SLOVENSKI STANDARD
SIST-TS ETSI/TS 102 232-5 V3.20.1:2024

01-julij-2024

Zakonito prestrezanje (LI) - Izročilni vmesnik in storitveno specifične podrobnosti (SSD) za dostavo vsebin IP - 5. del: Storitveno specifične podrobnosti za večpredstavnostne storitve IP

Lawful Interception (LI) - Handover Interface and Service-Specific Details (SSD) for IP delivery - Part 5: Service-specific details for IP Multimedia services

Ta slovenski standard je istoveten z: **ETSI TS 102 232-5 V3.20.1 (2024-03)**

ICS:

35.240.95 Spletne uporabniške rešitve Internet applications

SIST-TS ETSI/TS 102 232-5 V3.20.1:2024 en

ETSI TS 102 232-5 V3.20.1 (2024-03)

Lawful Interception (LI);
Handover Interface and
Service-Specific Details (SSD) for IP delivery;
Part 5: Service-specific details for IP Multimedia services

Reference

RTS/LI-00255-5

Keywords

IMS, IP, lawful interception, security

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Sous-Préfecture de Grasse (06) N° w061004871

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Foreword

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

The present document is part 5 of a multi-part deliverable. Full details of the entire series can be found in part 1 [2].

The ASN.1 module is available as an electronic attachment to the present document (see clause 7 for details).

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Introduction

The present document focuses on Lawful Interception of IP Multimedia Services. It is to be used in conjunction with ETSI TS 102 232-1 [2], in which the handling of the intercepted information is described.

1 Scope

The present document specifies interception of Internet Protocol (IP) Multimedia (MM) Services based on the Session Initiation Protocol (SIP) and Realtime Transport Protocol (RTP) and Message Session Relay Protocol (MSRP) and IP MM services as described by the Recommendations ITU-T H.323 [6] and H.248-1 [i.3].

The present document is consistent with the definition of the Handover Interface, as described in ETSI TS 102 232-1 [2].

The present document does not override or supersede any specifications or requirements in 3GPP TS 33.108 [9] and ETSI TS 101 671 [1].

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at https://docbox.etsi.org/Reference.

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

The following referenced documents are necessary for the application of the present document.

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

NOTE: ETSI TS 101 671 is in status "historical" and is not maintained.

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

[4] IETF RFC 3261: "SIP: Session Initiation Protocol".

[5] IETF RFC 3550: "RTP: A Transport Protocol for Real-Time Applications".

[6] Recommendation ITU-T H.323: "Packet-based multimedia communications systems".

[7] Void.

[8] Void.

[9] ETSI TS 133 108: "Universal Mobile Telecommunications System (UMTS); LTE; Digital cellular telecommunications system (Phase 2+) (GSM); 3G security; Handover interface for Lawful Interception (LI) (3GPP TS 33.108)".

[10] ETSI TS 101 331: "Lawful Interception (LI); Requirements of Law Enforcement Agencies".

[11] ATIS-1000678.v4.2020: "Lawfully Authorized Electronic Surveillance (LAES) for Voice over Internet Protocol and Rich Communications Services Messaging in Wireline and Broadband Telecommunications Networks, Version 4".

[12] Recommendation ITU-T H.225.0: "Call signalling protocols and media stream packetization for packet-based multimedia communication systems".

[13] Recommendation ITU-T H.245: "Control protocol for multimedia communication".

[14] Void.

[15] IETF RFC 4975: "The Message Session Relay Protocol (MSRP)".

[16] Recommendation ITU-T T.38: "Procedures for real-time Group 3 facsimile communication over IP networks".

[17] IETF RFC 4825: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".

[18] ETSI TS 124 623: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Extensible Markup Language (XML) Configuration Access Protocol (XCAP) over the Ut interface for Manipulating Supplementary Services (3GPP TS 24.623)".

[19] IETF RFC 5322: "Internet Message Format".

[20] ISO 3166-1: "Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes".

[21] ETSI TS 123 038: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Alphabets and language-specific information (3GPP TS 23.038)".

[22] ETSI TS 123 040: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Technical realization of the Short Message Service (SMS) (3GPP TS 23.040)".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI TR 102 528: "Lawful Interception (LI); Interception domain Architecture for IP networks".

[i.2] ETSI TR 102 503: "Lawful Interception (LI); ASN.1 Object Identifiers in Lawful Interception and Retained data handling Specifications".

