TSGS#22(03)0591

Source: SA WG3 (Security)

Title: CRs to 33.107 and 33.108: Reporting TEL URL (Rel-6)

Document for: Approval

Agenda Item: 7.3.3

SA Doc number	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	SA WG3 Doc number	Workitem
SP-030591	33.107	035	-	Rel-6	Reporting TEL URL	F	6.0.0	S3-030784	SEC1-LI
SP-030591	33.108	032	-	Rel-6	Reporting TEL URL	B	6.3.0	S3-030785	SEC1-LI

3GPP TSG SA WG3 Security — S3#31 **S3-030784**
18 - 21 November 2003, Munich, Germany

3GPP TSG-SA3 LI Meeting #11 ***Tdoc ⌘S3LI03_119r1***
London, UK, 18 – 20 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **33.107** **CR** **035** ⌘ **rev** **-** ⌘ Current version: **6.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Reporting TEL URL
Source:	⌘	SA WG3 (SA3 LI)
Work item code:	⌘	SEC1-LI
Date:	⌘	19/11/2003
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction 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.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In previous meeting reporting TEL URL was approved. This CR offers alignment of following subclause to that. In some cases, LEA may not have SIP URL, but only TEL URL. CR032 to Rel-6 33.107 (SP-030479, S3-030352, S3LI03_072r2) introduced alternative IMS LI identifier, TEL URL, which in such cases will be used by ADMF for activating the interception in CSCF. However, CR032 fell short from defining what happens in such cases across X2 interface.
Summary of change:	⌘	Add reporting of “observed TEL URL” to multimedia events.
Consequences if not approved:	⌘	Ambiguity in the spec, which may have implications on TS 33.108 as well.

Clauses affected:	⌘	7A.3

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		TS 33.108 CR032 (S3LI03_120r2)
			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	

7A.3 Multi-media events

- All SIP messages to or from a targeted subscriber, and all SIP messages executed on behalf of a targeted subscriber for multi-media session control are intercepted by the P CSCF and S CSCF and sent to DF2. The target identifier used to trigger the intercept will also be sent with the SIP message. P CSCF event reports may be redundant with S CSCF event reports when the P CSCF and S CSCF reside in the same network, however, this standard does not require nor prohibit redundant information from being reported to DF2.
- The IRI should be sent to DF2 with a reliable transport mechanism.
- The reporting of location information for the sake of location dependent intercept is for further study.
- The use of a correlation ID for SIP to bearer correlation is a topic for further study.
- An intercepted SIP event sent to DF2 is shown below:
  - Observed SIP URL
  - Observed TEL URL
  - Event Time and Date
  - Network element identifier
  - SIP Message Header
  - SIP Message Payload

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CHANGE REQUEST

⌘ **33.108** **CR** **032** ⌘ **rev** **-** ⌘ Current version: **6.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Reporting TEL URL
Source:	⌘	SA WG3 (SA3 LI)
Work item code:	⌘	SEC1-LI
Date:	⌘	19/11/2003
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction 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.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	In some cases, LEA may not have SIP URL, but only TEL URL. CR032 to Rel-6 33.107 (SP-030479, S3-030352, S3LI03_072r2) introduced alternative IMS LI identifier, TEL URL, which in such cases will be used by ADMF for activating the interception in CSCF. Assuming that in such cases P-CSCF cannot always translates TEL URL into SIP URL the CR offers that CSCF conditionally sends to DF2 either SIP URL or TEL-URL or both, SIP URL and TEL URL. Besides, in principle, in addition to E.164 number TEL URL may contain additional string. Therefore, this CR recommends to define new parameter under **partyIdentity**, **tel-url**, rathet than reuse the existing **e164-Format**.
Summary of change:	⌘	This CR offers sending conditionally SIP URL and/or TEL URL to LEMF once interception was activated by TEL URL. Besides, references added and updated, and an editorial change was made to annex B.3.
Consequences if not approved:	⌘	Ambiguity in the spec.

Clauses affected:	⌘	2; 7.2; B.3

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		TS 33.107 CR035: (S3LI03_119r1)
			X	Test specifications		
			X	O&M Specifications		

Other comments: ⌘

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1] TR 101 331: "Telecommunications security; Lawful Interception (LI); requirements of Law Enforcement Agencies".

[2] ES 201 158: "Telecommunications security; Lawful Interception (LI); Requirements for network functions".

[3] ETR 330: "Security Techniques Advisory Group (STAG); A guide to legislative and regulatory environment".

