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Lawful Interception (LI);
Dictionary for common parameters

Reference
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Foreword

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

It contains also the XSD technical implementation as attachment to the original document available from the ETSI site.

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 defines a dictionary of parameters that are commonly used in multiple TC LI specifications. Aside from defining a dictionary, the present document aims to provide technical means for other specifications to use. It is encouraged to use the present document in the development of new specifications.

It is foreseen that regular maintenance of the present document is required. As such, release management requirements will be defined.

Before accepting any new common parameter, the present document will provide a set of requirements the parameter has to comply to in order to become a common parameter.

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.

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

[1] 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".

[2] W3C Recommendation 5 April 2012: "W3C XML Schema Definition Language (XSD) 1.1 Part 2: Datatypes".

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

[4] Recommendation ITU-T E.164: "The international public telecommunication numbering plan".

[5] Recommendation ITU-T E.212: "The international identification plan for public networks and subscriptions".

[6] ETSI TS 123 003: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Numbering, addressing and identification (3GPP TS 23.003)".

[7] ETSI TS 102 657: "Lawful Interception (LI); Retained data handling; Handover interface for the request and delivery of retained data".

[8] IETF RFC 791: "Internet Protocol".

[9] IETF RFC 4632: "Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan".

[10] IETF RFC 8200: "Internet Protocol, Version 6 (IPv6) Specification".

[11] IETF RFC 4291: "IP Version 6 Addressing Architecture".

[12] IETF RFC 793: "Transmission Control Protocol".

[13] IETF RFC 768: "User Datagram Protocol".

[14] IEEE 802.3™: "IEEE Standard for Ethernet".

[15] IETF RFC 5322: "Internet Message Format".[16]W3C Recommendation, 14 December 2017: "HTML 5.2".

[17] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

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

[19] IEEE 1003.1-2017: "IEEE Standard for Information Technology--Portable Operating System Interface (POSIX(R)) Base Specifications, Issue 7".

[20] ISO/IEC 7812-1:2015: "Identification cards -- Identification of issuers -- Part 1: Numbering system".

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

[22] IETF RFC 3966: "The tel URI for Telephone Numbers".

[23] NIMA Technical Report 8350.2: "Department of Defense World Geodetic System 1984, Its Definition and Relationships With Local Geodetic Systems".

[24] ETSI TS 123 501: "5G; System architecture for the 5G System (5GS) (3GPP TS 23.501)".

[25] ETSI TS 133 501: "5G; Security architecture and procedures for 5G System (3GPP TS 33.501)".

[26] IETF RFC 7542: "The Network Access Identifier".

[27] ETSI TS 124 501: "5G; Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3 (3GPP TS 24.501)".

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.

3 Definition of terms, symbols and abbreviations

3.1 Terms

Void.

3.2 Symbols

Void.

3.3 Abbreviations

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

3GPP	3rd Generation Partnership Project
ASCII	American Standard Code for Information Interchange
ASN.1	Abstract Syntax Notation One
CC	Content of Communication
CIDR	Classless Inter-Domain Routing
CSP	Communications Service Provider
GPSI	Generic Public Subscription Identifier
HEX	HEXadecimal
HI	Handover Interface
HI1	Handover Interface port 1 (for administrative information)
HI2	Handover Interface port 2 (for Intercept Related Information)
HI3	Handover Interface port 3 (for Content of Communication)
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IEI	Information Element Identifier
IETF	Internet Engineering Task Force
IMEI	International Mobile station Equipment Identity
IMEISV	International Mobile station Equipment Identity and Software Version number
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
IRI	Intercept Related Information
ISO	International Organization for Standardization
ITU-T	International Telecommunication Union - Telecommunication
LEA	Law Enforcement Agency
LIID	Lawful Interception Identifier
MAC	Media Access Control
NAI	Network Access Identifier
NIMA	National Imagery and Mapping Agency
PEI	Permanent Equipment Identifier
POSIX	Portable Operating System Interface
RFC	Request For Comments
SIP	Session Initialization Protocol
SUCI	Subscription Concealed Identifier
SUPI	Subscription Permanent Identifier
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
URI	Uniform Resource Identifier
UTC	Coordinated Universal Time
UUID	Universally Unique IDentifier
WGS84	World Geodetic System 1984
XML	eXtended Markup Language
XSD	XML Schema Definition

4 Release management

This clause describes the release management requirements. The requirements are:

- The version of the present document is defined as <major>.<minor>.<patch>.
- The major version should be incremented when making a backwards incompatible change.
- The minor version should be incremented when adding backwards compatible functionality.
- The patch version should be incremented when fixing a backwards compatible bug.

- Once a major version has been incremented, the previous major version will be supported for 2 years after publication of the new version. Change requests issued to a version that is no longer supported will need to be issued for the latest supported major version.

5 Parameter requirements

5.0 Introduction

This clause describes the requirements a parameter should comply to in order to be specified as a common parameter.

5.1 Parameter attributes

Name

- The parameter should be assigned a unique name. The naming conventions used are described in clause 5.2.

Description

- A description of the parameter should be provided.

Usage guidance

- If there are circumstances in which additional usage guidance is applicable, use cases may be described in this attribute.

References to other specifications

- If the parameter is specified in another specification (such as an RFC), a reference to that specification shall be provided. If possible, the reference should point to the exact clause or clause in the specification.

EXAMPLE: Specify one or more sample values of the parameter.

Technical means to define and validate the parameter

- If possible, provide a regular expression to specify the value that is accepted by this parameter. Implementations may be required to perform additional validation on the value. The regular expressions follow the IEEE POSIX [19], section 9 regular expression format but shall be limited to the regular expression capabilities supported by XSD [2].
- Define the parameter in the XSD [2] in section 7.1.
- Define the parameter in the ASN.1 [3] in section 7.2.

