



# **Enabler Release Definition for Mobile Location Service (MLS)**

Candidate Version 1.2 – 01 Oct 2009

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**Open Mobile Alliance**  
OMA-ERELED-MLS-V1\_2-20091001-C

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# 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. RELEASE VERSION OVERVIEW .....                  | 7  |
| 4.1 VERSION 1.0 FUNCTIONALITY .....                | 7  |
| 4.2 VERSION 1.1 FUNCTIONALITY .....                | 7  |
| 4.3 VERSION 1.2 FUNCTIONALITY .....                | 7  |
| 5. DOCUMENT LISTING FOR MLS .....                  | 8  |
| 6. CONFORMANCE REQUIREMENTS NOTATION DETAILS ..... | 9  |
| 7. ERDEF FOR MLS - CLIENT REQUIREMENTS .....       | 10 |
| 8. ERDEF FOR MLS - SERVER REQUIREMENTS .....       | 11 |
| APPENDIX A. CHANGE HISTORY (INFORMATIVE) .....     | 12 |
| A.1 APPROVED VERSION HISTORY .....                 | 12 |
| A.2 DRAFT/CANDIDATE VERSION 1.1 HISTORY .....      | 12 |

# Tables

|   |    |
|---|----|
| Table 1: Listing of Documents in MLS Enabler .....    | 8  |
| Table 2: ERDEF for MLS Client-side Requirements ..... | 10 |
| Table 3: ERDEF for MLS Server-side Requirements ..... | 11 |

# 1. Scope

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

## 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](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/](http://www.openmobilealliance.org/)
- [23.271] “Functional stage 2 description of Location Services “, 3GPP TS 23.271 Release 6  
[URL:http://www.3gpp.org/ftp/Specs/latest/Rel-6/23\\_series/](http://www.3gpp.org/ftp/Specs/latest/Rel-6/23_series/)
- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.8, Open Mobile Alliance™, OMA-ORG-IOP-  
Process-V1\_8, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [MLP 3.3] “Mobile Location Protocol v3.3”, Open Mobile Alliance™, OMA-TS-MLP-V3\_3  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [MLP DTD] “MLP 3.3 DTDs”, Open Mobile Alliance™, OMA-SUP-DTD\_MLP-V3\_3  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [MLP\_COM DTD] “MLP 3.3 Common DTDs”, Open Mobile Alliance™, OMA-SUP-DTD\_MLP\_ID\_QOP\_RES\_SHAPE-  
V3\_3  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [MLS AD] “MLS Architecture Document”, Open Mobile Alliance™, OMA-AD-MLS-V1\_0  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [MLS RD] “MLS Requirements Document”, Open Mobile Alliance™, OMA-RD-MLS-V1\_0  
[URL:http://www.openmobilealliance.org/](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](http://www.ietf.org/rfc/rfc2119.txt)
- [RLP 1.0] “Roaming Location Protocol v1.0”, Open Mobile Alliance™, OMA-TS-RLP-V1\_0  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [RLP DTD] “RLP 1.0 DTDs”, Open Mobile Alliance™, OMA-SUP-DTD\_RLP-V1\_1  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [SUPL AD] “SUPL Architecture Document”, Open Mobile Alliance™, OMA-AD-SUPL-V1\_0  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [SUPL RD] “SUPL Requirements Document”, Open Mobile Alliance™, OMA-RD-SUPL-V1\_0  
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [TIA-881] 3GPP2 X.S0002-0, Version 2.0, May 2006: “MAP Location Service Enhancements”  
URL: [http://www.3gpp2.org/Public\\_html/specs/](http://www.3gpp2.org/Public_html/specs/)

### 2.2 Informative References

## 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”, "Release Version Overview" and “Conformance Requirements Notation Details”, are normative, unless they are explicitly indicated to be informative.

The formal notation convention used in sections 7 and 8 to formally express the structure and internal dependencies between specifications in the Enabler Release specification baseline is detailed in [SCRRULES].

