SyncML Device Management Standardized Objects, Version 1.1.2

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Continues the Technical Activities
Originated in the SyncML Initiative

Contents

1. SCOPE 4
2. REFERENCES 5
2.1 NORMATIVE REFERENCES 5
2.2 INFORMATIVE REFERENCES 5
3. TERMINOLOGY AND CONVENTIONS 6
3.1 CONVENTIONS 6
3.2 DEFINITIONS 6
3.3 ABBREVIATIONS 6
4. INTRODUCTION 7
5. STANDARDIZED OBJECTS 8
5.1 MANAGEMENT OBJECTS 8
5.1.1 Definition and description of management objects 8
5.1.2 DDF compliance 9
5.2 MANAGEMENT OBJECTS STANDARDIZED BY OTHER ORGANIZATIONS 10
5.3 THE SYNCML DM MANAGEMENT OBJECTS 10
5.3.1 The SyncML DM management object 11
5.3.2 The DevInfo management object 17
5.3.3 The DevDetail management object 17
APPENDIX A. STATIC CONFORMANCE REQUIREMENTS (NORMATIVE) 20
APPENDIX B. CHANGE HISTORY (INFORMATIVE) 21
B.1 APPROVED VERSION HISTORY 21
B.2 DRAFT/CANDIDATE VERSION 1.1.2 HISTORY 21
APPENDIX C. SYNCML/DM (NORMATIVE) 22
APPENDIX D. DEVINFO (NORMATIVE) 34
APPENDIX E. DEVDETAIL (NORMATIVE) 38

1. Scope

This document defines a set of management objects. Some of these are mandatory for all SyncML DM compliant devices and others are optional. The objects are defined using the SyncML DM Device Description Framework.

The SyncML Initiative, Ltd. was a not-for-profit corporation formed by a group of companies who co-operated to produce an open specification for data synchronization and device management. Prior to SyncML, data synchronization and device management had been based on a set of different, proprietary protocols, each functioning only with a very limited number of devices, systems and data types. These non-interoperable technologies have complicated the tasks of users, manufacturers, service providers, and developers. Further, a proliferation of different, proprietary data synchronization and device management protocols has placed barriers to the extended use of mobile devices, has restricted data access and delivery and limited the mobility of the users.

SyncML Components

SyncML is a specification that contains the following main components:

- An XML-based representation protocol
- A synchronization protocol and a device management protocol
- Transport bindings for the protocol
- A device description framework for device management

2. References

2.1 Normative References

[DMBOOT] "SyncML Device Management Bootstrap, Version 1.1.2". Open Mobile Alliance™. OMA-SyncML-DMBootstrap-V1_1_2. URL:http:www.openmobilealliance.org/tech/docs

[DMCONF] "Device Management Conformance Requirements, Version 1.1.2". Open Mobile Alliance™. OMA-SyncML-DMConReqs-V1_1_2. URL:http:www.openmobilealliance.org/tech/docs

[DMPRO] "SyncML Device Management Protocol, Version 1.1.2". Open Mobile Alliance™. OMA-SyncML-DMProtocol-V1_1_2. URL:http:www.openmobilealliance.org/tech/docs

[DMTND] "SyncML Device Management Tree and Description, Version 1.1.2". Open Mobile Alliance™. OMA-SyncML-DMTND-V1_1_2. URL:http:www.openmobilealliance.org/tech/docs

[GFS] "General formats Specifications". Open Mobile Alliance™. WAP-188-WAPGenFormats. URL:http:www.openmobilealliance.org/tech/docs

[RFC1766] "Tags for the Identification of Languages". H. Alvestrand. March 1995. URL:http://www.ietf.org/rfc/rfc1766.txt

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels". S. Bradner. March 1997. URL:http://www.ietf.org/rfc/rfc2119.txt

[RFC2373] "Internet Protocol Version 6 Addressing Architecture". R. Hinden and S. Deering. July 1998. URL:http://www.ietf.org/rfc/rfc2373.txt

[RFC2396] "Uniform Resource Identifiers (URI): Generic Syntax". T. Berners-Lee, R. Fielding, L. Masinter. August 1998. URL:http://www.ietf.org/rfc/rfc2396.txt

[RFC791] "Internet Protocol: Darpa Internet Protocol Program Specification". September 1981. URL:http://www.ietf.org/rfc/rfc791.txt

[SYNCDEV] "SyncML Device Information, version 1.1.2". Open Mobile Alliance™. OMA-SyncML-DevInfo-V1_1_2. URL:http:www.openmobilealliance.org/tech/docs

[DMDDFDTD] "SyncML DM Device Description Framework, Version 1.1.2". Open Mobile Alliance™. OMA-SyncML-DMDDFDTD-V1_1_2. URL:http:www.openmobilealliance.org/tech/DTD

2.2 Informative References

None.

3. Terminology and Conventions

3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

Any reference to components of the DTD's or XML snippets are specified in this `typeface`.

3.2 Definitions

See the DM Tree and Description [DMTND] document for definitions of terms related to the management tree.

3.3 Abbreviations

None.

4. Introduction

Other SyncML DM specifications define the syntax and semantics of the SyncML DM protocol. However, the usefulness of such a protocol would be limited if the managed entities in devices required different data formats and displayed different behaviors. To avoid this situation this specification defines a number of mandatory management objects for various uses in devices. These objects are primarily associated with SyncML DM and SyncML configuration.

