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European digital cellular telecommunications system (Phase 2); ETSI Object Identifier tree; Common domain; Mobile domain; Operation and Maintenance (O & M), managed object registration definition (GSM 12.30)

ETSI

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Foreword

This ETSI Technical Report (ETR) has been produced by the Special Mobile Group (SMG) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETR contains the structure for the GSM Operations and Maintenance (O&M) domain of the common domain of the ETSI object identifier tree within the European digital cellular telecommunications system. This ETR corresponds to GSM technical specification, GSM 12.30, version 4.2.0.

NOTE: TC-SMG has produced documents which give technical specifications for the implementation of the European digital cellular telecommunications system. Historically, these documents have been identified as GSM Technical Specifications (GSM-TSs). These specifications may subsequently become I-ETSs (Phase 1), or European Telecommunication Standards (ETSs)(Phase 2), whilst others may become ETSI Technical Reports (ETRs). GSM-TSs are, for editorial reasons, still referred to in this ETR.

Introduction

The STC SMG 6 proposed a structure for the GSM O&M domain of the ETSI object identifier tree which extended the dedicated branch reserved for this use to the September '93 SMG meeting. This proposal was accepted and responsibility for the detailed definition was devolved to SMG 6.

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1 Scope

This ETSI Technical Report (ETR) describes the structure for the GSM Operations and Maintenance (O&M) domain of the Common domain of the ETSI object identifier tree as defined in ETR 091:1993 [1].

2 References

This ETR incorporates by dated and undated reference, provisions from other publications. These references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETR only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   ETR 091 (1993): "ETSI object identifier tree; Common domain Mobile domain".

[2]   ETS 300 351 (1994): "ETSI object identifier tree; Rules and registration procedures".

3 Definitions

For the purposes of this ETR, terms are defined in ETR 091 [1] and ETS 300 351 [2].

4 Symbols and abbreviations

For the purposes of this ETR, the following abbreviations apply:
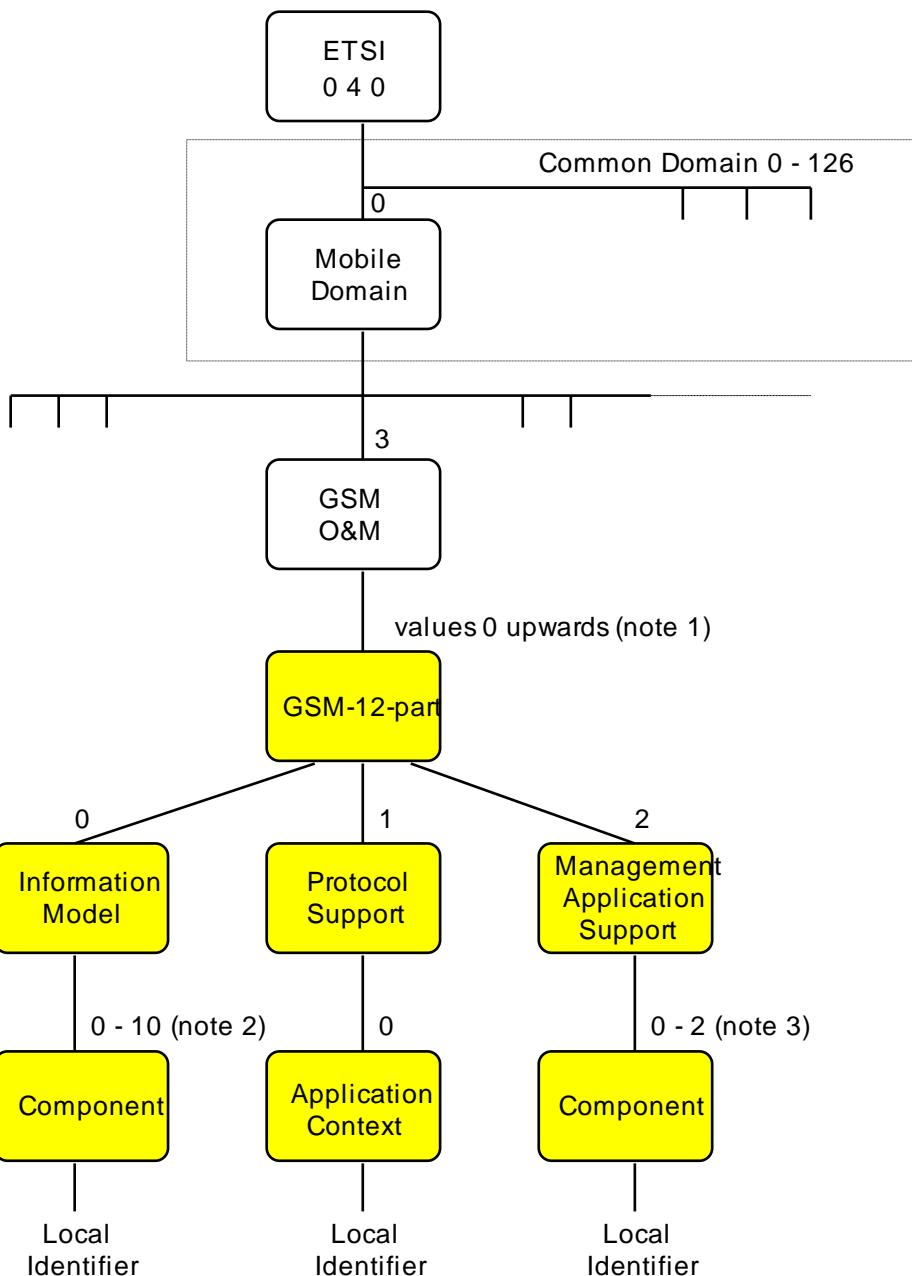
GSM   Global System for Mobile communications

