**3GPP SA3LI#90 S3i230428**

**Prague; June 27-30, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.928** | **CR** | **0008** | **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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | More on LIPF logic diagrams: Logic of LI provisioning for NIDD | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (Nokia, Nokia Shanghai Bell, Ministére de l’économie et finances) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI18 | | | | |  | ***Date:*** | | | 2023-06-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | ***B*** |  | | | | | ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | More services were introduced to the TS 33.128 after the initial set of LIPF logic diagrams were created. The TR 33.928 should accommodate those aspects as well. This CR adds LIPF logic diagrams to illustrate the LI provisioning for NIDD (which includes NEF-based services and SCEF based services). | | | | | | | | |
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| ***Summary of change:*** | | New logic to illustrate the LI provisioning for NIDD (NEF-based Services and SCEF-based services). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The LIPF logic will not be aligned to the TS 33.128. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.4.3.x. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | S3i230374 | | | | | | | | |

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

##### 5.4.3.x.2 LI provisioning for NEF based services

###### 5.4.3.x.2.1 5GC

5.4.3.x.2.1.1 Scope of interception

This clause references to the LI functions provided in the NEF. The following is a list of 5GC services to which the LI functions are provided in the NEF:

- NIDD using NEF.

- Device triggering.

- MSISDN-less SMS.

- Parameter provisioning.

- AF session with QoS.

The details of the above are described in TS 33.128 [4].

5.4.3.x.2.1.2 The flow-chart

Figure 5.4.3.x.2.1.2-1 shows the LIPF logic for provisioning the LI functions in NEF.



Figure 5.4.3.x.2.1.2-1: LI for NEF based services.

For all except the parameter provisioning, GPSI and SUPI are used as the target identifiers. For parameter provisioning, only the GPSI is used as a target identifier.

GPSI collectively represents GPSIMSISDN and GPSINAI. SUPI collectively represents SUPIIMSI and SUPINAI.

5.4.3.x.2.1.3 Interception

The CC-POI in NEF is used only for the NIDD using the NEF.

The table 5.4.3.x.2.1.3-1 provides the scope of LI functions provided in NEF.

Table 5.4.3.x.2.1.3-1: Scope of LI functions in NEF

|  |  |  |
| --- | --- | --- |
| NEF-based services | NEF LI functions | |
| NIDD using NEF | IRI-POI | CC-POI |
| Device triggering | IRI-POI | n/a |
| MSISDN-less SMS | IRI-POI | n/a |
| Parameter provisioning | IRI-POI | n/a |
| AF session with QoS | IRI-POI | n/a |

NOTE 1: The use of "n/a" in the above table implies that the LI function is not applicable to the NEF for the indicated scenario.

NOTE 2: The LIPF is not aware of the above role played by the NEF in providing the LI functions.

NOTE 3: MDF2 and MDF3 which are also involved in providing the LI functions are not shown in the tables above.

###### 5.4.2.x.2.2 EPC

5.4.3.x.2.2.1 Scope of interception

This clause references to the LI functions provided in the SCEF and IWK-SCEF. NIDD happens to be one of those services. The following is a list of EPC services to which the LI functions are provided in the SCEF and IWK-SCEF:

- NIDD using SCEF.

- Device triggering.

- MSISDN-less SMS.

- Parameter provisioning.

- AS session with QoS.

The details of the above are described in TS 33.128 [4].

5.4.3.x.2.2.2 The flow-chart

Figure 5.4.3.x.2.2.2-1 shows the LIPF logic for provisioning the LI functions in SCEF/IWK-SCEF.



Figure 5.4.3.x.2.2.2-1: LIPF logic for provisioning the LI functions in SCEF/IWK-SCEF

For all except the parameter provisioning, MSISDN, IMSI and External Identifier are used as the target identifiers. For parameter provisioning, only the MSISDN and the External Identifier are used as a target identifier.

5.4.3.x.2.2.3 Interception

The LI functions in the SCEF are provided in a non-roaming case and in the HPLMN for a roaming case. The LI functions in the IWK-SCEF are provided in the VPLMN for a roaming case.

The CC-POI in SCEF and IWK-SCEF is used only for the NIDD using the SCEF.

The table 5.4.3.x.2.2.3-1 provides the scope of LI functions provided in SCEF and IWK-SCEF.

Table 5.4.3.x.2.2.3-1: Scope of LI functions in SCEF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SCEF based services | NFs with LI functions | | | | | |
| Non-roaming | | Roaming | | | |
| SCEF | IWK-SCEF | VPLMN | | HPLMN | |
|  |  | SCEF | IWK-SCEF | SCEF | IWK-SCEF |
| NIDD using SCEF | IR-POI | n/a | n/a | IRI-POI | IRI-POI | n/a |
| CC-POI | n/a | n/a | CC-POI | CC-POI | n/a |
| Device triggering | IR-POI | n/a | n/a | IRI-POI | IRI-POI | n/a |
| MSISDN-less SMS | IR-POI | n/a | n/a | IRI-POI | IRI-POI | n/a |
| Parameter provisioning | IR-POI | n/a | n/a | IRI-POI | IRI-POI | n/a |
| AS session with QoS | IR-POI | n/a | n/a | IRI-POI | IRI-POI | n/a |

NOTE 1: The use of "n/a" in the above table implies that the LI function is not applicable to the NFs for the indicated scenario.

NOTE 2: The LIPF is not aware of the above role played by the SCEF or IWK-SCEF in providing the LI functions and not the roaming situations of the target.

NOTE 3: MDF2 and MDF3 which are also involved in providing the LI functions are not shown in the tables above.

### \*\* End of all changes \*\*