Enabler Test Report DRM v1.0

OMA TestFest (October 2004)
Version 29-Oct-2004

Open Mobile Alliance
OMA-Enabler_Test_Report-DRM-v10-2004-10-29

Contents

1. Scope

This report describes the results from the testing carried out at OMA TestFest (October 2004) concerning DRM enabler version 1.0.

2. References

2.1 Normative References

[OMAIOPPROC]   OMA Interoperability Policy and Process, http://www.openmobilealliance.org/

[DRMEICS]   Enabler Implementation Conformance Statement, OMA DRM 1.0 Enabler Release, Draft Version 09-Sep-2003, http://www.openmobilealliance.org/

[ERELD]   "Enabler Release Definition for DRM Version 1.0" Open Mobile Alliance™. OMA-ERELD-DRM-v1_0. URL:http://www.openmobilealliance.org/

[DL_SPEC]   OMA DRM 1.0 specifications

[EPTR]   Enabler Product Test Report

[ETP]   Enabler Test Plan

[ETS]   Enabler Test Specification for DRM 1.0 Approved Version 1.0, 09-Sep-2003

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

None.

3.3 Abbreviations

DCF   DRM Content Format
DRM   Digital Rights Management
EICS   Enabler Implementation Conformance Statement
EPTR   Enabler Product Test Report
ETP   Enabler Test Plan
ETS   Enabler Test Specification
OMA   Open Mobile Alliance
PR   Problem Report

4. Summary

This report gives details of the testing carried out during the OMA TestFest (October 2004) for Digital Rights Management(DRM) version 1.0.

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.

Date:	October 2004
Location:	Beijing, China
Enabler:	DRM 1.0
Process:	OMA Interoperability Policy and Process [OMAIOPPROC]
Type of Testing	Interoperability Testing
Products tested:	Client-to-server
Test Plan:	DRM v1.0 Enabler Test Plan [ETP]
Test Specification:	DRM v1.0 Enabler Test Specification [ETS]
Test Tool:	None
Test Code:	None
Type of Test event:	TestFest
Participants:	4th Pass, Beep Science, Openwave, Institute for Information Industry; MediaTek, NDS, Philips Software, Samsung Electronics Co Ltd ; SK Telecom & Digicaps, Sony Ericsson Mobile Communications AB
Number of Client Products:	5
Participating Technology Providers for clients:	Institute for Information Industry; MediaTek, Philips Software, Samsung Electronics Co Ltd, Sony Ericsson Mobile Communications AB
Number of Server Products:	5
Participating Technology Providers for servers:	4th Pass, Beep Science, NDS, Openwave, SK Telecom & Digicaps
Number of test sessions completed:	25 of 25

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:	Total number of TCs:	Number of Passed:	Number of Failed:	Number of N/A:	Number of OT:	Number of INC:
Client to Server TCs	17	282	2	110	13	18
Total	**17**	**282**	**2**	**110**	**13**	**18**

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-1.0-int-1	To test "Forward Lock" DRM functionality with "binary" encoding.	25	25	0	0	0		
DRM-1.0-int-2	To test "Forward Lock" DRM functionality with "base64" encoding.	16	16	0	0	0		
DRM-1.0-int-3	To test "Combined Delivery" functionality.	25	24	0	0	1		
DRM-1.0-int-4	To test the behaviour when the consuming device does not support "Combined Delivery" functionality.	0	0	0	0	0		
DRM-1.0-int-5	To test "Separate Delivery" functionality in case the DCF file indicates that the server intends to push the rights object separately. The DCF containing the content is not forward-locked.	20	17	0	0	3		
DRM-1.0-int-6	To test "Separate Delivery" functionality in case the DCF file indicates that the server intends to push the rights object separately. The DCF containing the content is forward-locked (i.e. wrapped inside a DRM message).	16	12	0	2	2		

DRM-1.0-int-7	To test "Superdistribution" functionality. The protected content is sent from one consuming device to another. The rights object is obtained by opening a browsing session to the rights issuing service.	20	15	0	3	2		
DRM-1.0-int-8	To test "Superdistribution" functionality in case of an unknown MIME type. The consuming device uses the Content-Type field to determine whether the content is suitable for it.	16	11	0	0	5		Observation 001
DRM-1.0-int-9	To test behaviour in the presence of several rights objects for one piece of content.	16	13	0	1	2		Observation 002
DRM-1.0-int-10	To test behaviour in the presence of several rights objects for one piece of content.	16	13	0	1	2		
DRM-1.0-int-11	To test <display> and <print> permissions for image files.	25	24	0	0	1		Observation 003
DRM-1.0-int-12	To test <play> permission for a sound file.	25	24	0	1	0		Observation 003
DRM-1.0-int-13	To test <count> constraint for a media object file.	25	24	0	1	0		
DRM-1.0-int-14	To test <datetime> constraint for a media object file.	25	24	0	1	0		
DRM-1.0-int-15	To test <interval> constraint for a media object file.	25	24	0	1	0		
DRM-1.0-int-16	To test the effect of having multiple constraints.	19	16	2	1	0		
DRM-1.0-int-17	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).	1	0	0	1	0		Observation 004

5.2.3   Observations

The following issues were captured by the Trusted Zone during the OMA TestFest.

