# Enabler Release Definition for Mobile Search Framework

Approved Version 1.0 – 31 Jul 2012

**Open Mobile Alliance**
OMA-ERELD-MSrchFramework-V1_0-20120731-A

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# 1. Scope

The scope of this document is limited to the Enabler Release Definition of Mobile Search Framework Enabler according to OMA Release process and the Enabler Release specification baseline listed in section 5.

The Mobile Search Framework Enabler release defines an open framework providing different capabilities to support mobile search service. The capabilities of this enabler include (not limited to) search engine integration, selection, results personalization; search engines are not in the scope of this enabler, nevertheless some requirements are identified for Search engines to be integrated with the Mobile Search Framework Enabler in a standard way .

# 2. References

## 2.1 Normative References

| | |
|---|---|
| **[RFC2119]** | "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt |
| **[SCRRULES]** | "SCR Rules and Procedures", Open Mobile Alliance™, OMA-ORG-SCR_Rules_and_Procedures, URL:http://www.openmobilealliance.org/ |
| **[MsrchFramework_RD]** | "Mobile Search Framework Requirements", Open Mobile Alliance™, OMA-RD-MSrchFramework-V1_0, URL:http://www.openmobilealliance.org/ |
| **[MsrchFramework_AD]** | "Mobile Search Framework Architecture", Open Mobile Alliance™, OMA-AD-MSrchFramework-V1_0, URL:http://www.openmobilealliance.org/ |

## 2.2 Informative References

| | |
|---|---|
| **[OMADICT]** | "Dictionary for OMA Specifications", Version 2.7, Open Mobile Alliance™, OMA-ORG-Dictionary-V2_7, 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.

The formal notation convention used in sections 8 and 9 to formally express the structure and internal dependencies between specifications in the Enabler Release specification baseline is detailed in [**Error! Reference source not found.**].

## 3.2 Definitions

| | |
|---|---|
| **Enabler Release** | Collection of specifications that combined together form an enabler for a service area, e.g. a download enabler, a browsing enabler, a messaging enabler, a location enabler, etc. The specifications that are forming an enabler should combined fulfil a number of related market requirements. |
| **Minimum Functionality Description** | Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release |
| **Deep Web Databases** | In the context of MSrchFramework Enabler, Deep web database is a kind of Search Engine and it refers to web database which is guarded by search interfaces and inaccessible to conventional web crawlers. Most of the pages of deep web do not exist until they are created dynamically as the result of a specific search. It may be generic or vertical/specialized (e.g. location, category etc…) |
| **Experts** | In the context of MSrchFramework Enabler, the Experts are people who are experts in a particular Q&A Field and capable of providing correct information about that Q&A Field. |
| **Feedback** | Feedback is the user explicit evaluation about the goodness of obtained results from MSrchFramework Enabler. For example by voting them (e.g. from 0 to 5) and/or leaving a comment about them and/or leaving a tag list (e.g. a list of keywords that describes the result). |
| **Indexing Search Engine** | In the context of MSrchFramework Enabler, Indexing Search Engine is a kind of Search Engine that uses indexes and web crawlers to retrieve information on the web according to the search inputs provided by the user. It may be generic or vertical/specialized (e.g. location, category etc…). |
| **Interaction** | Interaction is the action that a user performs on obtained results from MSrchFramework Enabler. Examples of Interaction are: the action to click on particular result or type of result (e.g. results of a particular brand, results with multimedia contents …), the subsequent search done, etc…. |
| **Personalization** | Personalization is a process in which the MSrchFramework Enabler tailors the search results based on user related information (profile, preferences, location and other context information) to return more accurate results for that user. |
| **Q&A Field** | Q&A Field, in context of MSrchFramework Enabler, is a type of Search Domain which can be used to categorize question (in term of request) coming from user. It can also be used to categorize different Experts registered with MSrchFramework Enabler. MSrchFramework Enabler can come-up with several Q&A Fields according to ServiceProvider's policies. The example of Q&A Fields may include Medical, Automobile, Aviation etc. |
| **Q&A** | Q&A, in context of MSrchFramework Enabler is a functionality which allows users to send a particular question MSrchFramework Enabler and get answer(s) from the person (human being) who is expert in that particular Q&A Field. |
| **Search Domain** | A Search domain is considered to be a category for search. All the incoming search requests can be categorize according to "Search Domain". Service Provider can come up with several Search Domains according to their policies. Some of the example of Search Domain would be Hotels, Shopping, Medical, etc. |