Since device manufacturers will always develop new functions in their devices and since these functions often are proprietary, no standardized management objects exist for them. To make these functions manageable in the devices that have them, a device description framework is needed that can provide servers with the necessary information they must have in order to manage the new functions. The intention with this framework is that device manufacturers will publish descriptions of their devices as they enter the market. Organizations operating device management servers should then only have to feed the new description to their servers for them to automatically recognize and manage the new functions in the devices.

5. Standardized Objects

5.1 Management Objects

Management objects are the entities that can be manipulated by management actions carried over the SyncML DM protocol. A management object can be as small as an integer or large and complex like a background picture or screen saver. The SyncML DM protocol is agnostic about the contents, or values, of the management objects and treats the node values as opaque data

5.1.1 Definition and description of management objects

SyncML DM management objects are defined using the SyncML DM Device Description Framework [DMTND], or DDF. The use of this description framework produces detailed information about the device in question. However, due to the high level of detail in these descriptions, they are sometimes hard for humans to digest and it can be a time consuming task to get an overview of a particular objects structure.

In order to make it easier to quickly get an overview of how a management object is organized and its intended use, a simplified graphical notation in the shape of a block diagram is used in this document. Even though the notation is graphical, it still uses some printable characters, e.g. to denote the number of occurrences of a node. These are mainly borrowed from the syntax of DTDs for XML. The characters and their meaning are defined in the following table.

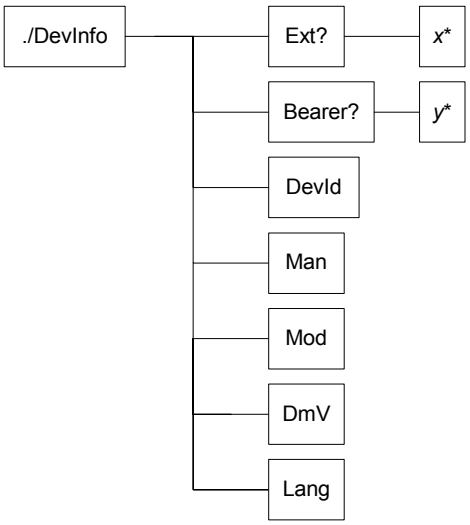
Character	Meaning
+	one or many occurrences
*	zero or more occurrences
?	zero or one occurrences

If none of these characters is used the default occurrence is exactly once.

There is one more feature of the DDF that needs to have a corresponding graphical notation, the un-named block. These are blocks that act as placeholders in the description and are instantiated with information when the nodes are used at run-time. Un-named blocks in the description are represented by a lower case character in italics, e.g. *x*.

Each block in the graphical notation corresponds to a described node, and the text is the name of the node. If a block contains an *x,* it means that the name is not known in the description and that it will be assigned at run-time. The names of all ancestral nodes are used to construct the URI for each node in the management object. It is not possible to see the actual parameters, or data, stored in the nodes by looking at the graphical notation of a management object.

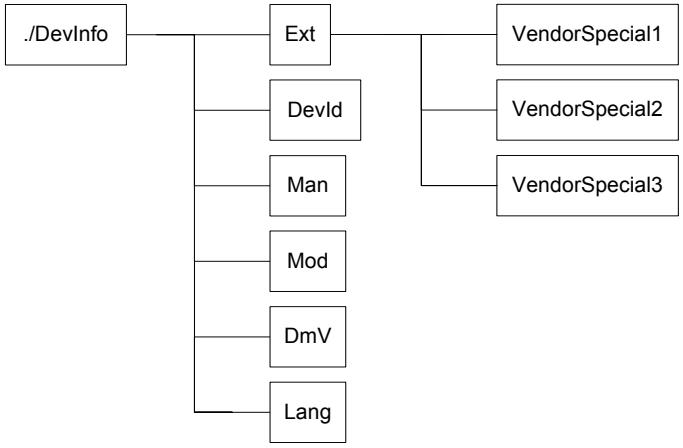
The following is an example of what a management object can look like when it is expressed using the graphical notation. This particular object is the SyncML DM Device Information management object.



Example of a management object pictured using the graphical notation

Naturally, this graphical overview does not show all the details of the full description, but it provides a good map of the description so that it is easier to find the individual nodes. Although the figure only provides an elevated view of the description, there are still some things worth noticing. All the blocks with names in place occur exactly once, except Ext and Bearer that are optional and may not be present at all. One of the named nodes, DevInfo, has child nodes; it is an interior node. With the exception of Ext and Bearer, none of the other named nodes can have any children of their own; they are leaf nodes. The un-named leaf nodes are marked with *. This means that although the description only contains one node description at this position in the tree, there can be any number of instantiated nodes at run-time, including none. The only limit is that the node names must be unique and memory must be available to store the nodes.

The next figure shows an example of what the device information management object could look like at run-time.



Example of an instantiated ./DevInfo object

The difference between this and the previous figure is that now the un-named blocks have been instantiated. It is also shown that the * character means that a node can occur zero or more times. Note that none of the stored data in the leaf nodes is shown in the figure, what are visible are only the node names.

5.1.2 DDF compliance

The management object descriptions in this document are normative. However, the descriptions also contain are a number of informative aspects that could be included to enhance readability or serve as examples. Other informative

aspects are, for instance, the ZeroOrMore and OneOreMore elements, where implementations may introduce restrictions. All these exceptions are listed here:

- All XML comments, e.g. "<!-- some text -->", are informative.
- The descriptions do not contain an RTProperties element, or any of its child elements, but a description of an actual implementation of this object MAY include these.
- If a default value for a leaf node is specified in a description, by the DefaultValue element, an implementation MUST supply its own appropriate value for this element. If the DefaultValue element is present in the description of a node, it MUST be present in the implementation, but MAY have a different value.
- The value of all Man, Mod, Description and DFTitle elements are informative and included only as examples.
- Below the interior nodes Ext and Bearer, an implementation may add further nodes at will.
- The contents of the AccessType element MAY be extended by an implementation.
- If the any of the following AccessType values are specified, they MUST NOT be removed in an implementation: Copy, Delete, Exec, Get, and Replace.
- If the AccessType value Add is specified it MAY be removed in an implementation if the implementation only supports a fixed number of child nodes.
- An implementation MAY replace the ZeroOrMore or OneOreMore elements with ZeroOrN or OneOrN respectively. An appropriate value for N must also be given with the …OrN elements.

