**3GPP SA3LI#86-b S3i220423**

**Sophia Antipolis, France, 30 August - 2 September 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.128** | **CR** | **0393** | **rev** | **1** | **Current version:** | **17.5.0** |  |
|  | | | | | | | | |
| *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:*** | LIPF Logic Annex updates to accommodate STIR/SHAKEN | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (Nokia, Nokia Shanghai Bell) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI17 | | | | |  | ***Date:*** | | | 2022-09-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | ***F*** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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:*** | | LIPF logic diagrams in annex G do not accommodate the STIR/SHAKEN aspects. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Logic diagrams are modified. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | LIPF logic when used by the implimenters will miss the STIR/SHAKEN aspects. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | G.5.4.1, G.5.4.2.3, G.5.4.2.x (new), G.5.5.1, G.5.5.2.2, G.5.5.2.x (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:*** | | S3i220423 | | | | | | | | |

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

## G.5.4 LIPF logic for targets that are not non-local ID

### G.5.4.1 The flowchart

Figures G.5-3, G.5-4, G.5-5 and G.5-6 show the LIPF logic for the service type of Voice when the target is not a non-local ID.



Figure G.5-3: Top level LIPF logic for service type of Voice when target is not a non-local ID

For the delivery type of IRI + CC, the IRI-POIs and the CC-TFs are provisioned. For the delivery type of IRI, the IRI-POIs are provisioned. For the delivery type of CC, the CC-TFs are provisioned.

Figure G.5-4 shows the LIPF logic for the provisioning of IRI-POIs and figure G.5-5 shows the LIPF logic for the provisioning of CC-TFs.

Figure G.5-4: LIPF logic for delivery type of IRI for service type of Voice when target is not a non-local ID

The S-CSCF, E-CSCF, P-CSCF, IBCF, MGCF and AS (in figure G.5-4) provide IRI-POI functions under certain conditions as noted within the illustration. To prevent those IRI-POIs from providing the LI functions when not supposed to, the LIPF may have to include a parameter during the provisioning. If STIR/SHAKEN is required to be intercepted in the network, then the provisioning of IRI-POIs in IBCF and AS include the parameter ReportDiversionPASSporTInfo if the target identity is IMPU. Additional STIR/SHAKEN related provisioning is illustrated in figure G.5-6a.



Figure G.5-5: LIPF logic for delivery type of CC for service type of Voice when target is not a non-local ID

The IBCF, MGCF and AS (in figure G.5-5) provide CC-TF functions under certain conditions as noted within the illustration. To prevent those CC-TFs from triggering the CC-POIs when not supposed to, the LIPF may have to include a parameter during the provisioning.

Figure G.5-6 illustrates the LIPF logic for LALS triggering.



Figure G.5-6: LIPF logic for LALS triggering for the service type of Voice

In LALS triggering option 1, the host NF that provides the LTF is same as the NF that provides the IRI-POI functions. And therefore, the host NFs that provide the LTF can be different based on the IMS deployment options.

The P-CSCF, IBCF and LMISF-IRI (in figure G.5-6) provide LTF under certain conditions as noted within the illustration. Under special scenario, the S-CSCF may provide the IRI-POI for emergency services (instead of E-CSCF) as specified in TS 33.127 [5]. To prevent those LTFs from providing the LI functions when not supposed to, the LIPF may have to include a parameter during the provisioning.

The figure G.5-6a illustrates the LIPF logic for additional STIR/SHAKEN related provisioning.



Figure G.5-6a: LIPF logic for additional STIR/SHAKEN related provisioning

For STIR/SHAKEN related reporting, IBCF, AS, P-CSCF (VPLMN with LBO), LMISF-IRI (VPLMN with HR) provide the IRI-POI functions. The LIPF logic shown in figure G.5-6a is additional logic required to support the LI for STIR/SHAKEN.

As illustrated in figure G.5-4, the IRI-POIs in P-CSCF, LMISF-IRI and AS are provisioned as part IMS-based voice LI. Likewise, the IRI-POI in IBCF is also provisioned for IMS-based voice LI when the alternate option is used.

When the STIR/SHAKEN is required to be intercepted in the network, the IRI-POIs in IBCF and AS are to be provisioned with ReportDiversionPASSporTInfo value when the target identity is IMPU

### \*\* NEXT Change \*\*

#### G.5.4.2.3 Summary

Table G.5-1 provides the scope of NF domain that provides the IRI-POI/CC-TF/CC-POI functions for the service type of Voice with the IMS deployment option Default.

