



# **Enabler Interoperability Report for Download**

Approved Version 2.0 – 29 Mar 2011

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**Open Mobile Alliance**  
OMA-IOP\_RPT-Download-V2\_0-20110329-A

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# 1. Scope

OMA IOP BRO as a sub-working group (SWG) to OMA IOP WG, has compiled this report to summarize the efforts done to prove the interoperability aspects of the Download Version 2.0 enabler, as they are being considered for approval by the OMA Technical Plenary as an OMA Enabler Release.

This document provides information needed by the OMA Technical Plenary to consider the approval of Download Enabler Release Version 2.0 from an IOP perspective.

## 2. References

- [IOPPROC] "OMA Interoperability Policy and Process", Version 1.10, Open Mobile Alliance™, OMA-ORG-IOP\_Process-V1\_10, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [ETR] "Enabler Test Requirements for Download OTA", Version 2.0, Open Mobile Alliance™, OMA-ETR-DLOTA-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DCLT\_EICS] "Enabler Implementation Conformance Statement Client Implementation of DLOTA", Open Mobile Alliance™, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DSRV\_EICS] "Enabler Implementation Conformance Statement Server Implementation of DLOTA", Open Mobile Alliance™, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [ERELED] "Enabler Release Definition for Download OTA", Version 2.0, Open Mobile Alliance™, OMA-ERELED-DLOTA-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DL\_SPEC] "Download Over the Air Specification ", Version 2.0, Open Mobile Alliance™, OMA-TS-DLOTA-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [ETS] "Enabler Test Specification for Download OTA", Version 2.0, Open Mobile Alliance™, OMA-ETS-DLOTA-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [EVP] "Enabler Validation Plan for Download OTA", Version 2.0, Open Mobile Alliance™, OMA-EVP-DLOTA-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMADICT] "Dictionary for OMA Specifications", Version 2.8, Open Mobile Alliance™, OMA-ORG-Dictionary-V2\_8, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

## 3. Terminology and Conventions

### 3.1 Conventions

This is an informative document, which is not intended to provide testable requirements to implementations.

### 3.2 Definitions

<b>Compound Objects</b>	Content which is composed of one or more Media Objects which have relationship each other.
<b>Content Provider</b>	A human entity or a company which provides Media Objects to the User
<b>Download Agent</b>	A User agent in the device responsible for downloading a Media Object described by a download descriptor.
<b>Download Descriptor</b>	Metadata about a Media Object and instructions to the download agent for how to download it.
<b>Download OTA Server</b>	A logical entity which encompasses the all server components (i.e. Presentation Server, Download Server, and Status Report Server).
<b>Download Server</b>	A Web server hosting Media Objects available for download using the DLOTA protocol
<b>Media Object</b>	A resource on a Web server that can be downloaded.
<b>Multiple Objects</b>	Content which is composed of one or more Media Objects. However the Media Objects do not always have relationship each other.
<b>Presentation Server</b>	A Web server presenting a download service to the User.
<b>Status Report Server</b>	A Web server accepting status reports from the download agent.
<b>User</b>	An entity which uses services as defined in [DICTIONARY].

### 3.3 Abbreviations

<b>AP</b>	Access Point
<b>DD</b>	Download Descriptor
<b>DLOTA</b>	Download Over The Air
<b>DRM</b>	Digital Rights Management
<b>DVB-H</b>	Digital Video Broadcasting for Handheld
<b>ETS</b>	Enabler Test Specification
<b>HTTP</b>	Hypertext Transfer Protocol
<b>IP</b>	Internet Protocol
<b>LAN</b>	Local Access Network
<b>MBMS</b>	Multimedia Broadcast Multicast Service
<b>MMS</b>	Multimedia Messaging Service
<b>MMSC</b>	MMS Centre
<b>OMA</b>	Open Mobile Alliance
<b>OTA</b>	Over The Air
<b>RADIUS</b>	Remote Authentication Dial-In User Service
<b>SMS</b>	Short Message Service
<b>SSL</b>	Secure Socket Layer
<b>TLS</b>	Transport Layer Security

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<b>URI</b>	Uniform Resource Identifier
<b>URL</b>	Uniform Resource Location
<b>WAP</b>	Wireless Access Protocol
<b>WSP</b>	Wireless Session Protocol
<b>WTLS</b>	Wireless Transport Layer Security
<b>XHTML</b>	Extended Hyper Text Markup Language

## 4. Summary

Download 2.0 has reached the candidate stage in September 2006. IOP BRO has produced all the IOP documentation required to allow Download 2.0 test sessions, namely the [EVP], [ETS], [DCLT\_EICS] and [DSRV\_EICS] until December of 2006. The [ETS] covers well the requirements listed on the [ETR] and the group considered the final version of the documents have good and enough quality and it was ready for starting the testing phase.

