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Technical Specification

**Lawful Interception (LI);
Handover Interface and
Service-Specific Details (SSD) for IP delivery;
Part 7: Service-specific details for Mobile Services**

ETSI

Reference

DTS/LI-00042-7

Keywords

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Lawful Interception (LI).

The present document is part 6 of a multi-part deliverable. Full details of the entire series can be found in TS 102 232 part 1 [2].

Introduction

The TS 102 232 series of standards aims to provide a common delivery interface for lawfully-intercepted material from a wide range of services. The aim of the present document is to increase the range of services to which the TS 102 232 interface applies, by including services from 3GPP TS 33.108 [3] within the TS 102 232 delivery framework.

1 Scope

The present document specifies an approach for the handover of the lawfully-intercepted information that is defined in 3GPPP TS 33.108 [3]. The present document uses the handover techniques defined in TS 102 232-1 [2]. In this way, the present document allows additional services to be delivered through a common interface.

Specifically, the scope of the present document includes the handover of lawfully-intercepted information from the following parts of 3GPP TS 33.108 [3]:

- IRI from the mobile circuit-switched domain (3GPP TS 33.108 [3] clause 5) . CC from the mobile circuit-switched domain is not covered by the present document.

- IRI and CC from the mobile packet-switched domain (3GPP TS 33.108 [3] clause 6).

- IRI and CC from the multi-media domain (3GPP TS 33.108 [3] clause 7).

The present document does not override or supersede any specifications or requirements in 3GPP TS 33.108 [3].

2 References

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- For a specific reference, subsequent revisions do not apply.

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NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] ETSI TS 101 671: "Lawful Interception (LI); Handover interface for the lawful interception of telecommunications traffic".

NOTE: Periodically TS 101 671 is published as ES 201 671. A reference to the latest version of the TS as above reflects the latest stable content from ETSI/TC LI.

[2] ETSI TS 102 232-1: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 1: Handover specification for IP delivery".

[3]   ETSI TS 133 108: "Universal Mobile Telecommunications System (UMTS); 3G security; Handover interface for Lawful Interception (LI)" (3GPP TS 33.108).

2.2   Informative references

Not applicable.

3   Definitions and abbreviations

3.1   Definitions

For the purposes of the present document, the terms and definitions given in TS 102 232-1 [2] and TS 101 671 [1] apply.

3.2   Abbreviations

For the purposes of the present document, the following abbreviations apply:

ASN.1	Abstract Syntax Notation One
CC	Content of Communication
CIN	Communications Identity Number
CSP	Communications Service Provider

NOTE: CSP covers all Access Providers, Network Operators and Service Providers.

IP	Internet Protocol
IRI	Intercept Related Information
LEMF	Law Enforcement Monitoring Facility
LI	Lawful Interception
MF	Mediation Function (at CSP)
PDU	Protocol Data Unit
PS	Packet Switched
uLIC	UMTS LI Correclation
UMTS	Universal Mobile Telecommunication System

4   General

4.1   Approach

The present document forms part 7 of the TS 102 232 family of standards, in that it is a service-specific component of the TS 102 232-1 [2] framework.

3GPP TS 33.108 [3] defines the interception behaviour that leads to IRI events on the handover interface, for both the packet data domain and circuit switched domain.
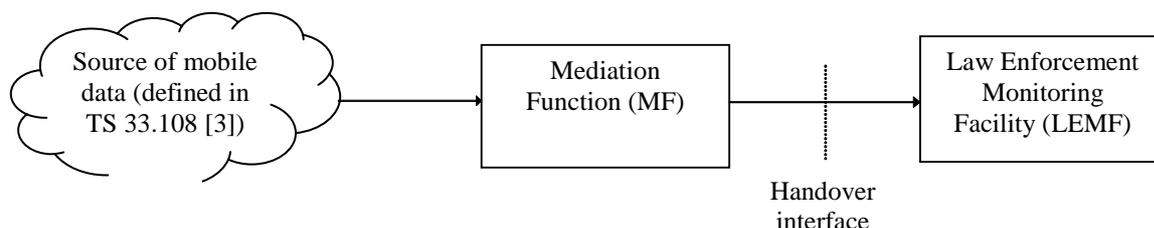
4.2   Reference model

Figure 1: Reference model

5   Headers, data exchange and networks

5.1   Approach

TS 102 232-1 [2] describes a technique for data exchange, and specifies the headers that shall be associated with the results of interception. The present document follows TS 102 232-1 [2] regarding headers, data exchange and networks demonstrates how the header fields in TS 102 232-1 [2] can be populated in a direct and straightforward manner using the interception information available in 3GPP TS 33.108 [3].

5.2   Structures

IRI events from 3GPP TS 33.108 [3], for both circuit and packet switched services, are sent using the uMTSIRI element of IRIContents.

CC from packet switched services are sent using the uMTSCC element CCContents, which is an OCTET STRING.

6   Intercept Related Information (IRI) and Content of Communication (CC)

6.1   Definition of IRI events and CC

IRI events are defined as per 3GPP TS 33.108 [3].

6.2   IRI format

IRI events are defined as per 3GPP TS 33.108 [3] for both circuit and packet switched services. They are sent using the uMTSIRI element of IRIContents.