5.2 Parameter naming conventions

Allowed characters

- The following characters are allowed: A-Z, a-z and 0-9.

Camel casing

- The name of the parameter is to be CamelCased, where the first character is uppercased. Any acronyms should be uppercased.

EXAMPLE:

- IPv4Address.
- SIPURI.
- EmailAddress.

5.3 Technology conventions

The used technologies defined in clause 7 may impose requirements that conflict with the requirements in clauses 5.1 and 5.2. In the case of a conflict and in exceptional cases, it is allowed to deviate from the requirements above.

6 Parameter dictionary

LIID

Name	LIID
Description	For each target identity related to an interception measure, the authorized CSP operator shall assign a special Lawful Interception IDentifier (LIID), which has been agreed between the LEA and the CSP. It is used within parameters of all HI interface ports. Using an indirect identification, pointing to a target identity makes it easier to keep the knowledge about a specific interception target limited within the authorized CSP operators and the handling agents at the LEA. The Lawful Interception IDentifier LIID is a component of the CC delivery procedure and of the IRI records. It shall be used within any information exchanged at the Handover Interfaces HI2 and HI3 for identification and correlation purposes. The LIID format shall consist of alphanumeric characters. It might for example, among other information, contain a lawful authorization reference number, and the date, when the lawful authorization was issued. The authorized CSP shall either enter a unique LIID for each target identity of the interception subject or as a national option a single LIID for multiple target identities all pertaining to the same interception subject. EXAMPLE: The interception subject has a telephony service with three telephone numbers. The CSP enters for each telephone number an own LIID, or optionally enters one LIID for all three telephone numbers. If more than one LEA intercepts the same target identity, there shall be unique LIIDs assigned, relating to each LEA.
Usage guidance	The LIID is defined as an OCTET STRING in ASN.1. This means it is possible to use binary octets or ASCII printable characters to express the LIID. To correctly handle this, the parameter accepts both variations.
References	ETSI TS 102 232-1 [1], clause 5.2.2.
Example	ZZZ123 (ASCII printable LIID) 46565527098f6bcd4621d373cade4e832627b4f6ff00ff00ff (Binary LIID, represented in HEX)
Regular expression	^([!-~]{1,25})|([0-9a-f]{26,50})$
XSD	LIID, simpleType
ASN.1	LIID, OCTET STRING

UTCDateTime

Name	UTCDateTime
Description	A UTC timestamp with second precision.
Usage guidance	-
References	W3C XML Schema Definition Language [2], section 3.3.7.
Example	2015-12-27T13:37:00Z
Regular expression	^[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}Z$
XSD	UTCDateTime, simpleType
ASN.1	Not defined

UTCMicrosecondDateTime

Name	UTCMicrosecondDateTime
Description	A UTC timestamp with microsecond precision.
Usage guidance	-
References	W3C XML Schema Definition Language [2], section 3.3.7.
Example	2015-12-27T13:37:00.012345Z
Regular expression	^[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}\.[0-9]{6}Z$
XSD	UTCMicrosecondDateTime, simpleType
ASN.1	Not defined

QualifiedDateTime

Name	QualifiedDateTime
Description	A timestamp with second precision and timezone qualifier.
Usage guidance	-
References	W3C XML Schema Definition Language 1.1 Part 2: Datatypes [2], section 3.3.7.
Example	2015-12-27T13:37:00+02:00
Regular expression	^[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}(Z|[+-] [0-9]{2}:[0-9]{2})$
XSD	QualifiedDateTime, simpleType
ASN.1	QualifiedDateTime, GeneralizedTime Timestamps shall be provided with a timezone qualifier. The fractional part of a second shall not be present. Local time format shall not be used.

QualifiedMicrosecondDateTime

Name	QualifiedMicrosecondDateTime
Description	A timestamp with microsecond precision and timezone qualifier.
Usage guidance	-
References	W3C XML Schema Definition Language 1.1 Part 2: Datatypes [2], section 3.3.7.
Example	2015-12-27T13:37:00.012345+02:00
Regular expression	^[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}\.[0-9]{6}(Z| [+-][0-9]{2}:[0-9]{2})$
XSD	QualifiedMicrosecondDateTime, simpleType
ASN.1	QualifiedMicrosecondDateTime, GeneralizedTime Timestamps shall be provided with a timezone qualifier. The fractional part of a second with no more than 6 digits shall be present. Local time format shall not be used.

InternationalE164

Name	InternationalE164
Description	E.164 Number in fully international format, written as decimal digits.
Usage guidance	-
References	Recommendation ITU-T E.164 [4], clause 6.
Example	31612345678
Regular expression	^[0-9]{1,15}$
XSD	InternationalE164, simpleType
ASN.1	NumericString (SIZE(1..15))

IMSI

Name	IMSI
Description	International Mobile Subscriber Identity, written as decimal digits.
Usage guidance	-
References	Recommendation ITU-T E.212 [5], clause 6.1 ETSI TS 123 003 [6], clause 2.2 and clause 2.3.
Example	204081234567890
Regular expression	^[0-9]{6,15}$
XSD	IMSI, simpleType
ASN.1	NumericString (SIZE(6..15))

IMEI

Name	IMEI
Description	International Mobile station Equipment Identity, written as decimal digits without the Luhn check digit, annex B of ISO/IEC 7812-1 [20].
Usage guidance	To avoid implementation issues, the IMEI parameter explicitly excludes the Luhn check digit, annex B of ISO/IEC 7812-1 [20]. (See notes 1 and 2).
References	ETSI TS 123 003 [6], clause 6.
Example	35395803121326
Regular expression	^[0-9]{14}$
XSD	IMEI, simpleType
ASN.1	NumericString (SIZE(14))
NOTE 1: ETSI TS 102 657 [7], clause E.3 identifies potential issues with the inclusion/exclusion of the check digit. As such, the IMEI parameter is explicitly specified without the check digit. NOTE 2: The IMEICheckDigit parameter can be used when the check digit is explicitly required.	

