

# ETSI TS 102 657 V2.4.1 (2024-07)



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

[ETSI TS 102 657 V2.4.1 \(2024-07\)](https://standards.iteh.ai/catalog/standards/etsi/4b194f3f-896f-4e9a-ad6b-5c5ab0afb3b6/etsi-ts-102-657-v2-4-1-2024-07)

<https://standards.iteh.ai/catalog/standards/etsi/4b194f3f-896f-4e9a-ad6b-5c5ab0afb3b6/etsi-ts-102-657-v2-4-1-2024-07>



---

**Reference**

RTS/LI-00263

---

**Keywords**

handover, retention

**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

---

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° w061004871

---

**Important notice**

The present document can be downloaded from the  
ETSI [Search & Browse Standards application](#).

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#).

Users should be aware that the present document may be revised or have its status changed,  
this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to  
the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our  
[Coordinated Vulnerability Disclosure \(CVD\)](#) program.

---

**Notice of disclaimer & limitation of liability**

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

---

**Copyright Notification**

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2024.  
All rights reserved.

# Contents

Intellectual Property Rights .....	9
Foreword.....	9
Modal verbs terminology.....	9
1 Scope .....	10
2 References .....	10
2.1 Normative references .....	10
2.2 Informative references.....	13
3 Definition of terms, symbols and abbreviations.....	13
3.1 Terms.....	13
3.2 Symbols.....	14
3.3 Abbreviations .....	14
4 Overview of handover interface .....	17
4.1 Reference model.....	17
4.2 Structure of document and applicable communication domains .....	18
4.3 Categories of retained data .....	19
4.4 Handover Interface port 1 (HI-A) and Handover Interface port 2 (HI-B).....	20
4.5 Model used for the RDHI.....	20
5 Handover interface message flows.....	20
5.1 Overview .....	20
5.1.1 Summary of this clause.....	20
5.1.2 Message flow modes.....	21
5.1.3 Delivery cases.....	21
5.1.4 "Active" requests and "closed" requests .....	21
5.1.5 Errors and failure situations.....	21
5.1.5.1 Error and failure types.....	21
5.1.5.2 Request process failure feedback .....	22
5.1.5.3 Other errors .....	22
5.1.5.4 Missing messages.....	22
5.1.6 Cancelling a request.....	23
5.1.7 Delivery of results.....	23
5.1.8 State diagram .....	24
5.1.9 Supplementary Messages.....	25
5.2 Message flows for general situation .....	25
5.2.1 Delivery of a response .....	25
5.2.2 Cancellation of request .....	26
5.2.3 Multi-part delivery .....	27
5.3 Message flows for Authorized-Organization-initiated scenario.....	28
5.3.1 Delivery of results or a failure response .....	28
5.3.2 Cancellation of request .....	29
5.3.3 Multi-part delivery.....	29
5.4 Message types for HI-A and HI-B.....	31
5.5 HI-A and HI-B addressing.....	32
6 Definition of the elements for retained data messages .....	32
6.1 Header information.....	32
6.1.1 Use of header information .....	32
6.1.2 RequestID field specification.....	32
6.1.3 CSP Identifiers.....	33
6.1.3.1 Use of CSP Identifiers (CSPID).....	33
6.1.3.2 Third Party CSP Identifier (thirdPartyCSPID).....	33
6.1.4 Timestamp (timeStamp) .....	33
6.1.5 RequestType (requestType).....	33
6.1.6 RequestFlag (requestFlag) .....	33

