**3GPP TSG-SA3 Meeting #89-LI *s3i230306***

**Washington DC, United States, 25th Apr 2023 - 28th Apr 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.127** | **CR** | **0212** | **rev** | **1** | **Current version:** | **18.3.0** |  |
|  | | | | | | | | |
| *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:*** | LI for Non-3GPP Access Functions Stage 2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (OTD\_US) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI18 | | | | |  | ***Date:*** | | | 26 April 2023 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Currently, there is no POI in the Non-3GPP access functions. This creates a lack of awareness for target UEs accessing the 5GC via non-3gpp methods. This is the Stage 2 to add this feature to TS 33.127. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add abbreviation to clause 3.3, Add new clase 6.2.8 and subsequent clauses for Stage 2 description. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Specification will remain incomplete. Information regarding non-3GPP access will not be reported to LEAs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.3, 6.2.8 (new clause and sub clauses) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Was s3i230262 | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* START OF CHANGES \*\*\*\*

\*\*\*START OF FIRST CHANGE \*\*\*

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GC 5G Core Network

5GMS 5G Media Streaming

5GS 5G System

AAnF AKMA Anchor Function

AC Application Client

ACR Application Context Relocation

ADMF LI Administration Function

AF Application Function

AF\_ID Application Function Identity

AKA Authentication and Key Agreement

A-KID AKMA Key IDentifier

AKMA Authentication and Key Management for Applications

AMF Access and Mobility Management Function

AS Application Server

AUSF Authentication Server Function

BBIFF Bearer Binding Intercept and Forward Function

BSS Business Support System

CAG Closed Access Group

CC Content of Communication

CP Control Plane

CPIM Common Presence and Instant Messaging

CPS Call Placement Service

CSI Cell Supplemental Information

CSP Communication Service Provider

CSR Cell Site Report

CUPS Control and User Plane Separation

DN Data Network

DNAI Data Network Access Identifier

DoNAS Data over NAS

EAP Extensible Authentication Protocol

EAS Edge Application Server

eCNAM Enhanced Calling Name

ECSP Edge Computing Service Provider

E-CSCF Emergency – Call Session Control Function

EDN Edge Data Network

EEC Edge Enabler Client

EECID Edge Enabler Client IDentifier

EES Edge Enabler Server

GPSI Generic Public Subscription Identifier

HMEE Hardware Mediated Execution Enclave

HR Home Routed

IBCF Interconnection Border Control Functions

ICF Identity Caching Function

IEF Identity Event Function

IMS-AGW IMS Access Gateway

IM-MGW IM Media Gateway

IP Interception Product

IQF Identity Query Function

IRI Intercept Related Information

KAF AKMA Application Key

KAKMA AKMA Anchor Key

KID Key IDentifier

KLI Decryption key(s) for services encrypted by CSP-provided keys

KSF Key Server Function

LAF Location Acquisition Function

LALS Lawful Access Location Services

LARF Location Acquisition Requesting Function

LBO Local Break Out

LEA Law Enforcement Agency

LEMF Law Enforcement Monitoring Facility

LI Lawful Interception

LI CA Lawful Interception Certificate Authority

LICF Lawful Interception Control Function

LI\_HI1 Lawful Interception Handover Interface 1

LI\_HI2 Lawful Interception Handover Interface 2

LI\_HI3 Lawful Interception Handover Interface 3

LI\_HI4 Lawful Interception Handover Interface 4

LI\_HILA Lawful Interception Handover Interface Location Acquisition

LI\_HIQR Lawful Interception Handover Interface Query Response

LIID Lawful Interception Identifier

LIPF Lawful Interception Provisioning Function

LIR Location Immediate Request

LI\_SI Lawful Interception System Information Interface

LISSF Lawful Interception State Storage Function

LI\_ST Lawful Interception State Transfer Interface

LI\_T1 Lawful Interception Internal Triggering Interface 1

LI\_T2 Lawful Interception Internal Triggering Interface 2

LI\_T3 Lawful Interception Internal Triggering Interface 3

LI\_X0 Lawful Interception Internal Interface 0

LI\_X1 Lawful Interception Internal Interface 1

LI\_X2 Lawful Interception Internal Interface 2

LI\_X2\_LA Lawful Interception Internal Interface 2 Location Acquisition

LI\_X3 Lawful Interception Internal Interface 3

LI\_X3A Lawful Interception Internal Interface 3 Aggregator

LI\_XEM1 Lawful Interception Internal Interface Event Management Interface 1

LI\_XER Lawful Interception Internal Interface Event Record

LI\_XLA Lawful Interception Internal Interface Location Acquisition

LI\_XQR Lawful Interception Internal Interface Query Response

LMF Location Management Function

LMISF LI Mirror IMS State Function

LMISF-CC LMISF for the handling of CC

LMISF-IRI LMISF for the handling of IRI

LTF Location Triggering Function

MA Multi-Access

MANO Management and Orchestration

MDF Mediation and Delivery Function