IMEICheckDigit

Name	IMEICheckDigit
Description	International Mobile station Equipment Identity, written as decimal digits with the Luhn check digit, annex B of ISO/IEC 7812-1 [20].
Usage guidance	-
References	ETSI TS 123 003 [6], clause 6.
Example	35395803121326
Regular expression	^[0-9]{15}$
XSD	IMEICheckDigit, simpleType
ASN.1	NumericString (SIZE(15))

IMEISV

Name	IMEISV
Description	International Mobile station Equipment Identity and Software Version Number as defined in ETSI TS 123 003 [6], clause 6.2.2, written as decimal digits including a software version number instead of a Luhn check digit.
Usage guidance	-
References	ETSI TS 123 003 [6], clause 6.2.2.
Example	3539580312132601
Regular expression	^[0-9]{16}$
XSD	IMEISV, simpleType
ASN.1	NumericString (SIZE(16))

IPv4Address

Name	IPv4Address
Description	IPv4 address, written in dotted decimal notation.
Usage guidance	-
References	IETF RFC 791 [8].
Example	192.0.2.1
Regular expression	^((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4] [0-9]|[01]?[0-9]?[0-9])$
XSD	IPv4Address, simpleType
ASN.1	Not defined

IPv4CIDR

Name	IPv4CIDR
Description	IPv4 CIDR, written in dotted decimal notation followed by CIDR notation.
Usage guidance	-
References	IETF RFC 791 [8] and IETF RFC 4632 [9].
Example	192.0.2.0/24
Regular expression	^((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4] [0-9]|[01]?[0-9]?[0-9])/([1-2]?[0-9]|3[0-2])$
XSD	IPv4CIDR, simpleType
ASN.1	Not defined

IPv6Address

Name	IPv6Address
Description	IPv6 address, written as eight groups of four hexadecimal digits separated by a colon.
Usage guidance	It is recognized that IPv6 address formatting has various options. To reduce complexity in technical implementations, the IPv6Address parameter restricts the address to the fully uncompressed representation of the IPv6 address.
References	IETF RFC 8200 [10].
Example	2001:0db8:0000:0000:0000:0000:0000:0001
Regular expression	^([0-9a-f]{4}:){7}([0-9a-f]{4})$
XSD	IPv6Address, simpleType
ASN.1	Not defined

IPv6CIDR

Name	IPv6CIDR
Description	IPv6 CIDR, written as eight groups of four hexadecimal digits separated by a colon followed by CIDR notation.
Usage guidance	See IPv6Address parameter for usage guidance.
References	IETF RFC 8200 [10], IETF RFC 4632 [9] and IETF RFC 4291 [11].
Example	2001:0db8:0000:0000:0000:0000:0000:0000/48
Regular expression	^([0-9a-f]{4}:){7}([0-9a-f]{4})/(([1-9][0-9]?)|(1[0-1][0-9])| (12[0-8]))$
XSD	IPv6CIDR, simpleType
ASN.1	Not defined

IPAddress

Name	IPAddress
Description	Either a IPv4Address parameter or IPv6Address parameter.
Usage guidance	-
References	-
Example	XSD <IPAddress> <IPv4Address>192.0.2.1</IPv4Address> </IPAddress> or <IPAddress> <IPv6Address>2001:0db8:0000:0000:0000:0000:0000:0001</IPv6Address> </IPAddress>
Regular expression	-
XSD	IPAddress, complexType
ASN.1	Not defined

IPCIDR

Name	IPCIDR
Description	Either a IPv4CIDR parameter or IPv6CIDR parameter.
Usage guidance	-
References	-
Example	XSD <IPCIDR> <IPv4CIDR>192.0.2.0/24</IPv4CIDR> </IPCIDR> or <IPCIDR> <IPv6CIDR>2001:0db8:0000:0000:0000:0000:0000:0000/48</IPv6CIDR> </IPCIDR>
Regular expression	-
XSD	IPCIDR, complexType
ASN.1	Not defined

TCPPort

Name	TCPPort
Description	TCP port, written in decimal notation.
Usage guidance	-
References	IETF RFC 793 [12].
Example	22
Regular expression	^([1-9][0-9]{0,3}|[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}| 655[0-2][0-9]|6553[0-5])$
XSD	TCPPort, simpleType
ASN.1	TCPPort, INTEGER

TCPPortRange

Name	TCPPortRange
Description	TCP port range, consists of a 'start' TCPPort parameter and an 'end' TCPPort parameter.
Usage guidance	The start and end values are inclusive.
References	-
Example	Regular expression 1024-2048 XSD <TCPPortRange> <start>1024</start> <end>2048</end> </TCPPortRange>
Regular expression	^([1-9][0-9]{0,3}|[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}| 655[0-2][0-9]|6553[0-5])-([1-9][0-9]{0,3}|[1-5][0-9]{4}|6[0-4] [0-9]{3}|65[0-4][0-9]{2}|655[0-2][0-9]|6553[0-5])$
XSD	TCPPortRange, complexType
ASN.1	TCPPortRange, SEQUENCE

UDPPort

Name	UDPPort
Description	UDP port, written in decimal notation.
Usage guidance	-
References	IETF RFC 768 [13].
Example	53
Regular expression	^([0-9]{1,4}|[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}|655[0-2] [0-9]|6553[0-5])$
XSD	UDPPort, simpleType
ASN.1	UDPPort, INTEGER