6.2	Retained Data response .....	33
6.2.1	General.....	33
6.2.2	Additional information in response messages.....	34
6.2.2.1	Record number (recordNumber) .....	34
6.2.2.2	Response status (ResponseStatus).....	34
6.2.3	Volatile information.....	34
6.2.4	Unavailable parameters.....	34
6.3	Retained Data requests .....	35
6.3.1	Information contained within a request .....	35
6.3.2	Format of a request .....	35
6.3.3	Additional information in requests .....	36
6.3.3.1	Priority of a request.....	36
6.3.3.2	Maximum hits .....	36
6.3.3.3	Maximum records per batch.....	36
6.3.3.4	Number of records limit.....	37
6.4	Error messages .....	37
7	Data exchange techniques .....	37
7.1	General .....	37
7.2	HTTP data exchange .....	37
7.2.1	Basic configuration .....	37
7.2.2	Single client/server .....	38
7.2.3	Mutual client/server .....	38
7.2.4	Details common to both single and mutual cases .....	38
7.3	Direct TCP data exchange.....	38
7.3.0	General.....	38
7.3.1	Application layer .....	39
7.3.2	Transport layer.....	39
7.3.2.1	Introduction.....	39
7.3.2.2	TCP settings .....	39
7.3.3	Network layer .....	39
7.3.4	Delivery networks.....	39
8	Security Measures .....	40
8.1	General .....	40
8.2	Connection Level Security .....	40
8.3	Application Level Security .....	40
8.4	Technical Security Measures.....	41
8.4.1	General.....	41
8.4.2	Connection Level.....	41
8.4.3	Application Level .....	41
8.4.3.1	Hashes .....	41
8.4.3.2	Digital Signatures.....	41
8.4.3.3	HI-B Non-Repudiation.....	41
8.4.3.4	Digital Signatures and Message Structure.....	42
<b>Annex A (normative): Data fields .....</b>		<b>43</b>
A.1	Summary .....	43
A.1.1	Introduction to data fields.....	43
A.1.2	Choice of data modelling language .....	43
A.1.3	Overview .....	43
A.1.4	Backwards Compatibility .....	44
A.2	Parameter definition for common fields.....	44
A.2.1	RetainedDataHeader.....	44
A.2.1.1	Parameters.....	44
A.2.1.2	RequestID parameters.....	44
A.2.2	RetainedDataPayload .....	44
A.2.2.1	RequestMessage parameters .....	44
A.2.2.2	RequestAcknowledgement parameters .....	45
A.2.2.3	ResponseMessage parameters.....	45
A.2.2.4	GetStatusMessage parameters .....	45

A.2.2.5	StatusMessage parameters .....	46
A.2.2.6	ErrorMessage parameters .....	46
A.2.3	GenericSubscriberInfo .....	46
A.2.3.1	Parameters .....	46
A.2.3.2	OrganizationInfo parameters .....	46
A.2.3.3	IndividualInfo parameters .....	47
A.2.3.4	ContractInformation parameters .....	48
A.2.4	PaymentDetails .....	48
A.3	ASN.1 definitions .....	48
A.3.1	General .....	48
A.3.1.1	ASN.1 syntax tree .....	48
A.3.1.2	General remarks on ASN.1 .....	49
A.3.2	ASN.1 Definitions for message headers .....	49
A.3.2.1	Message wrappers .....	49
A.3.2.2	Message headers .....	49
A.3.3	ASN.1 definitions for common fields .....	49
A.3.4	Void .....	49
<b>Annex B (normative): Service-specific details for telephony services .....</b>		<b>50</b>
B.1	Scope .....	50
B.2	Telephony fields .....	50
B.2.1	General .....	50
B.2.2	Telephony Subscriber .....	50
B.2.2.0	General .....	50
B.2.2.1	subscriber ID .....	50
B.2.2.2	genericSubscriberInfo .....	51
B.2.2.3	telephonySubscriberInfo .....	51
B.2.2.4	subscribedTelephonyServices .....	51
B.2.2.4.1	Description .....	51
B.2.3	Telephony Billing Details .....	52
B.2.3.0	General .....	52
B.2.3.1	BillingRecords .....	52
B.2.4	TelephonyServiceUsage .....	53
B.2.4.1	Parameters .....	53
B.2.4.2	PartyInformation .....	53
B.2.4.3	SMSInformation .....	54
B.2.4.4	MmsInformation .....	54
B.2.5	TelephonyDevice .....	55
B.2.5.1	General .....	55
B.2.6	TelephonyNetworkElement .....	55
B.2.6.1	General .....	55
B.2.6.2	Location parameters .....	55
B.2.6.2.1	General .....	55
B.2.6.2.2	GSM Location Information .....	57
B.2.6.2.3	UMTS Location Information .....	57
B.2.6.2.4	Extended Location .....	57
B.2.6.3	TransmitterDetails parameters .....	58
B.2.6.3.1	General .....	58
B.3	ASN.1 definitions for telephony .....	58
B.4	Void .....	58
<b>Annex C (normative): Service-specific details for asynchronous message services .....</b>		<b>59</b>
C.1	Scope .....	59
C.2	Descriptions .....	59
C.2.1	General .....	59
C.2.2	MsgSubscriber .....	60
C.2.2.0	General .....	60
C.2.2.1	MsgSubscriberID .....	60