| | |
|---|---|
| **Search Engine** | Search Engine is a tool designed to search for different kind of content (e.g. information, images etc…). Information provided by Search Engines to the Mobile Search Framework in a structured form (XML documents, RSS feed, …) statically organized in pages or dynamically generated at run time according to search inputs provided by the user. Information can be a content or a reference to it (e.g. a web link) In this document, the term Search Engine refers to Indexing Search Engines as well as Deep Web Databases. |
| **Search Engine** | In the context of MSrchFramework Enabler, Search History is the collection of Feedback and Interaction from the user. |
| **Subscribe-Push** | Subscribe-Push, in context of MSrchFramework Enabler, is a functionality which enables user to subscribe for specific information providing several filtration criteria. The information is sent to the user considering all the filtration criteria. |

# 3.3    Abbreviations

| | |
|---|---|
| **ERDEF** | Enabler Requirement Definition |
| **ERELD** | Enabler Release Definition |
| **MSrchFramework** | Mobile Search Framework |
| **OMA** | Open Mobile Alliance |
| **OMNA** | Open Mobile Naming Authority |

# 4. Release Version Overview

This document outlines the Enabler Release Definition for Mobile Search Framework enabler and the respective conformance requirements for clients and servers implementing claiming compliance to it as defined by Open Mobile Alliance across the specification baseline.

The MSrchFramework enabler will be able to facilitate mobile search service: The following figure shows the actors for the MSrchFramework enabler.
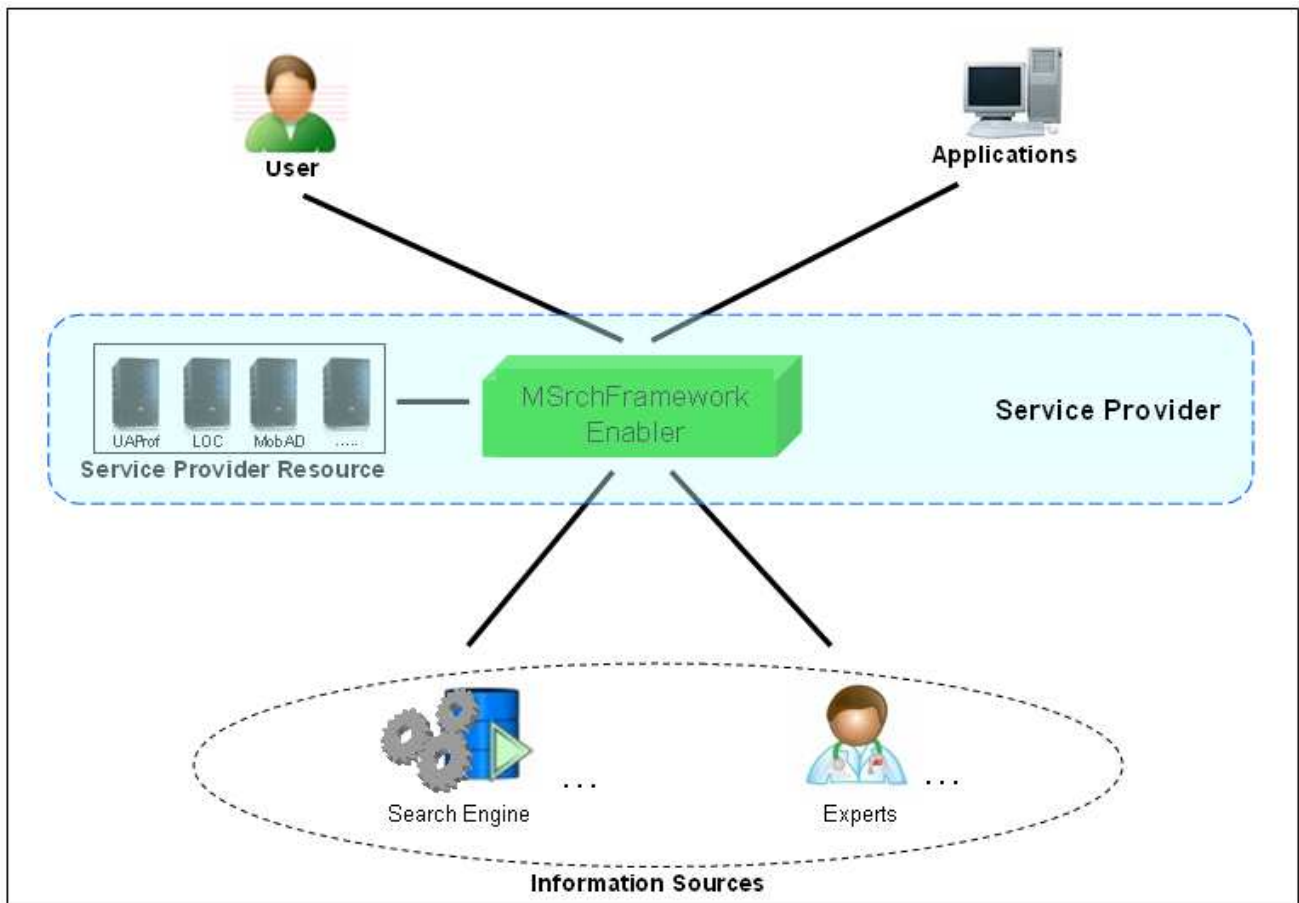