### 3.2 Definitions

|  |   |
|--|---|
| <b>Enabler Release</b>                   | 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. |
| <b>Minimum Functionality Description</b> | Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.  |
| <b>MCF</b>                               | Defined in [IOPPROC] as “All mandatory client features of the specification SCR”  |
| <b>MSF</b>                               | Defined in [IOPPROC] as “All mandatory server features of the specification SCR”  |
| <b>SUPL Enabled Terminal (SET)</b>       | A device that is capable of communicating with a SUPL network. Examples of this could be a UE in UMTS, a MS in GSM or IS-95, or a PC over an IP-based transport.  |
| <b>SUPL Location Platform (SLP)</b>      | Entity responsible for SUPL Service Management and Position Determination. SLP contains the SLC and SPC Functions.  |

### 3.3 Abbreviations

|               |                                |
|---------------|--------------------------------|
| <b>ERDEF</b>  | Enabler Requirement Definition |
| <b>ERELED</b> | Enabler Release Definition     |
| <b>OMA</b>    | Open Mobile Alliance           |
| <b>MLP</b>    | Mobile Location Protocol       |
| <b>MLS</b>    | Mobile Location Service        |
| <b>OMA</b>    | Open Mobile Alliance           |
| <b>PCP</b>    | Privacy Checking Protocol      |
| <b>RLP</b>    | Roaming Location Protocol      |
| <b>SUPL</b>   | Secure User Plane Location     |

## 4. Release Version Overview

### 4.1 Version 1.0 Functionality

The OMA Mobile Location Service V1.0 (MLS V1.0) consists of a set of location specifications complying with 3GPP Release 6 LCS Specification. MLS 1.0 is primarily intended for use in a 3GPP environment. Compliance to other environments is not a requirement but the specification has in several cases been extended to not unnecessary prevent use in other environments. The set of specifications in MLS V1.0 consist of MLP V3.2 and RLP V1.0.

### 4.2 Version 1.1 Functionailty

The OMA Mobile Location Service V1.1 (MLS V1.1) consists of a set of location specifications complying with 3GPP Release 6 LCS Specifications. In addition MLS V1.1 supports the functions in the OMA SUPL V1.0 enabler. MLS 1.1 is primarily intended for use in a 3GPP environment. Compliance to other environments is not a requirement but the specification has in several cases been extended to not unnecessary prevent use in other environments. The set of specifications in MLS V1.1 consist of MLP V3.2, RLP V1.0 and PCP V1.0.

### 4.3 Version 1.2 Functionailty

The OMA Mobile Location Service V1.2 (MLS V1.2) consists of a set of location specifications:

- Supporting functions in MLS 1.1 except for Lid and Lpp reference points.
- Complying with 3GPP Release 7 LCS Specifications except for Lid and Lpp reference points that are no longer supported.
- Supporting the OMA SUPL V2.0 enabler, [SUPL AD].
- Supporting 3GPP2 “MAP Location Service Enhancements”, [TIA-881].

The set of specifications in MLS V1.2 consist of MLP V3.3 and RLP V1.1.

## 5. Document Listing for MLS

This section is normative.

| Doc Ref                         | Permanent Document Reference                     | Description   |
|---------------------------------|--|---|
| <b>Requirement Document</b>     |  |   |
| [MLS RD]                        | OMA-RD-MLS-V1_2-20080627-C                       | Requirement Document for MLS Enabler  |
| <b>Architecture Document</b>    |  |   |
| [MLS AD]                        | OMA-AD-MLS-V1_2-20080627-C                       | Architecture Document for MLS Enabler   |
| <b>Technical Specifications</b> |  |   |
| [MLP 3.3]                       | OMA-TS-MLP-V3_3-20091001-C                       | Specification that defines the MLP 3.3 protocol   |
| [RLP 1.1]                       | OMA-TS-RLP-V1_1-20091001-C                       | Specification that defines the RLP 1.1 protocol   |
| <b>Supporting Files</b>         |  |   |
| [MLP_COM DTD ]                  | OMA-SUP-DTD_MLP_ID_QOP_RES_SHAPE-V3_3-20091001-C | DTD for the messages and included elements common to MLP and RLP protocols.<br><br>Working file in DTD directory:<br>file: MLP_ID_QOP_RES_SHAPE_v3_3.dtd<br>path: <a href="http://www.openmobilealliance.org/tech/dtd/">http://www.openmobilealliance.org/tech/dtd/</a> |
| [MLP DTD]                       | OMA-SUP-DTD_MLP-V3_3-20091001-C                  | DTD for the messages and included elements of the MLP protocol.<br><br>Working file in DTD directory:<br>file: MLP_v3_3.dtd<br>path: <a href="http://www.openmobilealliance.org/tech/dtd/">http://www.openmobilealliance.org/tech/dtd/</a>                              |
| [RLP DTD]                       | OMA-SUP-DTD_RLP-V1_1-20091001-C                  | DTD for the messages and included elements of the RLP protocols.<br><br>Working file in DTD directory:<br>file: RLP_v1_1.dtd<br>path: <a href="http://www.openmobilealliance.org/tech/dtd/">http://www.openmobilealliance.org/tech/dtd/</a>                             |

