

ETSI TS 102 657 V2.1.1 (2023-08)



**Lawful Interception (LI);
Retained data handling;
Handover interface for the request and
delivery of retained data**

[ETSI TS 102 657 V2.1.1 \(2023-08\)](https://standards.iteh.ai/catalog/standards/sist/2fd76165-5f17-4103-9b10-19987f7af550/etsi-ts-102-657-v2-1-1-2023-08)

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Reference

RTS/LI-00243

Keywords

handover, retention

ETSI

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Foreword

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

The ASN.1 module and XML schema are available as an electronic attachment to the present document (see details in clause A.3.1.2).

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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1 Scope

The present document is based on requirements from ETSI TS 102 656 [2].

The present document contains handover requirements and a handover specification for the data that is identified in national legislations on Retained Data.

The present document considers both the requesting of retained data and the delivery of the results.

The present document defines an electronic interface. An informative annex describes how this interface may be adapted for manual techniques. Apart from in annex I, the present document does not consider manual techniques.

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.

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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.

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

- [1] Void.
- [2] [ETSI TS 102 656](#): "Lawful Interception (LI); Retained Data; Requirements of Law Enforcement Agencies for handling Retained Data".
- [3] [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".
- [4] [ISO 3166-1](#): "Codes for the representation of names of countries and their subdivisions -- Part 1: Country code".
- [5] [ISO 4217](#): "Codes for the representation of currencies".
- [6] [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.

- [7] [ETSI EN 300 356 \(all parts\)](#): "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface".
- [8] [ETSI TS 100 974](#): "Digital cellular telecommunications system (Phase 2+); Mobile Application Part (MAP) specification (3GPP TS 09.02)".
- [9] [ETSI TS 124 008](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Mobile radio interface Layer 3 specification; Core network protocols; Stage 3 (3GPP TS 24.008)".
- [10] Void.
- [11] [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)".

- [12] [ETSI TS 101 109 \(V7.2.0\)](#): "Digital cellular telecommunications system (Phase 2+); Universal Geographical Area Description (GAD) (3GPP TS 03.32 version 7.2.0 Release 1998)".
- [13] [FIPS PUB 186-5](#): "Digital Signature Standard (DSS)".
- [14] [IETF RFC 7230](#): "Hypertext Transfer Protocol (HTTP/1.1): Message Syntax and Routing".
- [15] [IETF RFC 2818](#): "HTTP Over TLS".
- [16] [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)".
- [17] [IETF RFC 793](#): "Transmission Control Protocol".
- [18] [IETF RFC 5681](#): "TCP Congestion Control".

NOTE: IETF RFC 5681 obsoletes IETF RFC 2581: "TCP Congestion Control".

- [19] [IETF RFC 6298](#): "Computing TCP's Retransmission Timer".

NOTE: IETF RFC 6298 obsoletes IETF RFC 2988: "Computing TCP's Retransmission Timer".

- [20] [IETF RFC 1122](#): "Requirements for Internet Hosts - Communication Layers".
- [21] [IETF RFC 791](#): "Internet Protocol".
- [22] [ETSI ES 282 002](#): "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN Emulation Sub-system (PES); Functional architecture".

- [23] Void.

- [24] [IETF RFC 5322](#): "Internet Message Format".

NOTE: IETF RFC 5322 obsoletes IETF RFC 2822: "Internet Message Format".

- [25] [ETSI TS 123 228](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Subsystem (IMS); Stage 2 (3GPP TS 23.228)".
- [26] [IETF RFC 3261](#): "SIP: Session Initiation Protocol".
- [27] [IETF RFC 4506](#): "XDR: External Data Representation Standard".
- [28] [ISO 13616-1:2020](#): "Financial services -- International Bank Account Number (IBAN) -- Part 1: Structure of the IBAN".

NOTE: Used in the attached ASN.1 or XSD documents available in ts_102657v020101p0.zip.

- [29] [ISO 9362:2022](#): "Banking -- Banking Telecommunication Messages -- Business Identifier Code (BIC)".

NOTE: Used in the attached ASN.1 or XSD documents available in ts_102657v020101p0.zip.

- [30] Void.

- [31] [ETSI TS 125 413](#): "Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface Radio Access Network Application Part (RANAP) signalling (3GPP TS 25.413)".

- [32] [ETSI TS 129 274](#): "Universal Mobile Telecommunications System (UMTS); LTE; 5G; 3GPP Evolved Packet System (EPS); Evolved General Packet Radio Service (GPRS) Tunnelling Protocol for Control plane (GTPv2-C); Stage 3 (3GPP TS 29.274)".