C.2.2.2	MsgStore.....	60
C.2.2.3	MsgStoreID.....	60
C.2.2.4	MsgAddress.....	60
C.2.2.5	MsgProviderID.....	61
C.2.2.6	MsgForwardingAddresses.....	61
C.2.2.7	MsgStoreSubscriberRelatedIDs.....	61
C.2.3	MsgServiceUsage.....	61
C.2.3.0	General.....	61
C.2.3.1	MsgTransmission.....	61
C.2.3.2	MsgStoreOperation.....	61
C.2.4	MsgBillingDetails parameters.....	62
C.2.4.0	General.....	62
C.2.4.1	MsgBillingRecords.....	62
C.3	ASN.1 definitions for asynchronous message services.....	63
C.4	Void.....	63
<b>Annex D (normative): Service-specific details for synchronous multi-media services .....</b>		<b>64</b>
D.1	Scope.....	64
D.2	Multimedia fields.....	64
D.2.1	General.....	64
D.2.2	Multimedia Subscriber.....	64
D.2.2.0	General.....	64
D.2.2.1	subscriberID.....	65
D.2.2.2	genericSubscriberInfo.....	65
D.2.2.3	multimediaSubscriberInfo.....	65
D.2.2.4	subscribedMultimediaServices.....	65
D.2.2.4.1	Description.....	65
D.2.3	MultimediaBillingDetails.....	66
D.2.3.1	MultimediaBillingDetails.....	66
D.2.3.2	MultimediaBillingAddress.....	67
D.2.3.3	MultimediaBillingRecords.....	67
D.2.4	Multimedia ServiceUsage.....	67
D.2.4.1	Parameters.....	67
D.2.4.2	PartyInformation.....	68
D.2.4.3	IMSInformation.....	69
D.2.4.4	MediaComponents.....	69
D.2.5	MultimediaDevice.....	70
D.2.5.1	General.....	70
D.3	ASN.1 definitions for Multimedia.....	70
D.4	Void.....	70
<b>Annex E (normative): Service-specific details for network access services .....</b>		<b>71</b>
E.1	Scope.....	71
E.2	Descriptions.....	71
E.2.1	General.....	71
E.2.2	NASubscriber.....	71
E.2.3	NAServiceSubscription.....	72
E.2.4	NAServiceUsage.....	72
E.2.5	NADevice.....	78
E.2.6	NANwElement.....	78
E.2.7	NABillingDetails.....	79
E.3	ASN.1 definitions for network access services.....	79
E.4	Void.....	79
<b>Annex F (informative): Basic set of search routines for Retained Data.....</b>		<b>80</b>