5.2 Management objects standardized by other organizations

SyncML DM has been designed so that existing management objects can be managed. These existing management objects have typically already been standardized by other standards organizations.

Currently there are no management objects standardized by other organizations in use with SyncML DM.

5.3 The SyncML DM management objects

Clients implementing SyncML DM MUST support the SyncML DM management object, SyncML DevInfo management object and the SyncML DevDetail management object. SyncML DM servers MUST support all three management objects as well.

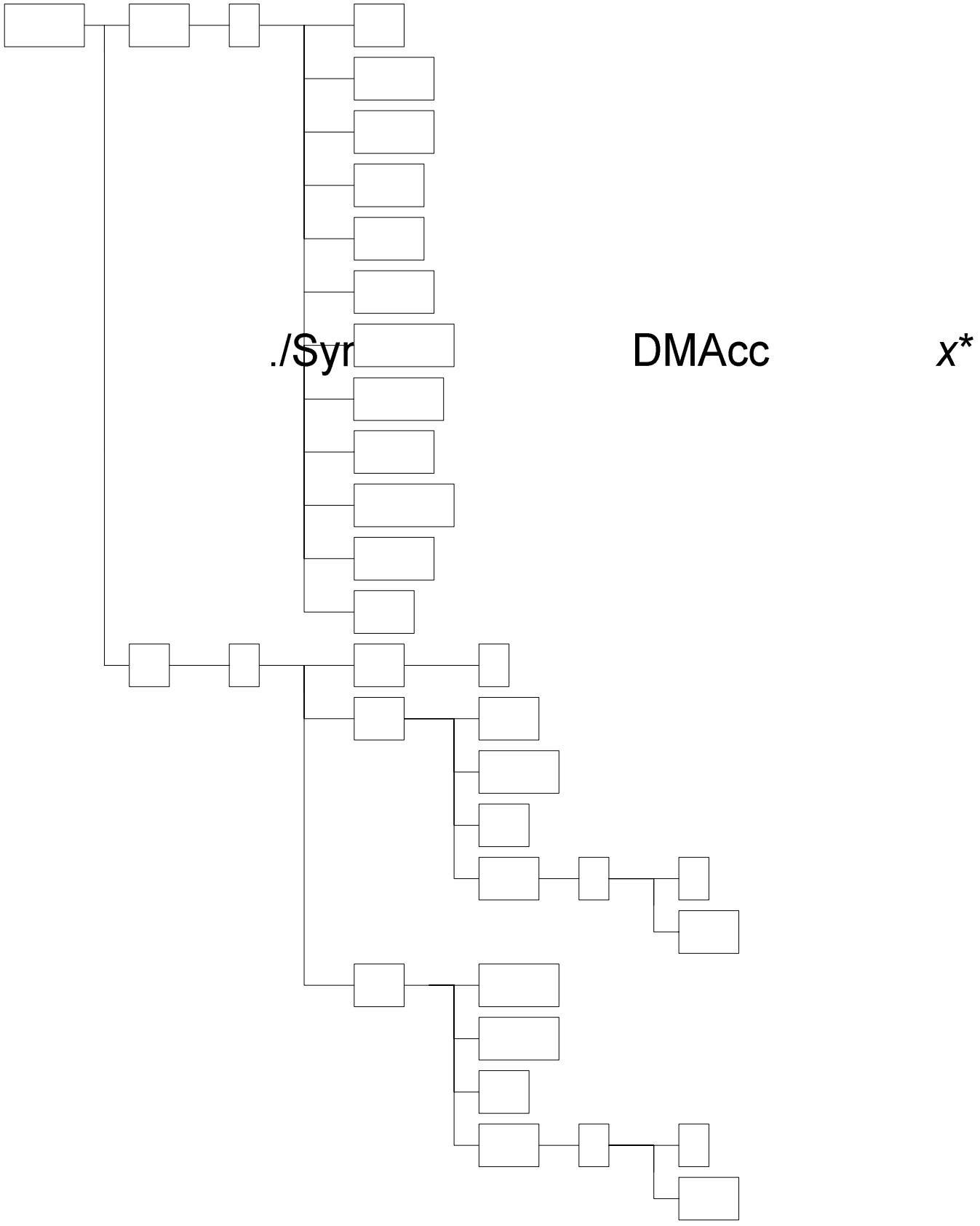
Management Object	Client Support	Server Support	Description
SyncML DM	MUST	MUST	Settings for the SyncML DM client in a managed device.
DevInfo	MUST	MUST	Device information for the SyncML DM server. Sent from the client to the server.
DevDetail	MUST	MUST	General device information that benefits from standardization.

The difference between DevInfo and DevDetail is that the DevInfo parameters are needed by the management server for problem free operation of the SyncML DM protocol. The DevInfo object is sent from client to server in the beginning of every session.

DevDetail contains other device specific parameters that benefits from being standardized and mandatory. The only difference is that these parameters are not sent from client to server automatically. Instead, these parameters are managed by servers as any other parameters and can be manipulated using SyncML DM commands.

