



# **Enabler Test Requirements for LAWMO**

## **Candidate Version 1.0 – 27 Jan 2009**

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**Open Mobile Alliance**  
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# 1. Scope

The Enabler Test Requirements (ETR) document for the Enabler under consideration is created and maintained by the Technical Working Group (TWG) responsible for the technical specifications for the corresponding Enabler.

The ETR document is intended to cover at least those requirements collected in the Requirements Document (RD) and the Architecture Document (AD) in addition to any other items the TWG has identified as important enough to warrant attention from interoperability perspective and identify any technical functionalities that should be covered by testing.

## 2. References

### 2.1 Normative References

- [DMTND] “OMA Device Management Tree and Description, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-TND-V1\_2, URL: <http://www.openmobilealliance.org>
- [DMPRO] “OMA Device Management Protocol”, Version 1.2, Open Mobile Alliance, OMA-TS-DM\_Protocol-V1\_2, URL: <http://www.openmobilealliance.org/>
- [ERELED] “Enabler Release Definition for LAWMO”, Open Mobile Alliance™, OMA-ERELED-LAWMO-V1\_0, URL: <http://www.openmobilealliance.org/>
- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.6, Open Mobile Alliance™, OMA-ORG-IOP\_Process-V1\_6, URL: <http://www.openmobilealliance.org/>
- [LAWMO-AD] “Lock And Wipe Management Object Architecture”, Open Mobile Alliance™, OMA-AD-LAWMO-V1\_0, URL: <http://www.openmobilealliance.org/>
- [LAWMO-TS] “Lock And Wipe Management Object Technical Specification”, Open Mobile Alliance™, OMA-TS-LAWMO-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>

### 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.

### 3.2 Definitions

<b>Device</b>	see [OMADICT]
<b>Factory Reset</b>	The act to reset the device to its initial factory state.
<b>Fully Lock Device</b>	To render the device fully inoperable from unauthorised usage except for functions mandated by law (e.g. emergency calls) and participating LAWMO sessions as well as other data sessions that aid in the recovery of the device.
<b>LAWMO Alert</b>	LAWMO-specific alerts which convey the result of LAWMO Operations via the DM Generic Alert mechanism [DMPRO].
<b>LAWMO Operations</b>	Lock Device, Unlock Device, Wipe Device’s Data and Factory Reset operations which may be invoked on a Lock and Wipe MO.
<b>Lock Device</b>	To render the device fully or partially inoperable from unauthorised usage according to which lock level is chosen.  Two lock levels are defined: Partially Lock Device and Fully Lock Device.
<b>Management Object</b>	A data model for information which is a logical part of the interfaces exposed by DM components.
<b>Partially Lock Device</b>	To render the device inoperable from unauthorised usage except for receiving incoming calls, functions mandated by law (e.g. emergency calls), and participating in LAWMO sessions as well as other data sessions that aid in the recovery of the device.
<b>TestFest</b>	Multi-lateral interoperability testing event
<b>Unlock Device</b>	To re-enable all Device functionalities previously locked by Lock Device operation.
<b>Wipe Device’s Data</b>	The act to permanently erase personal and/or enterprise-related data from the device

### 3.3 Abbreviations

<b>AD</b>	Architecture Document
<b>LAWMO</b>	Lock And Wipe Management Object
<b>MO</b>	Management Object
<b>MOI</b>	Management Object Identifier
<b>OMA</b>	Open Mobile Alliance
<b>RD</b>	Requirements Document

## 4. Introduction

The purpose of this Enabler Test Requirements document is to help guide the testing effort for the Enabler LAWMO V1.0, documenting those areas where testing is most important to ensure interoperability of implementations.

The Enabler under consideration comprises the following specifications:

- Lock and Wipe Management Object, version 1.0: A Management Object defined to remotely lock and/or wipe the Device's data. In particular it defines the Lock/Unlock Device, Wipe Device's Data and Factory Reset operations.

Generally, the testing activity should aim at validating the normal working behaviour of the client/server interactions, as well as testing the error conditions whenever it is possible to set up the appropriate scenarios. The following sections provide a more detailed description of the testing requirements for LAWMO V1.0.

This document also intends to provide some guidance on the prioritization of the specifications and features to be tested within Enabler LAWMO V1.0.

## 5. Test Requirements

The Lock and Wipe Management Object (LAWMO) V1.0 Enabler supports the following functionality.

- Support a mechanism to lock the Device – partially or fully.
- Support a mechanism to unlock the Device
- Support a mechanism to wipe the data from the Device – personal or/and enterprise.
- Support a mechanism to list the available data that can be wiped from the Device.
- Support a mechanism to configure the data to be wiped from the Device.
- Support a mechanism to trigger remotely a factory reset of the Device.
- Support a mechanism to report the result of LAWMO Operations to LAWMO Server
- Support a mechanism to notify the user with the LAWMO Operation result when LAWMO Operation is executed

### 5.1 Enabler Test Requirements

The test requirements collected in this section are related to the Enabler LAWMO 1.0.

