

## **Lawful Interception (LI); ASN.1 Object Identifiers in Lawful Interception Specifications**

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**Reference**

RTR/LI-00052

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**Keywords**

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## Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Lawful Interception (LI).

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# 1 Scope

The present document gives an overview over the relevant Object Identifiers (OID) used in Lawful Interception specifications of ETSI and other specifications from ITU-T and ISO.

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## 2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

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### 2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

Not applicable.

### 2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

- [i.1] Void.
- [i.2] ETSI ES 201 671: "Lawful Interception (LI); Handover interface for the lawful interception of telecommunications traffic".
- [i.3] ETSI TS 101 671: "Lawful Interception (LI); Handover Interface for the lawful interception of telecommunications traffic".

NOTE: Periodically TS 101 671 is published as ES 201 671. A reference to the latest version of the TS as above reflects the latest stable content from ETSI/TC LI.

- [i.4] ETSI TS 133 108: "Universal Mobile Telecommunications System (UMTS); 3G security; Handover interface for Lawful Interception (LI) (3GPP TS 33.108)".

- [i.5] ETSI TS 102 232: "Lawful Interception (LI); Handover specification for IP delivery".
- NOTE: TS 102 232 is replaced by TS 102 232-1 [13].
- [i.6] ETSI TS 102 233: "Lawful Interception (LI); Service specific details for E-mail services".
- NOTE: TS 102 233 is replaced by TS 102 232-2 [14].
- [i.7] ETSI TS 102 234: "Lawful Interception (LI); Service-specific details for internet access services".
- NOTE: TS 102 234 is replaced by TS 102 232-3 [15].
- [i.8] ETSI TS 102 815: "Lawful Interception (LI); Service-specific details for Layer 2 Lawful Interception".
- NOTE: TS 102 815 is replaced by TS 102 232-4 [16].
- [i.9] ITU-T Recommendation X.880: "Information technology - Remote Operations: Concepts, model and notation".
- [i.10] ETSI TS 101 909-20-1: "Digital Broadband Cable Access to the Public Telecommunications Network; IP Multimedia Time Critical Services; Part 20: Lawful Interception; Sub-part 1: CMS based Voice Telephony Services".
- [i.11] ETSI TS 101 909-20-2: "Digital Broadband Cable Access to the Public Telecommunications Network; IP Multimedia Time Critical Services; Part 20: Lawful Interception; Sub-part 2: Streamed multimedia services".
- [i.12] ETSI EN 301 040: "Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface".
- [i.13] 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".
- [i.14] ETSI TS 102 232-2: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 2: Service-specific details for E-mail services".
- [i.15] ETSI TS 102 232-3: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 3: Service-specific details for internet access services".
- [i.16] ETSI TS 102 232-4: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 4: Service-specific details for Layer 2 services".
- [i.17] ETSI TS 102 232-5: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 5: Service-specific details for IP Multimedia Services".
- [i.18] ETSI TS 102 232-6: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 6: Service-specific details for PSTN/ISDN services".

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## 3 Definitions and abbreviations

### 3.1 Definitions

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

**common domain:** set of objects, which are part of the definition of a protocol or a set of related protocols

**information object:** well-defined piece of information, definition, or specification, which requires a name in order to, identify its use in an instance of communication

**Object Identifier (OID):** value (distinguishable from all other such values), which is associated with an information object

NOTE: An object identifier consists of a sequence of integers. Each integer represents a node in the object identifier tree. So, each successive integer can be thought of as a selection of an end of a branch of the tree. The branch is traversed to get to the next level in the tree.

## 3.2 Abbreviations

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

ASN.1	Abstract Syntax Notation One
LI	Lawful Interception
OID	Object Identifier
ROSE	Remote Operation Service Element

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# 4 Structure of the ETSI domain