5.3.1 The SyncML DM management object

This management object is used to manage settings for the SyncML DM protocol. This object is also used for bootstrapping SyncML DM devices [DMBOOT]. The following figure gives an overview of the SyncML DM management object.



The SyncML DM management object

The SyncML DM management object consists of two parts. The first part is the DMAcc node which is where the SyncML DM specific settings are stored. These settings are collectively referred to as a SyncML DM account.

The second part is Con, which is used for connectivity settings needed to communicate with a SyncML DM server. The sub tree of the Con node is similar to what a generic connectivity management object might look like and there is also substantial overlap with WAP Provisioning parameters here. For these reasons it is obvious that the Con node does not really belong at this point in the management tree. However, since there currently is no other defined way to manage these parameters it is included here in this version of the specification. Similar or equivalent connectivity settings may be stored elsewhere in the management tree. In that case the value of ConRef will point to that location.

The nodes making up SyncML DM have the following meanings: (Note that all URI are given as relative URI with ./SyncML as the base URI.)

DMAcc
This interior node is a common parent to all SyncML DM accounts nodes.

DMAcc/*x*
This interior node acts as a placeholder for one or more SyncML DM accounts. The node name MUST be assigned by the server at bootstrap.

DMAcc/*x*/Addr
This node can store addresses of different kinds. The type of address stored is specified by the value of the DMAcc/*x*/AddrType node.

DMAcc/*x*/AddrType
This node specifies the format and interpretation of the DMAcc/*x*/Addr node value. The value is numeric and encoded as inline string, as specified in the table below. Note that the quotes are not part of the value.

Address Type	Value	Description
HTTP	'1'	A URL, [RFC2396].
WSP	'2'	A URL, [RFC2396].
OBEX	'3'	

DMAcc/*x*/PortNbr
This node specifies the port number to use, if applicable for the current bearer. The port number must be a decimal number and must fit within the range of a 16 bit unsigned integer.

DMAcc/*x*/ConRef
This node is used to point to connectivity information stored elsewhere in the device. This is needed in order to locate connectivity information stored separately from the SyncML DM management object. In the current release of this specification the value of DMAcc/*x*/ConRef SHOULD provide a logical link to an existing connectivity object. If for instance the value of DMAcc/*x*/ConRef is “My_ISP”, then the name of the referenced connectivity object should be Con/My_ISP. Note that this example refers to the use of the connectivity object within ./SyncML. However the value of DMAcc/*x*/ConRef can be a reference to any set of connectivity information in a device, even outside the management tree.

DMAcc/*x*/ServerId
This node stores the server identifier for the current SyncML DM account. This value is set during bootstrap, i.e. the creation of the DMAcc object. Note that once the ServerId is set, it cannot be changed in a regular SyncML DM session since the AccessType property MUST NOT contain the Replace command for this node.

DMAcc/*x*/ServerPW
This node holds the password or secret that the server will use to authenticate itself to the client. The password should be stored using Basic format (recommended locally encrypted) if Basic authentication will be used. The AccessType property for this node MUST NOT contain Get or Copy.

DMAcc/*x*/ServerNonce
This node stores the next nonce that the server will use to authenticate itself to the client.

DMAcc/*x*/UserName
This node stores the name of the user (or device), for use in SyncML DM authentication.

DMAcc/x/ClientPW
This node holds the password or secret that the client will use to authenticate itself to the server. The password should be stored using Basic format (recommended locally encrypted) if Basic authentication will be used. If only MD5 or HMAC authentication will be used, the password may be stored hashed. The `AccessType` property for this node MUST NOT contain `Get` or `Copy`.

DMAcc/x/ClientNonce
This node stores the next nonce that the client will use to authenticate itself to the server.

DMAcc/*x*/AuthPref
This is a string-valued parameter whose possible values are the names of the various possible SyncML authentication types, e.g. "syncml:auth-md5". If this node is present, the client SHOULD use this authentication type when connecting to the server. The use of this node is intended to reduce the number of round trips between client and server that would be caused by authentication challenges. This node is optional.

DMAcc/*x*/Name
This optional node stores the user displayable name for the current SyncML DM account.

Con
This interior node is a common parent to all connectivity nodes.

Con/*w*
This interior node acts as a placeholder for one or more connectivity nodes. The server MUST assign the node name. To logically link a SyncML DM account with a connectivity node, the name of this node MUST be the same as the value of the `DMAcc/x/ConRef` node, i.e. name(`Con/w`) = value(`DMAcc/x/ConRef`)

Con/*w*/NAP/Bearer
This node specifies the bearer type of the connection information. The value is numeric and encoded as inline string, as specified in the table below. Note that the quotes are not part of the value.

Bearer type	Value
OBEX	‘1’
GSM-USSD	'2'
GSM-SMS	'3'
ANSI-136-GUTS	‘4’
IS-95-CDMA-SMS	‘5’
IS-95-CDMA-CSD	‘6’
IS-95-CDMA-PACKET	‘7’
ANSI-136-CSD	‘8’
ANSI-136-GPRS	‘9’
GSM-CSD	‘10’
GSM-GPRS	‘11’

AMPS-CDPD	‘12’
PDC-CSD	‘13’
PDC-PACKET	‘14’
IDEN-SMS	‘15’
IDEN-CSD	‘16’
IDEN-PACKET	‘17’
FLEX/REFLEX	‘18’
PHS-SMS	‘19’
PHS-CSD	‘20’
TETRA-SDS	‘21’
TETRA-PACKET	‘22’
MOBITEX MPAK	'23’
ANSI-136-GHOST	'24’

Con/*w*/NAP/AddrType

This node specifies the address type value of the connection information. The value is numeric and encoded as inline string, as specified in the table below. Note that the quotes are not part of the value.