[4] GSM 09.02: "Digital cellular telecommunications system (Phase 2+); Mobile Application Part (MAP) specification".

[5] ITU-T Recommendation X.680: "Specification of Abstract Syntax Notation One (ASN.1)".

[6] ITU-T Recommendation X.690: "Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)".

[7] ITU-T Recommendation X.880: "Information technology - Remote Operations: Concepts, model and notation".

[8] ITU-T Recommendation X.882: "Information technology - Remote Operations: OSI realizations - Remote Operations Service Element (ROSE) protocol specification".

[9] EN 300 940, GSM 04.08: "Digital cellular communications system (Phase 2+); Mobile radio interface layer 3 specification".

[10] TS 101 509 "Digital cellular telecommunications system (Phase 2+); Lawful interception; Stage 2 (GSM 03.33).

[11] GSM 03.03: "Digital cellular telecommunications system (Phase 2+); Numbering, addressing and identification".

[12] GSM 09.60 (EN 301 347): "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); GPRS tunelling protocol (GTP) across Gn and Gp Interface".

[13] STD 9 "File Transfer Protocol (FTP)", October 1985.

[14] GSM 12.15 "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication Management; Charging & Billing; GSM call and event data for the Packet Switched (PS) domain)".

[15] STD0005 "Internet Protocol".

[16] STD0007 "Transmission Control Protocol".

[17] 3GPP TS 29.060 "GPRS Tunnelling Protocol".

[18] 3GPP TS 33.106 "Lawful Interception Requirements".

[19] 3GPP TS 33.107 "Lawful Interception Architecture and Functions".

[20] 3GPP TS 23.107 "QoS Concepts and Architecture".

[21] 3GPP TS 24.008: "3GPP Technical Specification Group Core Network; Mobile radio interface layer 3 specification".

[22] ES 201 671 version 2.1.1: "Handover Interface for the lawful interception of telecommunications traffic".

[23] J-STD-25-A: "Lawfully Authorized Electronic Surveillance".

[24] ETSI TS 101 671 version 2.3.1: "Handover Interface for the lawful interception of telecommunications traffic".

[25] 3GPP TS 23.003 "3rd Generation Partnership Project; Technical Specification Group Core Network; Numbering, addressing, and identification".

[26] RFC ~~2543~~3261: "SIP: Session Initiation Protocol".

[27] RFC 1006: "ISO Transport Service on top of the TCP".

[28] RFC 2126: "ISO Transport Service on top of TCP (ITOT)".

[29] ITU T Recommendation Q.763: "Formats and Codes of the ISDN User Part of Signalling System No. 7".

[30] ETSI EN 300 356 (all parts): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface".

[31] ETSI EN 300 403-1 (V1.2.2): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".

[32] ETSI EN 300 286-1: "Integrated Services Digital Network (ISDN); User-to-User Signalling (UUS) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[33] ITU-T Recommendation Q.763: "Signalling System No.7 - ISDN User Part formats and codes".

[34] ITU-T Recommendation Q.931: "ISDN user-network interface layer 3 specification for basic call control".

[35] 3GPP TS 29.002: "3rd Generation Partnership Project; Technical Specification Group Core Network; Mobile Application Part (MAP) specification".

[36] RFC 2806: URLs for Telephone Calls.

********* Next Modification *********

7.2 IRI for IMS

In addition, information on non-transmission related actions of a target constitute IRI and is sent via HI2, e.g. information on subscriber controlled input.

The intercept related information (IRI) may be subdivided into the following categories:

1. Control information for HI2 (e.g. correlation information).
2. Basic data context information, for standard data transmission between two parties (e.g. SIP-message).

For each event, a Record is sent to the LEMF, if this is required. The following table gives the mapping between event type received at DF2 level and record type sent to the LEMF.

Table 7.1: Mapping between IMS Events and HI2 Records Type

Event	IRI Record Type
SIP-Message	REPORT

A set of information is used to generate the record. The records used transmit the information from mediation function to LEMF. This set of information can be extended in the CSCF or DF2 MF, if this is necessary in a specific country. The following table gives the mapping between information received per event and information sent in records.

Table 7.2: Mapping between IMS Events Information and IRI Information

Parameter	Description	HI2 ASN.1 parameter
Observed SIP URL	Observed SIP URL	partyInformation (sip-url)
Observed TEL URL	Observed TEL URL	partyInformation (tel-url)
Event type	IMS Event	iMSevent
Event date	Date of the event generation in the CSCF	timeStamp
Event time	Time of the event generation in the CSCF	
Network identifier	Unique number of the intercepting CSCF	networkIdentifier
Correlation number	Unique number for each PDP context delivered to the LEMF, to help the LEA, to have a correlation between each PDP Context and the IRI.	gPRSCorrelationNumber
Lawful interception identifier	Unique number for each lawful authorization.	lawfulInterceptionIdentifier
SIP message	Whole SIP message	sIPMessage

NOTE: LIID parameter must be present in each record sent to the LEMF.