## 4.1 Tree structure

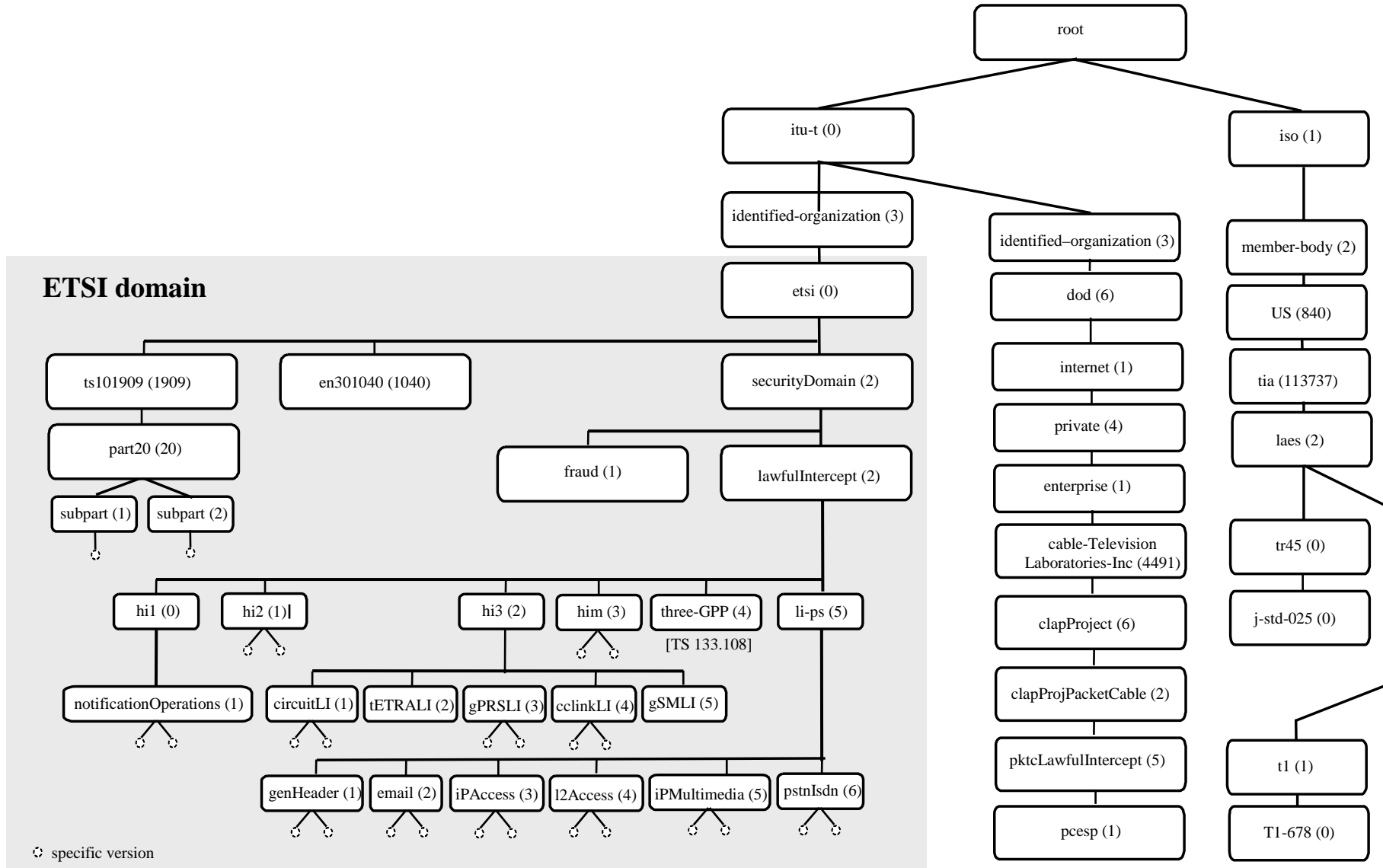
Figure 1 contains the structure for the ETSI domain with the included Lawful Intercept domain and ASN.1 modules from other Lawful Interception (LI) specifications.

ETSI/TC LI will act as the formal registration authority for the Lawful Intercept domain, except for the "threeGPP(4)" subdomain which is administrated by 3GPP/SA3-LI, ETSI/TC AT-D is responsible for the "ts101909(1909)" subdomain and ETSI/EP TETRA is responsible for the "en301040(1040)" subdomain.

## 4.2 Description of the ETSI domain

Tables 1 to 3 contain the OIDs of the ETSI domain. The entries in the last column in the tables point to the specification where the modules can be found.

For information, in addition to those OIDs defined within ETSI/TC LI, table 4 contains the OIDs for the ROSE operations. Because of the imports, the ASN.1 modules of ROSE will be included when syntax checking or compiling the LI specific ASN.1 modules.



NOTE: There are other standards which contain ASN.1 modules for interception (see <http://portal.etsi.org/li/status.asp>).

