



## **Lawful Interception (LI); Dictionary for common parameters**

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Reference

RTS/LI-00126

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Keywords

dictionary, Lawful Interception, security

***ETSI***

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## Contents

Intellectual Property Rights .....	4
Foreword.....	4
Modal verbs terminology.....	4
1 Scope .....	5
2 References .....	5
2.1 Normative references .....	5
2.2 Informative references.....	6
3 Abbreviations .....	6
4 Release management .....	6
5 Parameter requirements.....	7
5.0 Introduction .....	7
5.1 Parameter attributes.....	7
5.2 Parameter naming conventions.....	7
5.3 Technology conventions.....	8
6 Parameter dictionary.....	8
7 Technical implementation .....	15
7.1 XSD.....	15
7.2 ASN.1.....	15
History .....	16

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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.

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## 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.

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## 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 reference document (including any amendments) applies.

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

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

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

- [1] ETSI TS 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)".
- [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, DARPA Internet Program Protocol Specification".
- [9] IETF RFC 4632: "Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan".
- [10] IETF RFC 2460: "Internet Protocol, Version 6 (IPv6) Specification".
- [11] IETF RFC 4291: "IP Version 6 Addressing Architecture".
- [12] IETF RFC 793: "Transmission Control Protocol, DARPA Internet Program Protocol Specification".
- [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 28 October 2014: "HTML5 A vocabulary and associated APIs for HTML and XHTML".
- [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 Std 1003.1-2008: "Standard for Information Technology - Portable Operating System Interface (POSIX(R))".
- [20] ISO/IEC 7812-1:2015: "Identification cards -- Identification of issuers -- Part 1: Numbering system".

## 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 reference document (including any amendments) applies.

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

Not applicable.

## 3 Abbreviations

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

ASCII	American Standard Code for Information Interchange
ASN.1	Abstract Syntax Notation One
CIDR	Classless Inter-Domain Routing
HEX	HEXAdecimal
IMEI	International Mobile station Equipment Identity
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
LIID	Lawful Interception Identifier
MAC	Media Access Control
RFC	Request for Comments
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
UTC	Coordinated Universal Time
UUID	Universally Unique IDentifier
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.

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## 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, section 9 [19] 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**

<b>Name</b>	LIID
<b>Description</b>	Lawful Interception Identifier
<b>Usage guidance</b>	The LIID is defined as an OCTET STRING in ASN.1. This means it is possible to use binary octets or ASCII characters to express the LIID. To correctly handle this, the parameter accepts both variations. To align with ETSI TS 102 232-1 [1], clause 5.2.2 the ASCII character validation only allows ASCII printable characters.
<b>References</b>	ETSI TS 102 232-1 [1], clause 5.2.2.
<b>Example</b>	ZZZ123 (ASCII printable LIID) 46565527098f6bcd4621d373cade4e832627b4f6ff00ff00ff (Binary LIID, represented in HEX)
<b>Regular expression</b>	<code>^([!~]{1,25}) ([0-9a-f]{26,50})\$</code>
<b>XSD</b>	LIID, simpleType
<b>ASN.1</b>	See clause 7.2

**UTCDateTime**

<b>Name</b>	UTCDateTime
<b>Description</b>	A UTC timestamp with second precision.
<b>Usage guidance</b>	-
<b>References</b>	W3C XML Schema Definition Language [2], section 3.3.7
<b>Example</b>	2015-12-27T13:37:00Z
<b>Regular expression</b>	<code>^[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}Z\$</code>
<b>XSD</b>	UTCDateTime, simpleType
<b>ASN.1</b>	See clause 7.2

**UTCMicrosecondDateTime**

<b>Name</b>	UTCMicrosecondDateTime
<b>Description</b>	A UTC timestamp with microsecond precision.
<b>Usage guidance</b>	-
<b>References</b>	W3C XML Schema Definition Language [2], section 3.3.7
<b>Example</b>	2015-12-27T13:37:00.012345Z
<b>Regular expression</b>	<code>^[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}\.[0-9]{6}Z\$</code>
<b>XSD</b>	UTCMicrosecondDateTime, simpleType
<b>ASN.1</b>	See clause 7.2

## QualifiedDateTime

<b>Name</b>	QualifiedDateTime
<b>Description</b>	A timestamp with second precision and timezone qualifier.
<b>Usage guidance</b>	-
<b>References</b>	W3C XML Schema Definition Language [2], section 3.3.7
<b>Example</b>	2015-12-27T13:37:00+02:00
<b>Regular expression</b>	$^{\text{[0-9]\{4\}-[0-9]\{2\}-[0-9]\{2\}T[0-9]\{2\}:[0-9]\{2\}:[0-9]\{2\}(z [-][0-9]\{2\}:[0-9]\{2\})\$}$
<b>XSD</b>	QualifiedDateTime, simpleType
<b>ASN.1</b>	See clause 7.2

