3GPP TSG-CN Meeting #26 **NP-040465**
8th ñ 10th December 2004. Athens, Greece.

3GPP TSG-CN1 Meeting #36 Tdoc N1-042100
Seoul, Korea, 15-19 November 2004

Title: LS on a 3GPP IMS management object
Response to:
Release: Rel-6
Work Item: IMS2

Source: 3GPP TSG CN1
To: OMA PAG, OMA POC, OMA DM, 3GPP2 TSG-X
Cc: 3GPP TSG CN

Contact Person:
Name: Atle Monrad
Tel. Number: +47 454 10 665
E-mail Address: atle.monrad@ericsson.com

Attachments: N1-042099 (TS 24.167) 3GPP IMS Management Object (MO)

---

1. Overall Description:

CN1 is working on a technical specification for a 3GPP IMS management object. This TS proposes to have a functional split between the basic functionality that concerns the SIP protocol suite and 3GPP TS 24.229 in a 3GPP IMS MO and on top of this management object it can be added ìservice specificî management objects where each MO typically contains a service. Examples of such foreseen services are PoC and presence.

CN1 regards the new technical specification as stable and close to completion, but the attached TS is still a draft version.

2. Actions:

To OMA PAG / OMA POC / OMA DM

ACTION: CN1 would kindly inform OMA PAG, OMA POC and OMA DM that the attached draft specification has been reviewed and agreed by 3GPP TSG CN1. OMA PAG and OMA POC may consider the content of the draft for their ongoing work with the management objects for services as PoC and presence.

To 3GPP2 TSG-X

ACTION: CN1 would kindly inform 3GPP2 about the ongoing work on a 3GPP IMS MO.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th ñ 18th February 2005	Sydney, Australia
CN1_38	25th ñ 30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042099
Seoul, Korea, 15-19 November 2004

Source: Ericsson, Vodafone, Nokia

Title: TS, 3GPP IMS managed object (MO); Stage 3

Agenda item: 7.4.1

Document for: APPROVAL

Proposal

A new TS is proposed.

The scope of the new TS is:

> This document defines a mobile device 3GPP IMS Management Object. The management object is compatible with OMA Device Management protocol specifications, version 1.1.2 and upwards, and is defined using the OMA DM Device Description Framework as described in OMA-SyncML-DMTND-V1-1 [6] and OMA-SyncML-DMStdObj-V1-1-2 [7].
>
> The 3GPP IMS Management Object consists of relevant parameters that can be managed for the IM CN Subsystem. This includes the basic framework defined in 3GPP TS 23.228 [4] and 3GPP TS 24.229 [5], and early IMS as defined in 3GPP TS 23.221 [3].

The proposed version 0.0.2 is attached as file 24.167-002.zip

3GPP TS 24.167abc V0.0.21 (2004-110)

Technical Specification

3rd Generation Partnership Project; Technical Specification Group Core Network; 3GPP IMS Management Object (MO); Stage 3 (Release 6)

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Select keywords from list provided in specs database.

Keywords
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Contents

Foreword

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  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

This document defines a mobile device 3GPP IMS Management Object. The management object is compatible with OMA Device Management protocol specifications, version 1.1.2 and upwards, and is defined using the OMA DM Device Description Framework as described in OMA-SyncML-DMTND-V1-1 [65] and OMA-SyncML-DMStdObj-V1-1-2 [76].

The 3GPP –IMS Management Object consists of relevant parameters that can be managed for the IM CN Subsystem. This includes the basic framework defined in 3GPP TS 23.228 [43] and 3GPP TS 24.229 [54], and early IMS as defined in 3GPP TS 23.221 [3].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the 3GPP IMS Management Object document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.003: "Numbering, addressing and identification-".

[3] 3GPP TS 23.221: "Architectural requirements".

[43] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[54] 3GPP TS 24.229: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[65] OMA-SyncML-DMTND-V1-1: "SyncML Device Management Tree and Description".

[76] OMA-SyncML-DMStdObj-V1-1-2: "SyncML Device Management Standardized Objects".

[87] RFC 1123: " Requirements for Internet Hosts -- Application and Support".