**Figure 1: Actors for MSrchFramework enabler**

**Service Provider**: The Service Provider offers the mobile search service to Users via the MSrchFramework Enabler. The Service Provider configures and maintains the MSrchFramework Enabler and manages the Service Provider Resources, the User Information (e.g. user profile, user context…) and the Search Engines/Experts related information (e.g. expertise, location, request interface). The Service Provider interacts with the Information Sources (Search Engines/Experts) in order to provide the right information to Users.

**Service Provider Resources:** The Service Provider Resources are the different kind of information/content maintained by the Service Provider. Part of those resources can be supplied by other OMA enablers which MSrchFramework enabler may interact with in order to perform some functions. Examples of those other Enablers can be (not exhaustive): SUPL (location), Presence (presence status), MobAd (target advertisement), ServUserProf (Service User Profile Management), UAProf (device capabilities), DPE (dynamic device capabilities, phone profile).

**Information Source**: The Information Sources provide the information/content to the MSrchFramework Enabler requested by Users. Two Information Sources indentified are Search Engines and Experts.

**User**: The User consumes personalized mobile search service, offered by the Service Provider, interacting with the MSrchFramework Enabler. The User can also use additional functionalities exposed by the MSrchFramework Enabler, such as (not exhaustive): Subscribe-Push to subscribe himself for specific information providing several filtration criteria, Query & Answer to ask a question and get answer(s) from the Expert(s), Search History to express him Feedback about obtained results and get recommendations.

# 4.1 Version 1.0 Functionality

This enabler release covers all the functionalities identified in the modules in the MSrchFramework V1.0 RD, i.e.:

1. Search Engine Integration: This module collects the capabilities of MSrchFramework Enabler about how a Search Engine will be incorporated in MSrchFramework Enabler. It includes Search Engine interaction (e.g. Search Engine registration, Search Engine information updates), Search Engine selection, result merging etc.

2. Personalization: This module collects the capabilities of MSrchFramework Enabler to provide personalized results.

3. Application support: This module collects the capabilities of MSrchFramework Enabler to allow application/services to initiate a search request. This will allow application/services to use the search capabilities of this enabler while serving their customers.

4. Interworking: This module collects the capabilities of MSrchFramework Enabler about the communication means between different instances of MSrchFramework Enabler enabling the Interworking among them.

5. Multimedia Support: This module collects the capabilities of MSrchFramework Enabler to support multimedia as input for the search request.

6. Q&A: This module collects the capabilities of MSrchFramework Enabler required to provide Q&A functionality.

7. Subscribe-Push: This module collects the capabilities of MSrchFramework Enabler to make Subscribe-Push functionality available.

8. Search History & Recommendations management: This module collects the capabilities of MSrchFramework Enabler to manage Search History and recommendations functionalities.

9. Request management: This module collects capabilities of MSrchFramework Enabler to manage (handled, distribute, optimize, …) the incoming requests for a better processing and understanding by the different entities of the enabler.