Fields which are duplicated in the 3GPP TS 33.108 [3] and TS 102 232-1 [2] structures should be populated consistently in both structures. Annex A.1 gives guidance on mapping between 3GPP TS 33.108 [3] elements and TS 102 232-1 [2] elements for IRI.

6.3   CC format

CC from packet switched services are sent using the uMTSCC element CCContents, which is an OCTET STRING. The OCTET STRING will be as defined in the payload element of the CC-PDU structure in 3GPP TS 33.108 [3] clause B.4.

The information in the uLIC-header element of CC-PDU will be used to populate the header information in the LI-PS-PDU structure of TS 102 232-1 [2]. Clause A.1 gives guidance on the mapping between these elements.

Annex A (normative):
ASN.1 for IRI and CC

A.1   Note on integrating ASN.1 structures

A.1.1   Header field mappings

Table A.1 shows how elements of the TS 102 232-1 [2] PSHeader structure should be populated from information in the 3GPP TS 33.108 [3] IRI-Parameters structure.

Table A.1: 3GPP TS 33.108 [3] to TS 102 232-1 [2] PSHeader mapping

TS 102 232-1 PSHeader element	Source from 3GPP TS 33.108
lawfulInterceptionIdentifier	Copied directly from IRI-Parameters.lawfulInterceptionIdentifier
authorizationCountryCode	Supplied directly by the MF
communicationIdentifier	See below for individual elements
networkIdentifier	See below for individual elements
operatorIdentifier	Copied directly from IRI-Parameters.networkIdentifier.operatorIdentifier
eTSI671NEID	Copied directly from IRI-Parameters.networkIdentifier.Network-Element-Identifier
communicationIdentityNumber	See clause A.1.2
deliveryCountryCode	Supplied directly by the MF
sequenceNumber	Supplied directly by the MF
timeStamp	Copied from IRI-Parameters.timeStamp. This requires a conversion from HI2Operations.TimeStamp to GeneralizedTime

Table A.2 shows how elements of the TS 102 232-1 [2] IRIPayload structure should be populated from information in the 3GPP TS 33.108 [3] structures.

Table A.2: 3GPP TS 33.108 [3] to TS 102 232-1 [2] IRIPayload mapping

TS 102 232-1 IRIPayload element	Source from 3GPP TS 33.108
iRIType	Inferred from UMTSIriContent
timeStamp	Copied from IRI-Parameters.timeStamp (assuming no aggregation of PDUs) This requires a conversion from HI2Operations.TimeStamp to GeneralizedTime
iRIContents	See below for individual elements
uMTSIRI	See below for individual elements
iRI-Parameters	Copied directly from IRI-Parameters, if handing over packet domain IRI
iRI-CS-Parameters	Copied directly from IRI-Parameters, if handing over circuit switched IRI

Table A.3 shows how elements of the TS 102 232-1 [2] PSHeader structure should be populated from information in the 3GPP TS 33.108 [3] CC-PDU structure.

Table A.3: 3GPP TS 33.108 [3] to TS 102 232-1 [2] PSHeader mapping

TS 102 232-1 [2] PSHeader element	Source from 3GPP TS 33.108
lawfulInterceptionIdentifier	Copied from CC-PDU.uLIC-header.lIID
authorizationCountryCode	Supplied directly by the MF.
communicationIdentifier	See below for individual elements
networkIdentifier	See below for individual elements
operatorIdentifier	Supplied directly by the MF (see 3GPP TS 33.108 [2] clause 5.2.4)
eTSI671NEID	Supplied directly by the MF (see 3GPP TS 33.108 [2] clause 5.2.4)
communicationIdentityNumber	See clause A.1.2
deliveryCountryCode	Supplied directly by the MF
sequenceNumber	Supplied directly by the MF
timeStamp	Copied from CC-PDU.uLIC-header.timeStamp This requires a conversion from HI2Operations.TimeStamp to GeneralizedTime

Table A.4 shows how elements of the TS 102 232-1 [2] CCPayload structure should be populated from information in the 3GPP TS 33.108 [3] structures

Table A.4: 3GPP TS 33.108 [3] to TS 102 232-1 [2] CCPayload mapping

TS 102 232-1 CCPayload element	Source from 3GPP TS 33.108
payloadDirection	Copied from CC-PDU.uLIC-header.t-PDU-direction This requires a trivial translation between TPDU-direction and PayloadDirection enumerated types
timeStamp	Copied from CC-PDU.uLIC-header.timeStamp This requires a conversion from HI2Operations.TimeStamp to GeneralizedTime
ccContents	See below for individual elements
uMTSCC	Bytes copied from CC-PDU.payload

A.1.2   CIN allocation

CIN allocation follows TS 102 232-1 [2] clause 5.2.4. The CIN extension field may be used, if required, using the CorrelationValues field as described in 3GPP TS 33.108 [3].

Annex B (informative):
Change request history

Status of the present document: TS 102 232-7 Service-specific details for Mobile Services		
Date	**Version**	**Remarks**
January 2008	2.1.1	First publication of the TS after approval by ETSI/TC LI#17 (22-24 January 2008, Como)
Rapporteur of the present document is Chris White (GTEN)		

History

Document history		
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