



# **OMA MSF-Client Configuration Management Object**

Approved Version 1.0 – 31 Jul 2012

---

**Open Mobile Alliance**  
OMA-TS-MSrchFramework\_MO-V1\_0-20120731-A

Use of this document is subject to all of the terms and conditions of the Use Agreement located at <http://www.openmobilealliance.org/UseAgreement.html>.

Unless this document is clearly designated as an approved specification, this document is a work in process, is not an approved Open Mobile Alliance™ specification, and is subject to revision or removal without notice.

You may use this document or any part of the document for internal or educational purposes only, provided you do not modify, edit or take out of context the information in this document in any manner. Information contained in this document may be used, at your sole risk, for any purposes. You may not use this document in any other manner without the prior written permission of the Open Mobile Alliance. The Open Mobile Alliance authorizes you to copy this document, provided that you retain all copyright and other proprietary notices contained in the original materials on any copies of the materials and that you comply strictly with these terms. This copyright permission does not constitute an endorsement of the products or services. The Open Mobile Alliance assumes no responsibility for errors or omissions in this document.

Each Open Mobile Alliance member has agreed to use reasonable endeavors to inform the Open Mobile Alliance in a timely manner of Essential IPR as it becomes aware that the Essential IPR is related to the prepared or published specification. However, the members do not have an obligation to conduct IPR searches. The declared Essential IPR is publicly available to members and non-members of the Open Mobile Alliance and may be found on the “OMA IPR Declarations” list at <http://www.openmobilealliance.org/ipr.html>. The Open Mobile Alliance has not conducted an independent IPR review of this document and the information contained herein, and makes no representations or warranties regarding third party IPR, including without limitation patents, copyrights or trade secret rights. This document may contain inventions for which you must obtain licenses from third parties before making, using or selling the inventions. Defined terms above are set forth in the schedule to the Open Mobile Alliance Application Form.

NO REPRESENTATIONS OR WARRANTIES (WHETHER EXPRESS OR IMPLIED) ARE MADE BY THE OPEN MOBILE ALLIANCE OR ANY OPEN MOBILE ALLIANCE MEMBER OR ITS AFFILIATES REGARDING ANY OF THE IPR'S REPRESENTED ON THE “OMA IPR DECLARATIONS” LIST, INCLUDING, BUT NOT LIMITED TO THE ACCURACY, COMPLETENESS, VALIDITY OR RELEVANCE OF THE INFORMATION OR WHETHER OR NOT SUCH RIGHTS ARE ESSENTIAL OR NON-ESSENTIAL.

THE OPEN MOBILE ALLIANCE IS NOT LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF DOCUMENTS AND THE INFORMATION CONTAINED IN THE DOCUMENTS.

© 2012 Open Mobile Alliance Ltd. All Rights Reserved.

Used with the permission of the Open Mobile Alliance Ltd. under the terms set forth above.

# 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
  - 4.1 VERSION 1.0 .....7
- 5. JUSTIFICATION .....8
- 6. STANDARDIZED MSFCC MANAGEMENT OBJECT .....9
  - 6.1 MANAGEMENT OBJECTS .....9
    - 6.1.1 Definition and description of management objects .....9
  - 6.2 DDF COMPLIANCE .....9
    - 6.2.1 Conformance Definitions .....10
  - 6.3 THE MSFCC MANAGEMENT OBJECT .....10
    - 6.3.1 Introduction .....10
    - 6.3.2 Node Description .....10
- APPENDIX A. CHANGE HISTORY (INFORMATIVE) .....14
  - A.1 APPROVED VERSION HISTORY .....14

# Figures

- Figure 1: The MSFCC Management Object .....10

# 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 Current 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

<b>DM</b>	Device Management
<b>MO</b>	Management Object
<b>MOID</b>	Management Object Identifier
<b>MSF</b>	Mobile Search Framework
<b>MSFCC</b>	Mobile Search Framework Client Configuration
<b>OMA</b>	Open Mobile Alliance
<b>URL</b>	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 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 `OneOrMore` 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 `RTPProperties` 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 OneOrMore 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

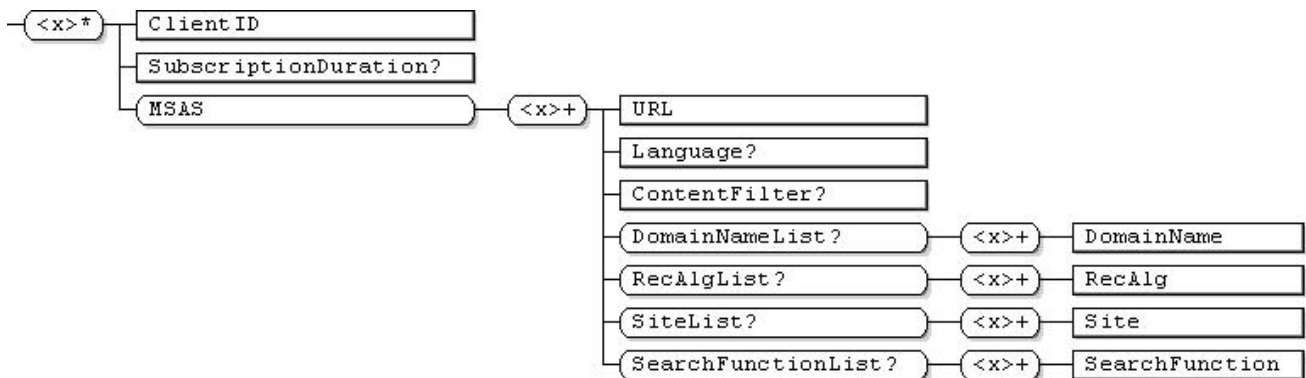


Figure 1: The MSFCC Management Object

.../<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 OMA-TS-MSrchFramework_MO-V1_0	31 Jul 2012	Status changed to Approved by TP: TP ref#: OMA-TP-2012-0292- INP_MSrchFramework_V1_0_ERP_for_Final_Approval