# 5. Document Listing for MsrchFramework V1.0

This section is normative.

| Doc Ref | Permanent Document Reference | Description |
|---|---|---|
| **Requirement Document** | | |
| [MsrchFramework_RD] | OMA-RD-MSrchFramework-V1_0-20120731-A | Requirements for Mobile Search Framework Enabler |
| **Architecture Document** | | |
| [MsrchFramework_AD] | OMA-AD-MSrchFramework-V1_0-20120731-A | Architecture for Mobile Search Framework Enabler |
| **Technical Specifications** | | |
| [MsrchFramework_TS] | OMA-TS-MSrchFramework-V1_0-20120731-A | The Technical Specification for Mobile Search Framework Enabler |
| [MsrchFramework_TS_MO] | OMA-TS-MSrchFramework_MO-V1_0-20120731-A | The Technical Specification for Mobile Search Framework Enabler Management Object |
| **Supporting Files** | | |
| [MsrchFramework_XSD] | OMA-SUP-XSD_MSrch_messages-V1_0-20120731-A | XML schema for MSrch messages<br><br>Working file in Schema directory:<br>  file: MSrch_messages-V1_0.xsd<br>  path:<br>http://www.openmobilealliance.org/tech/profiles/ |
| [MsrchFramework_XSD] | OMA-SUP-XSD_MSrch_userinfo-V1_0-20120731-A | XML schema for MSrch structure and data types<br><br>Working file in Schema directory:<br>  file: MSrch_userinfo-v1_0.xsd<br>  path:<br>http://www.openmobilealliance.org/tech/profiles/ |
| [MsrchFramework_XSD] | OMA-SUP-MSrchFramework_MO-V1_0-20120731-A | XML schema for MSrch Enabler Management Object<br><br>Working file in Schema directory:<br>  file: msfcc-v1_0.ddf<br>  path:<br>http://www.openmobilealliance.org/tech/omna/dm_mo |

# 6. OMNA Considerations

<< This section is to be used to describe any OMNA items included in the release.  This would include, among others:

- Usage of OMA-based Uniform Resource Names (URNs) (including those used as namespace identifiers in Schemas)

- AppiDs for Application Characteristics (AC)

- Managed Object (MO) information for the MO registry

- ISO Object IDs

- PUSH Application Ids

- WAP Wireless Session Protocol (WSP) Content Types

- Presence <service-description> assignments

- Uniform Resource Identifier (URI)-List Registered Usage Names (for XDM)

The format of this section will be left up to the release owners to account for the particular needs they may run into.  It should be clear from the written material, though, as to the set of OMNA items needed.

If a new OMNA registry is needed to support the release – clearly this should have been worked with the REL Committee before submitting a Release Document.  Failure to do so may result in delays as the required tables are worked up and made publicly available.  Another risk is that the table desired is not supported by OMNA (is not a registry type table) and the group will need to re-think how they intend to resolve their needs.

Through the normal development process the OMNA entries or support registries should be accommodated.  This should not be trigger to remove the linkage from this section.  Thus, if an entry is added to OMNA after the initial Candidate version described the need – the material should stay in this section.  It may be useful in subsequent releases to add some text to indicate that the needed items have been accommodated (e.g. add a comment regarding its availability or support as appropriate).

If the release has absolutely no OMNA items to be accommodated – then it should indicate that explicitly with a short description (e.g. this release does not have any OMNA items for handling).  This determination probably can not be made until the end of the development phases and editors are encouraged to keep this advisory in place until the Consistency Review.

DELETE THIS COMMENT >>

# 7. Conformance Requirements Notation Details

This section is informative

The tables in following chapters use the following notation:

**Item:**                          Entry in this column MUST be a valid ScrItem according to [SCRRULES].

**Feature/Application:**     Entry in this column SHOULD be a short descriptive label to the **Item** in question.

**Requirement:**           Expression in the column MUST be a valid TerminalExpression according to [SCRRULES] and it
                           MUST accurately reflect the architectural requirement of the **Item** in question.

# 8.  ERDEF for MSrchFramework - Client Requirements

This section is normative.

| Item | Feature / Application | Requirement |
|---|---|---|
| OMA-ERDEF-MSrchFramework-C-001-<br><<M/O>> | MSrchFramework Client | |
| | | |

**Table 1: ERDEF for MSrchFramework Client-side Requirements**

# 9. ERDEF for MSrchFramework - Server Requirements

This section is normative.

| Item | Feature / Application | Requirement |
|------|----------------------|-------------|
| OMA-ERDEF-MSrchFramework-S-001-<<M/O>> | MSrchFramework Server | |
| | | |

**Table 2: ERDEF for MSrchFramework Server-side Requirements**

# Appendix A.   Change History                                        (Informative)

## A.1     Approved Version History

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