5.2.3.1   EICS issues

This section details issues with the DRM v1.0 Enabler Implementation Conformance Statement (EICS) [DRMEICS].

None.

5.2.3.2   Enabler Test Suite (ETS) issues

This section details issues with the Enabler Test Specification for OMA DRM v1.0.

Observation: 001	
Document:	Enabler Test Specification for DRM 1.0 Version 1.0 17-September-2004
Test Case:	DRM-1.0-int-8
Comment:	The pass criteria are for those clients that supports storage of unknown data. Handsets that don't come with some external storage or don't allow unknown content to be stored should have a pass-criteria for them also. It is suggested the following additional pass criteria is used: 3. If the device does not support the mime-type and doesn't allow storage of unknown media, the media object should have been discarded upon reception
Recommendation:	Re-review test case.

Observation: 002	
Document:	Enabler Test Specification for DRM 1.0 Version 1.0 17-September-2004
Test Case:	DRM-1.0-int-9

Comment:	A clarification is needed for the third pass-criteria:
	'3. The media object can be used in accordance with the associated rights of exactly one of the rights objects.'
	
	What does it mean that the media can be used with 'exactly one of the rights objects'?
	Should the others be discarded or is it exactly one until it is consumed?
	Is the pass-criteria trying to capture that the received ROs shouldn't be combined into one RO?
	
	Scenario:
	RO-1: Constraint - count 3
	RO-2: Constraint - interval 10 minutes
	RO-3: Constraint - between start and end date
	
	Interpretation 1:
	  RO-1,2,3 are recevied and only one, say RO-3, is retained.
	
	Interpretation 2:
	  RO-1,2,3 are received. One of the ROs are picked (say RO-3) and is used between start and end dates. Once expired, the next RO becomes active, and so

	on…
	
	Interpretation 3:
	   RO-1,2,3 are received and combined into
	   RO-x: count 3 for 10 minutes between start and end date
	 From the current pass-criteria this is a clear failure

Recommendation:	Re-review test case.

Observation: 003	
Document:	Enabler Test Specification for DRM 1.0 Version 1.0 17-September-2004
Section:	DRM-1.0-int-11
Comment:	DRM-1.0-int-11 and DRM-1.0-int-12 seems to be testing the same functionality for different media types, but the two cases differ: int-12 has a clear positive and negative case while int-11 is using the print-permission for the negative case. It was suggested that it would be better if the negative case propositioned for DRM-1.0-int-11 : 'In the second DRM message the rights object does not contain <display> or <print> permissions.' With this change in place the order of the positive and negative Cases should be the same in int-11 and int-12.
Recommendation:	Re-review test case

Observation: 004	
Document:	Enabler Test Specification for DRM 1.0 Version 1.0 17-September-2004
Section:	DRM-1.0-int-17
Comment:	In the preconditions part the sentence 'Time periods for <datetime> and <interval> constraints are overlapping' suggests an erroneous interpretation if the <interval> constraint. Since an <interval> constraint specifies the time interval after the first use of media object the <datetime> and <interval> can't be overlapping.
Recommendation:	Re-review the test case.

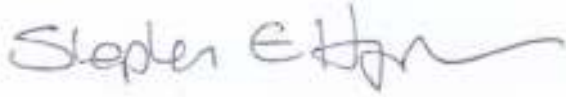### 5.2.3.3   DRM v1.0 Specification issues

None.

5.2.3.4   DRM v.10 General Feedback

Observation: 005	
Document:	Enabler Test Specification for DRM 1.0 Version 1.0 17-September-2004
Section:	Test content provide by OMA
Comment:	One of the clients raised an issue with the Interoperability test data used for DRM testing. In int-10.dcf, there is a Header included in the encoding reading: Content-Vendor: "Nokia IOP Operations" In OMA-Download_DRMCF_V1_0_20031113-C.pdf Page 10/14 - Section 5.2.4.5 - defines that the line MUST terminate with CRLF. This is not the case in the file (in fact with all the test content) which is causing a parsing error in the client.
Recommendation:	Test content is updated to match the specifications.

6. Confirmation

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

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Stephen Higgins - DRM Trusted Zone

Appendix A.   Change History   (Informative)

Type of Change	Date	Section	Description