MDF2 Mediation and Delivery Function 2

MDF3 Mediation and Delivery Function 3

MRFP Multimedia Resource Function Processor

MSRP Message Session Relay Protocol

N3A Non-3GPP Access

N3AF Non-3GPP Access Functions

N3IWF Non 3GPP Inter Working Function

N9HR N9 Home Routed

NAS Non-Access Stratum

NCGI NR Cell Global Identity

NEF Network Exposure Function

NFV Network Function Virtualisation

NFVI Network Function Virtualisation Infrastructure

NFVO Network Function Virtualisation Orchestrator

NIDD Non-IP Data Delivery

NPLI Network Provided Location Information

NR New Radio

NRF Network Repository Function

NSSF Network Slice Selection Function

OSS Operations Support System

PAG POI Aggregator

PCF Policy Control Function

P-CSCF Proxy - Call Session Control Function

PEI Permanent Equipment Identifier

PGW PDN Gateway

PGW-C PDN Gateway Control Plane

PGW-U PDN Gateway User Plane

POI Point Of Interception

PLMN Public Land Mobile Network

PTC Push to Talk over Cellular

RCD Rich Call Data

RCS Rich Communication Suite

S8HR S8 Home Routed

SCEF Service Capability Exposure Function

SCS Service Capability Server

SGW Serving Gateway

SGW-C Serving Gateway Control Plane

SGW-U Serving Gateway User Plane

SHAKEN Signature-based Handling of Asserted information using toKENs

SIRF System Information Retrieval Function

S-CSCF Serving - Call Session Control Function

SIP Session Initiation Protocol

SMF Session Management Function

SMSF SMS-Function

STF Security Terminating Function

STIR Secure Telephony Identity Revisited

SUCI Subscriber Concealed Identifier

SUPI Subscriber Permanent Identifier

TAI Tracking Area Identity

TF Triggering Function

TLS Transport Layer Security

TNGF Trusted Non-3GPP Gateway Function

TrGW Transit Gateway

TWIF Trusted WLAN Interworking Function

UDM Unified Data Management

UDR Unified Data Repository

UDSF Unstructured Data Storage Function

UPF User Plane Function

VNF Virtual Network Function

VNFC Virtual Network Function Component

W-AFG Wireline Access Gateway Function

xCC LI\_X3 Content of Communication

xIRI LI\_X2 Intercept Related Information

\*\*\* END OF FIRST CHANGE \*\*\*\*

\*\*\*START OF SECOND CHANGE \*\*\*

### 6.2.8 LI at the non-3GPP Access Functions

#### 6.2.8.1 Architecture

In the 5GC network, the non-3GPP Access Functions (N3AFs) allow for a UE to connect to the 5GC via trusted or untrusted non-3GPP access. N3AFs, defined in the present document, may include N3IWF, TNGF, TWIF, or W-AGF. Some or all of these functions may be deployed in a 5G system to enable non-3GPP access. Figure 6.2.8-1 provides a generic 5GS architecture including a N3AF.

Diagram, box and whisker chart

Description automatically generated

**Figure 6.2-3: LI architecture for LI at N3AF**

The LICF present in the ADMF receives the warrant from an LEA, derives the intercept information from the warrant and provides the same to the LIPF.

The LIPF present in the ADMF provisions the IRI-POI (over LI\_X1), and optionally, CC-POI present in the N3AF and the MDF2/3. The LIPF may interact with the SIRF (over LI\_SI) present in the NRF to discover the N3AFs in the network.

The IRI-POI present in the N3AF detects the target UE's activity, then generates and delivers the xIRI to the MDF2 over LI\_X2, and optionally xCC to the MDF3 over LI\_X3. The MDF2 delivers the IRI messages as part of the Interception Product to the LEMF over LI\_HI2. The MDF3 delivers the CC to the LEMF over LI\_HI3.

#### 6.2.8.2 Target identities

The LIPF present in the ADMF provisions the intercept information associated with the following target identities to the IRI-POI present in the N3AF:

- SUPI.

- PEI.

- EUI64.

The interception performed on the above three identities are mutually independent, even though, an xIRI may contain the information about the other identities when available.

#### 6.2.8.3 IRI events

The IRI-POI present in the N3AF shall generate xIRI, when it detects the following specific events or information:

- Connection Establishment.

- Connection Release.

The connection establishment xIRI is generated when the IRI-POI present in an N3AF detects that a target UE has successfully established a connection to the 5GS via a N3AF.

The connection release xIRI is generated when the IRI-POI present in an N3AF detects that the N3AF has sent an N2 release message to the target UE for any reason.

#### 6.2.8.4 Common IRI parameters

The list of xIRI parameters are specified in TS 33.128 [15]. All xIRI shall include the following:

- Target identity.

- Time stamp.

- Correlation information.

#### 6.2.8.5 Specific IRI parameters

The list of parameters in each xIRI are defined in TS 33.128 [15]. The following give a summary.

The connection establishment xIRI shall include the following:

- Connection related information.

The connection release xIRI shall include the following:

- Connection release related information.

#### 6.2.8.6 Network topologies

The N3AF shall provide the IRI-POI functions in the following network topology cases:

- Non-roaming case.

- Roaming case, in HPLMN.

\*\*\* END OF SECOND CHANGE \*\*\*\*

\*\*\*END OF ALL CHANGES \*\*\*