Table G.5-1: Scope of NF domain in IMS providing the LI functions with Default option

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NFs with LI function | | | Non-roaming | Roaming with LBO | | Roaming with HR | |
| VPLMN | HPLMN | VPLMN | HPLMN |
| HSS | | | IRI-POI | n/a | IRI-POI | n/a | IRI-POI |
| AS (NOTE 6, NOTE 12) | | | IRI-POI | n/a | IRI-POI | n/a | IRI-POI |
| AS (NOTE 7) | | | CC-TF | n/a | CC-TF | n/a | CC-TF |
| MRFP (NOTE 7) | | | CC-POI | n/a | CC-POI | n/a | CC-POI |
| S-CSCF (NOTE 8) | | | IRI-POI | n/a | IRI-POI | n/a | IRI-POI |
| E-CSCF (NOTE 8) | | | IRI-POI | IRI-POI | n/a | IRI-POI | n/a |
| P-CSCF | | | n/a | IRI-POI (NOTE 1) | n/a | n/a | n/a |
| P-CSCF | | | CC-TF | CC-TF | n/a | CC-TF (NOTE 2) | n/a |
| IMS-AGW | | | CC-POI | CC-POI | n/a | CC-POI (NOTE 2) | n/a |
| MGCF (NOTE 3) | | | CC-TF | n/a | CC-TF | n/a | CC-TF |
| IM-MGW (NOTE 3) | | | CC-POI | n/a | CC-POI | n/a | CC-POI |
| IBCF (NOTE 14) | | | IRI-POI | IRI-POI | IRI-POI | IRI-POI | IRI-POI |
| IBCF (NOTE 4) | | | CC-TF | n/a | CC-TF | n/a | CC-TF |
| TrGW (NOTE 4) | | | CC-POI | n/a | CC-POI | n/a | CC-POI |
| LMISF-IRI (NOTE 1) | | | n/a | n/a | n/a | IRI-POI | n/a |
| LMISF-CC (NOTE 1) | | | n/a | n/a | n/a | CC-POI | n/a |
| LALS triggering | Option 1 | S-CSCF | LTF | n/a | LTF | n/a | LTF |
| E-CSCF | LTF | LTF | n/a | LTF | n/a |
| P-CSCF | n/a | LTF (NOTE 1) | n/a | n/a | n/a |
| LMISF-IRI | n/a | n/a | n/a | LTF (NOTE 1) | n/a |
| Option 2 | MDF2 | LTF | LTF | LTF | LTF | LTF |

Table G.5-2 provides the scope of NF domain that provides the IRI-POI/CC-TF/CC-POI functions for the service type of Voice with the IMS deployment option Alternate option.

Table G.5-2: Scope of NF domain in IMS providing the LI functions with Alternate option

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NFs with LI function | | | Non-roaming | Roaming with LBO | | Roaming with HR | |
| VPLMN | HPLMN | VPLMN | HPLMN |
| HSS | | | IRI-POI | n/a | IRI-POI | n/a | IRI-POI |
| AS (NOTE 6, NOTE 12) | | | IRI-POI | n/a | IRI-POI | n/a | IRI-POI |
| AS (NOTE 7) | | | CC-TF | n/a | CC-TF | n/a | CC-TF |
| MRFP (NOTE 7) | | | CC-POI | n/a | CC-POI | n/a | CC-POI |
| P-CSCF | | | IRI-POI | IRI-POI | n/a | IRI-POI (NOTE 2) | IRI-POI |
| P-CSCF | | | CC-TF | CC-TF | n/a | CC-TF (NOTE 2) | CC-TF |
| IMS-AGW | | | CC-POI | CC-POI | n/a | CC-POI (NOTE 2) | CC-POI |
| MGCF (NOTE 3) | | | IRI-POI | n/a | IRI-POI | n/a | IRI-POI |
| MGCF (NOTE 3) | | | CC-TF | n/a | CC-TF | n/a | CC-TF |
| IM-MGW (NOTE 3) | | | CC-POI | n/a | CC-POI | n/a | CC-POI |
| IBCF | | | IRI-POI  (NOTE 13) | IRI-POI  (NOTE 2, 14) | IRI-POI  (NOTE 13) | IRI-POI (NOTE 2, 14) | IRI-POI (NOTE 13) |
| IBCF (NOTE 4) | | | CC-TF | n/a | CC-TF | n/a | CC-TF |
| TrGW (NOTE4) | | | CC-POI | n/a | CC-POI | n/a | CC-POI |
| LMISF-IRI (NOTE 1) | | | n/a | n/a | n/a | IRI-POI | n/a |
| LMISF-CC (NOTE 1) | | | n/a | n/a | n/a | CC-POI | n/a |
| LALS Triggering | Option 1 | P-CSCF | LTF | LTF | n/a | LTF (NOTE 2) | LTF |
| IBCF | n/a | n/a | LTF (NOTE 5) | n/a | n/a |
| LMISF-IRI | n/a | n/a | n/a | LTF (NOTE 1) | n/a |
| Option 2 | MDF2 | LTF | LTF | LTF | LTF | LTF |

NOTE 1: For non-emergency sessions only.