UDPPortRange

Name	UDPPortRange
Description	UDP port range, consists of a 'start' UDPPort parameter and an 'end' UDPPort parameter.
Usage guidance	The start and end values are inclusive.
References	-
Example	Regular expression 2048-4096 XSD <UDPPortRange> <start>2048</start> <end>4096</end> </UDPPortRange>
Regular expression	^([0-9]{1,4}|[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}|655[0-2] [0-9]|6553[0-5])-([0-9]{1,4}|[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4] [0-9]{2}|655[0-2][0-9]|6553[0-5])$
XSD	UDPPortRange, complexType
ASN.1	UDPPortRange, SEQUENCE

Port

Name	Port
Description	Either a TCPPort parameter or a UDPPort parameter.
Usage guidance	-
References	-
Example	XSD <Port> <TCPPort>22</TCPPort> </Port>
Regular expression	^([0-9]{1,4}|[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}|655[0-2] [0-9]|6553[0-5])$
XSD	Port, complexType
ASN.1	Port, CHOICE

PortRange

Name	PortRange
Description	Either a TCPPortRange parameter or a UDPPortRange parameter.
Usage guidance	The start and end values are inclusive.
References	-
Example	XSD <PortRange> <TCPPortRange> <start>2048</start> <end>4096</end> </TCPPortRange> </PortRange>
Regular expression	-
XSD	PortRange, complexType
ASN.1	PortRange, CHOICE

IPAddressPort

Name	IPAddressPort
Description	Combination of an IPAddress parameter and a Port parameter.
Usage guidance	-
References	-
Example	XSD <IPAddressPort> <address> <IPv4Address>192.0.2.1</IPv4Address> </address> <port> <TCPPort>22</TCPPort> </port> </IPAddressPort>
Regular expression	-
XSD	IPAddressPort, complexType
ASN.1	Not defined

IPAddressPortRange

Name	IPAddressPortRange
Description	Combination of an IPAddress parameter and a PortRange parameter.
Usage guidance	-
References	-
Example	XSD <IPAddressPortRange> <address> <IPv4Address>192.0.2.1</IPv4Address> </address> <portRange> <TCPPortRange> <start>2048</start> <end>4096</end> </TCPPortRange> </portRange> </IPAddressPortRange>
Regular expression	-
XSD	IPAddressPortRange, complexType
ASN.1	Not defined

MACAddress

Name	MACAddress
Description	MAC address, written as six groups of two hexadecimal digits separated by a colon.
Usage guidance	-
References	IEEE 802.3 [14]
Example	c0:ff:ee:c0:ff:ee
Regular expression	^([a-f0-9]{2}:){5}[a-f0-9]{2}$
XSD	MACAddress, simpleType
ASN.1	Not defined

EmailAddress

Name	EmailAddress
Description	E-mail address
Usage guidance	-
References	IETF RFC 5322 [15].
Example	john.doe@example.com
Regular expression	^[a-zA-Z0-9.!#$%&'*+\/=?^_`{\|}~-]+@[a-zA-Z0-9]([a-zA-Z0-9-]{0,61} [a-zA-Z0-9])?(\.[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])?)*$ See note.
XSD	EmailAddress, simpleType
ASN.1	Not defined
NOTE: The regular expression above is sourced from the W3C HTML5 Recommendation [16].	

UUID

Name	UUID
Description	UUID
Usage guidance	-
References	IETF RFC 4122 [17].
Example	de305d54-75b4-431b-adb2-eb6b9e546013
Regular expression	^[a-f0-9]{8}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{12}$
XSD	UUID, simpleType
ASN.1	Not defined

ISOCountryCode

Name	ISOCountryCode
Description	An ISO 3166-1 [18] alpha-2 two-letter country code.
Usage guidance	-
References	ISO 3166-1 [18] alpha-2.
Example	"NL"
Regular expression	^[A-Z]{2}$
XSD	ISOCountryCode, simpleType
ASN.1	Not defined

ShortString

Name	ShortString
Description	A string with a maximum length of 255 characters.
Usage guidance	-
References	-
Example	string
Regular expression	-
XSD	ShortString, simpleType
ASN.1	Not defined

LongString

Name	LongString
Description	A string with a maximum length of 65 535 characters.
Usage guidance	-
References	-
Example	string
Regular expression	-
XSD	LongString, simpleType
ASN.1	Not defined

SIPURI

Name	SIPURI
Description	SIP URI
Usage guidance	-
References	IETF RFC 3261 [21], section 19.1.
Example	sip:user@example.com
Regular expression	^sips?:[a-zA-Z0-9!#$&-;=?-\[\]_~%]+$
XSD	SIPURI, simple type
ASN.1	Not defined

TELURI

Name	TELURI
Description	TEL URI
Usage guidance	-
References	IETF RFC 3966 [22].
Example	tel:+447700900000
Regular expression	^tel:[a-zA-Z0-9!#$&-;=?-\[\]_~%]+$
XSD	TELURI, simple type
ASN.1	Not defined

WGS84CoordinateDecimal

Name	WGS84CoordinateDecimal
Description	A geographical latitude-longitude coordinate, referring to the WGS84 reference ellipsoid, given in decimal notation.
Usage guidance	-
References	NIMA Technical Report 8350.2 [23] (for WGS84 definition itself, not for the syntax defined here).
Example	XSD <WGS84CoordinateDecimal> <latitude>N43.616000</latitude> <longitude>E007.053000</longitude> </WGS84CoordinateDecimal>
Regular expression	-
XSD	WGS84CoordinateDecimal, complexType
ASN.1	WGS84CoordinateDecimal, SEQUENCE