[i.3] Recommendation ITU-T H.248-1: "Gateway control protocol: Version 3".

NOTE: H.248 was renumbered when revised on 2002-03-29. H.248 main body, Annexes A to E and Appendix I were included in H.248.1. Subsequent annexes were sequentially numbered in the series, e.g. H.248 Annex F became H.248.2.

3 Definition of terms, symbols and abbreviations

3.1 Terms

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

context: logical collection of H.248 terminations

IP MultiMedia service: multimedia service that utilizes the Internet Protocol (IP) for the transport of data

MultiMedia (MM): use of computers to present text, graphics, video, animation and sound in an integrated way

MultiMedia service: communication service that offers Multimedia communication to end-users

termination: entity in H.248 that acts as a source or sink of media

NOTE: Terminations may be physical, such as a given channel on a TDM line, or ephemeral, such as an IP endpoint.

TSAP identifier: piece of information used to multiplex several transport connections of the same type on a single H.323 entity with all transport connections sharing the same Network Address (e.g. the port number in a TCP/UDP/IP environment)

NOTE: Transport layer Service Access Point (TSAP) identifiers may be (pre)assigned statically by some international authority or may be allocated dynamically during the setup of a call. Dynamically assigned TSAP identifiers are of transient nature, i.e. their values are only valid for the duration of a single call.

3.2 Symbols

Void.

3.3 Abbreviations

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

AF	Administration Function
ASN.1	Abstract Syntax Notation One
CC	Content of Communication
CCCI	Content of Communication Control Interface
CC IIF	CC Internal Interception Function
CCTF	Content of Communication Trigger Function
CCTI	Content of Communication Trigger Interface
CID	Communication IDentifier
CIN	Communication Identity Number
CLI	Calling Line Identity
CSP	Communications Service Provider

NOTE: Covers all AP/NWO/SvP.

DTMF	Dual Tone Multi Frequency
FFS	For Further Study
GSM	Global System for Mobile
GW	GateWay
HI1	Handover Interface 1 (for Administrative Information)
HI2	Handover Interface 2 (for Intercept Related Information)
HI3	Handover Interface 3 (for Content of Communication)
HTTP	Hyper Text Transfer Protocol
ID	IDentity
IF	Interception Function
IIF	Internal Interception Function
IMEI	International Mobile Equipment Identity
IMPI	IMS Private Identity
IMPU	IMS PUblic identity
IMS	IP Multimedia Subsystem
IMSI	International Mobile Station Identity
INI	Internal Network Interface
IP	Internet Protocol
IRI	Intercept Related Information
IRI IIF	IRI Internal Interception Function
LEA	Law Enforcement Agency

LEMF	Law Enforcement Monitoring Facility
LI	Lawful Interception
LIAF	Lawful Interception Administration Function
LIID	Lawful Interception IDentifier
MF	Mediation Function
MG	Media Gateway
MGC	Media Gateway Controller
MM	MultiMedia
MSRP	Message Session Relay Protocol
NNI	Network-to-Network Interface
OID	Object IDentifier
PDU	Protocol Data Unit
RAS	Registration, Administration and Status
RP	Relay Protocol
RTCP	RTP Control Protocol
RTP	Realtime Transport Protocol
SDP	Session Description Protocol
SIP	Session Initiation Protocol
SMS	Short Message Service
SSD	Service-Specific Details
SvP	Service Provider
TCP	Transmission Control Protocol
TDM	Time Division Multiplex
TP	Transfer Protocol
TPDU	Transaction Protocol Data Unit
TSAP	Transport layer Service Access Point
UDP	User Datagram Protocol
UDPTL	Facsimile UDP Transport Layer (protocol)
UE	User Equipment
UNI	User-Network Interface
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
VoIP	Voice over IP
XCAP	eXtensible Markup Language (XML) Configuration Access Protocol

4 General

4.1 Reference Model for Lawful Interception

The present document adopts the generic reference model for the interception domain from ETSI TR 102 528 [i.1], its internal intercept functions, Intercept Related Information Internal Interception Function (IRI IIF), Content of Communication Trigger Function (CCTF), and Content of Communication Internal Interception Function (CC IIF), and the Internal Network Interfaces INI1, INI2, INI3, Content of Communication Trigger Interface (CCTI) and Content of Communication Control Interface (CCCI) as shown in figure 1.