Enabler Test Specification for DCD

Candidate Version 1.0 – 14 Jul2009

Open Mobile Alliance

OMA-ETS-DCD-V1_0-20090714-C

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Use of this document is subject to all of the terms and conditions of the Use Agreement located at http://www.openmobilealliance.org/UseAgreement.html.

Unless this document is clearly designated as an approved specification, this document is a work in process, is not an approved Open Mobile Alliance™ specification, and is subject to revision or removal without notice.

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. Information contained in this document may be used, at your sole risk, for any purposes. You may not use this document in any other manner without the prior written permission of the Open Mobile Alliance. The Open Mobile Alliance authorizes 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. The Open Mobile Alliance assumes no responsibility for errors or omissions in this document.

Each Open Mobile Alliance member has agreed to use reasonable endeavors to inform the Open Mobile Alliance in a timely manner of Essential IPR as it becomes aware that the Essential IPR is related to the prepared or published specification. However, the members do not have an obligation to conduct IPR searches. The declared Essential IPR 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. The Open Mobile Alliance has not conducted an independent IPR review of this document and the information contained herein, and makes no representations or warranties regarding third party IPR, including without limitation patents, copyrights or trade secret rights. This document may contain inventions for which you must obtain licenses from third parties before making, using or selling the inventions. Defined terms above are set forth 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 THE "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.

THE OPEN MOBILE ALLIANCE IS NOT LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF DOCUMENTS AND THE INFORMATION CONTAINED IN THE DOCUMENTS.

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms set forth above.

Contents

1. SCOPE 7
2. REFERENCES 8
2.1 NORMATIVE REFERENCES 8
2.2 INFORMATIVE REFERENCES 8
3. TERMINOLOGY AND CONVENTIONS 9
3.1 CONVENTIONS 9
3.2 DEFINITIONS 9
3.3 ABBREVIATIONS 11
4. INTRODUCTION 13
5. DCD CONFORMANCE TEST CASES 14
6. DCD INTEROPERABILITY TEST CASES 15
6.1 DCD-1.0-INT-001 CLIENT ACTIVATION 15
6.2 DCD-1.0-INT-002 CLIENT DEACTIVATION 16
6.3 DCD-1.0-INT-010 APPLICATION REGISTRATION 17
6.4 DCD-1.0-INT-020 INTERNAL SUBSCRIPTION 18
6.5 DCD-1.0-INT-021 INTERNAL UNSUBSCRIPTION 19
6.6 DCD-1.0-INT-030 SCHEDULED CONTENT UPDATE REQUEST 20
6.7 DCD-1.0-INT-031 ON-DEMAND CONTENT UPDATE REQUEST 21
6.8 DCD-1.0-INT-032 CONFIRMED CONTENT UPDATE REQUEST 22
6.9 DCD-1.0-INT-033 CONTENT ITEM RETRIEVAL BY CONTENT ID 23
6.10 DCD-1.0-INT-034 CONTENT ITEM RETRIEVAL BY CONTENT ADDRESS 24
6.11 DCD-1.0-INT-035 AUX CONTENT ITEM RETRIEVAL 25
6.12 DCD-1.0-INT-036 CONTENT ITEM REPLACEMENT 26
6.13 DCD-1.0-INT-040 CONTENT UPDATE NOTIFICATION 27
6.14 DCD-1.0-INT-041 CONTENT UPDATE PUSH 28
6.15 DCD-1.0-INT-050 CONTENT SUBMISSION WITH CONTENT RESPONSE 29
6.16 DCD-1.0-INT-051 CONTENT SUBMISSION WITH CONFIRMATION 30
6.17 DCD-1.0-INT-060 CHANNEL DISCOVERY NOTIFICATION 31
6.18 DCD-1.0-INT-061 CHANNEL DISCOVERY PUSH 32
6.19 DCD-1.0-INT-062 CHANNEL METADATA ADDITION 33
6.20 DCD-1.0-INT-063 CHANNEL METADATA REMOVAL 34
6.21 DCD-1.0-INT-064 CHANNEL GUIDE REPLACEMENT 35
6.22 DCD-1.0-INT-065 CHANNEL METADATA REPLACEMENT 36
6.23 DCD-1.0-INT-066 CHANNEL METADATA UPDATE 37
6.24 DCD-1.0-INT-070 CHARGING-RELATED CHANNEL METADATA HANDLING IN CHANNEL DISCOVERY 38
6.25 DCD-1.0-INT-071 CHARGING-RELATED CHANNEL METADATA HANDLING IN INTERNAL SUBSCRIPTION 39
6.26 DCD-1.0-INT-072 CHARGING-RELATED CHANNEL METADATA HANDLING IN EXTERNAL SUBSCRIPTION 40
6.27 DCD-1.0-INT-073 CHARGING-RELATED CONTENT METADATA HANDLING 41
6.28 DCD-1.0-INT-100 CONNECTION PROFILE UPDATE 42
6.29 DCD-1.0-INT-110 EXTERNAL SUBSCRIPTION 43
6.30 DCD-1.0-INT-111 EXTERNAL UNSUBSCRIPTION 44
6.31 DCD-1.0-INT-130 DCD-PROVIDED STORAGE 45
6.32 DCD-1.0-INT-131 CONTENT DECODING 46
6.33 DCD-1.0-INT-132 CONTENT EXPIRATION 47
6.34 DCD-1.0-INT-140 DC-INITIATED SUSPENSION 48
6.35 DCD-1.0-INT-141 DC-INITIATED RESUMPTION 49
6.36 DCD-1.0-INT-142 DECA-INITIATED SUSPENSION 50
6.37 DCD-1.0-INT-143 DECA-INITIATED RESUMPTION 51
6.38 DCD-1.0-INT-150 USAGE TRACKING POLICY ESTABLISHMENT 52
6.39 DCD-1.0-INT-151 USAGE TRACKING POLICY REPLACEMENT 53
6.40 DCD-1.0-INT-152 USAGE TRACKING POLICY REMOVAL 54
6.41 DCD-1.0-INT-153 ON-DEMAND USAGE TRACKING REPORT 54