**Table 1: Listing of Documents in MLS Enabler**



## 6. 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.

## 7. ERDEF for MLS - Client Requirements

This section is normative.

| Item                | Feature / Application      | Status | Requirement   |
|---------------------|----------------------------|--------|---|
| OMA-ERDEF-MLS-C-001 | MLS Enabler                | M      | OMA-ERDEF-MLS-C-002<br>OR<br>OMA-ERDEF-MLS-C-003<br>OR<br>OMA-ERDEF-MLS-C-004 |
| OMA-ERDEF-MLS-C-002 | MLS Client                 | O      | MLP 3.2:MCF   |
| OMA-ERDEF-MLS-C-003 | Requesting Location Server | O      | RLP 1.0: MCF AND NOT<br>(RLP-D-C-003 OR<br>RLP-V-C-010 OR<br>RLP-V-C-012)     |
| OMA-ERDEF-MLS-C-004 | Home Location Server       | O      | RLP 1.0: MCF  |

**Informative Note:** The requirement for Item OMA-ERDEF-MLS-C-003 exempt three privacy related SCR Items in RLP from being mandatory as they are not applicable for the Requesting Location Server.

**Table 2: ERDEF for MLS Client-side Requirements**

## 8. ERDEF for MLS - Server Requirements

This section is normative.

| Item                | Feature / Application      | Status | Requirement   |
|---------------------|----------------------------|--------|---|
| OMA-ERDEF-MLS-S-001 | MLS Enabler                | M      | OMA-ERDEF-MLS-S-002<br>OR<br>OMA-ERDEF-MLS-S-003<br>OR<br>OMA-ERDEF-MLS-S-004 |
| OMA-ERDEF-MLS-S-002 | Requesting Location Server | O      | MLP 3.2:MSF   |
| OMA-ERDEF-MLS-S-003 | Home Location Server       | O      | RPL 1.0: MSF AND NOT<br>(RPL-D-S-003 OR<br>RPL-V-S-010 OR<br>RPL-V-S-012)     |
| OMA-ERDEF-MLS-S-004 | Visited Location Server    | O      | RPL 1.0:MSF   |

**Informative Note:** The requirement for Item OMA-ERDEF-MLS-S-003 exempt three privacy related SCR Items in RLP from being mandatory as they are not applicable for the Home Location Server.

**Table 3: ERDEF for MLS Server-side Requirements**

## Appendix A. Change History (Informative)

### A.1 Approved Version History

| Reference | Date | Description      |
|-----------|------|------------------|
| n/a       |      | No prior version |

### A.2 Draft/Candidate Version 1.2 History

| Document Identifier                      | Date        | Sections | Description   |
|--|-------------|----------|---|
| Draft Versions<br>OMA-ERELED-MLS-V1.2    | 15 Oct 2007 | n/a      | Initial draft   |
|  | 27 Dec 2007 | 5        | List of docs updated to latest version.<br>Description of RLP 1.1 corrected.<br>List of supporting files updated to reflect restructuring of supporting files |
|  | 03 Mar 2008 | 4.3      | Add clarification on removed support of Lpp and Lid reference points to resolve Consistency Review comment.   |
|  | 08 May 2008 | 5        | Document list updated   |
|  | 15 May 2008 | 5        | Document date updated   |
| Candidate Version<br>OMA-ERELED-MLS-V1.2 | 27 Jun 2008 | n/a      | Status changed to Candidate by TP<br>TP ref#: OMA-TP-2008-0221-<br>INP_LOC_MLS_V1.2_for_Candidate_Approval  |
| Draft Versions<br>OMA-ERELED-MLS-V1.2    | 04 Aug 2009 | n/a      | Document list updated   |
|  | 28 Sep 2009 | n/a      | Document list updated   |
| Candidate Version<br>OMA-ERELED-MLS-V1.2 | 01 Oct 2009 | n/a      | Status changed to Candidate by TP<br>TP ref#: OMA-TP-2009-0357-<br>INP_MLS_1.2_ERP_for_Candidate_re_approval  |