# OMA MSF-Client Configuration Management Object

Approved Version 1.0 – 31 Jul 2012

**Open Mobile Alliance**

OMA-TS-MSrchFramework_MO-V1_0-20120731-A

# Contents



# Figures

# 1. Scope

This document defines the OMA MSF-Client Configuration Management Object (MO). The MO is defined using the OMA Device Description Framework.

# 2. References

## 2.1 Normative References


**[DMBOOT]** "OMA Device Management Bootstrap, Version 1.3". Open Mobile Alliance™. OMA-TS-DM_Bootstrap-V1_3. URL:http://www.openmobilealliance.org

**[DMTND]** "OMA Device Management Tree and Description, Version 1.3". Open Mobile Alliance™. OMA-TS-DM_TND-V1_3. URL:http://www.openmobilealliance.org

**[ISO8601]** ISO 8601:2004, Data elements and interchange formats -- Information interchange -- Representation of dates and times. URL:http://www.iso.ch/

**[OMA-ACMO-WP]** "OMA White Paper on Provisioning Objects". Open Mobile Alliance™. OMA-WP-AC_MO-V1_0. URL:http://www.openmobilealliance.org

**[OMA-MSrchFramework-TS]** "OMA Mobile Search Framework Technical Specification". Open Mobile Alliance™. OMA-TS-MSrchFramework-V1_0, URL:http://www.openmobilealliance.org

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

**[RFC1738]** "Uniform Resource Locators (URL)", IETF Network Working Group, December 1994, URL:http://www.ietf.org/rfc/rfc1738.txt

**[BCP-47]** "Tags for Identifying Languages", IETF Best Curent Practice, URL: http://www.ietf.org/rfc/bcp/bcp47.txt


## 2.2 Informative References


**[DMStdObj]** "OMA Device Management Standardized Objects, Version 1.3". Open Mobile Alliance™. OMA-TS-DM_StdObj-V1_3. URL:http://www.openmobilealliance.org/

# 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 references 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

| | |
|---|---|
| **DM** | Device Management |
| **MO** | Management Object |
| **MOID** | Management Object Identifier |
| **MSF** | Mobile Search Framework |
| **MSFCC** | Mobile Search Framework Client Configuration |
| **OMA** | Open Mobile Alliance |
| **URL** | Uniform Resource Locator |

# 4. Introduction

This document describes the configuration parameters and associated management object syntax that allows configuration of OMA MSF-Client(s).

## 4.1 Version 1.0

The MSF-Client Configuration MO Version 1.0 aims to provide the configuration parameters for the MSF-Client.

The MSF-Client Configuration MO Version 1.0 can be used for Mobile Search Framework 1.0 Enabler.

# 5. Justification

The MSF-Client Configuration MO definition follows the Management Object definition guideline defined in [OMA-ACMO-WP].

The related configuration parameter definition follows the parameter definition specified in [OMA-MSrchFramework-TS].

# 6. Standardized MSFCC Management Object

## 6.1 Management Objects

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

### 6.1.1 Definition and description of management objects

OMA DM management objects are defined using the OMA 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.

For a further introduction to this graphical notation, please refer to [DMStdObj].

## 6.2 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.

### 6.2.1 Conformance Definitions

The status definition in the node definitions indicates if the client supports that node or not. If the status is "Required" then the client MUST support that node in the case the client supports the parent node. In other case the node MAY be supported by the client.

## 6.3 The MSFCC Management Object

### 6.3.1 Introduction

The Mobile Search Framework Client Configuration Management Object facilitates management of MSF-Client parameters. If MSFCC MO is to be configured during bootstrap, [DMBOOT] MUST be used.

### 6.3.2 Node Description

The management object is used to manage settings for MSFCC Client.

