**3GPP SA3LI#87-e-a S3i220508**

**Virtual meeting; October 4-6, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.128** | **CR** | **0411** | **rev** | **1** | **Current version:** | **18.1.0** |  |
|  | | | | | | | | |
| *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:*** | LIPF Logic Annex – updates to fix a few errors related to STIR/SHAKEN tables | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (Nokia, Nokia Shanghai Bell) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI17 | | | | |  | ***Date:*** | | | 2022-10-06 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | ***A*** |  | | | | | ***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:*** | | The tables in Annex G that depict the IMS NFs providing the IRI-POI for STIR/SHAKEN have errors. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Errors are corrected. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misleading and conflicting information in the specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | G.5.4.2.4, G.5.5.2.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | S3i220508 | | | | | | | | |

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

#### G.5.4.2.4 STIR/SHAKEN

Since the IRI-POI in AS, in support of LI for special services such as conferencing, is always provisioned, the LIPF logic has to ensure that when the STIR/SHAKEN is required to be intercepted and the target Id is IMPU, the ReportDiversionPASSporTInfo is included as part of that provisioning.

Likewise, the IRI-POI in IBCF is also provisioned except for the case when the default option for IMS LI is deployed. The diagram shown in figure G.5-6A illustrates that when STIR/SHAKEN is required to be intercepted and the target Id is IMPU, the IRI-POI in IBCF is provisioned even with the default option of IMS LI with ReportDiversionPASSporTInfo is included.

In general, when the STIR/SHAKEN is required to be intercepted in the network, and the target Id is IMPU, the IRI-POIs in AS and the IBCF are provisioned with ReportDiversionPASSporTInfo parameter included.

The diagram shown in figure G.5-6B below illustrates the LI provisioning just from STIR/SHAKEN perspective. However, from an overall provisioning perspective, it is embedded within the LIPF logic of IMS LI provisioning as illustrated in clause G.5.4.1.



Figure G.5-6B: Localized LI provisioning view from STIR/SHAKEN perspective

The inclusion of ReportDiversionPASSporTInfo for provisioning of IRI-POI in P-CSCF and LMISF-IRI is not required.

Table G.5-2A shows the NFs that will have to provide the STIR/SHAKEN LI (signing) for various scenarios and the table G.5-2B shows the NFs that will have to provide the STIR/SHAKEN LI (verification) for various scenarios.

The signing for STIR/SHAKEN happens in the HPLMN except for the emergency sessions it can also happen in the VPLMN. In these tables the indicated scenarios are from the perspective of target.

Table G.5-2A: Scope of NF domain in IMS providing the LI functions for STIR/SHAKEN (signing)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scenario | | HPLMN | | VPLMN |
| CSP choice AS | CSP choice is IBCF |
| Emergency call | | IBCF | IBCF | IBCF |
| RCD present | | AS | AS | n/a |
| Intra-CSP session signing/verification required | | AS | AS | n/a |
|  | |  |  |  |
|  | |  |  |  |
| Intra-CSP session signing/verification not required | Intra-CSP session | n/a | n/a | n/a |
| Inter-CSP session | AS | IBCF | n/a |

Table G.5-2B: Scope of NF domain in IMS providing the LI functions for STIR/SHAKEN (verification)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scenario | | HPLMN | | VPLMN |
| CSP choice AS | CSP choice is IBCF |
| Emergency callback | | AS | IBCF | See NOTE 1 |
| Inbound roaming with LBO | | n/a | n/a | P-CSCF |
| Inbound roaming with Home-Routed | | n/a | n/a | LMISF-IRI |
| Intra-CSP session signing/verification required | | AS | AS | See NOTE 1 |
|  | |  |  |  |
|  | |  |  |  |
| Intra-CSP session signing/verification not required | Intra-CSP session | AS (see NOTE 2) | AS (see NOTE 2) | See NOTE 1 |
| Inter-CSP session | AS | IBCF (see NOTE 3) | See NOTE 1 |

NOTE 1: Same as in the row for inbound roaming (LBO) and inbound roaming (HR).

NOTE 2: This is the case where the redirection happens with the outgoing SIP INVITE containing the validation result and the REQUEST URI is a target identity (see clause 7.11.2.3). The AS may or may not interact with the Verification AS.

NOTE 3: The IRI-POI is in IBCF. The IRI-POI can be in AS for the special redirection case depicted in NOTE 2 (see clause 7.11.2.3).

The indicated CSP choice is applicable when the signing/verification of only inter-CSP session is required. The CSP choice for signing and verification need not be the same.

### \*\* Next Change \*\*

#### G.5.5.2.3 STIR/SHAKEN

When the target is non-local ID, the IRI-POI in AS is not provisioned for IMS-LI. The IRI-POI in IBCF is provisioned except for the case where the alternate option is deployed in the HPLMN for IMS LI (target non-local ID) and default option is used for IMS-LI in the VPLMN (target non-local ID).

The diagram shown in figure G.5-9A illustrates that when the interception of STIR/SHAKEN is required in the network, and the target Id is IMPU, and the target is non-local ID, the IBCF is provisioned even when the alternate option for IMS LI is used in the HPLMN and default option is used for IMS LI in the VPLMN.

The diagram shown in figure G.5-6A (clause G.5.4.1) illustrates the LI provisioning just from STIR/SHAKEN perspective. However, from an overall provisioning perspective for target non-local ID, it is embedded within the LIPF logic of IMS LI provisioning as illustrated in clause G.5.5.1.

Table G.5-5 shows the NFs that will have to provide the STIR/SHAKEN LI (signing) for various scenarios and table G.5-6 shows the NFs that will have to provide the STIR/SHAKEN LI (verification) for various scenarios.

The signing for STIR/SHAKEN happens in the HPLMN. In these tables the indicated scenarios are from the perspective of the party communicating with the target non-local ID.

Table G.5-5: Scope of NF domain in IMS providing the LI functions for STIR/SHAKEN (signing)

|  |  |  |  |
| --- | --- | --- | --- |
| Scenario | | CSP choice AS | CSP choice is IBCF |
| RCD present | | AS | AS |
| Intra-CSP session | | n/a | n/a |
|  | |  |  |
|  | |  |  |
| Inter-CSP session | Intra-CSP session signing/verification is required | AS | AS |
| Intra-CSP session signing/verification not required | AS | IBCF |

Table G.5-6: Scope of NF domain in IMS providing the LI functions for STIR/SHAKEN (verification)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scenario | | HPLMN | | VPLMN | |
| CSP choice AS | CSP choice is IBCF | Default | Alternate |
| Inbound roaming with LBO | | n/a | n/a | P-CSCF | IBCF |
| Inbound roaming with Home-Routed | | n/a | n/a | LMISF-IRI | LMISF-IRI |
| Intra-CSP session | | n/a | n/a | n/a | n/a |
|  | |  |  |  |  |
|  | |  |  |  |  |
| Inter-CSP session | Intra-CSP session signing/verification is required | AS | AS | See NOTE | See NOTE |
| Intra-CSP session signing/verification not required | AS | IBCF | See NOTE | See NOTE |

NOTE: Same as in the rows for inbound roaming (LBO) and inbound roaming (HR).

The indicated CSP choice is applicable when the signing/verification of only inter-CSP session is required. The CSP choice for signing and verification need not be the same.

### \*\* End of all Changes \*\*