3 Definitions 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

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

AS	Application Server
CN	Core Network
CSCF	Call Session Control Function
DDF	Device Description Framework
DM	Device Management

IMS	IP Multimedia core network Subsystem
IP	Internet Protocol
MO	Management Object
OMA	Open Mobile Alliance
P-CSCF	Proxy ñ CSCF
PDP	Packet Data Protocol
SIP	Session Initiation Protocol
UE	User Equipment
URI	Universal Resource Identifier

4 3GPP IMS Management Object

The 3GPP IMS Management Object is used to manage settings of the UE for IM CN Subsystem protocols. The Management Object covers generic parameters for the IM CN subsystem. The Management Object enables the management of the settings on behalf of the end user.

The Management Object Identifier is: org.3gpp/1.0/SIPCore

Protocol compatibility: This MO is compatible with OMA DM 1.2.

Management object name: 3GPP_IMS

Editorís Note: The name of the management object to be determined by OMA.

The following nodes and leaf objects are possible under the 3GPP_IMS node:

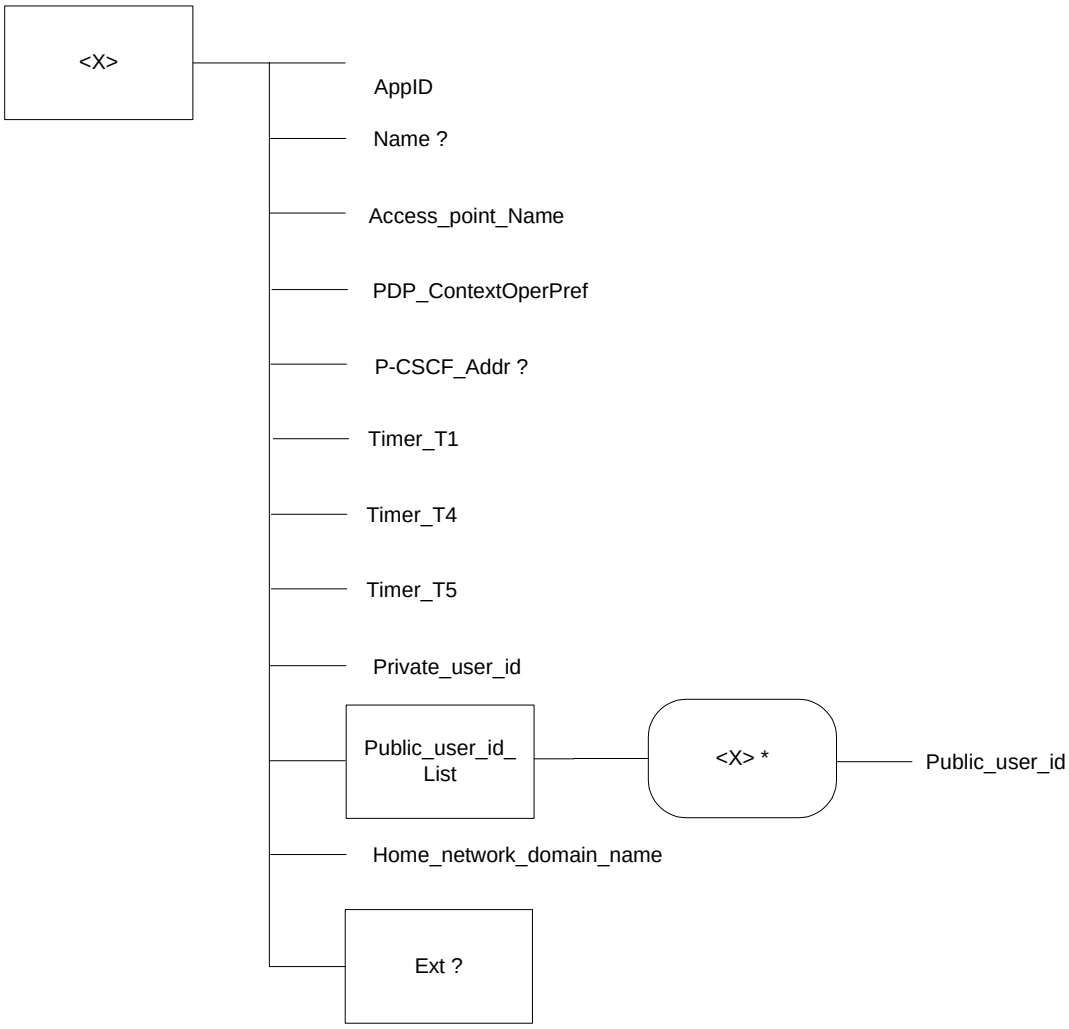

Figure 1: The 3GPP IMS Management Object

5 Management Object parameters

5.1 General

This clause describes the parameters for the 3GPP IMS Management Object.

