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

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.271** | **CR** | **0022** | **rev** | **1** | **Current version:** | **18.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Add message flows of converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC | | | | | | | | | |
|  |  | | | | | | | | | |
| ***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 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Message flows of converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC are missing | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add message flows of converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Converged charging for UE positioning assisted by Sidelink Positioning and involving 5GC will not be supported | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 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:*** | |  | | | | | | | | |

|  |
| --- |
| **First change** |



### 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



##### 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].

|  |
| --- |
| **End of changes** |