Enabler Test Report DRM v2.0

OMA TestFest (Nov 2005)
Version 24-Nov-2005

Open Mobile Alliance
OMA-Enabler_Test_Report-DRM-20-20051124

Contents

1. Scope

This report describes the results from the testing carried out at OMA TestFest11 November 2005 concerning DRM enabler version 2.0.

2. References

2.1   Normative References

[OMAIOPPROC]	OMA Interoperability Policy and Process, http://www.openmobilealliance.org/
[DRMEICS]	Enabler Implementation Conformance Statement, OMA DRM 2.0 Client Enabler Release, 10-September-2004, http://www.openmobilealliance.org/
	Enabler Implementation Conformance Statement, OMA DRM 2.0 Server Enabler Release, 10-September-2004, http://www.openmobilealliance.org/
[ERELD]	"Enabler Release Definition for DRM Version 2.0" Open Mobile Alliance™. OMA-ERELD-DRM-v2_0. URL:http://www.openmobilealliance.org/
[DRM]	"DRM Rights Management". Open Mobile Alliance™. OMA-Download-DRM-v1_0. URL:http://www.openmobilealliance.com/.
[DRM-v2.0]	"DRM Rights Management". Open Mobile Alliance™. OMA-DRM-DRM-v2_0. URL:http://www.openmobilealliance.com/.
[DRMCF-v2.0]	"DRM Content Format". Open Mobile Alliance™. OMA-DRM-DCF-v2_0. URL:http://www.openmobilealliance.com/.
[DRMREL-v2.0]	"DRM Rights Expression Language". Open Mobile Alliance™. OMA-DRM-REL-v2_0. URL:http://www.openmobilealliance.com/.
[EPTR]	Enabler Product Test Report
[ETP]	Enabler Test Plan
[ETS]	OMA-ETS-DRM-Interoperability-V2_0-20050922-A.doc Enabler Test Specification [ETS]

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

Asset	Content governed by rights. See DRM content.
Combined delivery	Delivery of the rights object and content together in a single message. See DRM message.
Composite object	A DCF that contains one or more DCFs by means of inclusion e.g. DRM messages, zip files.
Content	A DCF
DRM Agent	A mobile device consuming DRM content.
DRM agent	A user agent in the device that enforces the rights and controls the consumption of DRM content on the device.
DRM content	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
DRM message	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.
Forward-lock	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.
DCF	A digital resource e.g. a ringing tone, a screen saver, a Java game or a composite object.
Media type	A MIME media type.
Rights	Permissions and constraints defining under which circumstances access is granted to DRM content.
Rights issuer	An entity who issues rights objects.
Rights object	An instance of rights
Separate delivery	Delivery of the rights object and content via separate transports.
Superdistribution	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 receipients 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 TestFest11 (November 2005) for Digital Rights Management(DRM) version 2.0.

The report is compiled on behalf of the OMA by the OMA Trusted Zone.

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.

Date:	November 2005
Location:	Düsseldorf, Germany
Enabler:	DRM 2.0
Process:	OMA Interoperability Policy and Process [OMAIOPPROC]
Type of Testing	Interoperability Testing
Products tested:	Client-to-server
Test Plan:	DRM v2.0 Enabler Test Plan [ETP]
Test Specification:	DRM v2.0 Enabler Test Specification [ETS]
Test Tool:	None
Test Code:	None
Type of Test event:	TestFest
Participants:	Beep Science AS (client and server), CoreMedia (client and server), Ericsson Mobile Platforms, Irdeto Mobile ,Inc.(client and server), Mobiletop Co., NEC Corporation (client and server), Nokia, Panasonic Mobile Communications, Philips , SK Telecom, TTPCom + *7 other participants*
Number of Client Products:	17
Participating Technology Providers for clients:	Beep Science AS, CoreMedia, Ericsson Mobile Platforms, Irdeto Mobile Inc, Mobiletop Co., NEC Corporation, Nokia, Panasonic Mobile Communications, Philips, SK Telecom, TTPCom+ *6 other clients*
Number of Server Products:	5
Participating Technology Providers for servers:	Beep Science AS, CoreMedia, Irdeto Mobile, Inc, NEC Corporation + *1 other server*
Number of test sessions completed:	76

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	76	51	1817	75	1183	679	119	3873
Total	**76**	**51**	**1817**	**75**	**1183**	**679**	**119**	**3873**