7.2.1 Events and information

This clause describes the information sent from the Delivery Function (DF) to the Law Enforcement Monitoring Facility (LEMF) to support Lawfully Authorized Electronic Surveillance (LAES). The information is described as records and information carried by a record. This focus is on describing the information being transferred to the LEMF.

The IRI events and data are encoded into records as defined in the Table 7-1 Mapping between IMS Events and HI2 Records Type and Annex B.3 Intercept related information (HI2) [1]. IRI is described in terms of a 'causing event' and information associated with that event. Within each IRI Record there is a set of events and associated information elements to support the particular service.

The communication events described in Table 7-1: Mapping between the IMS Event and HI2 Record Type and Table 7-2: Mapping between IMS Events Information and IRI Information convey the basic information for reporting the disposition of a communication. This clause describes those events and supporting information.

Each record described in this clause consists of a set of parameters. Each parameter is either:

mandatory (M) - required for the record,

conditional (C) - required in situations where a condition is met (the condition is given in the Description), or

optional (O) - provided at the discretion of the implementation.

The information to be carried by each parameter is identified. Both optional and conditional parameters are considered to be OPTIONAL syntactically in ASN.1 Stage 3 descriptions. The Stage 2 inclusion takes precedence over Stage 3 syntax.

Table 7.3: SIP-Message REPORT Record

Parameter	MOC	Description/Conditions
observed SIP-URL	C~~M~~	SIP URL of the interception target (if available).
observed TEL-URL	C	TEL URL of the interception target (if available).
event type	M	Provide IMS event type.
event date	M	Provide the date and time the event is detected.
event time		
network identifier	M	Shall be provided.
lawful intercept identifier	M	Shall be provided.
correlation number	C	If available and not included in the SIP-message
SIP message	M	The relevant SIP message

********* Next Modification *********

B.3 Intercept related information (HI2)

Declaration of ROSE operation umts-sending-of-IRI is ROSE delivery mechanism specific. When using FTP delivery mechanism, data UmtsIRIsContent must be considered.

ASN1 description of IRI (HI2 interface)

```
UmtsHI2Operations {itu-t(0) identified-organization(4) etsi(0) securityDomain(2) lawfulintercept(2)
threeGPP(4) hi2(1) version-2(2)}

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

IMPORTS

        OPERATION,
        ERROR
            FROM Remote-Operations-Information-Objects
            {joint-iso-itu-t(2) remote-operations(4) informationObjects(5) version1(0)}

        LawfulInterceptionIdentifier,
        TimeStamp,
        Network-Identifier,
        National-Parameters,
        DataNodeAddress,
        IPAddress,
        IP-value,
        X25Address
```

... OMITTED UNCHANGED ASN.1 FOR EASE OF READING THIS CR ...

```
PartyInformation            ::= SEQUENCE
{
    party-Qualifier     [0]  ENUMERATED
    {
        gPRS-Target(3),
        ...
    },
    partyIdentity       [1] SEQUENCE
    {
        imei                    [1] OCTET STRING (SIZE (8)) OPTIONAL,
            -- See MAP format [4]

        imsi                    [3] OCTET STRING (SIZE (3..8)) OPTIONAL,
            -- See MAP format [4] International Mobile
            -- Station Identity E.212 number beginning with Mobile Country Code

        msISDN                  [6] OCTET STRING (SIZE (1..9)) OPTIONAL,
            -- MSISDN of the target, encoded in the same format as the AddressString
            -- parameters defined in MAP format document ref [4], § 14.7.8

        e164-Format             [7] OCTET STRING    (SIZE (1 .. 25)) OPTIONAL,
            -- E164 address of the node in international format. Coded in the same format as
            -- the calling party number  parameter of the ISUP (parameter part:[5])

        sip-url                 [8] OCTET STRING    OPTIONAL,
            -- See [26]RFC 2543

        ...,
        tel-url                 [9] OCTET STRING    OPTIONAL,
            -- See [36]
    },

    services-Data-Information   [4] Services-Data-Information OPTIONAL,
        -- This parameter is used to transmit all the information concerning the
        -- complementary information associated to the basic data call
    ...
}
```