



## **Enabler Test Report DRM v2.0**

OMA TestFest (May 2005)  
Version 27-May-2005

---

Open Mobile Alliance  
OMA-Enabler\_Test\_Report-DRM-20-20050527

This document is considered confidential and may not be disclosed in any manner to any non-member of the Open Mobile Alliance™, unless there has been prior explicit Board approval.

This document is a work in process and is not an approved Open Mobile Alliance™ specification. This document is subject to revision or removal without notice. No part of this document may be used to claim conformance or interoperability with the Open Mobile Alliance specifications.

© 2005 Open Mobile Alliance Ltd. All rights reserved.

Terms and conditions of use are available from the Open Mobile Alliance™ Web site at <http://www.openmobilealliance.org/copyright.html>.

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. You may not use this document in any other manner without the prior written permission of the Open Mobile Alliance™. The Open Mobile Alliance authorises 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 offered by you.

The Open Mobile Alliance™ assumes no responsibility for errors or omissions in this document. In no event shall the Open Mobile Alliance be liable for any special, indirect or consequential damages or any damages whatsoever arising out of or in connection with the use of this information.

This document is not an Open Mobile Alliance™ specification, is not endorsed by the Open Mobile Alliance and is informative only. This document is subject to revision or removal without notice. No part of this document may be used to claim conformance or interoperability with the Open Mobile Alliance specifications.

Open Mobile Alliance™ members have agreed to use reasonable endeavors to disclose in a timely manner to the Open Mobile Alliance the existence of all intellectual property rights (IPR's) essential to the present document. However, the members do not have an obligation to conduct IPR searches. The information received by the members 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>. Essential IPR is available for license on the basis set out 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 this "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.

This document is available online in PDF format at <http://www.openmobilealliance.org/>.

Known problems associated with this document are published at <http://www.openmobilealliance.org/>.

Comments regarding this document can be submitted to the Open Mobile Alliance™ in the manner published at <http://www.openmobilealliance.org/documents.html>

# 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 .....	7
4. SUMMARY .....	8
5. TEST DETAILS.....	9
5.1 DOCUMENTATION.....	9
5.2 TEST CASE STATISTICS .....	10
5.2.1 Test Case Summary.....	10
5.2.2 Test Case List.....	11
5.2.3 Problem Reports.....	15
6. CONFIRMATION .....	16
APPENDIX A. CHANGE HISTORY (INFORMATIVE) .....	17

# 1. Scope

This report describes the results from the testing carried out at OMA TestFest9 May 2005 concerning DRM enabler version 2.0.

## 2. References

### 2.1 Normative References

[OMAIOPPROC]	OMA Interoperability Policy and Process, <a href="http://www.openmobilealliance.org/">http://www.openmobilealliance.org/</a>
[DRMEICS]	Enabler Implementation Conformance Statement, OMA DRM 2.0 Client Enabler Release, 10-September-2004, <a href="http://www.openmobilealliance.org/">http://www.openmobilealliance.org/</a> Enabler Implementation Conformance Statement, OMA DRM 2.0 Server Enabler Release, 10-September-2004, <a href="http://www.openmobilealliance.org/">http://www.openmobilealliance.org/</a>
[ERELED]	“Enabler Release Definition for DRM Version 2.0” Open Mobile Alliance™. OMA-ERELED-DRM-v2_0. <a href="http://www.openmobilealliance.org/">URL:http://www.openmobilealliance.org/</a>
[DRM]	“DRM Rights Management”. Open Mobile Alliance™. OMA-Download-DRM-v1_0. <a href="http://www.openmobilealliance.com/">URL:http://www.openmobilealliance.com/</a> .
[DRM-v2.0]	“DRM Rights Management”. Open Mobile Alliance™. OMA-DRM-DRM-v2_0. <a href="http://www.openmobilealliance.com/">URL:http://www.openmobilealliance.com/</a> .
[DRMCF-v2.0]	“DRM Content Format”. Open Mobile Alliance™. OMA-DRM-DCF-v2_0. <a href="http://www.openmobilealliance.com/">URL:http://www.openmobilealliance.com/</a> .
[DRMREL-v2.0]	“DRM Rights Expression Language”. Open Mobile Alliance™. OMA-DRM-REL-v2_0. <a href="http://www.openmobilealliance.com/">URL:http://www.openmobilealliance.com/</a> .
[EPTR]	Enabler Product Test Report
[ETP]	Enabler Test Plan
[ETS]	Enabler Test Specification for DRM Version 2.0, 15-Mar-2005

### 2.2 Informative References

## 3. Terminology and Conventions

### 3.1 Conventions

This is an informative document, i.e. the document does not intend to contain normative statements.