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.	24	20	1	1	2	-	
DRM-2.0-int-2	To test DRM 1.0 "Combined Delivery" functionality.	13	8	0	3	2	-	
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.	9	2	0	3	4	-	
DRM-2.0-int-4	Registration of a DRM Agent	76	68	7	0	1	-	
DRM-2.0-int-5	RO Acquisition with existing RI Context.	76	66	3	5	2	-	
DRM-2.0-int-6	RO Acquisition without existing RI Context	76	60	5	8	3	-	
DRM-2.0-int-7	1-pass RO Acquisition with existing RI Context.	44	35	1	6	2	-	
DRM-2.0-int-8	1-pass RO Acquisition without existing RI Context.	43	33	1	6	3	-	
DRM-2.0-int-9	Server-initiated Device Time Synchronization	69	48	3	16	2	-	
DRM-2.0-int-10	To test a situation where an RO is included in the DCF.	66	45	5	14	2	-	
DRM-2.0-int-11	To test behaviour in the presence of a group RO for multiple DCFs, using the Group ID mechanism	59	43	0	14	2	-	
DRM-2.0-int-12	To test behaviour in the presence of an individual RO for a content item which has a Group ID	62	42	4	14	2	-	
DRM-2.0-int-13	To test behaviour in the presence of several rights objects for one piece of content.	76	56	2	16	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.	76	56	2	16	2	-	
DRM-2.0-int-15	To test DRM Agent's capability to process Multipart DCFs from the RI.	50	34	2	12	2	-	
DRM-2.0-int-16	To test behaviour in the presence of multiple Ros for a multipart DCF.	61	43	1	15	2	-	
DRM-2.0-int-17	To test behaviour when different content items in a multipart DCF are associated with different groups	55	34	2	17	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.	60	39	0	19	2	-	
DRM-2.0-int-19	To test the TransactionID mechanism in connection with Superdistribution.	44	23	2	17	2	-	
DRM-2.0-int-20	To test <display> and <print> permissions.	64	51	0	11	2	-	
DRM-2.0-int-21	To test <play> permission.	67	50	0	15	2	-	
DRM-2.0-int-22	To test <execute> permission.	40	21	0	17	2	-	
DRM-2.0-int-23	To test <count> constraint for a DCF.	76	59	0	15	2	-	
DRM-2.0-int-24	To test <timed-count> constraint for a DCF.	62	41	2	17	2	-	
DRM-2.0-int-25	To test <datetime> constraint for a DCF.	76	51	3	19	3	-	
DRM-2.0-int-26	To test <interval> constraint for a DCF.	70	48	1	19	2	-	
DRM-2.0-int-27	To test <accumulated> constraint for a DCF.	66	44	1	19	2	-	
DRM-2.0-int-28	To test <individual> constraint for a DCF.	55	35	1	17	2	-	
DRM-2.0-int-29	To test <system> constraint for a DCF.	53	35	0	16	2	-	
DRM-2.0-int-30	To test the effect of having multiple constraints.	73	51	1	19	2	-	
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).	24	9	0	13	2	-	

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.	55	36	0	17	2	-	
DRM-2.0-int-33	Initiate ROAP from DCF Preview Header with existing RI Context & domain name in the Domain Name Whitelist	55	34	1	17	3	-	
DRM-2.0-int-34	To test inheritance model when stateful constraints are involved.	73	47	3	20	3	-	
DRM-2.0-int-35	To test a case where the Parent Rights Object	61	37	2	20	2	-	
DRM-2.0-int-36	To test inheritance model when a child RO is a group RO	60	35	3	20	2	-	
DRM-2.0-int-37	Trigger-initiated domain join without existing RI Context	62	47	3	10	2	-	
DRM-2.0-int-38	Trigger-initiated domain join with valid RI Context and no existing Domain Context for this RI	62	49	1	10	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.	49	23	3	13	10	-	
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	55	39	1	13	2	-	
DRM-2.0-int-41	Domain RO Acquisition with existing RI Context.	61	44	1	13	3	-	
DRM-2.0-int-42	To test delivering the DomainRO inside a DCF	56	33	3	16	4	-	
DRM-2.0-int-43	To test if different devices related with the same domain are able to share DCFs	44	21	3	16	4	-	
DRM-2.0-int-44	Device leaves a domain after receiving a LeaveDomain trigger	58	41	1	14	2	-	
DRM-2.0-int-45	Initiate ROAP from DCF Silent Header with existing RI Context and domain name NOT in Domain Name Whitelist	53	35	0	16	2	-	
DRM-2.0-int-46	Initiate ROAP from DCF Silent Header with existing RI Context and domain name NOT in Domain Name Whitelist	53	34	0	16	3	-	

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.	31	12	0	17	2	-	
DRM-2.0-int-48	Device registration and domain establishment for Unconnected Device	10	0	0	8	2	-	
DRM-2.0-int-49	RO Acquisition with existing RI Context.	9	0	0	8	1	-	
DRM-2.0-int-50	Unconnected Device leaving domain.	9	0	0	8	1	-	
DRM-2.0-int-51	RO Acquisition without existing RI Context	9	0	0	8	1	-	

5.2.3   Problem Reports

During the activities for TestFest11, the following problem reports were generated relating to the test materials and test process:

PR Number	Affecting	Description	Test Case reference / Specification reference
0015	ETS	Test says user is prompted before domain upgrade, but spec says user consent SHOULD NOT be obtained in this case	int-40
0016	Test Spec	keyIdentifier nodes are not schema valid because of missing namespace declaration when document is in canonical form	
0017	ETS	Ambiguity over constraint usage with respect to inheritance and top level/child level constraints	Int-34

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.

_____

OMA Trusted Zone

Appendix A.   Change History   (Informative)

Type of Change	Date	Section	Description