NAP/Address Type	Value	Description
IPV4	'1'	An IPv4 address [RFC791] represented in decimal format with dots as delimiters
IPV6	'2'	An IPv6 address [RFC2373] represented as hexadecimal numbers with colons as delimiters or as a combination of hexadecimal and decimal numbers with dots and colons as delimiters
E164	'3'	A phone number according to the E164 scheme defined in [GFS]
ALPHA	'4'	Generic alphanumeric address, (as defined by alphanum in [RFC2396})
APN	‘5’	Access Point Name, [GFS]

Con/*w*/NAP/Addr

Contains all the digits and pauses needed to communicate with a remote entity and is defined in [GFS]. The format and content of the node depend on the bearer type. This node might, for instance, contain the phone number of an access router, a calling card sequence, a GPRS APN or the address of an SMSC. The node value SHOULD be in international format whenever possible, e.g. using the “+” notation as in GSM. The `Con/w/NAP/AddrType` node defines the type of address present in this node.

Con/*w*/NAP/Auth/*y*
This interior node specifies a NAP (Network Access Point) authentication method. This node does not specify the actual method to use when connecting to the NAP, but it links the authentication parameters, Id and Secret, to an authentication method. The name of the node species for which authentication method the associated Id and Secret nodes are valid. The name of this node SHOULD be "PAP" or "CHAP". The name is case sensitive.

Con/*w*/NAP/Auth/*y*/Id
Specifies the NAP authentication identifier, e.g. user name.

Con/*w*/NAP/Auth/*y*/Secret
Specifies the NAP authentication secret, e.g. password. The `AccessType` property for this node MUST NOT contain `Get` or `Copy`.

Con/*w*/PX/PortNbr
This node specifies the port number to use. The port number must be expressed as a decimal value and must fit with in the range of a 16-bit unsigned integer.

Con/*w*/PX/AddrType
This node specifies the format and interpretation of the `Con/w/PX/Addr` node value. The value is numeric and encoded as inline string, as specified in the table below. Note that the quotes are not part of the value.

Address Type	Value	Description
IPV4	'1'	An IPv4 address [RFC791] represented in decimal format with dots as delimiters
IPV6	'2'	An IPv6 address [RFC2373] represented as hexadecimal numbers with colons as delimiters or as a combination of hexadecimal and decimal numbers with dots and colons as delimiters
E164	'3'	A phone number according to the E164 scheme defined in [GFS]
ALPHA	'4'	Generic alphanumeric address, [RFC2396]

Con/*w*/PX/Addr
This node can store addresses of different kinds. The type of address stored is specified by the value of the `Con/w/PX/AddrType` node.

Con/*w*/PX/Auth/*z*
This interior node specifies a NAP authentication method. This node does not specify the actual method to use when connecting to the NAP, but it links the authentication parameters, Id and Secret, to an authentication method. The name of the node species for which authentication method the associated Id and Secret node are valid. The name of this node SHOULD be "HTTP_BASIC", "HTTP_DIGEST" or "WTLS_SS". The name is case sensitive.

Con/*w*/PX/Auth/*z*/Id
Specifies the proxy authentication identifier, e.g. user name.

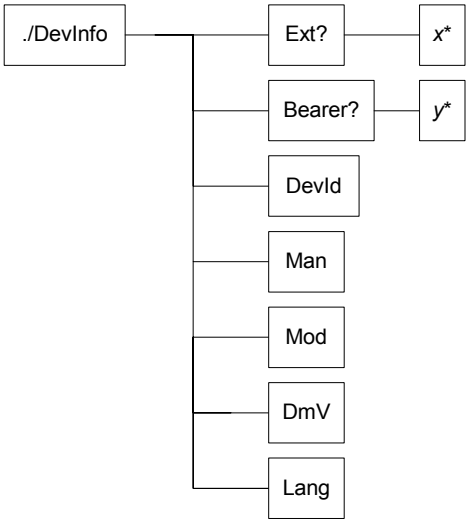
Con/*w*/PX/Auth/*z*/Secret
Specifies the proxy authentication secret, e.g. password. The `AccessType` property for this node MUST NOT contain `Get` or `Copy`.

Con/*w*/Ext
An optional internal node, designating the single branch of the SyncML DM management object sub tree into which extensions can be added, permanently or dynamically.

The complete DDF description of this management object can be found in Appendix C.

5.3.2 The DevInfo management object

The following figure shows an overview of the DevInfo management object.



The DevInfo management object

The nodes making up DevInfo have the following meanings:

Ext
An optional, internal node, designating the only branch of the DevInfo sub tree into which extensions can be added, permanently or dynamically.

Bearer
An optional, internal node of the DevInfo sub tree in which items related to the bearer (CDMA, etc.) are stored. Use of this sub tree can be mandated by other standards.

DevId
A unique identifier for the device. SHOULD be globally unique. Defined in [SYNCDEV].

Man
The manufacturer identifier. Defined in [SYNCDEV].

Mod
A model identifier (manufacturer specified string). Defined in [SYNCDEV].