### 3.2 Definitions

<b>Asset</b>	Content governed by rights. See DRM content.
<b>Combined delivery</b>	Delivery of the rights object and content together in a single message. See DRM message.
<b>Composite object</b>	A DCF that contains one or more DCFs by means of inclusion e.g. DRM messages, zip files.
<b>Content</b>	A DCF
<b>DRM Agent</b>	A mobile device consuming DRM content.
<b>DRM agent</b>	A user agent in the device that enforces the rights and controls the consumption of DRM content on the device.
<b>DRM content</b>	Content that is consumed according to a set of rights. DRM content may be in encrypted DRM Content Format or in plaintext delivered inside a DRM message
<b>DRM message</b>	A message containing a DCF and an optional rights object. DCFs received inside a DRM message must not leave the device. The optional rights object defines additional consumption rules for the DCF.
<b>Forward-lock</b>	A special case of combined delivery method where the DRM message includes only the DCF and not a rights object at all. A set of default rights applies for the DCF.
<b>DCF</b>	A digital resource e.g. a ringing tone, a screen saver, a Java game or a composite object.
<b>Media type</b>	A MIME media type.
<b>Rights</b>	Permissions and constraints defining under which circumstances access is granted to DRM content.
<b>Rights issuer</b>	An entity who issues rights objects.
<b>Rights object</b>	An instance of rights
<b>Separate delivery</b>	Delivery of the rights object and content via separate transports.
<b>Superdistribution</b>	A mechanism that (1) allows the end user to redistribute the encrypted DRM content to other end users through potentially insecure channels and (2) enables the recipients to obtain initial rights for the superdistributed DRM content.

### 3.3 Abbreviations

CEK	Content Encryption Key
DCF	DRM Content Format
DRM	Digital Rights Management
HTTP	Hypertext Transfer Protocol
MIME	Multipurpose Internet Mail Extensions
OMA	Open Mobile Alliance
REL	Rights Expression Language
RI	Rights Issuer
RO	Rights Object
ROAP	Rights Object Acquisition Protocol
SCR	Static Conformance Requirement
WAP	Wireless Application Protocol
WSP	Wireless Session Protocol

## 4. Summary

This report gives details of the testing carried out during the OMA TestFest9 (May 2005) for Digital Rights Management(DRM) version 2.0.

The report is compiled on behalf of OMA by NCC Group.

The work and reporting has followed the OMA IOP processes and policies [OMAIOPPROC].



## 5. Test Details

### 5.1 Documentation

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

<b>Date:</b>	May 2005
<b>Location:</b>	Helsinki, Finland
<b>Enabler:</b>	DRM 2.0
<b>Process:</b>	OMA Interoperability Policy and Process [OMAIOPPROC]
<b>Type of Testing</b>	Interoperability Testing
<b>Products tested:</b>	Client-to-server
<b>Test Plan:</b>	DRM v2.0 Enabler Test Plan [ETP]
<b>Test Specification:</b>	DRM v2.0 Enabler Test Specification [ETS]
<b>Test Tool:</b>	None
<b>Test Code:</b>	None
<b>Type of Test event:</b>	TestFest
<b>Participants:</b>	Beep Science, Discretix, Flextronics/Emuzed, NDS, NEC Corporation, Nokia, Philips, RSA Security, Viaccess SA, CoreMedia, Openwave Systems, Safenet <i>and 1 other participant.</i>
<b>Number of Client Products:</b>	12
<b>Participating Technology Providers for clients:</b>	Beep Science, Discretix, Flextronics/Emuzed, NDS, NEC Corporation, Nokia, Philips, RSA Security, Viaccess SA <i>and 1 other participant.</i>
<b>Number of Server Products:</b>	8
<b>Participating Technology Providers for servers:</b>	Beep Science, CoreMedia, NDS, NEC Corporation, Openwave Systems, RSA Security, Safenet and Viaccess SA
<b>Number of test sessions completed:</b>	87 of 89

## 5.2 Test Case Statistics

### 5.2.1 Test Case Summary

This chapter gives an overview of the result for all test cases included in [ETS].