Management object identifier: urn:oma:mo:oma-msrch-msfcc:1.0

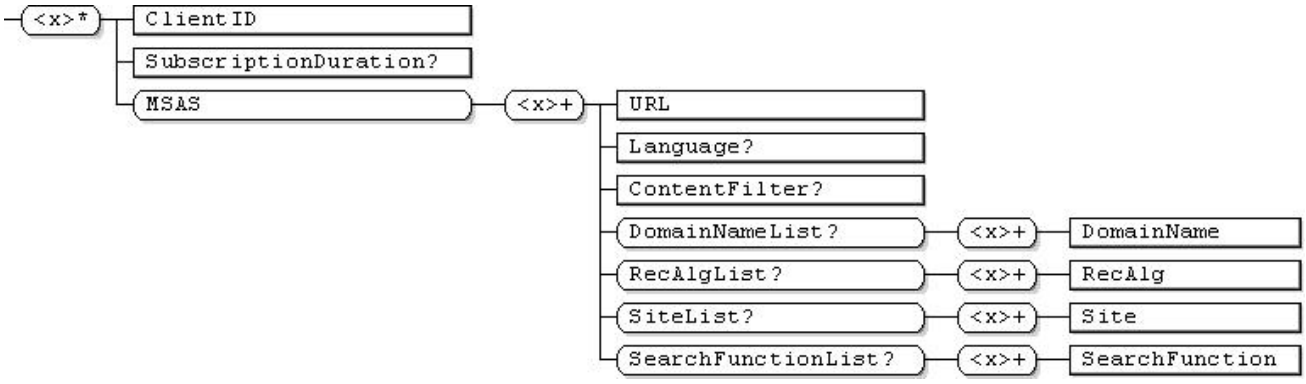


**Figure 1: The MSFCC Management Object**

**…/<x>**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrMore | node | Get |

This interior node acts as a placeholder for zero or more client configuration management objects. Management Object Identifier for the MSFCC MO MUST be: “urn:oma:mo:oma-msrch-msfcc:1.0”.

**ClientID**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | chr | Get |

This node specifies the client ID which MUST be used by MSF-Client when sending requests on MSF-1 interface.

**SubscriptionDuration**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | chr | Get |

This node specifies the duration of subscription.

The value MUST be expressed as a [ISO8601] duration format.

**MSAS**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | node | Get |

This interior node acts as a placeholder for MSAS configuration parameters.

**MSAS/<X>**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | OneOrMore | node | Get |

This interior node acts as a placeholder for one or more MSAS configuration parameters.

**MSAS/<X>/URL**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | chr | Get |

This node specifies the MSAS URL. The format is specified in [RFC1738].

**MSAS/<X>/Language**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | chr | Get |

This node specifies the optional default language to be used by MSF-Client. The format of language MUST be compliant with [BCP-47].

**MSAS/<X>/ContentFilter**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | chr | Get |

This node specifies the optional content filter which MUST be used by MSF-Client.

**MSAS/<X>/DomainNameList**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | node | Get |

This node acts as placeholder for Domain Name list.

**MSAS/<X>/DomainNameList/<X>**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | OneOrMore | Node | Get |

This node distinguishes item in Domain Name list.

**MSAS/<X>/DomainNameList/<X>/DomainName**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | chr | Get |

This node defines the value of Domain Name item in Domain Name list.

**MSAS/<X>/RecAlgList**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | node | Get |

This node acts as placeholder for Recommendation Algorithm list.

**MSAS/<X>/ RecAlgList /<X>**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | OneOrMore | node | Get |

This node distinguishes item in Recommendation Algorithm list.

**MSAS/<X>/ RecAlgList /<X>/ RecAlg**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | chr | Get |

This node defines the value of Recommendation Algorithm item in Recommendation Algorithm list.

**MSAS/<X>/SiteList**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | node | Get |

This node acts as placeholder for Site list.

**MSAS/<X>/ SiteList /<X>**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | OneOrMore | node | Get |

This node distinguishes item in Site list.

**MSAS/<X>/ SiteList /<X>/ Site**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | Chr | Get |

This node defines the value of Site item in Site list.

**MSAS/<X>/SearchFunctionList**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | ZeroOrOne | node | Get |

This node acts as placeholder for Search Function list.

**MSAS/<X>/ SearchFunctionList /<X>**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | OneOrMore | Node | Get |

This node distinguishes item in Search Function list.

**MSAS/<X>/ SearchFunctionList /<X>/ SearchFunction**

| Status | Occurrence | Format | Min. Access Types |
|---|---|---|---|
| Required | One | Chr | Get |

This node defines the value of Search Function item in Search Function list.

# Appendix A. Change History (Informative)

## A.1 Approved Version History

| Reference | Date | Description |
|---|---|---|
| Approved Version<br>OMA-TS-MSrchFramework_MO-V1_0 | 31 Jul 2012 | Status changed to Approved by TP:<br>TP ref#: OMA-TP-2012-0292-INP_MSrchFramework_V1_0_ERP_for_Final_Approval |