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LTE;**

**Selective Disabling of 3GPP User Equipment Capabilities
(SDoUE) Management Object (MO)
(3GPP TS 24.305 version 11.1.0 Release 11)**



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

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

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

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1 Scope

The present document specifies a mobile device Selective Disabling of 3GPP UE Capabilities (SDoUE) Management Object (MO) and the rules and corresponding behaviour of the UE with regard to the selective disabling of 3GPP UE capabilities, for example, when services or functions are disabled/enabled.

The SDoUE MO is compatible with the OMA Device Management (DM) protocol specifications, version 1.2 and upwards, and is defined using the OMA DM Device Description Framework (DDF) as described in the Enabler Release Definition OMA-ERELED-DM-V1_2 [8].

The SDoUE MO consists of the relevant parameters that can be managed for selective disabling of 3GPP UE capabilities.

The SDoUE MO defines a repository of data into the ME.

The service requirements for selective disabling of 3GPP UE capabilities are defined in 3GPP TS 22.011 [2].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 22.011: "Service accessibility".
- [2A] 3GPP TS 23.003: "Numbering, addressing and identification".
- [3] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".
- [4] 3GPP TS 24.010: "Mobile radio interface layer 3; Supplementary services specification; General aspects".
- [5] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
- [6] 3GPP TS 24.030: "Location Services (LCS); Supplementary service operations; Stage 3".
- [7] 3GPP TS 24.229: "IP Multimedia Call Control Protocol based on SIP and SDP; Stage 3".
- [7A] 3GPP TS 24.301: "Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS); Stage 3".
- [8] OMA-ERELED-DM-V1_2: "Enabler Release Definition for OMA Device Management".
- [9] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
- [10] ITU-T Recommendation E.212: "The international identification plan for mobile terminals and mobile users".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] apply.

3.2 Abbreviations

ACL	Access Control List
CS	Circuit Switched
DDF	Device Description Framework
DM	Device Management
EPS	Evolved Packet System
ESM	EPS Session Management
IMS	IP Multimedia core network Subsystem
MBMS	Multimedia Broadcast/Multicast Service
MCC	Mobile Country Code
MNC	Mobile Network Code
ME	Mobile Equipment
MO	Management Object
OMA	Open Mobile Alliance
PDP	Packet Data Protocol
PS	Packet Switched
SDoUE	Selective Disabling of 3GPP UE Capabilities
SM	Session Management
UE	User Equipment

4 Selective Disabling of 3GPP UE Capabilities Management Object

The Selective Disabling of 3GPP UE Capabilities (SDoUE) Management Object (MO) is used to manage settings of the UE for remotely disabling selected UE capabilities.

The Management Object Identifier is: urn:oma:mo:ext-3gpp-sdoue:1.0.

The OMA DM Access Control List (ACL) property mechanism as standardized (see Enabler Release Definition OMA-ERELED-DM-V1_2 [8]) may be used to grant or deny access rights to OMA DM servers in order to modify nodes and leaf objects of the SDoUE MO.

The following nodes and leaf objects are possible under the SDoUE node:

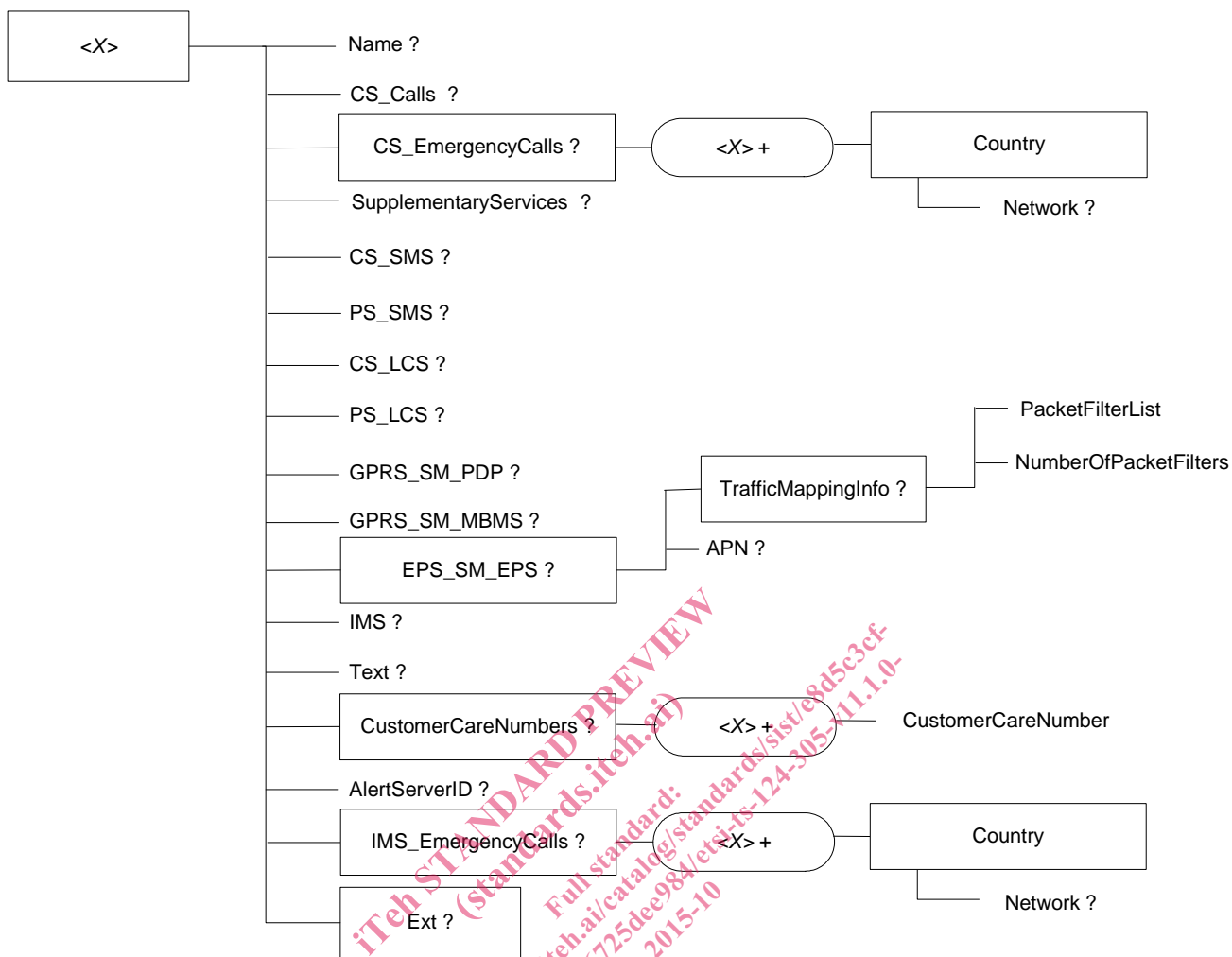


Figure 1: The SDoUE Management Object

5 Management Object parameters

5.1 General

This clause describes the parameters for the SDoUE Management Object (MO).

5.2 Node: <X>

This interior node acts as a placeholder for zero or one accounts for a fixed node.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

5.3 /<X>/Name

The Name leaf is a name for the SDoUE MO settings.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get
- Values: <User displayable name>

5.4 /<X>/CS_Calls

The CS_Calls leaf indicates an operator's preference to enable or disable mobile-originated Call Control (CC) procedures except for emergency calls.

The CC procedures are specified in 3GPP TS 24.008 [3].

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get
- Values: 0, 1
 - 0 – Indicates that mobile-originated CS calls are enabled.
 - 1 – Indicates that mobile-originated CS calls are disabled.

When the CS_Calls leaf value is set to "1", the UE shall initiate the signalling procedure for release of all calls except for emergency calls (see 3GPP TS 24.008 [3]). Furthermore, the UE shall not use mobile-originated call control procedures except for emergency calls and customer care service number(s) until the CS_Calls leaf value is set to "0".

NOTE: Customer care service number(s) is(are) provided by the CustomerCareNumbers leaf (see sub-clauses 5.15, 5.16 and 5.17).

5.5 /<X>/ CS_EmergencyCalls

The CS_EmergencyCalls interior node indicates an operator's preference to enable or disable emergency call control procedures.

NOTE 1: Disabling of emergency call control procedures is subject to regional regulatory requirements. Therefore, emergency call control procedures cannot be disabled in regions where support of them is required (see 3GPP TS 22.011 [2]).

The emergency call control procedures are specified in 3GPP TS 24.008 [3].

