**3GPP TSG-SA3 Meeting #84-LI-e-b *9r6***

**Online, , 2nd Mar 2022 - 4th Mar 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **33.127** | **CR** | **0160** | **rev** | **2** | **Current version:** | **17.3.0** |  |
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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 |  | Radio Access Network |  | Core Network | **x** |

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| ***Title:***  | Measurement Report with LI/LALS in EPC |
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| ***Source to WG:*** | SA3LI(Ministère Economie et Finances, Rogers Communications Canada) |
| ***Source to TSG:*** | SA3 |
|  |  |
| ***Work item code:*** | LI17 |  | ***Date:*** | 2022-03-04 |
|  |  |  |  |  |
| ***Category:*** | **C** |  | ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | Enhancement of location based on Measurement Report. |
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| ***Summary of change:*** | A positioning info transfer xIRI is generated when the IRI-POI present in the MME detects that a UE associated positioning message related to a target UE is being exchanged. |
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| ***Consequences if not approved:*** | Regulatory issue with CSPs to provide Measurement Report to LEMF in EPC |
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| ***Clauses affected:*** | 6.3.2.3.1 |
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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:*** |  |
|  |  |
| ***This CR's revision history:*** | s3i220113, s3i220129 |

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

##### 6.3.2.3.1 Option A

The IRI-POI present in the MME shall generate xIRI, when it detects the following specific events or information:

- Attach.

- Detach.

- Tracking Area/EPS Location Update.

- Start of interception with EPS attached UE.

- Unsuccessful communication related attempt.

- Identifier association.

- Positioning info transfer.

The attach xIRI is generated when the IRI-POI present in an MME detects that a target UE has performed an E-UTRAN attach procedure including via a HeNB. The attach xIRI describes the type of attach performed. Unsuccessful registration shall be reported only if the target UE has been successfully authenticated.

The detach xIRI is generated when the IRI-POI present in an MME detects that a target UE has detached from the EPS including via a HeNB. The detach xIRI shall indicate whether it was a UE-initiated or a network-initiated detach.

The tracking area/EPS location update xIRI is generated each time the IRI-POI present in an MME detects that the target’s UE location is updated due to target's UE mobility (e.g. in case of X2 based handover, S1 based handover) or when the MME observes target UE location information during some service operation (e.g., periodic Tracking Area Update, UE triggered Service Request). If the information in the MME received over S1 (TS 36.413 [14]) includes one or more cell IDs, then all cell IDs shall be reported to the LEMF whenever location reporting is triggered at the MME.

The start of interception with EPS attached UE xIRI is generated when the IRI-POI present in an MME detects that interception is activated on a target UE that is already attached to the EPS. If there are multiple PDN connections active for the target, then a start of interception with EPS attached UE xIRI is generated for each of them.

When additional warrants are activated on a target UE, MDF2 shall be able to generate and deliver the start of interception with E-UTRAN attached UE related IRI messages to the LEMF associated with the warrants without receiving the corresponding start of interception with already registered UE xIRI.

The unsuccessful communication related attempt xIRI is generated when the IRI-POI present in an MME detects that a target UE initiated communication procedure (e.g. service request, SMS) is rejected or not accepted by the MME before the proper NF handling the communication attempt itself is involved.

The identifier association xIRI is generated each time the IRI-POI in the MME detects a GUTI allocation change for an IMSI associated with the target's UE.

The IRI-POI in the MME shall support per target selective activation or deactivation of reporting of only identifier association xIRI independently of activation of LI for all other events. When identifier association xIRI only reporting is activated, the IRI-POI in the MME shall also generate Tracking Area/EPS Location Update xIRI.

The positioning info transfer xIRI is generated when the IRI-POI present in the MME detects one the following events :

- network-based or network-assisted positioning requests, responses or reports related to a target UE are being exchanged between E-SMSC and eNB via the MME.

- UE-based or UE-assisted positioning requests, responses or reports related to a target UE are being exchanged between E-SMLC and UE via the MME.

NOTE: The activation and invocation of the Positioning Info Transfer capability exclusively for LALS is not supported in the current version of the specification. Instead, the capability is invoked whenever any LCS operation (including LALS) is performed on the target.

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

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