- [33] [ETSI TS 129 061](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN) (3GPP TS 29.061)".
- [34] [ETSI TS 129 118](#): "Universal Mobile Telecommunications System (UMTS); LTE; Mobility Management Entity (MME) - Visitor Location Register (VLR) SGs interface specification (3GPP TS 29.118)".
- [35] [ETSI TS 123 272](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Circuit Switched (CS) fallback in Evolved Packet System (EPS); Stage 2 (3GPP TS 23.272)".
- [36] [ETSI TS 133 234](#): "Universal Mobile Telecommunications System (UMTS); LTE; 3G security; Wireless Local Area Network (WLAN) interworking security (3GPP TS 33.234)".
- NOTE: Used in the attached ASN.1 or XSD documents available in ts_102657v020101p0.zip.
- [37] [W3C® Recommendation 21 March 2017](#): "XML Path Language (XPath) 3.1".
- [38] [ETSI TS 123 008](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Organization of subscriber data (3GPP TS 23.008)".
- [39] [ETSI TS 124 229](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229)".
- [40] Void.
- [41] [ETSI TS 123 003](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Numbering, addressing and identification (3GPP TS 23.003)".
- [42] [ETSI TS 138 413](#): "5G; NG-RAN; NG Application Protocol (NGAP) (3GPP TS 38.413)".
- NOTE: Used in the attached ASN.1 or XSD documents available in ts_102657v020101p0.zip.
- [43] [ETSI TS 129 571](#): "5G; 5G System; Common Data Types for Service Based Interfaces; Stage 3 (3GPP TS 29.571)".
- [44] [ETSI TS 136 413](#): "LTE; Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP) (3GPP TS 36.413)".
- [45] [ETSI TS 123 501](#): "5G; System architecture for the 5G System (5GS) (3GPP TS 23.501)".
- [46] [ETSI TS 132 291](#): "5G; Telecommunication management; Charging management; 5G system, charging service; Stage 3 (3GPP TS 32.291)".
- [47] [ETSI TS 132 255](#): "5G; Telecommunication management; Charging management; 5G data connectivity domain charging; Stage 2 (3GPP TS 32.255)".
- [48] [ETSI TS 129 520](#): "5G; 5G System; Network Data Analytics Services; Stage 3 (3GPP TS 29.520)".
- [49] [ETSI TS 132 251](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Telecommunication management; Charging management; Packet Switched (PS) domain charging (3GPP TS 32.251)".
- [50] [ETSI TS 137 340](#): "Universal Mobile Telecommunications System (UMTS); LTE; 5G; NR; Multi-connectivity; Overall description; Stage-2 (3GPP TS 37.340)".
- [51] [Recommendation ITU-T Q.850](#): "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN user part".

[52] [Recommendation ITU-T E.164](#): "The international public telecommunication numbering plan".

[53] [GSMA SGP.02](#): "Remote Provisioning Architecture for Embedded UICC Technical Specification".

NOTE: Used in the attached ASN.1 or XSD documents available in ts_102657v020101p0.zip.

[54] [Recommendation ITU-T G.984.1](#): "Gigabit-capable passive optical networks (GPON): General characteristics".

NOTE: Used in the attached ASN.1 or XSD documents available in ts_102657v020101p0.zip.

[55] [IETF RFC 7315](#): "Private Header (P-Header) Extensions to the Session Initiation Protocol (SIP) for the 3GPP".

[56] [ETSI TS 123 558](#): "5G; Architecture for enabling Edge Applications (3GPP TS 23.558)".

[57] [ISO 24165-2](#): "Digital token identifier (DTI) Registration, assignment and structure -- Part 2: Data elements for registration".

[58] [ISO/IEC 10646](#): "Information technology -- Universal coded character set (UCS)".

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.

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

Not applicable. <https://standards.iteh.ai/catalog/standards/sist/2fd76165-5f17-4103-9b10-19987f7af550/etsi-ts-102-657-v2-1-1-2023-08>

3 Definition of terms, symbols and abbreviations

3.1 Terms

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

Authorized Organization (AO): any authority legally authorized to request or receive retained data e.g. a Law Enforcement Agency

Handover Interface A (HI-A): administrative handover interface comprising requests for information and their responses

Handover Interface B (HI-B): data handover interface comprising the retained data transmission of information

issuing authority: any entity possessing the necessary jurisdiction and authority pursuant to law to compel a service provider to deliver retained subscriber information or traffic data specified in a query

lawful authorization: permission granted to an Authorized Organization under certain conditions to request specified telecommunications retained data and requiring co-operation from a network operator/service provider/access provider

