**3GPP TSG-SA5 Meeting #155 *S5-242700rev1***

**Jeju, South Korea, 27 - 31 May 2024**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **32.271** | **CR** | **0022** | **rev** | **1** | **Current version:** | **18.0.0** |  |
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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:***  | Add message flows of converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC |
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| ***Source to WG:*** | China Telecom |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | DUMMY |  | ***Date:*** | 2024-05-16 |
|  |  |  |  |  |
| ***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 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-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 |
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| ***Clauses affected:*** | 5.x.2 (new) |
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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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| **First change** |

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### 5.x.2 Message flows

#### 5.x.2.1 Introduction

The different scenarios below focus on the different messages from/to the GMLC and corresponding interaction with the CHF, based on scenarios specified in TS 23.586 [xx].

#### 5.x.2.2 UE positioning assisted by Sidelink Positioning and involving 5GC

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##### 5.x.2.2.1 Message flow for mobile originated UE positioning assisted by Sidelink Positioning and involving 5GC charging – PEC

The figure 5.x.2.2.1.1 describes the high-level charging procedure for GMLC (CTF) Converged charging for mobile originated UE positioning assisted by Sidelink Positioning and involving 5GC.



**Figure 5.x.2.2.1.1: Message flow for mobile originated UE positioning assisted by Sidelink Positioning and involving 5GC charging – PEC**

0. mobile originated Sidelink positioning/Ranging procedure and the location calculation procedure as described in TS 23.586 [xx].

1. The AMF invokes the Ngmlc\_Location\_LocationUpdate service operation towards the GMLC carrying the location result and the additional information regarding the location estimate.

2ch-a. The GMLC sends Charging Data Request [Event] to the CHF, including the charging information.

2ch-b. The CHF generates a CDR.

2ch-c. The CHF returns Charging Data Response [Event] to GMLC.

3. GMLC transfers the location request response to UE and optionally AF/LCS client as described in TS 23.586 [xx].

##### 5.x.2.2.2 Message flow for mobile terminated UE positioning assisted by Sidelink Positioning and involving 5GC – PEC

The figure 5.x.2.2.2.1 describes the high-level charging procedure for GMLC (CTF) Converged charging for mobile terminated UE positioning assisted by Sidelink Positioning and involving 5GC.



**Figure 5.x.2.2.2.1: Message flow for mobile terminated UE positioning assisted by Sidelink Positioning and involving 5GC charging - PEC**

0. Mobile terminated Sidelink positioning/Ranging procedure and the location result for the Target UE is calculated as described in TS 23.586 [xx].

1. The AMF invokes the Namf\_Location\_ProvidePositioningInfo service operation towards the GMLC carrying the location result and the additional information regarding the location estimate.

2ch-a. The GMLC sends Charging Data Request [Event] to the CHF, including the charging information.

2ch-b. The CHF generates a CDR.

2ch-c. The CHF returns Charging Data Response [Event].

3. GMLC transfers the location request response to AF/LCS client as described in TS 23.586 [xx].

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| **End of changes** |