Figure 1: Tree structure of ETSI domain



Table 1: OIDs of the ETSI domain

Object Identifier				Specification			
itu-t (0)	identified-organizations(4)	etsi(0)	securityDomain(2)	fraud(1)	TR 102 503 V1.4.1 ES 201 671 [i.2], V1.1.1 clause A.4		
				hi1(0)	notification Operations (1) version1(1) version2(2) version3(3) version4(4) version5(5) version6(6)	ES 201 671 [i.2], V1.1.1 clause A.4 ES 201 671 [i.2], V2.1.1 clause D.4 TS 101 671 [i.3], V2.9.1 clause D.4 TS 101 671 [i.3], V2.11.1 clause D.4 TS 101 671 [i.3], V2.12.1 clause D.4 TS 101 671 [i.3], V.3.3.1 clause D.4	
				hi2(1)	version1(1) version2(2) version3(3) version4(4) version5(5) version6(6) version7(7) version8(8) version9(9) version10(10)	ES 201 671 [i.2], V1.1.1 clause A.5 ES 201 671 [i.2], V2.1.1 clause D.5 TS 101 671 [i.3], V2.5.1 clause D.5 TS 101 671 [i.3], V2.7.1 clause D.5 TS 101 671 [i.3], V2.9.1 clause D.5 TS 101 671 [i.3], V2.10.1 clause D.5 TS 101 671 [i.3], V2.11.1 clause D.5 TS 101 671 [i.3], V2.12.1 clause D.5 TS 101 671 [i.3], V2.13.1 clause D.5 TS 101 671 [i.3], V2.14.1 clause D.5	
				hi3(2)	circuitLI(1)	version1(1) version2(2) version3(3)	ES 201 671 [i.2], V1.1.1 clause A.6 ES 201 671 [i.2], V2.1.1 clause D.6 TS 101 671 [i.3], V.2.12.1 clause D.6
					tETRALI(2)	version1(1)	ES 201 671 [i.2], V1.1.1 clause A.7 For Further Study
					gPRSLI(3)	version1(1) version2(2) version3(3)	ES 201 671 [i.2], V1.1.1 clause A.8 TS 101 671 [i.3], V2.10.1 clause D.9 TS 101 671 [i.3], V2.12.1 clause D.9
					cclinkLI(4)	version1(1) version2(2) version3(3) version4(4)	ES 201 671 [i.2], V1.1.1 clause A.9 ES 201 671 [i.2], V2.1.1 clause D.8 TS 101 671 [i.3], V2.7.1 clause D.8 TS 101 671 [i.3], V.2.12.1 clause D.8
					gSMLI(5)		ES 201 671 [i.2], V2.1.1 clause D.2 For Further Study

Object Identifier					Specification				
itu-t (0)	identified-organizations(4)	etsi(0)	securityDomain(2)	lawfulIntercept(2)	him(3)	version1(1) version2(2) version3(3)	ES 201 671 [i.2], V1.1.1 clause A.3 ES 201 671 [i.2], V2.1.1 clause D.3 TS 101 671 [i.3], V2.12.1 clause D.3		
					threeGPP(4)	hi2(1)	version-1(1) version-2(2)	3GPP TS 33.108 [i.4], V5.0.0 clause B.3 3GPP TS 33.108 [i.4], V6.0.0 clause B.3	
							r5(5)	version-3(3) version-4(4)	3GPP TS 33.108 [i.4], V5.7.0 clause B.3 3GPP TS 33.108 [i.4], V5.8.0 clause B.3
							r6(6)	version-3(3)	3GPP TS 33.108 [i.4], V6.5.0 clause B.3
								version-4(4)	3GPP TS 33.108 [i.4], V6.6.0 clause B.3
								version-5(5) version-6(6)	3GPP TS 33.108 [i.4], V6.7.0 clause B.3 3GPP TS 33.108 [i.4], V6.8.0 clause B.3
							r7(7)	version-1(1) version-2(2)	3GPP TS 33.108 [i.4], V7.2.0 clause B.3 3GPP TS 33.108 [i.4], V7.3.0 clause B.3
								version-3(3)	3GPP TS 33.108 [i.4], V7.8.0 clause B.3
							r8(8)	version-1(1)	3GPP TS 33.108 [i.4], V8.0.0 clause B.3
							hi3(2)	version-1(1)	3GPP TS 33.108 [i.4], V5.0.0 clause B.4
								r5(5)	version-2(2)
					r6(6)	version-1(1)		3GPP TS 33.108 [i.4], V6.5.0 clause B.4	
						version-2(2) version-3(3)		3GPP TS 33.108 [i.4], V6.7.0 clause B.4 3GPP TS 33.108 [i.4], V6.8.0 clause B.4	
					r7(7)	version-0(0)	3GPP TS 33.108 [i.4], V7.3.0 clause B.4		
					hi2CS(3)	version-1(1) version-2(2)	3GPP TS 33.108 [i.4], V6.1.0 clause B.3a 3GPP TS 33.108 [i.4], V6.6.0 clause B.3a		
						r6(6)	version-3(3)	3GPP TS 33.108 [i.4], V6.8.0 clause B.3a	
						r7(7)	version-0(0) version-1(1)	3GPP TS 33.108 [i.4], V7.3.0 clause B.4 3GPP TS 33.108 [i.4], V7.8.0 clause B.3	
					hi3CS(4)	version1(1)	3GPP TS 33.108 [i.4], V6.5.0 clause B.6		
						r6(6)	version2(2)	3GPP TS 33.108 [i.4], V6.8.0 clause B.6	
						r7(7)	version0(0)	3GPP TS 33.108 [i.4], V7.3.0 clause B.4	
					him(5)	version1(1) version2(2)	3GPP TS 33.108 [i.4], V6.5.0 clause B.5 3GPP TS 33.108 [i.4], V7.1.0 clause B.5		
					hi2wlan(6)	r7(7)	version-1(1)	3GPP TS 33.108 [i.4], V7.8.0 clause B.3	
						r8(8)	version-1(1)	3GPP TS 33.108 [i.4], V8.0.0 clause B.3	