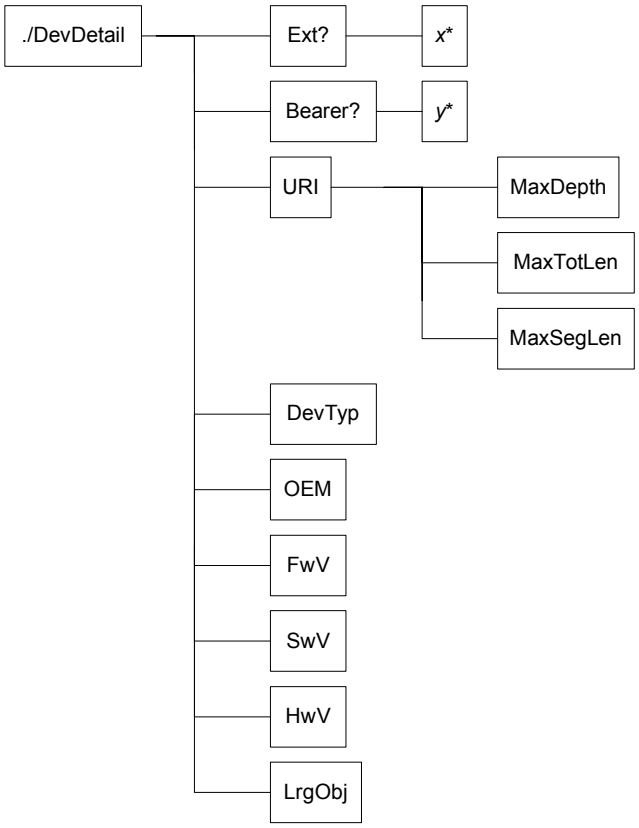
DmV
A SyncML device management client version identifier (manufacturer specified string).

Lang
The current language setting of the device. The syntax of the language tags and their use are defined in [RFC1766]. Language codes are defined by ISO in the standard ISO639.

The complete DDF description of this management object can be found in Appendix D.

5.3.3 The DevDetail management object

The following figure shows an overview of the DevDetail management object.



The DevDetail management object

The nodes making up DevDetail have the following meanings:

Ext
An optional, internal node, designating the only branch of the DevDetail sub tree into which extensions can be added, permanently or dynamically.

Bearer
An optional, internal node, designating a branch of the DevDetail sub tree into which items related to the bearer (CDMA, etc.) are stored. Use of this sub tree can be mandated by other standards.

URI/MaxDepth
Specifies the maximum depth of the management tree supported by the device. The maximum depth of the tree is defined as the maximum number of URI segments that the device supports. The value is a 16 bit, unsigned integer encoded as a numerical string. The value '0' means that the device supports a tree of 'unlimited' depth.

URI/MaxTotLen
Specifies the maximum total length of any URI used to address a node or node property. The maximum total length of a URI is defined as the largest total number of characters making up the URI which the device can support. Note that depending on the character set this might not be the same as the number of bytes. The value is a 16 bit, unsigned integer encoded as a numerical string. The value '0' means that the device supports URI of 'unlimited' length.

URI/MaxSegLen
Specifies the maximum total length of any URI segment in a URI used to address a node or node property. The maximum total length of a URI segment is defined as the largest number of characters which the device can support in a single URI segment. Note that depending on the used character set this might not be the same as the number of bytes. The value is a 16 bit, unsigned integer encoded as a numerical string. The value '0' means that the device supports URI segments of 'unlimited' length.

DevTyp
Device type, e.g. PDA, pager, or phone. Defined in [SYNCDEV].

OEM
Original Equipment Manufacturer. Defined in [SYNCDEV].

FwV
Firmware version. Defined in [SYNCDEV].

SwV
Software version. Defined in [SYNCDEV].

HwV
Hardware version. Defined in [SYNCDEV].

LrgObj
Indicates whether the device supports the SyncML Large Object Handling specification, as defined in [DMPRO].

It is RECOMMENDED that the combination of HwV, SwV, FwV, Man, Mod, and OEM provide a unique signature identifying the specific version of software, thus providing a means for other implementations to make special provisions based on that identification.

The complete DDF description of this management object can be found in Appendix E.

Appendix A. Static Conformance Requirements (Normative)

The static conformance requirements can be found in [DMCONF].

Appendix B. Change History (Informative)

B.1 Approved Version History

Reference	Date	Description
n/a	n/a	No previous version within OMA

B.2 Draft/Candidate Version 1.1.2 History

Document Identifier	Date	Section	Description
Class 0		All	The initial version of this document, based on SyncML DM 1.1.1.
Class 2	2003-04-10	All	Change Requests listed in OMA-DM-2003-0047R3
Class 3	2003-05-08	All	Editorial corrections
Draft Version OMA-SyncML-DMStdObj-V1_1_2-20030508-D	8 May 2003		Draft for TP approval
Candidate Version OMA-SyncML-DMStdObj-V1_1_2-20030612-C	12 June 2003		Status Changed to Candidate by TP TP ref# OMA-TP-2003-0266R1
Class 3	03 December 2003	Appendix C, 2.1 Normative References	Changes per OMA-DM-2003-0168R01-CR_DM-DDF-Update.zip and OMA-DM-2003-0126R02-CR_NonceDDF.doc

Appendix C. SyncML/DM (Normative)

This Appendix is Normative given the restrictions in Section 5.1.2.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.1.2//EN"
http://www.openmobilealliance.org/tech/DTD/OMA-SyncML-DMDDF-1_1_2.dtd>

<MgmtTree>
    <VerDTD>1.1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>
    <Node>
        <NodeName>SyncML</NodeName>
        <!--The Path element must be used here so that the SyncML management object can be correctly positioned in the
management tree.-->
        <Path>.</Path>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>SyncML settings</Description>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>SyncML node</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>DMAcc</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>A collection of all SyncML DM accounts</DFTitle>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName/>
                <DFProperties>
                    <AccessType>
                        <Delete/>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
```

