**3GPP TSG-SA3 Meeting #115 *draft\_S3-240949-r1***

Athens, Greece, 26th February - 1st March 2024

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **33.533** | **CR** | **0055** | **rev** | **-** | **Current version:** | **18.1.0** |  |
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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:*** | Clarification on the UE Ranging/SL Positioning privacy profile | | | | | | | | | |
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| ***Source to WG:*** | Ericsson, Xiaomi | | | | | | | | | |
| ***Source to TSG:*** | S3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | \_Sec | | | | |  | ***Date:*** | | | 2024-02-19 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | According to the reply LS S3-234480, SA2 has confirmed that the content of UE Ranging/SL Positioning privacy profile should be developed by SA3.  This paper uses S3-234902r2 as baseline and proposes to solve the UE privacy file for Ranging/SL positioning service exposure. | | | | | | | | |
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| ***Summary of change:*** | | New Annex to define UE privacy profile for Ranging/SL positioning. | | | | | | | | |
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| ***Consequences if not approved:*** | | Missing privacy file for Ranging /SL Positioning service exposure. | | | | | | | | |
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| ***Clauses affected:*** | | 6.3.5, new Annex X | | | | | | | | |
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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:*** | |  | | | | | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of the 1st Change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 6.3.5 Procedures for authorization of AF/5GC NF/LCS Client for Ranging/SL positioning service exposure

For the authorization of the AF, 5GC NF or LCS client for Ranging/SL Positioning service exposure, the SL-MT-LR procedure specified in TS 23.273 [3] is taken as the baseline. The authorization shall be performed towards all the n UEs (n ≥ 2), i.e. UE1, UE2, ..., UEn in the request message. If all of the UEs grant permission for Ranging/SL Positioning exposure, the GMLC shall forward the service request from the AF/5GC NF to the AMF. If none of the UEs grants permission for Ranging/SL Positioning exposure, the GMLC shall reject the service request. If part of the UEs grant and part of the UEs don't grant permission for Ranging/SL Positioning exposure, the GMLC shall decide t, o proceed with or reject the service request from the AF/5GC NF or LCS client based on implementation, e.g. a local rule configured by the network operator. If the GMLC decides to accept the service request, it shall only include the identities of the UEs granting permission in the service request forwarded to the AMF.

When receiving the RangingSL Pos or LCS client itioning service request from the AF/5GC NF, the GMLC interacts with the UDM to check the UE privacy profile for Ranging/SL Positioning service as specified in Annex X.

The GMLC interacts with the AMF to request the ranging result of UEs, which may include an indication of a privacy related action. If the indicator of privacy check related action indicates that the UE must either be notified or notified with privacy verification, a notification invoke message is sent to the UE if the signalling connection established. However, if the Ranging/SL Positioning service is disallowed by the UE, or signalling connection establishment fails and UE notification (including UE notification with privacy verification) is required, the AMF shall provide failure response to the GMLC.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of the 2nd Change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Annex X (normative):  
UE privacy profile for Ranging/SL Positioning service

The UE LCS Privacy Profile defined in clause 5.4.2 of TS 23.273 [3] is taken as the baseline for the UE Ranging/SL Positioning privacy profile with the following modifications:

- UE Ranging/SL Positioning privacy profile is part of subscription data for UEs subscribed to use Ranging/SL positioning services.

- UE Ranging/SL Positioning privacy profile is used to indicate whether Ranging/SL positioning service exposure to 5GC NF, AF, LCS Client and SL Positioning Client UE is allowed or disallowed.

- Privacy Override Indicator (POI) is used to determine whether the UE Ranging/SL positioning privacy profile of the subscriber to be positioned shall be overridden by the request for regulatory services. The assignment of a POI value is appliable to LCS client, same as specified in TS 23.273 [x].

- The list of external LCS client in UE LCS privacy profile is replaced by the list of zero or more AFs/LCS Clients.