Object Identifier						Specification				
itu-t (0)	identified-organizations(4)	etsi(0)	securityDomain(2)	lawfullIntercept(2)	li-ps(5)	hi1(0)		TS 102 232 [i.5], V1.1.1 clause A.1 For Further Study		
						genHeader(1)	version1(1) version2(2) version3(3) version4(4) version5(5) version6(6) version7(7) version8(8)	TS 102 232 [i.5], V1.1.1 clause A.2 TS 102 232 [i.5], V1.2.1 clause A.2 TS 102 232 [i.5], V1.3.1 clause A.2 TS 102 232 [i.5], V1.4.1 clause A.2 TS 102 232 [i.5], V1.5.1 clause A.2 TS 102 232-1 [i.13], V2.1.1 clause A.2 TS 102 232-1 [i.13], V2.2.1 clause A.2 TS 102 232-1 [i.13], V2.3.1 clause A.2		
						email(2)	version1(1)	iRI(1) cC(2)	TS 102 233 [i.6], V.1.1.1 annex D TS 102 233 [i.6], V.1.1.1 annex D TS 102 232-2 [i.14], V2.1.1 annex D	
							version2(2)	iRI(1)	TS 102 233 [i.6], V.1.2.1 annex D	
							version3(3)	iRI(1)	TS 102 233 [i.6], V.1.3.1 annex D TS 102 232-2 [i.14], V2.1.1 annex D	
							version4(4)	iRI(1)	TS 102 232-2 [i.14], V2.3.1 annex D	
						iPAccess(3)	version1(1)	iRI(1) cC(2) iRIOnly(3)	TS 102 234 [i.7], V1.1.1 clause 8 TS 102 234 [i.7], V1.1.1 clause 8 TS 102 234 [i.7], V1.1.1 clause 8	
							version2(2)	iRI(1) cC(2) iRIOnly(3)	TS 102 234 [i.7], V.1.3.1 clause 8 TS 102 234 [i.7], V.1.3.1 clause 8 TS 102 234 [i.7], V.1.3.1 clause 8	
							version3(3)	iRI(1) cC(2) iRIOnly(3)	TS 102 234 [i.7], V.1.4.1 clause 8 TS 102 234 [i.7], V.1.4.1 clause 8 TS 102 234 [i.7], V.1.4.1 clause 8	
							version4(4)	iRI(1) cC(2) iRIOnly(3)	TS 102 234 [i.7], V.1.6.1 clause 8 TS 102 234 [i.7], V.1.6.1 clause 8 TS 102 234 [i.7], V.1.6.1 clause 8	
							version5(5)	iRI(1) cC(2) iRIOnly(3)	TS 102 232-3 [i.15], V2.1.1 clause 8 TS 102 232-3 [i.15], V2.1.1 clause 8 TS 102 232-3 [i.15], V2.1.1 clause 8	
							i2Access(4)	version1(1)	iRI(1) cC(2) iRIOnly(3)	TS 102 815 [i.8], V1.1.1 clause 8.2 TS 102 815 [i.8], V1.1.1 clause 8.2 TS 102 815 [i.8], V1.1.1 clause 8.2
								version2(2)	iRI(1) cC(2) iRIOnly(3)	TS 102 815 [i.8], V1.2.1 clause 8.2 TS 102 815 [i.8], V1.2.1 clause 8.2 TS 102 815 [i.8], V1.2.1 clause 8.2
								version3(3)	iRI(1) cC(2) iRIOnly(3)	TS 102 815 [i.8], V1.3.1 clause 8.2 TS 102 815 [i.8], V1.3.1 clause 8.2 TS 102 815 [i.8], V1.3.1 clause 8.2
						version4(4)		iRI(1) cC(2) iRIOnly(3)	TS 102 232-4 [i.16], V2.1.1 clause 8.1 TS 102 232-4 [i.16], V2.1.1 clause 8.1 TS 102 232-4 [i.16], V2.1.1 clause 8.1	