5.2 Node: /<X>

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

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get
- Values: N/A

The interior node is mandatory if the UE supports the IM CN Subsystem~~IMS~~. ~~IMS s~~Support for a UE is defined by the user agent role as defined in 3GPP TS 24.229 [54].

5.3 /<X>/AppID

The AppID identifies the type of the application service available at the described application service access point. The value is expected to be globally unique.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <Globally unique value>

Editorís Note: The value of the 3GPP_IMS/AppID to be determined by OMA

5.4 /<X>/Name

The Name leaf is a name for the 3GPP_~~-~~IMS settings.

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

5.5 /<X>/Access_Point_Name

The Access_Point_Name leaf defines the APN to use for where the PDP context for the SIP towards the FQDN to a P-CSCF.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The IMS access point name>

The format of the APN is defined by 3GPP TS 23.003 [2].

Example: operator.com

5.6 /<X>/PDP_ContextOperPref

The PDP_ContextOperPref leaf indicates ~~the~~ an operators preference to have a dedicated PDP context for SIP signalling. ~~If preference for a dedicated PDP context for signalling is indicated, one or more additional PDP contexts will be used for media according to the description in 3GPP TS 24.229 [4].~~

- Occurrence: One
- Format: bin
- Access Types: Get, Replace
- Values: 0, 1

  0 ñ Indicates that the operator has no~~NO~~ preference for a dedicated PDP context for SIP signalling.

  1 ñ Indicates that the operator has preference for a dedicated PDP context for SIP signalling.

The PDP_ContextOperPref leaf indicates a preference only. 3GPP TS 24.229 [5] describes the normative options and the procedures for establishment of a dedicated PDP context for SIP signalling.

5.7 /<X>/P-CSCF_Addr

The P-CSCF_Addr leaf defines an FQDN to an IPv4 P-CSCF.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <A fully qualified domain name>

The P-CSCF_Addr leaf shall only be used in early IMS implementations as described in 3GPP TS 23.221 [3]. ~~The P-CSCF_Addr leaf will only be used if no P-CSCF address is received from the network as part of the PDP context activation procedure as described by 3GPP TS 24.229 [4].~~

The FQDN, or domain name as defined by RFC 1123 [8~~7~~], is represented as character-labels with dots as delimiters.

Example: operator.com

5.8 /<X>/Timer_T1

The Timer_T1 leaf defines the SIP timer T1 ñ the RTT estimate.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The round trip time>

The Timer_T1 leaf is an estimate for the round trip time in the system (UE ñ P-CSCF). The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5~~4~~]

Example: 2000 (milliseconds)

5.9 /<X>/Timer_T4

The Timer_T4 leaf defines the SIP timer T4 ñ the maximum retransmit interval for non-INVITE requests and INVITE responses.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: < The maximum retransmit interval for non-INVITE requests and INVITE responses>

The Timer_T4 leaf is an estimate for the maximum retransmit interval for non-INVITE requests and INVITE responses. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5~~4~~]

Example: 16000 (milliseconds)

5.10 /<X>/Timer_T5

The Timer_T5 leaf defines the SIP timer T1 ñ the maximum duration a message will remain in the network.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The maximum duration a message will remain in the network>

The Timer_T5 leaf is an estimate for the maximum duration a message will remain in the network. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [54]

Example: 17000 (milliseconds)

5.11 /<X>/Private_user_id

The Private_user_id leaf defines the private identity of the user.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A private user identity>

The format of the private user identity ~~IMPI~~ is defined by 3GPP TS 23.003 [2].

Example: 234150999999999@ims.mnc015.mcc234.3gppnetwork.org

5.12 /<X>/Public_user_id_List/

The Public_user_id_List interior node is used to allow a reference to a list of public user identities.

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

5.13 /<X>/Public_user_identity_List/<X>

This run-time node acts as a placeholder for one or more public user identities.

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

5.14 /<X>/Public_user_identity_List/<X>/ Public_user_identity

The Public_user_identity leaf defines one or more public user identity.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A public user identity>

The format of the public user identity ~~IMPI~~ is defined by 3GPP TS 23.003 [2].

Example: sip: sip:user@domain~~234150999999999@ims.mnc015.mcc234.3gppnetwork.org~~

5.15 /<X>/Home_network_domain_name

The Home_network_domain_name leaf indicates the operators home network domain.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <The home network domain name>

The format of the home network domain name is defined by 3GPP TS 23.003 [2].