F.1	Example set of search routines .....	80
F.1.1	Overview .....	80
F.1.2	Summary of search case .....	80
F.1.3	Subscriber records .....	80
F.2	Telephony data .....	81
F.2.1	Telephony subscriber .....	81
F.2.2	Telephony billing details .....	81
F.2.3	Telephony service usage .....	81
F.2.4	Telephony network element .....	82
F.3	Messaging data .....	82
F.3.1	Message subscriber .....	82
F.3.2	Message service usage .....	82
F.4	Network Access data .....	83
F.4.1	NA subscriber .....	83
F.4.2	NA service usage .....	83
<b>Annex G (informative): Examples of search routines .....</b>		<b>84</b>
G.1	Introduction .....	84
G.2	Example for telephony subscriber query in clause F.2.1 .....	84
G.3	Example for telephony service usage query in clause F.2.3 .....	85
<b>Annex H (informative): Further information on data categories .....</b>		<b>86</b>
H.1	General .....	86
H.2	Further information on subscriber data .....	86
H.2.1	Subscriber data requests .....	86
H.2.2	Generic subscriber data records .....	86
H.2.3	Service Specific Subscriber Reply Data .....	87
H.3	Further information on usage data .....	87
H.3.1	Usage requests .....	87
H.3.2	Usage data categories .....	88
H.3.3	Usage: Traffic Data (Reply) .....	88
H.3.4	Usage: Traffic Data related information (Reply) .....	88
H.3.5	Usage: communication independent user activities (Reply) .....	88
H.3.6	Usage: network Activity Data (Reply) .....	88
H.4	Further information on network element data .....	89
H.4.1	Network element requests .....	89
H.4.2	Network Configuration Data Reply Data .....	89
<b>Annex I (informative): Manual techniques .....</b>		<b>90</b>
<b>Annex J (informative): Single versus multi-part deliveries .....</b>		<b>91</b>
J.1	General .....	91
J.2	Criteria for multi-part delivery .....	91
J.3	Subscriptions into the future .....	92
<b>Annex K (normative): Service-specific details for Edge Computing applications .....</b>		<b>93</b>
K.1	Overview .....	93
K.2	Edge Computing fields .....	93
K.2.1	General .....	93
K.2.2	Edge Computing Subscriber .....	93
K.2.2.1	General .....	93
K.2.2.2	subscriberID .....	93
K.2.2.3	genericSubscriberInfo .....	94

K.2.2.4	edgeComputingSubscriberInfo .....	94
K.2.2.5	subscribedEdgeComputingApplications .....	94
K.2.2.5.1	Description .....	94
K.2.3	EdgeComputingApplicationBillingDetails .....	95
K.2.3.1	EdgeComputingApplicationBillingDetails .....	95
K.2.3.2	EdgeComputingApplicationBillingRecords .....	95
K.2.4	EdgeComputingApplicationUsage .....	97
K.2.4.1	Parameters .....	97
K.2.5	EdgeComputingDevice .....	98
K.2.5.1	General .....	98
<b>Annex L (informative):</b>	<b>Bibliography .....</b>	<b>99</b>
<b>Annex M (informative):</b>	<b>Change Request History .....</b>	<b>100</b>
History .....		104

iTech Standards  
(<https://standards.iteh.ai>)  
Document Preview

[ETSI TS 102 657 V2.4.1 \(2024-07\)](https://standards.iteh.ai/catalog/standards/etsi/4b194f3f-896f-4e9a-ad6b-5c5ab0afb3b6/etsi-ts-102-657-v2-4-1-2024-07)

<https://standards.iteh.ai/catalog/standards/etsi/4b194f3f-896f-4e9a-ad6b-5c5ab0afb3b6/etsi-ts-102-657-v2-4-1-2024-07>



---

# Intellectual Property Rights

## Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

## Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

---

# 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).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

---

# 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.

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] Void.
- [2] [ETSI TS 102 656](#): "Lawful Interception (LI); Retained Data; Requirements of Law Enforcement Agencies for handling Retained Data". V2.4.1 (2024-07).
- [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\_102657v020301p0.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\_102657v020301p0.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\_102657v020301p0.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\_102657v020301p0.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\_102657v020301p0.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\_102657v020301p0.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)".

[59] [ETSI TS 123 316](#): "5G; Wireless and wireline convergence access support for the 5G System (5GS)".

[60] [IEEE™ EUI](#): "Guidelines for Use of Extended Unique Identifier (EUI), Organizationally Unique Identifier (OUI), and Company ID (CID)".

## 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.

[i.1] Recommendation ITU-T X.400: "Message handling system and service overview".

---

## 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:

3GPP	3 <sup>rd</sup> Generation Partnership Project
5G	5 <sup>th</sup> 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