WGS84LatitudeDecimal

Name	WGS84LatitudeDecimal
Description	A geographical latitude, referring to the WGS84 reference ellipsoid, given in decimal notation.
Usage guidance	The latitude is given as two digits before the decimal point, left-padded with zero where necessary. The latitude is specific to six decimal places, right-padded with zero where necessary.
References	NIMA Technical Report 8350.2 [23] (for WGS84 definition itself, not for the syntax defined here).
Example	N43.616000
Regular expression	^[NS][0-9]{2}\.[0-9]{6}$
XSD	WGS84LatitudeDecimal, simpleType
ASN.1	WGS84LatitudeDecimal, OCTET STRING

WGS84LongitudeDecimal

Name	WGS84LongitudeDecimal
Description	A geographical longitude, referring to the WGS84 reference ellipsoid, given in decimal notation.
Usage guidance	The longitude is given as three digits before the decimal point, left-padded with zero where necessary. The longitude is specific to six decimal places, right-padded with zero where necessary.
References	NIMA Technical Report 8350.2 [23] (for WGS84 definition itself, not for the syntax defined here).
Example	E007.053000
Regular expression	`^[EW][0-9]{3}\.[0-9]{6}$`
XSD	WGS84LongitudeDecimal, simpleType
ASN.1	WGS84LongitudeDecimal, OCTET STRING

WGS84CoordinateAngular

Name	WGS84CoordinateAngular
Description	A geographical latitude-longitude coordinate, referring to the WGS84 reference ellipsoid, given in angular notation.
Usage guidance	-
References	NIMA Technical Report 8350.2 [23] (for WGS84 definition itself, not for the syntax defined here).

Example	XSD
	`<WGS84CoordinateAngular>`
	`  <latitude>N433700.62</latitude>`
	`  <longitude>E0070310.42</longitude>`
	`</WGS84CoordinateAngular>`

Regular expression	-
XSD	WGS84CoordinateAngular, complexType
ASN.1	WGS84CoordinateAngular, SEQUENCE

WGS84LatitudeAngular

Name	WGS84LatitudeAngular
Description	A geographical latitude, referring to the WGS84 reference ellipsoid, given in angular notation.
Usage guidance	Values are specified as "XDDMMSS.ss", i.e. a concatenation of the following fixed-length values, each padded with zeroes where necessary: A one-character hemisphere indicator, "N" or "S". A two-digit value indicating degrees. A two-digit value indicating arc-minutes. A two-digit value indicating whole arc-seconds. A decimal point. A two-digit value indicating fractional arc-seconds.
References	NIMA Technical Report 8350.2 [23] (for WGS84 definition itself, not for the syntax defined here).
Example	N433700.62
Regular expression	`^[NS][0-9]{6}\.[0-9]{2}$`
XSD	WGS84LatitudeAngular, simpleType
ASN.1	WGS84LatitudeAngular, OCTET STRING

WGS84LongitudeAngular

Name	WGS84LongitudeAngular
Description	A geographical longitude, referring to the WGS84 reference ellipsoid, given in angular notation.
Usage guidance	Values are specified as "XDDDMMSS.ss" i.e. a concatenation of the following fixed-length values, each padded with zeroes where necessary: A one-character hemisphere indicator, "E" or "W". A three-digit value indicating degrees. A two-digit value indicating arc-minutes. A two-digit value indicating whole arc-seconds. A decimal point. A two-digit value indicating fractional arc-seconds.
References	NIMA Technical Report 8350.2 [23] (for WGS84 definition itself, not for the syntax defined here).
Example	E0070310.42
Regular expression	`^[EW][0-9]{7}\.[0-9]{2}$`
XSD	WGS84LongitudeAngular, simpleType
ASN.1	WGS84LongitudeAngular, OCTET STRING

SUPIIMSI

Name	SUPIIMSI
Description	Subscription Permanent Identifier as defined in ETSI TS 123 501 [24], clause 5.9.2 in IMSI representation.
Usage guidance	In 3GPP Release 15 a SUPI may contain either an IMSI or an NAI, as defined in ETSI TS 123 501 [24]. This representation is used for a SUPI in IMSI format.
References	ETSI TS 123 501 [24]. ETSI TS 123 003 [6], clause 2.2.
Example	See definition of IMSI
Regular expression	
XSD	
ASN.1	

SUPINAI

Name	SUPINAI
Description	Subscription Permanent Identifier as defined in 3GPP 23.501 [24], clause 5.9.2 in NAI representation.
Usage guidance	In 3GPP Release 15 a SUPI may contain either an IMSI or an NAI, as defined in ETSI TS 123 501 [24]. This representation is used for a SUPI in NAI format.
References	ETSI TS 123 501 [24]. IETF RFC 7542 [26].
Example	See definition of NAI
Regular expression	
XSD	
ASN.1	

SUCI

Name	SUCI
Description	Subscription Concealed Identifier as defined in 3GPP 33.501 [25], clause 6.12.2.
Usage guidance	The structure of a SUCI is given in ETSI TS 123 003 [6], clause 2.2B, and the IE encoding format is given in ETSI TS 124 501 [27]. When the ASN.1 representation is used, the octets of the SUCI are provided as defined in ETSI TS 124 501 [27], clause 9.11.3.4, with the 5GS Mobile identity IEI and length fields (i.e. octets 1 and 2 in Figure 9.11.3.4.2) omitted. When XSD or string representations are used, the same octets are provided but in hex-binary representation.
References	ETSI TS 133 501 [25]. ETSI TS 124 501 [27].
Example	
Regular expression	`^[0-9a-f]+$`
XSD	SUCI, simpleType
ASN.1	SUCI, OCTET STRING

