow network selection procedures on the HPLMN/EHPLMN as specified in clause 4.4.3.1.1 case m) | | | | | | | | |
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| ***Summary of change:*** | | 1. Revert all changes which was added by CR0942 2. Improve the exception for staying in manual network selection mode for MS supporting CAG to follow network selection procedures specified in clause 4.4.3.1.1 case m) | | | | | | | | |
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| ***Consequences if not approved:*** | | MS may select non-allowed CAG cell during manual network selection mode when going back to HPLMN/EHPLMN which the user never gave consent or explicitly allowing it | | | | | | | | |
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| ***Clauses affected:*** | | 4.4.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

#### 4.4.3.1 At switch‑on or recovery from lack of coverage

At switch on, following recovery from lack of coverage, or when the MS stops operating in the SNPN access mode, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see clause 4.5.2) attempts to perform a Location Registration.

NOTE 1: The MS in automatic network selection mode can end the PLMN search procedure once the registered PLMN or equivalent PLMN is found on an access technology.

NOTE 2: An MS in automatic network selection mode can use location information to determine which PLMNs can be available in its present location.

EXCEPTION: As an alternative option to this, if the MS is in automatic network selection mode and it finds coverage of an EHPLMN, the MS may register to that EHPLMN and not return to the registered PLMN or equivalent PLMN. If the EHPLMN list is not present or is empty, and the HPLMN is available, the MS may register on the HPLMN and not return to the registered PLMN or equivalent PLMN. The operator shall be able to control by SIM configuration whether an MS that supports this option is permitted to perform this alternative behaviour.

EXCEPTION: As an alternative option to this, if the MS is in automatic network selection mode, the MS has a list of "PLMNs where registration was aborted due to SOR" and the registered PLMN is part of the list of "PLMNs where registration was aborted due to SOR", the MS may choose not to return to the registered PLMN or equivalent PLMN and proceed as defined in clause 4.4.3.1.1 with the exception that in iii), the MS considers PLMNs which are in the list of "PLMNs where registration was aborted due to SOR" as lowest priority.

EXCEPTION: In A/Gb mode an MS with voice capability, shall not search for CPBCCH carriers. In A/Gb mode an MS not supporting packet services shall not search for CPBCCH carriers.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows one of the following two procedures depending on its PLMN selection operating mode. At switch on, if the MS provides the optional feature of user preferred PLMN selection operating mode at switch on then this operating mode shall be used. Otherwise, the MS shall use the PLMN selection mode that was used before switching off.

EXCEPTION: At switch on, if the MS is in manual mode and neither registered PLMN nor PLMN that is equivalent to it is available but EHPLMN is available, then instead of performing the manual network selection mode procedure of clause 4.4.3.1.2 the MS may select and attempt registration on the highest priority EHPLMN. If the EHPLMN list is not available or is empty and the HPLMN is available, then the MS may select and attempt registration on the HPLMN. If the MS supports CAG and needs to select or attempt registration on the highest priority EHPLMN or HPLMN, the MS follows network selection procedures of clause 4.4.3.1.1 bullet m). The MS shall remain in manual mode.

NOTE 3: If successful registration is achieved, then the current serving PLMN becomes the registered PLMN and the MS does not store the previous registered PLMN for later use.

EXCEPTION: If registration is not possible on recovery from lack of coverage due to the registered PLMN being unavailable, an MS attached to GPRS services, attached via E-UTRAN or registered via the NG-RAN may, optionally, continue looking for the registered PLMN for an implementation dependent time.

NOTE 4: An MS attached to GPRS services, attached via E-UTRAN or registered via the NG-RAN should use the above exception only if one or more PDP contexts, PDN connections or PDU sessions are currently active.

EXCEPTION: At switch on, if the RPLMN is a PLMN with which the MS was registered for disaster roaming and the MS is registered via non-3GPP access connected to 5GCN or an NG-RAN cell of the RPLMN 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 MS determined PLMN with disaster condition or an allowable PLMN is available then the MS will ignore RPLMN and its equivalent PLMN.

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