The tables for the mandatory and optional test requirements include the following columns:

**FEATURE KEY:** A set of characters uniquely identifying the enabler test requirement to be tested. The purpose of the Feature Key is that when used, it distinctly refers to only one feature to be tested.

**FEATURE DESCRIPTION:** A description of a technical specification feature to be tested.

**FEATURE TEST REQUIREMENTS:** A description of what shall be tested for the feature

#### 5.1.1 Mandatory Test Requirements

Mandatory test requirements are covering mandatory features/functions of an Enabler which shall always be implemented in the client/server.

	Feature Key	Feature Description	Feature Test Requirements
Normal Flow	DDF	Device Description Framework	Requirement to test that the client vendor supplied DDF files defining their support for Management Objects defined by this enabler are compliant to the requirements in <i>Device Description Framework</i> in DM 1.2 TND [DMTND].
	DDF-MOI	Management Object Identifier	Requirement to test that the DDF file contains the correct MO Identifiers for interior nodes as specified in this enabler.
	DDF-MUST	Mandatory Nodes	Requirement to test that the DDF file contains all mandatory nodes.
	DDF-Cond	Mandatory structure within optional nodes	Requirement to test that if the DDF file contains an optional feature then all mandatory definitions for that optional feature must be included.
	DDF-DFTYPE	MIME Type	Requirement to test that the <i>DFTYPE</i> for leaf-nodes defined in the DDF file is as specified in this enabler.



	Feature Key	Feature Description	Feature Test Requirements
	DDF-Format	Node format definition	Requirement to test that the <i>DDFFormat</i> defined in the DDF file for each node is as specified in this enabler.
	DDF-Min-Occ	Minimum occurrence	Requirement to test the minimum <i>Occurrence</i> that are defined for all existing nodes.
	DDF-Max-Occ	Maximum occurrence	Requirement to test the maximum <i>Occurrence</i> that are defined for all existing nodes.
	FullyLock	Fully Lock the Device	Requirement to test full locking of the Device The FullyLock primitive [LAWMO-TS] must be tested
	PartiallyLock	Partially Lock the Device	Requirement to test partial locking of the Device The PartiallyLock primitive [LAWMO-TS] must be tested
	Unlock	Unlock the Device	Requirement to test unlocking the Device The UnLock primitive [LAWMO-TS] must be tested
	List	List the available data that can be wiped from the Device	Requirement to test listing the available data that can be wiped from the Device
	Configure	Configure the data to be wiped from the Device	Requirement to test configuring the data to be wiped from the Device
<b>Error Flow</b>	DDF-Min-Acc	Minimum Access Type	Requirement to test the minimum <i>AccessType</i> for all existing nodes
	DDF-Inv-Ext	Usage of Extensions	Requirement to test that no non-standard nodes exist outside of the defined Extensions sub-trees "Ext".
	DDF-Inv-Acc	Usage of restricted access type	Requirement to test that no forbidden <i>AccessTypes</i> are supported. For example "NO Get".

Table 1: Applicability Table for Enabler Specific Mandatory Test Requirements

### 5.1.2 Optional Test Requirements

Optional test requirements are covering optional features/functions of an Enabler.

If an optional requirement of the Enabler is implemented in the client/server, this requirement SHALL be tested.

	Feature Key	Feature Description	Feature Test Requirements
<b>Normal Flow</b>	Wipe	Wipe data from the Device	Requirement to test wiping data from the Device The Wipe primitive [LAWMO-TS] must be tested
<b>Error Flow</b>			

**Table 2: Applicability Table for Enabler Specific Optional Test Requirements**

## **5.2 Backwards Compatibility**

No backward compatibility requirements are defined since this is the first version of this enabler.

## **5.3 Enabler Dependencies**

LAWMO is normatively dependent on the DM 1.2 specifications. However, this normative dependency should not be seen as restricting this MO definition only to DM clients implementing that version of the DM enabler.

## Appendix A. Change History (Informative)

### A.1 Approved Version History

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

### A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-ETR-LAWMO-V1_0	30 Sep 2008	All	First draft
	14 Oct 2008	All	Editorial clean up
	04 Nov 2008	2.1,2.2,5.1.1	Incorporate agreed CR: OMA-DM-LAWMO-2008-0026
Candidate Versions OMA-ETR-LAWMO-V1_0	27 Jan 2009	n/a	Status changed to Candidate by TP TP ref# OMA-TP-2009-0010- INP_LAWMO_V1_0_ERP_for_Candidate_Approval