PEIIMEI

Name	PEIIMEI
Description	Permanent Equipment Identifier as defined in 3GPP 23.501 [24], clause 5.9.3 in IMEI representation, without the final check / spare digit.
Usage guidance	In 3GPP Release 15 a PEI may contain either an IMEI or an IMEISV as defined in ETSI TS 123 501 [24]. This representation is used for IMEI format without the final check / spare digit.
References	ETSI TS 123 501 [24], clause 5.9.3. ETSI TS 123 003 [6], clause 6.2.1.
Example	See definition of IMEI
Regular expression	
XSD	
ASN.1	

PEIIMEICheckDigit

Name	PEIIMEICheckDigit
Description	Permanent Equipment Identifier as defined in 3GPP 23.501 [24], clause 5.9.3 in IMEI representation with Luhn check digit.
Usage guidance	In 3GPP Release 15 a PEI may contain either an IMEI or an IMEISV as defined in ETSI TS 123 501 [24]. This representation is used for IMEI format including the Luhn check digit.
References	ETSI TS 123 501 [24], clause 5.9.3. ETSI TS 123 003 [6], clause 6.2.1.
Example	See definition of IMEICheckDigit
Regular expression	
XSD	
ASN.1	

PEIIMEISV

Name	PEIIMEISV
Description	Permanent Equipment Identifier as defined in 3GPP 23.501 [24], clause 5.9.3 in IMEISV representation.
Usage guidance	In 3GPP Release 15 a PEI may contain either an IMEI or an IMEISV as defined in ETSI TS 123 501 [24]. This representation is used for IMEISV format written as decimal digits including a software version number instead of a Luhn check digit.
References	ETSI TS 123 501 [24]. ETSI TS 123 003 [6], clause 6.2.2.
Example	See definition of IMEISV
Regular expression	
XSD	
ASN.1	

GPSIMSISDN

Name	GPSIMSISDN
Description	Generic Public Subscription Identifier as defined in 3GPP 23.501 [24], clause 5.9.8 in MSISDN representation (see ETSI TS 123 003 [6], clause 3.2).
Usage guidance	In 3GPP Release 15 a GPSI may contain either a MSISDN, or an External Identifier given as a an NAI following the rules given in ETSI TS 123 003 [6], clause 19.7.2. This representation is used for MSISDN following the format given in ETSI TS 123 003 [6], clause 3.2.
References	ETSI TS 123 501 [24] ETSI TS 123 003 [6]
Example	31612345678
Regular expression	^[0-9]{1,15}$
XSD	simpleType
ASN.1	NumericString (SIZE(1..15))

GPSINAI

Name	GPSINAI
Description	Generic Public Subscription Identifier as defined in 3GPP 23.501 [24], clause 5.9.8 in NAI representation.
Usage guidance	In 3GPP Release 15 a GPSI may contain either a MSISDN, or an External Identifier given as a an NAI following the rules given in ETSI TS 123 003 [6], clause 19.7.2. This representation is used for NAI format.
References	ETSI TS 123 501 [24]. IETF RFC 7542 [26].
Example	See definition of NAI
Regular expression	
XSD	
ASN.1	

NAI

Name	NAI
Description	Network Access Identifier following the format given in IETF RFC 7542 [26].
Usage guidance	In general an NAI will take the form "username@realm".
References	IETF RFC 7542 [26].
Example	`user@homerealm.example.net`
Regular expression	-
XSD	NAI, simpleType
ASN.1	NAI, UTF8String

7 Technical implementation

7.1 XSD

The XSD definition is defined in annex A. The XSD file named "TS_103_280_v020301.xsd" is contained in archive "ts_103280v020301p0.zip" which accompanies the present document.

The targetNamespace of the XSD is set to 'http://uri.etsi.org/03280/common/2017/07'. The XSD version is set to 2.3.1.

The targetNamespace shall be increased in the event of a major release as defined in clause 4 and the requirement to do so. The year in the targetNamespace shall be set to the year and month of publication of the major release.

The XSD version shall be increased according to the versioning scheme as defined in clause 4. A change to the present document shall not necessarily lead to a new XSD version. The XSD version shall only be increased when a change to the XSD is required, as such the version of the present document and the XSD version may differ.

As the XSD version is not part of the targetNamespace, an implementation should take into account that the appropriate version is used when importing the XSD.

7.2 ASN.1

The ASN.1 definition is defined in annex B. The ASN.1 file named "TS_103_280_v020301.asn1" is contained in archive "ts_103280v020301p0.zip" which accompanies the present document.

The ASN.1 object identifier is defined as itu-t(0) identified-organization(4) etsi(0) common-parameters(3280) version231(231).

The ASN.1 version shall be increased according to the versioning scheme as defined in clause 4. A change to the present document shall not necessarily lead to a new ASN.1 version. The ASN.1 version shall only be increased when a change to the ASN.1 is required, as such the version of the present document and the ASN.1 version may differ.

