**3GPP SA3LI#90 S3i230425**

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

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.928** | **CR** | **0005** | **rev** | **1** | **Current version:** | **18.0.0** |  |
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| *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: Detailed logic for the service type of RCS | | | | | | | | | |
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| ***Source to WG:*** | SA3-LI (Nokia, Nokia Shanghai Bell) | | | | | | | | | |
| ***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 provides the details of LI provisioning logic in LIPF for the service type RCS. | | | | | | | | |
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| ***Summary of change:*** | | New logic to illustrate LI provisioning for the service type RCS is added. | | | | | | | | |
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| ***Consequences if not approved:*** | | The LIPF logic will not be aligned to the TS 33.128. | | | | | | | | |
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| ***Clauses affected:*** | | 5.z (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:*** | | S3i230371 | | | | | | | | |

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

## 5.z RCS

### 5.z.1 Scope of interception

The illustrations shown in this clause are for the service type RCS. The RCS services may be provided by the CSP or by a third party service provider. In the latter case, the provisioning logic defined below applies to the RCS service provider. The S-CSCF in the CSP domain if involved may still need to report the RCS registration related events.

A target can be a subscriber of the RCS service provider or a non-local ID. In the case where a target is a non-local ID, the party communicating with the target is a subscriber of RCS service provider.

The interception of service type of RCS is done by the IRI-POI and CC-POI present in the RCS server, the IRI-POI and CC-POI present in the HTTP Content Server and File Transfer Localization Function and the IRI-POI present in the S-CSCF (always CSP).

For the cases where the file transfer related events cannot be associated to a provisioned target identity in the HTTP Content Server and the File Transfer Localization Function, the TFs (IRI-TF and CC-TF) present in the RCS Server trigger the POIs (i.e. the triggered IRI-POI and the triggered CC-POI) in the HTTP Content Server and File Transfer Localization Function.

For one file transfer related event, either the triggered IRI-POI or non-triggered IRI-POI in the HTTP Content Server and the File Transfer Localization Function generate the xIRIs. Likewise, to deliver the content of the file, either the triggered CC-POI or non-triggered CC-POI in the HTTP Content Server and the File Transfer Localization Function generate the xCC.

If the File Transfer Localization Function is not deployed by the RCS Service Provider, the reporting what would have been done by the LI function in the File Transfer Localization Function cannot be done.

The IRI-POI present in the S-CSCF reports just the RCS Registration related xIRI when the same cannot be reported by the IRI-POI present in the RCS Server (i.e. the case where IMS and RCS services are provided by different service providers).

### 5.z.2 LIPF logic for service type of RCS

Figure 5.z.2-1 illustrates the LIPF logic for the service type RCS.



Figure 5.z.2-1: LIPF logic for provisioning for the service type RCS

Figure 5.z.2-2 illustrates the RCS LI provisioning logic as applicable to CSP . and figure 5.z.2-3 illustrates the RCS-LI provisioning logic as applicable to the third party service provider.

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Figure 5.z.2-2: RCS LI provisioning as applicable to a CSP



Figure 5.z.2-3: RCS LI provisioning as applicable to third party service provider

As shown in figure 5.z.2-2, the provisioning of IRI-POI in HSS is not applicable for target non-local ID. Also, provisioning of IRI-POI in the HSS is not applicable for the RCS provider when different from a CSP. The provisioning of an IRI-POI in the S-CSCF is not required if the RCS server is deployed in CSP network.

Figure 5.z.2-2 illustrates the LIPF logic for additional LI provisioning for RCS.



Figure 5.z.2-2: Additional LIPF logic for provisioning for the service type RCS

The provisioning of IRI-POI, CC-POI in HTTP Content Server and File Transfer Localization Function is only for the POIs triggered from the IRI-TF, CC-TF present in the RCS Server.

The following target identifiers are applicable to the service type of RCS for provisioning the IRI-POI/CC-POI at the RCS Server:

- IMPU.

- IMPI.

- PEI (IMEI only).

- IMEI.

The target identity in the IMPU format may contain a SIP URI, TEL URI.

The following target identifiers are applicable to the service type of RCS for provisioning the IRI-POI/CC-POI at the HTTP Content Server and File Transfer Localization Function:

- SIP URI.

- TEL URI.

- GPSI.

- SUPI

- IMSI.

- MSISDN.

- Email Address.

The target identity in the GPSI format may contain a GPSIIMSI or GPSINAI. The target identity in the SUPI format may contain SUPIIMSI or SUPINAI.

### 5.z.3 Interception

#### 5.z.3.1 Deployment

The CSP may or may not deploy a File Transfer Localization Function.

If the File Transfer Localization Function is not deployed, then reporting of xIRIs and xCC that were supposed to be reported from IRI-POI and CC-POI in the File Transfer Localization Function is not possible. This limitation happens when a target or party communicating with the target non-local ID downloads a file from the HTTP Content Server.

The RCS Server and the IMS may be managed by different service providers. When the RCS Server is deployed and managed by a different provider, the IRI-POI in the S-CSCF present of the IMS provider network is able to report RCS registration related xIRIs.

#### 5.z.3.2 Summary

Table 5.z.3.2-1 provides the scope of NF domain that provides the IRI-POI/IRI-TF/CC-TF/CC-POI functions for the service type of RCS.

Table 5.z.3.2-1: Scope of NF providing the LI functions for RCS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NF with the LI function | CSP provides IMS and RCS | | | IMS provider is different from RCS provider | | | |
| IMS provider | | | RCS provider |
| Roaming | | | Roaming | | |
| Not | Outbound | Inbound | Not | Outbound | Inbound |
| HSS (target local) | IRI-POI | IRI-POI | n/a | IRI-POI | IRI-POI | n/a | n/a |
| HSS (target non-local) | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| S-CSCF | n/a | n/a | n/a | IRI-POI | IRI-POI | n/a | n/a |
| RCS Server | IRI-POI | IRI-POI | n/a | n/a | n/a | n/a | IRI-POI |
| RCS Server | CC-POI | CC-POI | n/a | n/a | n/a | n/a | CC-POI |
| RCS Server | IRI-TF | IRI-TF | n/a | n/a | n/a | n/a | IRI-TF |
| RCS Server | CC-TF | CC-TF | n/a | n/a | n/a | n/a | CC-TF |
| HTTP Content Server | IRI-POI | IRI-POI | n/a | n/a | n/a | n/a | IRI-POI |
| HTTP Content Server | CC-POI | CC-POI | n/a | n/a | n/a | n/a | CC-POI |
| File Transfer Localization Function | IRI-POI | IRI-POI | n/a | n/a | n/a | n/a | IRI-POI |
| File Transfer Localization Function | CC-POI | CC-POI | n/a | n/a | n/a | n/a | CC-POI |

NOTE 1: 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 2: The LIPF is not aware of the above role played by the NFs in providing the LI functions nor the roaming situations of the target or the party communicating with the target non-local ID.

NOTE 3: The LIPF is aware of whether RCS services are provided by CSP (that provides the IMS services) or in third party service provider.

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

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