NOTE 2: For emergency sessions only.

NOTE 3: Only when an incoming session to a target is redirected over a CS domain.

NOTE 4: Only when target is outbound roaming or when an incoming session to a target is redirected over an IP domain, or to an outbound roaming party with LBO.

NOTE 5: Only when the target is outbound roaming without a redirection.

NOTE 6: When the interception of conferencing services is required

NOTE 7: When the content interception of conferencing, or application of music/ is required.

NOTE 8: For IMS emergency sessions in fixed networks when the S-CSCF is on the signaling path, S-CSCF may optionally (instead of E-CSCF) provide the IRI-POI functions with the default option.

NOTE 9: The use of "n/a" in the above table implies that the LI function is not applicable to the NF for the indicated scenario.

NOTE 10: The LIPF is not aware of the above role played by the host NFs in providing the LI functions.

NOTE 11: MDF2, MDF3 and LI-LCS Client which are also involved in providing the LI functions are not shown in the tables above.

NOTE 12: When the interception of STIR/SHAKEN is required.

NOTE 13: Only when target is outbound roaming or when an incoming session to a target is redirected over an IP domain, or to an outbound roaming party with LBO, or when the interception of STIR/SHAKEN is required.

NOTE 14: Only when the interception of STIR/SHAKEN is required.

### \*\* NEXT Change \*\*

#### G.5.4.2.X 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.5-6a 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.5-6a: 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.

The 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) | 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) | AS (see NOTE 2) | AS (see NOTE 2) | See NOTE 1 |
| Inter-CSP session | AS | IBCF/AS (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 LIPF logic for targets that are non-local ID

### G.5.5.1 The flowchart

Figures G.5-7, G.5-8 and G.5-9 show the LIPF logic for the service type of Voice when the target is a non-local ID.



Figure G.5-7: LIPF logic for service type of Voice when target is a non-local ID

For the delivery type of IRI + CC, the IRI-POIs and the CC-TFs are provisioned. For the delivery type of IRI, the IRI-POIs are provisioned. For the delivery type of CC, the CC-TFs are provisioned.

Figure G.5-8 shows the LIPF logic for the provisioning of IRI-POIs and figure G.5-9 shows the LIPF logic for the provisioning of CC-TFs.

Figure G.5-8: LIPF logic for delivery type of IRI for service type of Voice when target is a non-local ID

The P-CSCF, IBCF and MGCF (in figure G.5-8) provide IRI-POI functions under certain conditions as noted within the illustration. To prevent those IRI-POIs from providing the LI functions when not supposed to, the LIPF may have to include a parameter during the provisioning.

If STIR/SHAKEN is required to be intercepted in the network, the provisioning of IRI-POI in IBCF include the parameter ReportDiversionPASSporTInfo. Additional STIR/SHAKEN related provisioning for target non-local ID is illustrated in figure G.5-9a.



Figure G.5-9: LIPF logic for delivery type of CC for service type of Voice when target is a non-local ID

The P-CSCF, IBCF and MGCF (in figure G.5-9) provide CC-TF functions under certain conditions as noted within the illustration. To prevent those CC-TFs from triggering the CC-POI when not supposed to, the LIPF may have to include a parameter during the provisioning.

The figure G.5-9a illustrates the LIPF logic for additional STIR/SHAKEN related provisioning for target non-local ID.



Figure G.5-9a: LIPF logic for additional STIR/SHAKEN related provisioning for target non-local ID

For STIR/SHAKEN related reporting IBCF, AS, P-CSCF (VPLMN with LBO), LMISF-IRI-POI (VPLMN with HR) provide the IRI-POI functions. The LIPF logic shown in figure G.5-9a is additional logic required to support the STIR/SHAKEN when the target is non-local ID.

As illustrated in figure G.5-8, the IRI-POIs in P-CSCF, LMISF-IRI are provisioned as part IMS-based voice LI. Likewise, the IRI-POI in IBCF is also provisioned for IMS-based voice LI when default option is used in HPLMN, or when alternate options are used in both HPLMN and VPLMN.

When the interception of STIR/SHAKEN is required in the network, the IRI-POIs in IBCF and AS are to be provisioned with ReportDiversionPASSporTInfo value.