Object Identifier						Specification		
itu-t (0)	identified-organizations(4)	etsi(0)	securityDomain(2)	lawfulIntercept(2)	li-ps(5)	iPMultimedia(5)	version1(1) iRI(1) cC(2)	TS 102 232-5 [i.17], V2.1.1 clause 7
							version2(2) iRI(1) cC(2)	TS 102 232-5 [i.17], V2.2.1 clause 7
							version3(3) iRI(1) cC(2)	TS 102 232-5 [i.17], V2.3.1 clause 7
						pstnIstdn(6)	version1(1) iRI(1) cC(2)	TS 102 232-6 [i.18], V2.1.1 annex A.2
							version2(2) iRI(1) cC(2)	TS 102 232-6 [i.18], V2.2.1 annex A.2

Table 2: OIDs of the ETSI/TC AT-D domain

Object Identifier						Specification	
itu-t (0)	identified-organizations(4)	etsi(0)	ts101909 (1909)	part20 (20)	subpart1 (1)	interceptVersion (0)	TS 101 909-20-1 [i.10], V1.1.2 annex A
					subpart2 (2)	interceptVersion (0)	TS 101 909-20-2 [i.11], V1.1.2 annex A

Table 3: OIDs of the ETSI/EP TETRA domain

Object Identifier					Specification	
itu-t (0)	identified-organizations(4)	etsi(0)	en301040 (1040)	interceptVersion (0)		EN 301 040 [i.12], V2.0.0 annex E

Table 4: Object Identifier of ROSE

Object Identifier				Specification	
joint-iso-itu-t(2)	remote-operations(4)	informationObjects(5)	version1(0)		ITU-T Recommendation X.880 [i.9], annex A

## Annex A: Change Request history

Status of the present document ASN.1 Object Identifiers in Lawful Intercept Specifications		
Date	Version	Remarks
October 2005	1.1.1	First publication of the TR after approval by ETSI/TC LI#10 (4-6 October 2005, Sorrento); Version 1.1.1 prepared by Ralf Schmalbach (BNetzA) (rapporteur TR).
May 2006	1.2.1	Included Change Request: TR102503CR001 (cat F) on Correction of mistakes performed during ETSI publication process of v1.1.1. This CR was approved by TC LI#11 (31 January – 2 February 2006, Saint Martin); Update of versions numbers of ASN.1 muldules in modified specifications during TC LI#12 (9-11 May 2006, Limassol). Version 1.2.1 prepared by Ralf Schmalbach (BNetzA) (rapporteur TR).
October 2007	1.3.1	Included Change Request: TR102503CR002 (cat F) on Update of versions numbers of ASN.1 muldules in modified specifications This CR was approved by TC LI#16 (2-4 October 2007, Berlin). Version 1.3.1 prepared by Ralf Schmalbach (BNetzA) (rapporteur TR).
month 2008	1.4.1	Included Change Request: TR102503CR003r1 (cat F) on Update of versions numbers of ASN.1 muldules in modified specifications This CR was approved by TC LI#18 (27-29 May 2008, Chania). Version 1.4.1 prepared by Ralf Schmalbach (BNetzA) (rapporteur TR).

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## Annex B: Bibliography

ETSI EG 200 351: "ETSI object identifier tree; Rules and registration procedures".

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## History

<b>Document history</b>		
V1.1.1	January 2006	Publication
V1.2.1	August 2006	Publication
V1.3.1	November 2007	Publication
V1.4.1	July 2008	Publication