**3GPP TSG-CT WG4 Meeting #110-eC4-223xxx**

**E-Meeting, 12th – 20th May 2022 *was C4-223159***

**Source: Ericsson, CATT**

**Title: Pseudo-CR on Service Description Update for Resynchronization**

**Spec: 3GPP TS 29.559**

**Agenda item: 6.2.6**

**Document for: Approval**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

If synchronization failed when Remote UE processing the authentication challenge in GPI, the Remote UE will initiate a subsequent key request to resynchronization with the PKMF of the Remote UE via the PKMF of the UE-to-Network Relay.

The information elements included in initial key request and the optional subsequent key request for re-synchronization is different. This contribution explicitly describes the conditional steps for resynchronization and clarify the information elements in each step.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the updated service description included in this document for 3GPP TS 29.559 for 5G PKMF services.

\* \* \* First Change \* \* \* \*

#### 5.2.2.2 ProseKey

##### 5.2.2.2.1 General

The ProseKey service operation is invoked by a NF Service Consumer, i.e. another PKMF in another PLMN, towards the PKMF to retrieve the keying material related to 5G ProSe.

The ProseKey service operation is used during the following procedure:

- 5G ProSe Remote UE attaching to a 5G ProSe UE-to-Network Relay (see 3GPP TS 33.503 [4], clause 6.3.3.2.2)

The NF Service Consumer (i.e. another PKMF in another PLMN) shall retrieve the 5G ProSe related keying material by invoking the "request " custom method on the resource URI of "Prose Keys Collection" resource, see clause 6.1.3.2.4. See also Figure 5.2.2.2.1-1.



Figure 5.2.2.2.1-1 ProseKey service operation

1. The NF Service Consumer shall send a HTTP POST request to invoke "request" custom method. The payload of the request shall be an object of "ProseKeyReqData" data type. The payload shall include the Relay Service Code, the KNRP freshness parameter 1, and either the SUCI of the 5G ProSe Remote UE or the PRUK ID.

2a. On success, the PKMF shall respond with the status code "200 OK". The payload of the response shall be an object of "ProseKeyRspData" data type. They payload shall include the KNRP, the KNRP freshness parameter 2 and optionally the GPI.

2b. On failure or redirection, one of the HTTP status codes listed in table 6.1.3.2.4.2.2-2 shall be returned. For a 4xx/5xx response, the message body shall contain a ProblemDetails structure with the "cause" attribute set to one of the application errors listed in table 6.1.3.2.4.2.2-2.

3. [conditional] If synchronization failed when UE processes the authentication challenge in the GPI and a subsequent Key Request is send for resynchronization, the NF Service Consumer shall send a HTTP POST request to invoke "request" custom method. The payload of the request shall be an object of "ProseKeyReqData" data type. The payload shall include the Relay Service Code, the KNRP freshness parameter 1, the information for resynchronization (RAND and AUTS).

4a. On success, the PKMF shall respond with the status code "200 OK". The payload of the response shall be an object of "ProseKeyRspData" data type. They payload shall include the KNRP, the KNRP freshness parameter 2 and the GPI.

4b. On failure or redirection, one of the HTTP status codes listed in table 6.1.3.2.4.2.2-2 shall be returned. For a 4xx/5xx response, the message body shall contain a ProblemDetails structure with the "cause" attribute set to one of the application errors listed in table 6.1.3.2.4.2.2-2.

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