IOP BRO has produced test code for some of the conformance test cases and loaded them on an OMA Download test server and requested companies to execute the tests and submit results. IOP BRO never got any comment or results back.

In February 2007 it was opened the registration for the first time for Download 2.0 and also requested bilateral test results of any test sessions that might have happened even outside of OMA control.

There is a big number of implementation in usage for some years now and so far no issues are known.

As per the new OMA process the specifications were under public review from the 20<sup>th</sup> of October 2010 up to the 20<sup>th</sup> of January 2011 without any comment being made. According to the OMA process after that period the enabler can be submitted for final approval.

For all the reasons above IOP BRO concludes that the enable can be moved to the approved release status.



## 5. Testing of Download v2.0

### 5.1 Documentation

This chapter lists the details of the enabler and any documentation, tools or test suites used to prove the enabler.

<b>Enabler:</b>	Download 2.0
<b>Process:</b>	OMA Interoperability Policy and Process [IOPPROC]
<b>Type of Testing</b>	Interoperability Testing and Conformance Testing
<b>Implementations tested:</b>	None
<b>Validation Plan:</b>	Download 2.0 Enabler Validation Plan [EVP]
<b>Test Specification:</b>	Download 2.0 Enabler Test Specification [ETS]
<b>Test Tool:</b>	OMA Download server
<b>Test Code:</b>	OMA-IOP-BRO-2006-0200R02-INP_dlota_conf_test_code
<b># of TestFests:</b>	0
<b># of Bilateral Test sessions:</b>	0

**Table 1: Test Documentation**

### 5.2 Test Case Statistics

This chapter lists the statistics for Enabler Validation Test Cases defined by [EVP]

The following status is used in the tables below:

- **Runs (R):** Used to indicate the total number of times the test case have been run ( $R = P + F + I$ ).
- **Pass (P):** Used to indicate how many times the test case have been run and successfully passed.
- **Fail (F):** Used to indicate how many times the test cases have been run and failed (used when the failure reason is known).
- **Inconclusive (I):** Used to indicate how many times the test cases have been run and did not pass due to other nature than conclusive implementation or specification failure (e.g.: the failure reason cannot be clearly determined).
- **Not Applicable (N/A):** Used to indicate how many times the test cases have not be run due to lack of support for the required functionality to run this test case by one or more involved implementations.
- **Out of Time (O):** Used to indicate how many times the test cases have not been run due to lack of time.
- **Problem Report (PR):** Used to indicate how many PRs have been issued for the test case.
- **Note:** Used to indicate the cause of the Inconclusive or Failed results.

Test Case Id	Description	Test Counts						PR	Note
		R	P	F	I	N/A	O		
N/A									
N/A									

**Table 2: Test Case Statistics**

## 5.3 Test Evidence

Testing of implementations based upon version 2.0 of the Download enabler has been conducted at the following TestFests:

- None

More details in regards to the concerned TestFests can be found below.

In addition to the TestFest activities, 0 of Bi lateral testing sessions has been carried out for the concerned enabler.

### 5.3.1 Test Case Summary from all TestFests

This chapter gives an overview of the result for all Enabler Validation Test Cases defined by [EVP] from all TestFests.

The following status is used in the tables below:

- Total number of TCs: Used in the summary to indicate how many test cases there are in total.
- Number of passed: Used in the summary to indicate how many of the total test cases that successfully has been passed.
- Number of failed: Used in the summary to indicate how many of the total test cases that has failed.
- Number of N/A: Used in the summary to indicate how many of the total test cases that has not be run due to that the implementation(s) do not support the functionality required to run this test case.
- Number of OT: Used in the summary to indicate how many of the total test cases that have not be run due to no time to run the test case.
- Number of INC: Used to indicate how many times the test cases have been run and did not pass due to other nature than conclusive implementation or specification failure (e.g.: the failure reason cannot be clearly determined).

TestFest #	Total # TCs	# Passed	# Failed	# N/A	# OT	# INC
<b>Totals</b>	46	0	0	0	0	0

**Table 3: Summary TestFest Information**

## 5.4 Download V2.0 PR Status

There are no PRs still open. Since the creation of the enabler until now no PR was ever raised.

## Appendix A. Change History

(Informative)

### A.1 Approved Version History

Reference	Date	Description
OMA-IOP_RPT-Download-V2_0-20110329-A	29 Mar 2011	Status changed to Approved by TP: OMA-TP-2011-0100-INP_Download_OTA_V2_0_ERP_for_Final_Approval