## QualifiedMicrosecondDateTime

<b>Name</b>	QualifiedMicrosecondDateTime
<b>Description</b>	A timestamp with microsecond precision and timezone qualifier.
<b>Usage guidance</b>	-
<b>References</b>	W3C XML Schema Definition Language [2], section 3.3.7
<b>Example</b>	2015-12-27T13:37:00.012345+02:00
<b>Regular expression</b>	$^{\text{[0-9]\{4\}-[0-9]\{2\}-[0-9]\{2\}T[0-9]\{2\}:[0-9]\{2\}:[0-9]\{2\}\.[0-9]\{6\}(z [-][0-9]\{2\}:[0-9]\{2\})\$}$
<b>XSD</b>	QualifiedMicrosecondDateTime, simpleType
<b>ASN.1</b>	See clause 7.2

## InternationalE164

<b>Name</b>	InternationalE164
<b>Description</b>	E.164 Number in fully international format, written as decimal digits.
<b>Usage guidance</b>	-
<b>References</b>	Recommendation ITU-T E.164 [4], clause 6
<b>Example</b>	31612345678
<b>Regular expression</b>	$^{\text{[0-9]\{1,15\}}\$}$
<b>XSD</b>	InternationalE164, simpleType
<b>ASN.1</b>	See clause 7.2

## IMSI

<b>Name</b>	IMSI
<b>Description</b>	International Mobile Subscriber Identity, written as decimal digits.
<b>Usage guidance</b>	-
<b>References</b>	Recommendation ITU-T E.212 [5], clause 6.1
<b>Example</b>	204081234567890
<b>Regular expression</b>	$^{\text{[0-9]\{15\}}\$}$
<b>XSD</b>	IMSI, simpleType
<b>ASN.1</b>	See clause 7.2

## IMEI

<b>Name</b>	IMEI
<b>Description</b>	International Mobile station Equipment Identity, written as decimal digits without the Luhn check digit, annex B of ISO/IEC 7812-1 [20].
<b>Usage guidance</b>	To avoid implementation issues, the IMEI parameter explicitly excludes the Luhn check digit, annex B of ISO/IEC 7812-1 [20]. 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.
<b>References</b>	3GPP TS 23.003 [6], clause 6
<b>Example</b>	35395803121326
<b>Regular expression</b>	$^{\text{[0-9]\{14\}}\$}$
<b>XSD</b>	IMEI, simpleType
<b>ASN.1</b>	See clause 7.2

**IMEICheckDigit**

<b>Name</b>	IMEICheckDigit
<b>Description</b>	International Mobile station Equipment Identity, written as decimal digits with the Luhn check digit, annex B of ISO/IEC 7812-1 [20].
<b>Usage guidance</b>	
<b>References</b>	3GPP TS 23.003 [6], clause 6
<b>Example</b>	35395803121326
<b>Regular expression</b>	$^{[0-9]\{15\}}$$
<b>XSD</b>	IMEICheckDigit, simpleType
<b>ASN.1</b>	See clause 7.2

**IPv4Address**

<b>Name</b>	IPv4Address
<b>Description</b>	IPv4 address, written in dotted decimal notation.
<b>Usage guidance</b>	-
<b>References</b>	IETF RFC 791 [8]
<b>Example</b>	192.0.2.1
<b>Regular expression</b>	$^{((25[0-5] 2[0-4][0-9] [01]?[0-9]?[0-9])\.)\{3\}(25[0-5] 2[0-4][0-9] [01]?[0-9]?[0-9])\$}$
<b>XSD</b>	IPv4Address, simpleType
<b>ASN.1</b>	See clause 7.2

**IPv4CIDR**

<b>Name</b>	IPv4CIDR
<b>Description</b>	IPv4 CIDR, written in dotted decimal notation followed by CIDR notation.
<b>Usage guidance</b>	-
<b>References</b>	IETF RFC 791 [8], IETF RFC 4632 [9]
<b>Example</b>	192.0.2.0/24
<b>Regular expression</b>	$^{((25[0-5] 2[0-4][0-9] [01]?[0-9]?[0-9])\.)\{3\}(25[0-5] 2[0-4][0-9] [01]?[0-9]?[0-9])/([1-2]?[0-9] 3[0-2])\$}$
<b>XSD</b>	IPv4CIDR, simpleType
<b>ASN.1</b>	See clause 7.2