ASN.1   Abstract Syntax Notation. One

O&M   Operation and Maintenance

5 Structure of the GSM O&M domain

This clause describes the proposed structure of the GSM O&M domain in terms of a tree hierarchy and the representative ASN.1 encoding.

5.1 Tree structure

Figure 1 represents the proposed structure for the identification of the components of the GSM O&M domain. It is an extension to the mobile domain described in ETR 091 [1].

```
                          ┌──────────┐
                          │   ETSI   │
                          │  0 4 0   │
                          └────┬─────┘
              ┌────────────────┼──────────────────────────────────┐
              │               0│         Common Domain 0 - 126     │
              │          ┌─────┴────┐                              │
              │          │  Mobile  │         ┌──┐ ┌──┐ ┌──┐       │
              │          │  Domain  │                              │
              │          └─────┬────┘                              │
              └────────────────┼──────────────────────────────────┘

        ┌──┐ ┌──┐ ┌──┐         │3              ┌──┐ ┌──┐
                          ┌─────┴────┐
                          │   GSM    │
                          │   O&M    │
                          └─────┬────┘
                                │
                    values 0 upwards (note 1)

                          ┌──────────┐
                          │GSM-12-part│
                          └────┬─────┘
               ┌───────────────┼────────────────┐
              0│              1│               2│
        ┌──────┴─────┐  ┌──────┴─────┐  ┌────────┴────────┐
        │Information │  │  Protocol  │  │   Management    │
        │   Model    │  │  Support   │  │   Application   │
        │            │  │            │  │    Support      │
        └──────┬─────┘  └──────┬─────┘  └────────┬────────┘
       0 - 10 (note 2)        0│          0 - 2 (note 3)
        ┌──────┴─────┐  ┌──────┴─────┐  ┌────────┴────────┐
        │ Component  │  │Application │  │   Component     │
        │            │  │  Context   │  │                 │
        └──────┬─────┘  └──────┬─────┘  └────────┬────────┘
               │               │                 │
           Local           Local             Local
         Identifier       Identifier        Identifier
```

NOTE 1:   Assigned values correspond to the GSM 12-series specifications, see subclause 5.1.1.

NOTE 2:   Assigned values are defined in subclause 5.1.2.

NOTE 3:   Assigned values are defined in subclause 5.1.3.

