**3GPP TSG-SA5 Meeting #155 *S5-244225rev1***

**Maastricht, NL, 19 - 23 August 2024**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.271** | **CR** | **0024** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Add message flows of converged charging for Ranging and Sidelink Positioning service exposure | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | China Telecom | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Ranging\_SL\_CH | | | | |  | ***Date:*** | | | 2024-08-09 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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:*** | | Message flows of converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC are missing | | | | | | | | |
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| ***Summary of change:*** | | Add message flows of converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC | | | | | | | | |
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| ***Consequences if not approved:*** | | Converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC will not be supported | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 5.x.2 (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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** |

# 2 References

The following documents contain provisions, which through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 32.240: "Telecommunication management; Charging management; Charging architecture and principles".

[2] - [9] Void.

[10] 3GPP TS 32.250: "Telecommunication management; Charging management; Circuit Switched (CS) domain charging".

[11] - [19] Void.

[20] 3GPP TS 32.260: "Telecommunication management; Charging management; IP Multimedia Subsystem (IMS) charging".

[21] - [29] Void.

[30] 3GPP TS 32.270: "Telecommunication management; Charging management; Multimedia Messaging Service (MMS) charging".

[31] - [49] Void

[50] 3GPP TS 32.299: "Telecommunication management; Charging management; Diameter charging application".

[51] 3GPP TS 32.298: "Telecommunication management; Charging management; Charging Data Record (CDR) encoding rules description".

[52] 3GPP TS 32.297: "Telecommunication management; Charging management; Charging Data Record (CDR) file format and transfer".

[53] 3GPP TS 32.296: "Telecommunication management; Charging management; Online Charging System (OCS) applications and interfaces".

[54] 3GPP TS 32.295: "Telecommunication management; Charging management; Charging Data Record (CDR) transfer".

[55] 3GPP TS 32.290: "Telecommunication management; Charging management; 5G system; Services, operations and procedures of charging using Service Based Interface (SBI)".

[56] 3GPP TS 32.291: " Telecommunication management; Charging management 5G system; Charging service, stage 3".

[57] - [99] Void.

[100] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[101] 3GPP TS 22.115: "Service aspects; Charging and billing".

[102] - [199] Void.

[200] Void.

[201] 3GPP TS 23.271: "Functional stage 2 description of Location Services (LCS)".

[202] 3GPP TS 23.273: "5G System (5GS) Location Services (LCS); Stage 2".

[203] 3GPP TS 25.305: "Stage 2 functional specification of User Equipment (UE) positioning in UTRAN".

[204] 3GPP TS 43.059: "Functional stage 2 description of Location Services (LCS) in GERAN".

[205] 3GPP TS 24.002: "GSM - UMTS Public Land Mobile Network (PLMN) Access Reference Configuration".

[206] 3GPP TS 23.586: “Architectural Enhancements to support Ranging based services and Sidelink Positioning”.

[207] - [299] Void.

[301] - [399] Void.

[400] Void.

[401] Void.

[402] IETF RFC 4006 (2005): "Diameter Credit-Control Application".

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| **Next change** |

#### 5.4.1.x Ranging/SL Positioning service exposure

###### 5.4.1.x.2 Message flow for SL Positioning Service Exposure to the trusted AF or LCS Client charging - PEC



**Figure 5.4.1.x.2.1: Message flow for SL Positioning Service Exposure to the trusted AF or LCS Client charging - PEC**

1. The trusted AF or the LCS Client send a Ranging/SL Positioning Service Request to GMLC for Ranging/Sidelink Positioning location results for the UEs (e.g. absolute locations, relative locations or distances and/or directions related to the UEs).
2. The GMLC obtains the location results of the UEs with the detailed steps defined in TS 23.273 [202] Section 6.20.3.
3. Target UE sends a response message to the trusted AF or LCS Client with the location results of the UEs.

4. When the GMLC decides that reporting criteria are met, Step 5 will be conducted.

5ch-a. The GMLC (CTF) triggers Charging Data Request [Event] to CHF.

5ch-b. The CHF creates a CDR.

5ch-c. The CHF returns Charging Data Response.

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| **End of changes** |