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 successfully passed.
- **Number of failed:** Used in the summary to indicate how many of the total test cases failed.
- **Number of N/A:** Used in the summary to indicate how many of the total test cases have not been run due to one of the implementations not supporting the functionality required to run this test case.
- **Number of OT:** Used in the summary to indicate how many of the total test cases have not been run due to no time to run the test case.
- **Number of INC:** Used in the summary to indicate how many of the total test cases have not been run due to functionality not being tested due to an error in the implementation or other functionality that is required to run this test case.

Test Section:	Number of test sessions:	Total number of TCs:	Number of Passed:	Number of Failed:	Number of N/A:	Number of OT:	Number of INC:	Total:
Client to Server TCs	87	51	673	104	103	2136	152	3168
<b>Total</b>	<b>87</b>	<b>51</b>	<b>673</b>	<b>104</b>	<b>103</b>	<b>2136</b>	<b>152</b>	<b>3168</b>

## 5.2.2 Test Case List

This chapter lists the statistics for all test cases included in [ETS].

The following status is used in the tables below:

- **No. of runs(R):** Used to indicate how many times the test cases have been run in total.
- **No. of passed(P):** Used to indicate how many times the test case has been run with successful result.
- **No. of failed(F):** Used to indicate how many times the test case has been run with failed result
- **No. of OT(O):** Used to indicate how many times the test case has not been run due to no time available.
- **No. of INC(I):** Used to indicate how many times the test case has not been run due to errors being found in other functionality required for running this test case.
- **PR:** Used to indicate if any PRs (Problem Reports) have been issued during testing.
- **Note:** Used to indicate the cause of Inconclusive or Fail verdicts.

Test Case:	Test Case Description:	R	P	F	O	I	PR:	Note:
DRM-2.0-int-1	To test "Forward Lock" DRM 1.0 functionality.	18	6	1	11	0	-	
DRM-2.0-int-2	To test DRM 1.0 "Combined Delivery" functionality.	14	0	3	11	0	-	
DRM-2.0-int-3	To test DRM 1.0 "Separate Delivery" functionality in case the DCF file indicates that the server intends to push the rights object separately.	14	1	0	11	2	-	
DRM-2.0-int-4	Registration of a DRM Agent	86	72	9	1	4	-	
DRM-2.0-int-5	RO Acquisition with existing RI Context.	87	62	7	13	5	-	
DRM-2.0-int-6	RO Acquisition without existing RI Context	87	50	1	32	4	-	
DRM-2.0-int-7	1-pass RO Acquisition with existing RI Context.	62	13	4	42	3	-	
DRM-2.0-int-8	1-pass RO Acquisition without existing RI Context.	61	11	3	44	3	-	
DRM-2.0-int-9	Server-initiated Device Time Synchronization	55	6	2	41	6	-	
DRM-2.0-int-10	To test a situation where an RO is included in the DCF.	71	22	5	40	4	-	
DRM-2.0-int-11	To test behaviour in the presence of a group RO for multiple DCFs, using the Group ID mechanism	46	0	1	40	5	-	
DRM-2.0-int-12	To test behaviour in the presence of an individual RO for a content item which has a Group ID	47	1	1	40	5	-	
DRM-2.0-int-13	To test behaviour in the presence of several rights objects for one piece of content.	74	26	1	45	2	-	

Test Case:	Test Case Description:	R	P	F	O	I	PR:	Note:
DRM-2.0-int-14	To test behaviour in the presence of several rights objects for one piece of content.	74	22	0	49	3	-	
DRM-2.0-int-15	To test DRM Agent's capability to process Multipart DCFs from the RI.	55	12	2	39	2	-	
DRM-2.0-int-16	To test behaviour in the presence of multiple Ros for a multipart DCF.	57	10	0	44	3	-	
DRM-2.0-int-17	To test behaviour when different content items in a multipart DCF are associated with different groups	47	1	0	44	2	-	
DRM-2.0-int-18	To test "Superdistribution" functionality. The protected content is sent from one DRM Agent to another. The rights object is obtained by ROAP session to the rights issuing service.	76	21	0	51	4		
DRM-2.0-int-19	To test the TransactionID mechanism in connection with Superdistribution.	55	6	1	44	4		
DRM-2.0-int-20	To test <display> and <print> permissions.	79	39	0	37	3		
DRM-2.0-int-21	To test <play> permission.	75	34	0	39	2		
DRM-2.0-int-22	To test <execute> permission.	66	20	0	43	3		
DRM-2.0-int-23	To test <count> constraint for a DCF.	82	36	2	40	4		
DRM-2.0-int-24	To test <timed-count> constraint for a DCF.	72	11	4	53	4		
DRM-2.0-int-25	To test <datetime> constraint for a DCF.	82	25	2	51	4		
DRM-2.0-int-26	To test <interval> constraint for a DCF.	79	22	4	50	3		
DRM-2.0-int-27	To test <accumulated> constraint for a DCF.	70	10	2	54	4		
DRM-2.0-int-28	To test <individual> constraint for a DCF.	55	0	1	50	4		
DRM-2.0-int-29	To test <system> constraint for a DCF.	49	0	0	46	3		
DRM-2.0-int-30	To test the effect of having multiple constraints.	81	19	3	55	4		
DRM-2.0-int-31	To test Interval and Datetime constraints with a mobile that does not have a time source (i.e. a situation where the constraint is not understood and cannot be enforced).	47	0	0	46	1		