\*\* Next Change \*\*

#### G.5.5.2.2 Summary

Table G.5-3 provides the scope of NF domain that provides the IRI-POI/CC-TF/CC-POI functions for the service type of Voice with the IMS deployment option Default in HPLMN.

Table G.5-3: Scope of NF domain in IMS providing the LI functions with Default in HPLMN

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NF with LI function | Non-roaming | Roaming with LBO | | | Roaming with HR | |
| VPLMN | | HPLMN | VPLMN | HPLMN |
| Default | Alternate |
| P-CSCF | n/a | IRI-POI | n/a | n/a | n/a | n/a |
| P-CSCF | n/a | CC-TF | n/a | n/a | n/a | n/a |
| IMS-AGW | n/a | CC-POI | n/a | n/a | n/a | n/a |
| AS (NOTE 5) | IRI-POI | n/a | n/a | IRI-POI | n/a | IRI-POI |
| MGCF | IRI-POI | n/a | n/a | IRI-POI | n/a | IRI-POI |
| MGCF | CC-TF | n/a | n/a | CC-TF | n/a | CC-TF |
| IM-MGW | CC-POI | n/a | n/a | CC-POI | n/a | CC-POI |
| IBCF | IRI-POI | IRI-POI (NOTE 5) | IRI-POI | IRI-POI | IRI-POI (NOTE5) | IRI-POI |
| IBCF | CC-TF | n/a | CC-TF | CC-TF | n/a | CC-TF |
| TrGW | CC-POI | n/a | CC-POI | CC-POI | n/a | CC-POI |
| LMISF-IRI | n/a | n/a | n/a | n/a | IRI-POI | n/a |
| LMISF-CC | n/a | n/a | n/a | n/a | CC-POI | n/a |

Table G.5-4 provides the scope of NF domain that provides the IRI-POI/CC-TF/CC-POI functions for the service type of Voice with the IMS deployment option Alternate option in HPLMN.

Table G.5-4: Scope of NF domain in IMS providing the LI functions with Alternate option in HPLMN

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NF with LI function | Non-roaming | Roaming with LBO | | | Roaming with HR | |
| VPLMN | | HPLMN | VPLMN | HPLMN |
| Default | Alternate |
| P-CSCF | n/a | IRI-POI | n/a | n/a | n/a | n/a |
| P-CSCF | n/a | CC-TF | n/a | n/a | n/a | n/a |
| IMS-AGW | n/a | CC-POI | n/a | n/a | n/a | n/a |
| AS (NOTE 5) | IRI-POI | n/a | n/a | IRI-POI | n/a | IRI-POI |
| S-CSCF | IRI-POI | n/a | n/a | IRI-POI | n/a | IRI-POI |
| MGCF | CC-TF | n/a | n/a | CC-TF | n/a | CC-TF |
| IM-MGW | CC-POI | n/a | n/a | CC-POI | n/a | CC-POI |
| IBCF (NOTE 5) | IRI-POI | IRI-POI | IRI-POI | IRI-POI | IRI-POI | I-IRI-POI |
| IBCF | CC-TF | n/a | CC-TF | CC-TF | n/a | CC-TF |
| TrGW | CC-POI | n/a | CC-POI | CC-POI | n/a | CC-POI |
| LMISF-IRI | n/a | n/a | n/a | n/a | IRI-POI | n/a |
| LMISF-CC | n/a | n/a | n/a | n/a | CC-POI | n/a |

NOTE 1: In tables G.5-3 and G.5-4, the use of the phrase non-roaming/roaming applies to the party communicating with the target non-local ID.

NOTE 2: The use of "n/a" in the above table implies that the LI function is not applicable to the NF for the indicated scenario.

NOTE 3: The LIPF is not aware of the above role played by the host NFs in providing the LI functions.

NOTE 4: MDF2, MDF3 and LI-LCS Client which are also involved in providing the LI functions are not shown in the tables above.

NOTE 5: Only when the interception of STIR/SHAKEN is required.

\*\* Next Change \*\*

#### G.5.5.2.X 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.5.4.2.X) 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.

The table G.5-3a shows the NFs that will have to provide the STIR/SHAKEN LI (signing) for various scenarios and the table G.5-3b 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.5-3a: 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 (signing/verification required) | AS | AS |
| Intra-CSP session (signing/verification not required) | n/a | n/a |
| Inter-CSP session | AS | IBCF |

Table G.5-3b: 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 (signing/verification required) | AS | AS | See NOTE | See NOTE |
| Intra-CSP session (signing/verification not required) | AS | AS | See NOTE | See NOTE |
| Inter-CSP session | 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 \*\*