```
            </DFFormat>
            <Occurrence>
                <ZeroOrMore/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The "name" node for a management account sub tree</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>Addr</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>Host address of the SyncML server, IP or URL.</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>AddrType</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>The type of address specified in the Addr node</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>PortNbr</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DefaultValue>80</DefaultValue>
                <DFFormat>
                    <chr/>
                </DFFormat>
```

```
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>SyncML Server port</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ConRef</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Logical reference to a connectivity node</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ServerId</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The "ServerId" value for this server</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ServerPW</NodeName>
        <DFProperties>
            <AccessType>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
```

```
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The password or secret that the server will use to authenticate itself to the client</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ServerNonce</NodeName>
        <DFProperties>
            <AccessType>
                <Replace/>
            </AccessType>
            <DFFormat>
                <bin/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The next nonce that the server will use to authenticate itself to the client</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>UserName</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The username of the device (or user)</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ClientPW</NodeName>
        <DFProperties>
            <AccessType>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
```

```
            <DFTitle>The password or secret that the client will use to authenticate itself to the server</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ClientNonce</NodeName>
        <DFProperties>
            <AccessType>
                <Replace/>
            </AccessType>
            <DFFormat>
                <bin/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The next nonce that the client will use to authenticate itself to the server</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>AuthPref</NodeName>
        <DFProperties>
            <AccessType>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The authentication type that this server prefers</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Name</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Displayable name for the SyncML DM settings</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
```

```
                </DFType>
            </DFProperties>
        </Node>
    </Node>
</Node>
<Node>
    <NodeName>Con</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
            <Replace/>
        </AccessType>
        <DFFormat>
            <node/>
        </DFFormat>
        <Scope>
            <Permanent/>
        </Scope>
        <DFTitle>A collection of connectivity nodes for SyncML DM</DFTitle>
        <DFType>
            <DDFName></DDFName>
        </DFType>
    </DFProperties>
    <Node>
        <NodeName/>
        <DFProperties>
            <AccessType>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrMore/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The "name" node for a connectivity sub tree</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>Ext</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName/>
```

```
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <!-- chr is only used as an example-->
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrMore/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>Ext setting holder</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>
    </Node>
    <Node>
        <NodeName>NAP</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>Bearer</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>The specified bearer to use</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>AddrType</NodeName>
            <DFProperties>
```

```
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The type of address specified</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Addr</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The NAP address</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Auth</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Authentication data for this NAP.</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName/>
            <DFProperties>
                <AccessType>
                    <Get/>
```

```
                    <Replace/>
                </AccessType>
                <Description>The "name" node for one set of authentication data.</Description>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <OneOrMore/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>One set of authentication data</DFTitle>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName>Id</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <Scope>
                        <Dynamic/>
                    </Scope>
                    <DFTitle>Id (or username) </DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
            <Node>
                <NodeName>Secret</NodeName>
                <DFProperties>
                    <AccessType>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <Scope>
                        <Dynamic/>
                    </Scope>
                    <DFTitle>Secret (or password) for this Id</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
        </Node>
    </Node>
</Node>
<Node>
    <NodeName>PX</NodeName>
    <DFProperties>
        <AccessType>
```

```
            <Get/>
            <Replace/>
        </AccessType>
        <DFFormat>
            <node/>
        </DFFormat>
        <Occurrence>
            <One/>
        </Occurrence>
        <Scope>
            <Dynamic/>
        </Scope>
        <DFType>
            <DDFName></DDFName>
        </DFType>
    </DFProperties>
    <Node>
        <NodeName>PortNbr</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The port number to use for this proxy.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>AddrType</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>The type of address specified</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Addr</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
```

```
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>The proxy address</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>Auth</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>Authentication data for this proxy.</DFTitle>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName/>
                <DFProperties>
                    <AccessType>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <Description>The "name" node for one set of authentication data.</Description>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <OneOrMore/>
                    </Occurrence>
                    <Scope>
                        <Dynamic/>
                    </Scope>
                    <DFTitle>One set of authentication data</DFTitle>
                    <DFType>
                        <DDFName></DDFName>
                    </DFType>
                </DFProperties>
                <Node>
                    <NodeName>Id</NodeName>
                    <DFProperties>
                        <AccessType>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <chr/>
```