Annex A (normative): XSD definition

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://uri.etsi.org/03280/common/2017/07"
targetNamespace="http://uri.etsi.org/03280/common/2017/07" version="2.3.1"
elementFormDefault="qualified">
    <xs:simpleType name="ShortString">
        <xs:restriction base="xs:string">
            <xs:maxLength value="255"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="LongString">
        <xs:restriction base="xs:string">
            <xs:maxLength value="65535"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="LIID">
        <xs:restriction base="xs:normalizedString">
            <xs:pattern value="([!-~]{1,25})|([0-9a-f]{26,50})"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="UTCDateTime">
        <xs:restriction base="xs:dateTime">
            <xs:pattern value="[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}Z"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="UTCMicrosecondDateTime">
        <xs:restriction base="xs:dateTime">
            <xs:pattern value="[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}\.[0-9]{6}Z"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="QualifiedDateTime">
        <xs:restriction base="xs:dateTime">
            <xs:pattern value="[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}(Z|[+-][0-
9]{2}:[0-9]{2})"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="QualifiedMicrosecondDateTime">
        <xs:restriction base="xs:dateTime">
            <xs:pattern value="[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}\.[0-9]{6}(Z|[+-
][0-9]{2}:[0-9]{2})"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="InternationalE164">
        <xs:restriction base="xs:token">
            <xs:pattern value="[0-9]{1,15}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IMSI">
        <xs:restriction base="xs:token">
            <xs:pattern value="[0-9]{6,15}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IMEI">
        <xs:restriction base="xs:token">
            <xs:pattern value="[0-9]{14}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IMEICheckDigit">
        <xs:restriction base="xs:token">
            <xs:pattern value="[0-9]{15}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IMEISV">
        <xs:restriction base="xs:token">
            <xs:pattern value="[0-9]{16}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IPv4Address">
        <xs:restriction base="xs:token">
            <xs:pattern value="((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4][0-
9]|[01]?[0-9]?[0-9])"/>
        </xs:restriction>
```

```
    </xs:simpleType>
    <xs:simpleType name="IPv4CIDR">
        <xs:restriction base="xs:token">
            <xs:pattern value="((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4][0-
9]|[01]?[0-9]?[0-9])/([1-2]?[0-9]|3[0-2])"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IPv6Address">
        <xs:restriction base="xs:token">
            <xs:pattern value="([0-9a-f]{4}:){7}([0-9a-f]{4})"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="IPv6CIDR">
        <xs:restriction base="xs:token">
            <xs:pattern value="([0-9a-f]{4}:){7}([0-9a-f]{4})/(([1-9][0-9]?)|(1[0-1][0-9])|(12[0-
8]))"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="IPAddress">
        <xs:choice>
            <xs:element name="IPv4Address" type="IPv4Address"/>
            <xs:element name="IPv6Address" type="IPv6Address"/>
        </xs:choice>
    </xs:complexType>
    <xs:complexType name="IPCIDR">
        <xs:choice>
            <xs:element name="IPv4CIDR" type="IPv4CIDR"/>
            <xs:element name="IPv6CIDR" type="IPv6CIDR"/>
        </xs:choice>
    </xs:complexType>
    <xs:simpleType name="TCPPort">
        <xs:restriction base="xs:integer">
            <xs:minExclusive value="1"/>
            <xs:maxInclusive value="65535"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="TCPPortRange">
        <xs:sequence>
            <xs:element name="start" type="TCPPort"/>
            <xs:element name="end" type="TCPPort"/>
        </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="UDPPort">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="65535"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="UDPPortRange">
        <xs:sequence>
            <xs:element name="start" type="UDPPort"/>
            <xs:element name="end" type="UDPPort"/>
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="Port">
        <xs:choice>
            <xs:element name="TCPPort" type="TCPPort"/>
            <xs:element name="UDPPort" type="UDPPort"/>
        </xs:choice>
    </xs:complexType>
    <xs:complexType name="PortRange">
        <xs:choice>
            <xs:element name="TCPPortRange" type="TCPPortRange"/>
            <xs:element name="UDPPortRange" type="UDPPortRange"/>
        </xs:choice>
    </xs:complexType>
    <xs:complexType name="IPAddressPort">
        <xs:sequence>
            <xs:element name="address" type="IPAddress"/>
            <xs:element name="port" type="Port"/>
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="IPAddressPortRange">
        <xs:sequence>
            <xs:element name="address" type="IPAddress"/>
            <xs:element name="portRange" type="PortRange"/>
        </xs:sequence>
    </xs:complexType>
```

```
    <xs:simpleType name="MACAddress">
        <xs:restriction base="xs:token">
            <xs:pattern value="([a-f0-9]{2}:){5}[a-f0-9]{2}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="EmailAddress">
        <xs:restriction base="ShortString">
            <xs:pattern value="[a-zA-Z0-9\.!#$%&amp;amp;'\*\+\\/=\?\^_`\{\|\}~\-]+@[a-zA-Z0-9]([a-zA-Z0-
9-]{0,61}[a-zA-Z0-9])?(\.[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])?)*"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="UUID">
        <xs:restriction base="xs:token">
            <xs:pattern value="[a-f0-9]{8}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{12}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="ISOCountryCode">
        <xs:restriction base="xs:token">
            <xs:pattern value="[A-Z]{2}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="SIPURI">
        <xs:restriction base="xs:anyURI">
            <xs:pattern value="sips?:[a-zA-Z0-9!#$&amp;amp;-;=?-\[\]_~%]+"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="TELURI">
        <xs:restriction base="xs:anyURI">
            <xs:pattern value="tel:[a-zA-Z0-9!#$&amp;amp;-;=?-\[\]_~%]+"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="WGS84CoordinateDecimal">
        <xs:sequence>
            <xs:element name="latitude" type="WGS84LatitudeDecimal"/>
            <xs:element name="longitude" type="WGS84LongitudeDecimal"/>
        </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="WGS84LatitudeDecimal">
        <xs:restriction base="xs:string">
            <xs:pattern value="[NS][0-9]{2}\.[0-9]{6}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="WGS84LongitudeDecimal">
        <xs:restriction base="xs:string">
            <xs:pattern value="[EW][0-9]{3}\.[0-9]{6}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="WGS84CoordinateAngular">
        <xs:sequence>
            <xs:element name="latitude" type="WGS84LatitudeAngular"/>
            <xs:element name="longitude" type="WGS84LongitudeAngular"/>
        </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="WGS84LatitudeAngular">
        <xs:restriction base="xs:string">
            <xs:pattern value="[NS][0-9]{6}\.[0-9]{2}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="WGS84LongitudeAngular">
        <xs:restriction base="xs:string">
            <xs:pattern value="[EW][0-9]{7}\.[0-9]{2}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="SUPIIMSI">
        <xs:restriction base="IMSI"/>
    </xs:simpleType>
    <xs:simpleType name="SUPINAI">
        <xs:restriction base="NAI"/>
    </xs:simpleType>
    <xs:simpleType name="SUCI">
        <xs:restriction base="xs:hexBinary"/>
    </xs:simpleType>
    <xs:simpleType name="PEIIMEI">
        <xs:restriction base="IMEI"/>
    </xs:simpleType>
    <xs:simpleType name="PEIIMEICheckDigit">
        <xs:restriction base="IMEICheckDigit"/>
    </xs:simpleType>
```