**IPv6Address**

<b>Name</b>	IPv6Address
<b>Description</b>	IPv6 address, written as eight groups of four hexadecimal digits separated by a colon.
<b>Usage guidance</b>	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.
<b>References</b>	IETF RFC 2460 [10]
<b>Example</b>	2001:db8:0000:0000:0000:0000:0001
<b>Regular expression</b>	$^{([0-9a-f]\{4\}:\){7}}([0-9a-f]\{4\})\$$
<b>XSD</b>	IPv6Address, simpleType
<b>ASN.1</b>	See clause 7.2

**IPv6CIDR**

<b>Name</b>	IPv6CIDR
<b>Description</b>	IPv6 CIDR, written as eight groups of four hexadecimal digits separated by a colon followed by CIDR notation.
<b>Usage guidance</b>	See IPv6Address parameter for usage guidance.
<b>References</b>	IETF RFC 2460 [10], IETF RFC 4632 [9], IETF RFC 4291 [11]
<b>Example</b>	2001:db8:0000:0000:0000:0000:0001/48
<b>Regular expression</b>	$^{([0-9a-f]\{4\}:\){7}}([0-9a-f]\{4\})/(([1-9][0-9]?) (1[0-1][0-9]) (12[0-8]))\$$
<b>XSD</b>	IPv6CIDR, simpleType
<b>ASN.1</b>	See clause 7.2

**IPAddress**

<b>Name</b>	IPAddress
<b>Description</b>	Either a IPv4Address parameter or IPv6Address parameter.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	XSD <IPAddress> <IPv4Address>192.0.2.1</IPv4Address> </IPAddress>
<b>Regular expression</b>	-
<b>XSD</b>	IPAddress, complexType
<b>ASN.1</b>	See clause 7.2

**IPCIDR**

<b>Name</b>	IPCIDR
<b>Description</b>	Either a IPv4CIDR parameter or IPv6CIDR parameter.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	XSD <IPCIDR> <IPv4CIDR>192.0.2.0/24</IPv4CIDR> </IPCIDR>
<b>Regular expression</b>	-
<b>XSD</b>	IPCIDR, complexType
<b>ASN.1</b>	See clause 7.2

**TCPPort**

<b>Name</b>	TCPPort
<b>Description</b>	TCP port, written in decimal notation.
<b>Usage guidance</b>	-
<b>References</b>	IETF RFC 793 [12]
<b>Example</b>	22
<b>Regular expression</b>	$^{([1-9][0-9]\{0,3\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])\$}$
<b>XSD</b>	TCPPort, simpleType
<b>ASN.1</b>	See clause 7.2

**TCPPortRange**

<b>Name</b>	TCPPortRange
<b>Description</b>	TCP port range, consists of a 'start' TCPPort parameter and an 'end' TCPPort parameter.
<b>Usage guidance</b>	The start and end values are inclusive.
<b>References</b>	-
<b>Example</b>	Regular expression 1024-2048  XSD <TCPPortRange> <start>1024</start> <end>2048</end> </TCPPortRange>
<b>Regular expression</b>	$^{([1-9][0-9]\{0,3\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])-([1-9][0-9]\{0,3\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])\$}$
<b>XSD</b>	TCPPortRange, complexType
<b>ASN.1</b>	See clause 7.2

**UDPPort**

<b>Name</b>	UDPPort
<b>Description</b>	UDP port, written in decimal notation.
<b>Usage guidance</b>	-
<b>References</b>	IETF RFC 768 [13]
<b>Example</b>	53
<b>Regular expression</b>	$^{([0-9]\{1,4\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])\$}$
<b>XSD</b>	UDPPort, simpleType
<b>ASN.1</b>	See clause 7.2

**UDPPortRange**

<b>Name</b>	UDPPortRange
<b>Description</b>	UDP port range, consists of a 'start' UDPPort parameter and an 'end' UDPPort parameter.
<b>Usage guidance</b>	The start and end values are inclusive.
<b>References</b>	-
<b>Example</b>	Regular expression 2048-4096 XSD <UDPPortRange> <start>2048</start> <end>4096</end> </UDPPortRange>
<b>Regular expression</b>	$^{([0-9]\{1,4\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])-([0-9]\{1,4\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])\$}$
<b>XSD</b>	UDPPortRange, complexType
<b>ASN.1</b>	See clause 7.2

**Port**

<b>Name</b>	Port
<b>Description</b>	Either a TCPPort parameter or a UDPPort parameter.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	XSD <Port> <TCPPort>22</TCPPort> </Port>
<b>Regular expression</b>	$^{([0-9]\{1,4\} [1-5][0-9]\{4\} 6[0-4][0-9]\{3\} 65[0-4][0-9]\{2\} 655[0-2][0-9] 6553[0-5])\$}$
<b>XSD</b>	Port, complexType
<b>ASN.1</b>	See clause 7.2