```
                                </DFFormat>
                                <Occurrence>
                                    <One/>
                                </Occurrence>
                                <Scope>
                                    <Dynamic/>
                                </Scope>
                                <DFTitle>Id (or username) </DFTitle>
                                <DFType>
                                    <MIME>text/plain</MIME>
                                </DFType>
                            </DFProperties>
                        </Node>
                        <Node>
                            <NodeName>Secret</NodeName>
                            <DFProperties>
                                <AccessType>
                                    <Replace/>
                                </AccessType>
                                <DFFormat>
                                    <chr/>
                                </DFFormat>
                                <Occurrence>
                                    <One/>
                                </Occurrence>
                                <Scope>
                                    <Dynamic/>
                                </Scope>
                                <DFTitle>Secret (or password) for this Id</DFTitle>
                                <DFType>
                                    <MIME>text/plain</MIME>
                                </DFType>
                            </DFProperties>
                        </Node>
                    </Node>
                </Node>
            </Node>
        </Node>
    </Node>
</MgmtTree>
```

Appendix D. DevInfo (Normative)

This appendix contains a description of the SyncML DM DevInfo management object, according to the SyncML DM Description Framework. This Appendix is Normative given the restrictions in Section 5.1.2.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.1.2//EN"
http://www.openmobilealliance.org/DTD/OMA-SyncML-DMDDF-DTD-1_1_2-20030415.dtd>
<MgmtTree>
    <VerDTD>1.1.2</VerDTD>
    <Node>
        <NodeName>DevInfo</NodeName>
        <!--The '.' shows that this node is located immediately under the root.-->
        <Path>.</Path>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The interior node holding all devinfo objects</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>Ext</NodeName>
            <!--There are no further items here at the moment.-->
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>The extendable DevInfo branch.</DFTitle>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>Bearer</NodeName>
            <!--There are no further items here at the moment.-->
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
```

```
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The bearer specific DevInfo branch.</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>DevId</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <!--Here the manufacturer must fill in the device ID (serial number) of the device.-->
            <DefaultValue/>
            <Description>A unique device identifier.</Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The unique device identifier.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Man</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <!--Here the manufacturer must fill in their name. -->
            <DefaultValue/>
            <Description>The name of the device manufacturer </Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The name of the device manufacturer.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Mod</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
```

```
            </AccessType>
            <!--Here the manufacturer must fill in the model name of the device.-->
            <DefaultValue/>
            <Description>The name of the device model</Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>Model name</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>DmV</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <!--Here the manufacturer must fill in the management client revision of the device.-->
            <DefaultValue/>
            <Description>The management client revision of the device.</Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The current management client revision of the device.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Lang</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DefaultValue/>
            <Description>The current language setting of the device.</Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>Current language.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
```

```
    </Node>
</MgmtTree>
```

Appendix E. DevDetail (Normative)

This appendix contains a description of the SyncML DM DevDetail management object, according to the SyncML DM Description Framework. This Appendix is Normative given the restrictions in Section 5.1.2.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.1.2//EN"
http://www.openmobilealliance.org/DTD/OMA-SyncML-DMDDF-DTD-1_1_2-20030415.dtd>
<MgmtTree>
    <VerDTD>1.1.2</VerDTD>
    <Node>
        <NodeName>DevDetail</NodeName>
        <!--The '.' shows that this node is located immediately under the root.-->
        <Path>.</Path>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The interior node holding all devinfo nodes</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>Ext</NodeName>
            <!--There are no further items here at the moment.-->
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>The extendable DevInfo branch.</DFTitle>
                <DFType>
                    <DDFName></DDFName>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>Bearer</NodeName>
            <!--There are no further items here at the moment.-->
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
```

```
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The bearer specific DevInfo branch.</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>URI</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The tree limitations branch.</DFTitle>
            <DFType>
                <DDFName></DDFName>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName>MaxDepth</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <Description>Maximum tree depth supported by the device.</Description>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>Maximum tree depth</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>
        <Node>
            <NodeName>MaxTotLen</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <Description>Maximum total URI length supported by the device.</Description>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Scope>
```

```
                <Permanent/>
            </Scope>
            <DFTitle>Maximum URI length</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>MaxSegLen</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>Maximum URI segment length supported by the device.</Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>Maximum URI segment length</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
</Node>
<Node>
    <NodeName>DevTyp</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
        </AccessType>
        <!--Here the manufacturer must fill in the type of the device.-->
        <DefaultValue>MobilePhone</DefaultValue>
        <Description>The type of the device.</Description>
        <DFFormat>
            <chr/>
        </DFFormat>
        <Scope>
            <Permanent/>
        </Scope>
        <DFTitle>The device type.</DFTitle>
        <DFType>
            <MIME>text/plain</MIME>
        </DFType>
    </DFProperties>
</Node>
<Node>
    <NodeName>OEM</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
        </AccessType>
        <Description>Name of OEM</Description>
        <DFFormat>
```

```
            <chr/>
        </DFFormat>
        <Scope>
            <Permanent/>
        </Scope>
        <DFTitle>The OEM for the device.</DFTitle>
        <DFType>
            <MIME>text/plain</MIME>
        </DFType>
    </DFProperties>
</Node>
<Node>
    <NodeName>FwV</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
        </AccessType>
        <!--Here the manufacturer must fill in the firmware revision of the device.-->
        <Description>The firmware revision of the device.</Description>
        <DFFormat>
            <chr/>
        </DFFormat>
        <Scope>
            <Permanent/>
        </Scope>
        <DFTitle>The current firmware revision of the device.</DFTitle>
        <DFType>
            <MIME>text/plain</MIME>
        </DFType>
    </DFProperties>
</Node>
<Node>
    <NodeName>SwV</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
        </AccessType>
        <!--Here the manufacturer must fill in the software revision of the device.-->
        <Description>The software revision of the device.</Description>
        <DFFormat>
            <chr/>
        </DFFormat>
        <Scope>
            <Permanent/>
        </Scope>
        <DFTitle>The current software revision of the device.</DFTitle>
        <DFType>
            <MIME>text/plain</MIME>
        </DFType>
    </DFProperties>
</Node>
<Node>
    <NodeName>HwV</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
        </AccessType>
```

```
            <!--Here the manufacturer must fill in the hardware revision of the device.-->
            <DefaultValue/>
            <Description>The hardware revision of the device.</Description>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>The current hardware revision of the device.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>LrgObj</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <!--Here the manufacturer must fill in whether the device supports large object handling  Typically, this
is a property of the SyncML management agent.-->
            <DefaultValue/>
            <Description>Large object handling supported if value is true.</Description>
            <DFFormat>
                <bool/>
            </DFFormat>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>Large object handling flag.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
</Node>
</MgmtTree>
```