Figure 1: Structure of the GSM O&M object identifier tree

5.1.1 Assigned values of GSM-12-part

The values of the object identifier structure component "GSM-12-part" correspond to the relevant GSM 12-series specifications, as follows:

(0)	GSM 12.00
(1)	GSM 12.01
(2)	GSM 12.02
(3)	GSM 12.03
(4)	GSM 12.04
(5)	GSM 12.05
(6)	GSM 12.06
(7)	GSM 12.07
(8)	GSM 12.08
	(values 9 and 10 are reserved for future use)
(11)	GSM 12.11
	(values 12 to 19 inclusive are reserved for future use)
(20)	GSM 12.20
(21)	GSM 12.21
(22)	GSM 12.22
	(values greater than 22 are reserved for future use).

5.1.2 Assigned values of information model components

The values assigned of the components of the information model branch of the object identifier structure are as follows:

(0)	standardSpecificExtension
(1)	functionalUnits
(2)	asn1module
(3)	managedObjectClass
(4)	package
(5)	parameter
(6)	nameBinding
(7)	attribute
(8)	attributeGroup
(9)	action
(10)	notification.

5.1.3 Assigned values of management application support components

The values assigned of the components of the management application support branch of the object identifier structure are as follows:

(0)	standardSpecificExtension
(1)	functionalUnitPackage
(2)	asn1Module

5.2   ASN.1 description

This clause provides the ASN.1 definition of the GSM O&M object identifier tree structure described in subclause 5.1.

GSM-DomainDefinitions {ccitt (0) identified-organisation (4) etsi (0) mobileDomain (0) gsm-Operation-Maintenance (3) gsm-12-30 (30) informationModel (0) asn1Module (2) gsm-OM-DomainDefinitions (0) version1 (1)}

DEFINITIONS ::=

BEGIN

-- **Domain Identifier**

IMPORTS

gsm-OperationAndMaintenanceId

FROM

MobileDomainDefinitions {ccitt (0) identified-organisation (4) etsi (0) mobileDomain (0) mobileDomainDefinitions (0) version1 (1)}
;
gsm-OM-DomainId   OBJECT IDENTIFIER ::= gsm-OperationAndMaintenanceId

-- **Sub-Domain Identifiers**

gsm-12-00   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-00 (0)}
gsm-12-01   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-01 (1)}
gsm-12-02   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-02 (2)}
gsm-12-03   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-03 (3)}
gsm-12-04   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-04 (4)}
gsm-12-05   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-05 (5)}
gsm-12-06   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-06 (6)}
gsm-12-07   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-07 (7)}
gsm-12-08   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-08 (8)}
gsm-12-11   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-11 (11)}
gsm-12-20   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-20 (20)}
gsm-12-21   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-21 (21)}
gsm-12-22   OBJECT IDENTIFIER ::= {gsm-OM-DomainId gsm12-22 (22)}
gsm-12-00A   OBJECT IDENTIFIER ::= {gsm-12-00 annexA (0)}
gsm-12-22   OBJECT IDENTIFIER ::= {gsm-12-00 annexB (1)}

```
-- common structures for GSM 12 part identifier constructs
--
CommonStructure          ::= INTEGER
                         {
                         informationModel (0),
                         protocolSupport (1),
                         managementApplicationSupport (2)
                         } (0..2)



--Information Model Identifiers

InformationModelStructure          ::= INTEGER
                         {
                         standardSpecificExtension (0),
                         functionalUnits (1),
                         asn1Module (2),
                         managedObjectClass (3),
                         package (4),
                         parameter (5),
                         nameBinding (6),
                         attribute (7),
                         attributeGroup (8),
                         action (9),
                         notification (10)
                         } (0..10)



-- Protocol Identifiers

ProtocolSupportStructure ::= INTEGER
                         {
                         applicationContext (0)
                         } (0)
ApplicationContextStructure        ::= INTEGER
                         {
                         gsm-Management (0)
                         } (0)



-- Management Application Identifiers

ManagementApplicationStructure          ::= INTEGER
                         {
                         standardSpecificExtension (0),
                         functionalUnitPackage (1),
                         asn1Module (0..2)
                         }
```

History

Document history		
April 1995	First Edition	
August 1995	Second Edition	