Example: ims.mnc015.mcc234.3gppnetwork.org

5.16 /<X>/Ext/

The Ext is an interior node for where the vendor specific information about the 3GPP-IMS MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identified is not defined and can therefore include un-standardized sub-tree.

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

Annex A (informative): Management Object DDF

This DDF is the standardized minimal set. A vendor can define itís own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.2//EN"
http://www.openmobilealliance.org/tech/DTD/OMA-SyncML-DMDDF-1_2.dtd>

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
        <NodeName>--3GPP_IMS--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>--3GPP IMS settings--</Description>
            <DFFormat>
                <Node/>
            </DFFormat>
            <Occurrence>
                <OneOrMore/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--3GPP IMS Management Object--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>--AppID--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Application ID--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Name--</NodeName>
```

```
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--User displayable name for the node--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Access_Point_Name--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--The IMS access point name--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--PDP_ContextOperPref--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <bin/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Indication of operator preference for a dedicated PDP context for IMS signalling--
</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
```

```
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--P-CSCF_Addr--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--The address of the P-CSCF--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T1--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T1--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T4--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
```

```
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T4--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T5--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T5--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Private_user_identity--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--IMPIprivate user identity--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Public_user_identity_List--</NodeName>
        <!ó  The Public_user_identity_List IMPU_LIST node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
```

```
                <node/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--A collection of ~~IMPU~~ public user identity objects--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName/>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <OneOrMore/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--The "name" node for an public user identity ~~IMPU O~~object--</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName>---public user identity~~IMPU~~ --</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <Scope>
                        <Permanent/>
                    </Scope>
                    <DFTitle>---The public user identity~~IMPU.~~--</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
        </Node>
    </Node>

    <Node>
        <NodeName>--Home_network_domain_name--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
```

```
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--home domain---</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Ext--</NodeName>
        <!ó  The Ext  node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--A collection of all vendor extension objects---</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
    </Node>