**PortRange**

<b>Name</b>	PortRange
<b>Description</b>	Either a TCPPortRange parameter or a UDPPortRange parameter.
<b>Usage guidance</b>	The start and end values are inclusive.
<b>References</b>	-
<b>Example</b>	XSD <PortRange> <TCPPortRange> <start>2048</start> <end>4096</end> </TCPPortRange> </PortRange>
<b>Regular expression</b>	-
<b>XSD</b>	PortRange, complexType
<b>ASN.1</b>	See clause 7.2

**IPAddressPort**

<b>Name</b>	IPAddressPort
<b>Description</b>	Combination of an IPAddress parameter and a Port parameter.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	XSD <IPAddressPort> <address> <IPv4Address>192.0.2.1</IPv4Address> </address> <port> <TCPPort>22</TCPPort> </port> </IPAddressPort>
<b>Regular expression</b>	-
<b>XSD</b>	IPAddressPort, complexType
<b>ASN.1</b>	See clause 7.2

**IPAddressPortRange**

<b>Name</b>	IPAddressPortRange
<b>Description</b>	Combination of an IPAddress parameter and a PortRange parameter.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	XSD <IPAddressPortRange> <address> <IPv4Address>192.0.2.1</IPv4Address> </address> <portRange> <TCPPortRange> <start>2048</start> <end>4096</end> </TCPPortRange> </portRange> </IPAddressPortRange>
<b>Regular expression</b>	-
<b>XSD</b>	IPAddressPortRange, complexType
<b>ASN.1</b>	See clause 7.2

**MACAddress**

<b>Name</b>	MACAddress
<b>Description</b>	MAC address, written as six groups of two hexadecimal digits separated by a colon.
<b>Usage guidance</b>	-
<b>References</b>	IEEE 802.3 [14]
<b>Example</b>	c0:ff:ee:c0:ff:ee
<b>Regular expression</b>	^( [a-f0-9]{2} : ){5}[a-f0-9]{2} \$
<b>XSD</b>	MACAddress, simpleType
<b>ASN.1</b>	See clause 7.2

**EmailAddress**

<b>Name</b>	EmailAddress
<b>Description</b>	E-mail address
<b>Usage guidance</b>	-
<b>References</b>	IETF RFC 5322 [15]
<b>Example</b>	john.doe@example.com
<b>Regular expression</b>	^ [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.
<b>XSD</b>	EmailAddress, simpleType
<b>ASN.1</b>	See clause 7.2

NOTE: The regular expression above is sourced from the W3C HTML5 Recommendation [16].

**UUID**

<b>Name</b>	UUID
<b>Description</b>	UUID
<b>Usage guidance</b>	-
<b>References</b>	IETF RFC 4122 [17]
<b>Example</b>	de305d54-75b4-431b-adb2-eb6b9e546013
<b>Regular expression</b>	$^{\text{[a-f0-9]}\{8\}} - {\text{[a-f0-9]}\{4\}} - {\text{[a-f0-9]}\{4\}} - {\text{[a-f0-9]}\{4\}} - {\text{[a-f0-9]}\{12\}}$$
<b>XSD</b>	UUID, simpleType
<b>ASN.1</b>	See clause 7.2

**ISOCountryCode**

<b>Name</b>	ISOCountryCode
<b>Description</b>	An ISO 3166-1 alpha-2 [18] two-letter country code.
<b>Usage guidance</b>	-
<b>References</b>	ISO 3166-1 alpha-2 [18]
<b>Example</b>	"NL"
<b>Regular expression</b>	$^{\text{[A-Z]}\{2\}}$$
<b>XSD</b>	ISOCountryCode, simpleType
<b>ASN.1</b>	See clause 7.2

**ShortString**

<b>Name</b>	ShortString
<b>Description</b>	A string with a maximum length of 255 characters.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	string
<b>Regular expression</b>	-
<b>XSD</b>	ShortString, simpleType
<b>ASN.1</b>	See clause 7.2

**LongString**

<b>Name</b>	LongString
<b>Description</b>	A string with a maximum length of 65535 characters.
<b>Usage guidance</b>	-
<b>References</b>	-
<b>Example</b>	string
<b>Regular expression</b>	-
<b>XSD</b>	ShortString, simpleType
<b>ASN.1</b>	See clause 7.2

## 7 Technical implementation

### 7.1 XSD

The XSD file named "TS\_103\_280\_v111.xsd" is contained in archive "ts\_103280v010102p0.zip" which accompanies the present document.

The targetNamespace of the XSD is set to '<http://uri.etsi.org/03280/common/2015/08>'. The XSD version is set to 1.1.1.

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

This clause is for further study.

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## History

<b>Document history</b>		
V1.1.1	August 2015	Publication
V1.1.2	August 2015	Publication