- The default call/session Unrelated Class is updated to support Ranging/SL Positioning exposure to SL Positioning Client UE.

NOTE: GMLC may store a list of allowed or disallowed SL Positioning Client UE IDs (Application layer ID) based on local implementation. The list of zero or more SL Positioning Client UEs is stored out of UE Ranging/SL Positioning privacy profile.

- The list of LCS client in UE LCS privacy profile is replaced by the list of zero or more 5GC NF or LCS client.

- The list of service type in UE LCS privacy profile is replaced by the list of Ranging/SL Positioning Application Identifier.

The UE Ranging/SL Positioning privacy profile data is defined in table X-1.

Table X-1: Ranging/SL Positioning privacy profile data stored in the UDM for a UE Subscriber

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| --- | --- | --- |
| Privacy Profile Data Type | Presence | UDM data |
| Ranging/SL Positioning Privacy Indication | M  O | Indication of one of the following mutually exclusive global settings:  - Ranging/SL Positioning services is disallowed  - Ranging/SL Positioning services is allowed (default)  Time period when the Ranging/SL Positioning Privacy Indication is valid |
| Call/session Unrelated Class | M  O  O  O  O  O  O  O  O  O  O  O  O    O | For any AF or LCS Client not in the AF/LCS Client list or SL Positioning Client UE or otherwise identified for the Call/session Unrelated Class, the following data may be present:  - One of the following mutually exclusive options:  - Ranging/SL positioning result not allowed (default case)  - Ranging/SL positioning result allowed with notification  - Ranging/SL positioning result allowed without notification.  - Ranging/SL positioning result with notification and privacy verification; Ranging/SL positioning allowed if no response  - Ranging/SL positioning result with notification and privacy verification; Ranging/SL positioning restricted if no response  - Time period when Ranging/SL positioning is allowed  - Geographical area where Ranging/SL positioning is allowed  - Indication that codeword shall be checked in UE or one or more codeword values to be checked in GMLC  AF/LCSClient list: a list of zero or more AFs/LCS Clients with the following data for each entry:  - One of the following mutually exclusive options:  - Ranging/SL positioning result allowed without notification (default case)  - Ranging/SL positioning result allowed with notification  - Ranging/SL positioning result with notification and privacy verification; Ranging/SL positioning allowed if no response  - Ranging/SL positioning result with notification and privacy verification; Ranging/SL positioning restricted if no response  - Time period when Ranging/SL positioning is allowed  - Geographical area where Ranging/SL positioning is allowed  Ranging/SL Positioning Application Identifier list: a list of one or more Ranging/SL Positioning Application Identifiers for which the Ranging/SL Positioning application is allowed to range/locate the particular UE. The following data may be present for each Ranging/SL Positioning Application Identifier in the list:  - One of the following mutually exclusive options:  - Ranging/SL positioning result allowed without notification (default case)- Ranging/SL positioning result allowed with notification  - Ranging/SL positioning result with notification and privacy verification; Ranging/SL positioning allowed if no response  - Ranging/SL positioning result with notification and privacy verification; Ranging/SL positioning restricted if no response  - Time period when Ranging/SL positioning is allowed  - Geographical area where Ranging/SL positioning is allowed  - Indication that codeword shall be checked in UE or one or more codeword values to be checked in GMLC |
| PLMN Operator Class | O | NF/LCS Client list: a list of one or more generic classes of 5GC NF/LCS client that are allowed to perform Ranging/SL positioning on the particular UE. The following classes are distinguished:  - LCS client broadcasting location related information  - O&M LCS client in the HPLMN  - O&M LCS client in the VPLMN  - LCS client recording anonymous location information  - LCS Client supporting a bearer service, teleservice or supplementary service to the target UE  - NWDAF in the HPLMN (when the UE is currently being served by the HPLMN)  - NWDAF in the VPLMN |
| Event report expected area | O | Presents a geographical area generated by UE, which is used by GMLC to determine event report allowed area for the UE |

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