</Node>

</MgmtTree>
```

Annex B (informative): Change history

It is usual to include an annex (usually the final annex of the document) for specifications under TSG change control which details the change history of the specification using a table as follows:

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
2004-10					Version 0.0.1: Preliminary proposal		
2004-11					Version 0.0.2: Version after CN1 #36		

3GPP TS 24.167 V0.0.2 (2004-11)

Technical Specification

3rd Generation Partnership Project; Technical Specification Group Core Network; 3GPP IMS Management Object (MO); Stage 3 (Release 6)

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3GPP

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CN	Core Network
CSCF	Call Session Control Function
DDF	Device Description Framework
DM	Device Management

IMS	IP Multimedia core network Subsystem
IP	Internet Protocol
MO	Management Object
OMA	Open Mobile Alliance
P-CSCF	Proxy ñ CSCF
PDP	Packet Data Protocol
SIP	Session Initiation Protocol
UE	User Equipment
URI	Universal Resource Identifier

4 3GPP IMS Management Object

The 3GPP IMS Management Object is used to manage settings of the UE for IM CN Subsystem protocols. The Management Object covers generic parameters for the IM CN subsystem. The Management Object enables the management of the settings on behalf of the end user.

The Management Object Identifier is: org.3gpp/1.0/SIPCore

Protocol compatibility: This MO is compatible with OMA DM 1.2.

Management object name: 3GPP_IMS

Editorís Note: The name of the management object to be determined by OMA.

The following nodes and leaf objects are possible under the 3GPP_IMS node:

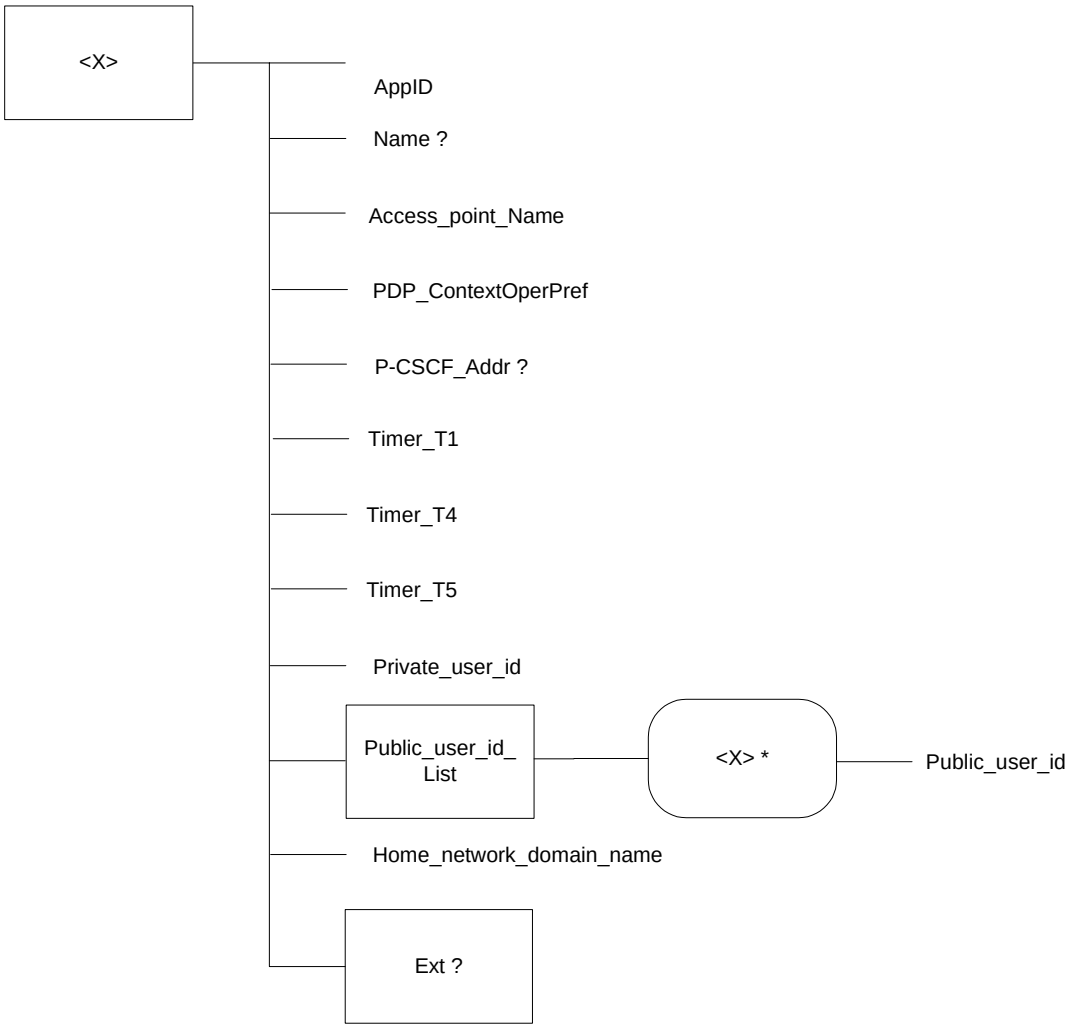

Figure 1: The 3GPP IMS Management Object

5 Management Object parameters

5.1 General

This clause describes the parameters for the 3GPP IMS Management Object.

5.2 Node: /<X>

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

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get
- Values: N/A

The interior node is mandatory if the UE supports the IM CN Subsystem. Support for a UE is defined by the user agent role as defined in 3GPP TS 24.229 [5].

5.3 /<X>/AppID

The AppID identifies the type of the application service available at the described application service access point. The value is expected to be globally unique.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <Globally unique value>

Editorís Note: The value of the 3GPP_IMS/AppID to be determined by OMA

5.4 /<X>/Name

The Name leaf is a name for the 3GPP_IMS settings.

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

5.5 /<X>/Access_Point_Name

The Access_Point_Name leaf defines the APN to use for where the PDP context for the SIP towards the FQDN to a P-CSCF.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The IMS access point name>

The format of the APN is defined by 3GPP TS 23.003 [2].

Example: operator.com

5.6 /<X>/PDP_ContextOperPref

The PDP_ContextOperPref leaf indicates an operators preference to have a dedicated PDP context for SIP signalling.

- Occurrence: One
- Format: bin
- Access Types: Get, Replace
- Values: 0, 1

  0 ñ Indicates that the operator has no preference for a dedicated PDP context for SIP signalling.

  1 ñ Indicates that the operator has preference for a dedicated PDP context for SIP signalling.

The PDP_ContextOperPref leaf indicates a preference only. 3GPP TS 24.229 [5] describes the normative options and the procedures for establishment of a dedicated PDP context for SIP signalling.

5.7 /<X>/P-CSCF_Addr

The P-CSCF_Addr leaf defines an FQDN to an IPv4 P-CSCF.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <A fully qualified domain name>

The P-CSCF_Addr leaf shall only be used in early IMS implementations as described in 3GPP TS 23.221 [3].

The FQDN, or domain name as defined by RFC 1123 [8], is represented as character-labels with dots as delimiters.

Example: operator.com

5.8 /<X>/Timer_T1

The Timer_T1 leaf defines the SIP timer T1 ñ the RTT estimate.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The round trip time>

The Timer_T1 leaf is an estimate for the round trip time in the system (UE ñ P-CSCF). The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5]

Example: 2000 (milliseconds)

5.9 /<X>/Timer_T4

The Timer_T4 leaf defines the SIP timer T4 ñ the maximum retransmit interval for non-INVITE requests and INVITE responses.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: < The maximum retransmit interval for non-INVITE requests and INVITE responses>

The Timer_T4 leaf is an estimate for the maximum retransmit interval for non-INVITE requests and INVITE responses. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5]

Example: 16000 (milliseconds)

5.10 /<X>/Timer_T5

The Timer_T5 leaf defines the SIP timer T1 ñ the maximum duration a message will remain in the network.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The maximum duration a message will remain in the network>

The Timer_T5 leaf is an estimate for the maximum duration a message will remain in the network. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5]

Example: 17000 (milliseconds)

5.11 /<X>/Private_user_id

The Private_user_id leaf defines the private identity of the user.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A private user identity>