Test Case:	Test Case Description:	R	P	F	O	I	PR:	Note:
DRM-2.0-int-32	Initiate ROAP from DCF Preview Header with existing RI Context & domain name NOT in Domain Name Whitelist.	65	4	2	52	7		
DRM-2.0-int-33	Initiate ROAP from DCF Preview Header with existing RI Context & domain name in the Domain Name Whitelist	64	2	2	53	7		
DRM-2.0-int-34	To test inheritance model when stateful constraints are involved.	56	1	7	46	2		
DRM-2.0-int-35	To test a case where the Parent Rights Object	56	1	7	46	2		
DRM-2.0-int-36	To test inheritance model when a child RO is a group RO	53	0	4	47	2		
DRM-2.0-int-37	Trigger-initiated domain join without existing RI Context	72	23	5	40	4		
DRM-2.0-int-38	Trigger-initiated domain join with valid RI Context and no existing Domain Context for this RI	72	26	3	41	2		
DRM-2.0-int-39	Trigger-initiated domain join with valid RI Context and existing Domain Context for this RI A Domain RO is delivered before the DRM Agent has upgraded the domain.	56	3	1	51	1		
DRM-2.0-int-40	Trigger-initiated domain join with valid RI Context and existing Domain Context for this RI RI-initiated domain generation upgrade	54	0	1	51	2		
DRM-2.0-int-41	Domain RO Acquisition with existing RI Context.	70	16	1	51	2		
DRM-2.0-int-42	To test delivering the DomainRO inside a DCF	68	8	2	55	3		
DRM-2.0-int-43	To test if different devices related with the same domain are able to share DCFs	62	7	0	52	3		
DRM-2.0-int-44	Device leaves a domain after receiving a LeaveDomain trigger	65	15	5	43	2		
DRM-2.0-int-45	Initiate ROAP from DCF Silent Header with existing RI Context and domain name NOT in Domain Name Whitelist	63	3	3	51	6		
DRM-2.0-int-46	Initiate ROAP from DCF Silent Header with existing RI Context and domain name NOT in Domain Name Whitelist	63	2	2	53	6		

Test Case:	Test Case Description:	R	P	F	O	I	PR:	Note:
DRM-2.0-int-47	To test a local backup of content and rights object.	49	4	0	44	1		
DRM-2.0-int-48	Device registration and domain establishment for Unconnected Device	37	0	0	37	0		
DRM-2.0-int-49	RO Acquisition with existing RI Context.	39	0	0	39	0		
DRM-2.0-int-50	Unconnected Device leaving domain.	38	0	0	38	0		
DRM-2.0-int-51	RO Acquisition without existing RI Context	40	0	0	40	0		

### 5.2.3 Problem Reports

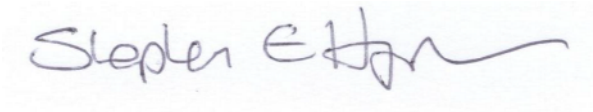
During the activities for TestFest9, the following problem reports were generated relating to the test materials and test process:

<b>PR Number</b>	<b>Affecting</b>	<b>Description</b>	<b>Test Case reference / Specification reference</b>
0004	EICS	SCR item DRM-DCF-CLI-2 in Client EICS has missing Requirements	-

Full details of the Problem Reports can be found at: <http://www.opengroup.org:8000/OMA-PR/>

## 6. Confirmation

This signature states that the included information is true and valid.

A handwritten signature in blue ink that reads "Stephen Higgins". The signature is written in a cursive style with a long, sweeping tail.

---

Stephen Higgins - Trusted Zone



## Appendix A. Change History (Informative)

Type of Change	Date	Section	Description