**3GPP TSG-CT WG1 Meeting #133-bis-eC1-22xxxx**

**E-meeting, 11-19 November 2021 (wasC1-220749 was C1-220386)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.571** | **CR** | **0009** | **rev** | **2** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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 | **x** |

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| ***Title:*** | Clarification on the LMF ID | | | | | | | | | |
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| ***Source to WG:*** | vivo | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_eLCS\_ph2 | | | | |  | ***Date:*** | | | 2022-01-07 |
|  |  | | | |  | |  | | |  |
| ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Considering the following statements in the TS 23.273:  *When receiving a NAS message from UE, including an LMF ID together with a LPP message (refer to step 25 in clause 6.3.1 for event reporting for a deferred 5GC-MT-LR), AMF sends the LPP message to the LMF, as indicated by the LMF ID.*  *NOTE 2: Description on how UE encapsulates the LMF ID in the NAS message is documented in TS 24.571 [36].*  The LMF ID may be encapsulated in the UL NAS TRANSPORT message to the AMF, which can assist the route of the LPP message to the identified LMF. Nevertheless, there is not captured in the TS 24.571.  In the subclause 5.3.2 in TS 24.571, the Routing identifier and correlation ID are also used for the route of the LPP message:  *The Routing identifier is the Correlation ID, which is defined in 3GPP TS 29.572 [6], so that the AMF can map the Routing identifier to the LMF and the Correlation identifier when the AMF receives a UL NAS TRANSPORT message including the responding LPP message.*  However, in the TS 29.572, the Correlation ID and LMF ID (which is mentioned as LMF identification) are two different data type. How to handle these two Routing identifier in the NAS TRANSPORT messages is not specified. | | | | | | | | |
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| ***Summary of change:*** | | Clarification on deferred Routing Identifier can be the LMF ID in the initiation and cancellation of the event reporting for a deferred 5GC-MT-LR. | | | | | | | | |
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| ***Consequences if not approved:*** | | Missing specification of the LMF ID. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.1.3.1, 5.2.2.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\*\*\*\*\* First change \*\*\*\*\*

##### 5.2.1.3.1 General

The supplementary services LCS PeriodicTriggered Invoke operation enables the LMF to initiate periodic or triggered location event reporting by a target UE as described in clause 6.3.1 of 3GPP TS 23.272 [2]. The supplementary services LCS PeriodicTriggered Invoke message is transferred to the target UE via the serving AMF in a DL NAS Transport message. A response from the target UE is similarly returned to the LMF via the serving AMF and is transferred to the AMF in an UL NAS Transport message. The Deferred Routing Identifier in the Additional information IE of the DL NAS TRANSPORT message or UL NAS TRANSPORT message for the initiation of periodic or triggered location event reporting can be an LMF ID.

Figure 5.2.1.3.1.1 illustrates an example of the NAS signalling transport for initiation of periodic or triggered location,



Figure 5.2.1.3.1.1: NAS signalling transport for LCS PeriodicTriggered messages

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

##### 5.2.2.2.1 General

The supplementary services MSCancelDeferredLocation operation enables the UE to cancel ongoing periodic or triggered location in a target LMF using NAS signalling as described in 3GPP TS 23.273  subclause 6.3.3 [2]. The supplementary services MCancelDeferredLocation messages are transported using the UL NAS TRANSPORT message and the DL NAS TRANSPORT message defined in 3GPP TS 24.501 [3]. The Deferred Routing Identifier in the Additional information IE of the DL NAS TRANSPORT message or UL NAS TRANSPORT message for the cancellation of periodic or triggered location event reporting can be an LMF ID.

Figure 5.2.2.2.1-1 illustrates an example of the NAS signalling transport.



Figure 5.2.2.2.1-1: NAS signaling transport for UE initiated Cancel Deferred Location

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

##### 5.2.2.4.1 General

The supplmentary services EventReport operation enables the UE to report the periodic or triggered location event invoked by the LMF via LCS PeriodicTriggered Invoke operation as described in clause 6.3.1 of 3GPP TS 23.273 [2] when some certain events are detected in the UE. The supplmentary services EventReport message is transferred to the LMF via the serving AMF in a UL NAS TRANSPORT message defined in 3GPP TS 24.501 [3]. A response from the LMF may be returned to the UE via the serving AMF and be transferred to the UE in a DL NAS TRANSPORT message. The Deferred Routing Identifier in the Additional information IE of the DL NAS TRANSPORT message or UL NAS TRANSPORT message for reporting the periodic or triggered location event can be an LMF ID.

Figure 5.2.2.4.1-1 illustrates an example of the NAS signalling transport for EventReport messages,



Figure 5.2.2.4.1-1: NAS signalling transport for EventReport messages

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

##### 5.2.2.6.1 General

The supplementary services EventReport operation enables the UE to report the periodic or triggered location event invoked by the LMF via LCS PeriodicTriggered Invoke operation as described in clause 6.7.1 of 3GPP TS 23.273 [2] when certain events are detected in the UE and when the UE supports and the LMF allows the use of Control Plane CIoT 5GS Optimisation. The supplementary services EventReport message is transferred to the LMF via the serving AMF in a CONTROL PLANE SERVICE REQUEST message defined in 3GPP TS 24.501 [3]. A response from the LMF may be returned to the UE via the serving AMF and be transferred to the UE in a DL NAS TRANSPORT message defined in 3GPP TS 24.501 [3]. The Deferred Routing Identifier in the Additional information IE of the DL NAS TRANSPORT message or UL NAS TRANSPORT message for reporting the periodic or triggered location event can be an LMF ID.

Figure 5.2.2.x.1-1 illustrates an example of the NAS signalling transport for EventReport messages,



Figure 5.2.2.6.1-1: NAS signalling transport for EventReport messages using Low Power Event Reporting and Triggered 5GC-MT-LR

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