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get
- Values: 0, 1
 - 0 – Indicates that CS emergency calls are enabled.
 - 1 – Indicates that CS emergency calls are disabled.

When the CS_EmergencyCalls node value is set to "1" and the UE detects being under coverage of a PLMN (identified by Mobile Country Code (MCC) and Mobile Network Code (MNC)) as indicated by any of the stored Country and

Network pairs of nodes (see sub-clauses 5.5A, 5.5B and 5.5C), then the UE shall initiate the signalling procedure for release of all emergency calls that use call control procedures. Furthermore, the UE shall not use call control procedures to establish emergency calls until the CS_EmergencyCalls node value is set to "0" or the UE detects a change of Mobile Country Code (MCC) and Mobile Network Code (MNC) that does not match any of the stored Country and Network pairs of nodes.

NOTE 2: As described by the definition and structure of the SDoUE MO the Country and Network nodes, if exist, constitute a pair of nodes. However, it is possible to indicate only a country/region by means of only setting the value of the Country node.

5.5A /<X>/CS_EmergencyCalls/<X>

This run-time node acts as a placeholder for one or more Country nodes. Furthermore, this node provides a means for the operator to indicate where emergency call control procedures are disabled (i.e. The CS_EmergencyCalls value is set to "1").

- Occurrence: ZeroOrMore
- Format: node
- Access Types: Get
- Values: N/A

5.5B /<X>/CS_EmergencyCalls/<X>/Country

The Country interior node represents one Mobile Country Code (MCC). This node provides a means for including information that can be used to indicate in which MCC the emergency call control procedures are disabled (i.e. The CS_EmergencyCalls value is set to "1").

The Country node value shall be a Mobile Country Code (MCC) as specified by ITU-T E.212 [10].

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <Mobile Country Code>

The UE shall only use the information stored in the Country node when emergency call control procedures are disabled (i.e. The CS_EmergencyCalls value is set to "1").

5.5C /<X>/CS_EmergencyCalls/<X>/Country/Network

The Network leaf represents one Mobile Network Code (MNC). This leaf provides a means, together with the Country leaf, for including information that can be used to indicate in which MCC and MNC the emergency calls procedures are disabled.

The Network leaf value shall be a Mobile Network Code (MNC) as specified by ITU-T E.212 [10].

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get
- Values: <Mobile Network Code>

The UE shall only use the information stored in the Network leaf when emergency call control procedures are disabled (i.e. The CS_EmergencyCalls value is set to "1"). Furthermore, the UE shall interpret the information stored in the Network leaf, if exists, in conjunction with the corresponding Country node.

5.6 /<X>/SupplementaryServices

The SupplementaryServices leaf indicates an operator's preference to enable or disable mobile-originated Supplementary services operations.

The Supplementary service operations are specified in 3GPP TS 24.010 [4].

NOTE: The functionality indicated by the SupplementaryServices leaf does not include the Location Service (LCS) supplementary service operations.

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get
- Values: 0, 1
 - 0 – Indicates that mobile-originated Supplementary service operations are enabled.
 - 1 – Indicates that mobile-originated Supplementary service operations are disabled.

When the SupplementaryServices leaf value is set to "1", the UE shall initiate the signalling procedure for release of all ongoing supplementary service operations (transactions). Furthermore, the UE shall not invoke mobile-originated supplementary service operation procedures until the SupplementaryServices leaf value is set to "0".

5.7 /<X>/CS_SMS

The CS_SMS leaf indicates an operator's preference to enable or disable mobile-originated Short Message Service (SMS) via CS.

The SMS procedures are specified in 3GPP TS 24.011 [5].

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get
- Values: 0, 1
 - 0 – Indicates that mobile-originated SMS via CS are enabled.
 - 1 – Indicates that mobile-originated SMS via CS are disabled.

If the CS_SMS leaf value is "1", the UE shall not use the CS domain for mobile-originated SMS transfer until the CS_SMS leaf value is set to "0". The UE may use the PS domain instead of the CS domain for mobile-originated SMS transfer when the CS_SMS leaf value is "1".

5.8 /<X>/PS_SMS

The PS_SMS leaf indicates an operator's preference to enable or disable mobile-originated Short Message Service (SMS) via PS.

The SMS procedures are specified in 3GPP TS 24.011 [5].

- Occurrence: ZeroOrOne
- Format: bool
- Access Types: Get
- Values: 0, 1