```
    <xs:simpleType name="PEIIMEISV">
        <xs:restriction base="IMEISV"/>
    </xs:simpleType>
     <xs:simpleType name="GPSIMSISDN">
        <xs:restriction base="xs:token">
            <xs:pattern value="[0-9]{1,15}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="GPSINAI">
        <xs:restriction base="NAI"/>
    </xs:simpleType>
    <xs:simpleType name="NAI">
        <xs:restriction base="xs:string"/>
    </xs:simpleType>
</xs:schema>
```

Annex B (normative): ASN.1 definition

```
Common-Parameters
{itu-t(0) identified-organization(4) etsi(0) common-parameters(3280) version231(231)}

DEFINITIONS IMPLICIT TAGS EXTENSIBILITY IMPLIED ::= BEGIN

-- Object Identifier definitions

commonParameterDomainId OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0) common-
parameters(3280) version231(231)}

-- Common Parameters (below are as defined in clause 6)

LIID ::= OCTET STRING (SIZE (1..25))

TCPPort ::= INTEGER (1..65535)

TCPPortRange ::= SEQUENCE
{
    start [0] TCPPort,
    end   [1] TCPPort
}

UDPPort ::= INTEGER (0..65535)

UDPPortRange ::= SEQUENCE
{
    start [0] UDPPort,
    end   [1] UDPPort
}

Port ::= CHOICE
{
    tCPPort [0] TCPPort,
    uDPPort [1] UDPPort
}

PortRange ::= CHOICE
{
    tCPPortRange [0] TCPPortRange,
    uDPPortRange [1] UDPPortRange
}

QualifiedDateTime ::= GeneralizedTime

QualifiedMicrosecondDateTime ::= GeneralizedTime

WGS84CoordinateDecimal ::= SEQUENCE
{
    latitude  [0] WGS84LatitudeDecimal,
    longitude [1] WGS84LongitudeDecimal
}

WGS84LatitudeDecimal ::= OCTET STRING (SIZE (10))

WGS84LongitudeDecimal ::= OCTET STRING (SIZE (11))

WGS84CoordinateAngular ::= SEQUENCE
{
    latitude  [0] WGS84LatitudeAngular,
    longitude [1] WGS84LongitudeAngular
}

WGS84LatitudeAngular ::= OCTET STRING (SIZE (10))

WGS84LongitudeAngular ::= OCTET STRING (SIZE (11))

InternationalE164 ::= NumericString (SIZE(1..15))

IMSI ::= NumericString (SIZE(6..15))

IMEI ::= NumericString (SIZE(14))
```

```
IMEICheckDigit ::= NumericString (SIZE(15))

IMEISV ::= NumericString (SIZE(16))

SUPIIMSI ::= IMSI

SUPINAI ::= NAI

SUCI ::= OCTET STRING

PEIIMEI ::= IMEI

PEIIMEICheckDigit ::= IMEICheckDigit

PEIIMEISV ::= IMEISV

GPSIMSISDN ::= NumericString (SIZE(1..15))

GPSINAI ::= NAI

NAI ::= UTF8String

END
```

Annex C (informative): Change Request history

Status of the present document Dictionary for common parameters		
TC LI approval date	**Version**	**Remarks**
June 2015	1.1.1	First publication of the TS after approval by ETSI TC LI#39 Document prepared by Steije van Schelt (rapporteur)
August 2016	1.1.2	Revision for a minor editorial correction
January 2017	1.2.1	Included Change Requests agreed by LI#42: CR001r1, LI(16)P42024r1 (Cat D) Addition of XSD annex to ETSI TS 103 280 CR002r1, LI(16)P420r1 (Cat B) ASN.1 definitions in ETSI TS 103 280 Document prepared by Steije van Schelt (rapporteur)
June 2017	2.1.1	Included Change Requests: CR003r1 (agreed by LI#43), LI(16)P43009r1 (Cat F) Short IMSI CR005 (agreed by LI#45), LI(17)P45025 (Cat B) Addition of SIP URI and TEL URI to common definitions CR006r1 (agreed by LI#45), LI(17)P45026r1 (Cat B) Addition of ASN.1 definitions to ETSI TS 103 280 Document prepared by Steije van Schelt (EVE compliancy solutions, rapporteur)
June 2018	2.2.1	Included Change Requests: CR007r3 (agreed by LI#48), LI(18)P48008r3 (Cat B) Clarification to UTC time parameters and addition of WGS84 Location Parameters CR008 (agreed by LI#48), LI(18)P48020 (Cat D) Correction of the Regular Expression contained in the Definition of EmailAddress Document prepared by Steije van Schelt (EVE compliancy solutions, rapporteur)
March 2019	2.3.1	Included Change Requests: CR009r3 (agreed by LI#50), LI(19)P50011r3 (Cat B) Addition of 5G identifiers to common parameters Document prepared by Steije van Schelt (EVE compliancy solutions, rapporteur)

History

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