NOTE: Typically, this refers to a warrant or order issued by a lawfully authorized body.

location information: information relating to the geographic, physical or logical location of an identity relating to an interception subject

number: any address (E.164, IP, email, URI) used for routing in a network or in a service on a user level or network/service level

receiving authority: any entity possessing the necessary authority pursuant to law and the technical means to receive retained subscriber information or traffic data delivered by a service provider

request: legal requirement for a Communications Service Provider (CSP) to disclose retained data in accordance with relevant national law

response to request of information: response from the CSP to the authorized organization acknowledging or rejecting a request for information

retained data record: set of data elements for a specific subscriber/user related to a specific service transaction

service transaction: instance of a service given by a CSP to a subscriber/user

service transaction record: set of data elements describing a service transaction (details to be determined)

transmission of information: transmission of retained data from the CSP to the receiving authority

3.2 Symbols

Void.

3.3 Abbreviations

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

NOTE: Some abbreviations are only used in the ASN.1 or XSD documents available in ts_102657v020101p0.zip.

3GPP	3 rd Generation Partnership Project
5G	5 th Generation
5GS	5G System
ACID	Application Client ID
ACK	ACKnowledge
ADSL	Asymmetric Digital Subscriber Line
AMF	Access and Mobility management Function
AMFID	AMF IDentifier
AO	Authorized Organization
APN	Access Point Name
ASCII	American Standard Code for Information Interchange
ASN	Abstract Syntax Notation
ASP	Application Service Provider
BER	Basic Encoding Rules
BIC	Business Identifier Code
CAN	Connectivity Access Network
CellID	Cell Identification
CGI	Cell Global Identity
CHF	CHarging Function
CPE	Customer Premises Equipment
CPU	Central Processing Unit
CR	Change Request
CS	Circuit Switched
CSP	Communications Service Provider
CSPID	CSP IDentifier
DNN	Data Network Name
DR	Data Retention
DSA	Digital Signature Algorithm
DSL	Digital Subscriber Line
DSS	Digital Signature Standard
DVD	Digital Versatile Disc or Digital Video Disc
EAS	Edge Application Server

eCGI	e-UTRAN Cell Global ID
ECSP	Edge Computing Service Provider
EECID	Edge Enabler Client ID
EID	Embedded (UICC) Identifier
EMS	Enhanced Messaging Service
EN-DC	E-UTRA-NR Dual Connectivity
EPC	Enhanced Packet Core
EPS	Evolved Packet System
eUICC	embedded UICC
eUTRAN	Evolved UMTS Terrestrial Radio Access Network
FIPS	Federal Information Processing Standard
GCI	Global Cable Identifier
GGSN	Gateway GPRS Support Node
GLI	Global Line Identifier
GPRS	General Packet Radio Service
GPSI	Generic Public Subscription Identifier
GSM	Global System for Mobile communications
GW	GateWay
HI	Handover Interface
HI-A	Handover Interface A
HI-B	Handover Interface B
HTTP	HyperText Transfer Protocol
HTTPS	HyperText Transfer Protocol over Secure Socket Layer
IANA	Internet Assigned Numbers Authority
IBAN	International Banking Account Number
ICCID	Integrated Circuit Card ID
ID	Identifier
IE	Information Element
IEI	Information Element Identifier
IMAP	Internet Message Access Protocol
IMEI	International Mobile Equipment Identity
IMEISV	IMEI Software Version
IMPI	IP Multimedia Private Identity
IMS	IP Multimedia Subsystem
IMSI	International Mobile Subscriber Identity
IOI	Inter Operator Identifiers
IP	Internet Protocol
IPSec	Internet Protocol Security
IPv4	Internet Protocol (version 4)
IPv6	Internet Protocol (version 6)
IRI	Intercept Related Information
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
ISUP	ISDN User Part
LAN	Local Area Network
LTE	3GPP Long Term Evolution (4G)
MAC	Media Access Control
MCC	Mobile Country Code
ME	Mobile Equipment
MF-B	Mediation Function B
MME	Mobility Management Entity
MMS	Multimedia Messaging Service
MNC	Mobile Network Code
MoIP	Multimedia over IP
MS	Mobile Station
MSC	Mobile Switching Centre
MSISDN	Mobile Subscriber ISDN number
MSN	Multiple Subscriber Number
N3IWF	Non 3GPP InterWorking Function
NA	Network Access
NAI	Network Access Identifier
NAS	Network Access Server