The format of the private user identity is defined by 3GPP TS 23.003 [2].

Example: 234150999999999@ims.mnc015.mcc234.3gppnetwork.org

5.12 /<X>/Public_user_id_List/

The Public_user_id_List interior node is used to allow a reference to a list of public user identities.

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

5.13 /<X>/Public_user_identity_List/<X>

This run-time node acts as a placeholder for one or more public user identities.

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

5.14 /<X>/Public_user_identity_List/<X>/ Public_user_identity

The Public_user_identity leaf defines one or more public user identity.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A public user identity>

The format of the public user identity is defined by 3GPP TS 23.003 [2].

Example: sip: sip:user@domain

5.15 /<X>/Home_network_domain_name

The Home_network_domain_name leaf indicates the operators home network domain.

- Occurrence: One
- Format: chr

- Access Types: Get
- Values: <The home network domain name>

The format of the home network domain name is defined by 3GPP TS 23.003 [2].

Example: ims.mnc015.mcc234.3gppnetwork.org

5.16 /<X>/Ext/

The Ext is an interior node for where the vendor specific information about the 3GPP-IMS MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identified is not defined and can therefore include un-standardized sub-tree.

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

Annex A (informative): Management Object DDF

This DDF is the standardized minimal set. A vendor can define itís own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.2//EN"
http://www.openmobilealliance.org/tech/DTD/OMA-SyncML-DMDDF-1_2.dtd>

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
        <NodeName>--3GPP_IMS--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>--3GPP IMS settings--</Description>
            <DFFormat>
                <Node/>
            </DFFormat>
            <Occurrence>
                <OneOrMore/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--3GPP IMS Management Object--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>--AppID--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Application ID--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Name--</NodeName>
```

```
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--User displayable name for the node--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Access_Point_Name--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--The IMS access point name--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--PDP_ContextOperPref--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <bin/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Indication of operator preference for a dedicated PDP context for IMS signalling--
</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
```

```
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--P-CSCF_Addr--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--The address of the P-CSCF--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T1--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T1--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T4--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
```

```
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T4--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T5--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T5--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Private_user_identity--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--private user identity--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Public_user_identity_List--</NodeName>
        <!ó  The Public_user_identity_List node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
```

```
                <node/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--A collection of public user identity objects--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName/>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <OneOrMore/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--The "name" node for an public user identity object--</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName>--public user identity--</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <Scope>
                        <Permanent/>
                    </Scope>
                    <DFTitle>--The public user identity--</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
        </Node>
    </Node>

    <Node>
        <NodeName>--Home_network_domain_name--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
```

```
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--home domain--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Ext--</NodeName>
        <!ó  The Ext  node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--A collection of all vendor extension objects--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
    </Node>

</Node>

</MgmtTree>
```

Annex B (informative): Change history

It is usual to include an annex (usually the final annex of the document) for specifications under TSG change control which details the change history of the specification using a table as follows:

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
2004-10					Version 0.0.1: Preliminary proposal		
2004-11					Version 0.0.2: Version after CN1 #36		