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

6.42 DCD-1.0-INT-154 POLICY-BASED USAGE TRACKING REPORT 55
6.43 DCD-1.0-INT-160 ON-DEMAND CONTEXTUAL INFORMATION UPLOAD 56
6.44 DCD-1.0-INT-161 CONTEXTUAL INFORMATION UPLOAD POLICY ESTABLISHMENT 57
6.45 DCD-1.0-INT-162 CONTEXTUAL INFORMATION UPLOAD POLICY REPLACEMENT 58
6.46 DCD-1.0-INT-163 CONTEXTUAL INFORMATION UPLOAD POLICY REMOVAL 59
6.47 DCD-1.0-INT-164 POLICY-BASED CONTEXTUAL INFORMATION UPLOAD 60
6.48 DCD-1.0-INT-170 CONTENT REPAIR 61
6.49 DCD-1.0-INT-200 OPERATION OVER CELL BROADCAST 62
6.49.1 DCD-1.0-int-201 Client Activation 62
6.49.2 DCD-1.0-int-210 Application Registration 63
6.49.3 DCD-1.0-int-220 Internal Subscription to CBS based 'Channel' 64
6.49.4 DCD-1.0-int-221 Internal Unsubscription from CBS based Channel 65
6.49.5 DCD-1.0-int-241 Content Update Push over CBS 66
6.49.6 DCD1.0-int-242 DCD Concatenated Content Update Push 67
6.49.7 DCD-1.0-int-252 Channel Discovery Push over CBS 67
6.50 DCD-1.0-INT-300 OPERATION OVER OMA BCAST 68
6.50.1 DCD-1.0-int-310 Application Registration with BCAST Access Parameters 68
6.50.2 DCD-1.0-int-320 Internal Subscription to BCAST Delivered Channel 69
6.50.3 DCD-1.0-int-321 Internal Unsubscription from BCAST Delivered Channel 70
6.50.4 DCD-1.0-int-341 Content Update Push over BCAST 71
6.50.5 DCD-1.0-int-361 Channel Discovery Push over BCAST 72
APPENDIX A. CHANGE HISTORY (INFORMATIVE) 74
A.1 APPROVED VERSION HISTORY 74
A.2 DRAFT/CANDIDATE VERSION 1.0 HISTORY 74

Figures

No table of figures entries found.

Tables

Table 1: DCD-1.0-int-001 Client Activation 16
Table 2: DCD-1.0-int-002 Client Deactivation 17
Table 3: DCD-1.0-int-010 Application Registration 18
Table 4: DCD-1.0-int-020 Internal Subscription 19
Table 5: DCD-1.0-int-021 Internal Unsubscription 20
Table 6: DCD-1.0-int-030 Scheduled Content Update Request 21
Table 7: DCD-1.0-int-031 On-Demand Content Update Request 22
Table 8: DCD-1.0-int-032 Confirmed Content Update Request 23
Table 9: DCD-1.0-int-033 Content Item Retrieval by Content Id 24
Table 10: DCD-1.0-int-034 Content Item Retrieval by Content Address 25
Table 11: DCD-1.0-int-035 Aux Content Item Retrieval 26
Table 12: DCD-1.0-int-036 Content Item Replacement 27
Table 13: DCD-1.0-int-040 Content Update Notification 28
Table 14: DCD-1.0-int-041 Content Update Push 29
Table 15: DCD-1.0-int-050 Content Submission With Content Response 30

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Table 16: DCD-1.0-int-051 Content Submission With Confirmation 31

Table 17: DCD-1.0-int-060 Channel Discovery Notification....32

Table 18: DCD-1.0-int-061 Channel Discovery Push....33

Table 19: DCD-1.0-int-062 Channel Metadata Addition 34

Table 20: DCD-1.0-int-063 Channel Metadata Removal 35

Table 21: DCD-1.0-int-064 Channel Guide Replacement 36

Table 22: DCD-1.0-int-065 Channel Metadata Replacement 37

Table 23: DCD-1.0-int-066 Channel Metadata Update....38

Table 24: DCD-1.0-int-070 Charging-Related Channel Metadata Handling in Channel Discovery....39

Table 25: DCD-1.0-int-071 Charging-Related Channel Metadata Handling in Internal Subscription 40

Table 26: DCD-1.0-int-072 Charging-Related Channel Metadata Handling in External Subscription 41

Table 27: DCD-1.0-int-073 Charging-Related Content Metadata Handling....42

Table 28: DCD-1.0-int-100 Connection Profile Update....43

Table 29: DCD-1.0-int-110 External Subscription....44

Table 30: DCD-1.0-int-111 External Unsubscription 45

Table 31: DCD-1.0-int-130 DCD-Provided Storage....46

Table 32: DCD-1.0-int-131 Content Decoding 47

Table 33: DCD-1.0-int-132 Content Expiration....48

Table 34: DCD-1.0-int-140 DC-initiated Suspension....49

Table 35: DCD-1.0-int-141 DC-initiated Resumption 50

Table 36: DCD-1.0-int-142 DECA-initiated Suspension 51

Table 37: DCD-1.0-int-143 DECA-initiated Resumption....52

Table 38: DCD-1.0-int-150 Usage Tracking Policy Establishment....53

Table 39: DCD-1.0-int-151 Usage Tracking Policy Replacement....54

Table 40: DCD-1.0-int-153 On-Demand Usage Tracking Report 55

Table 41: DCD-1.0-int-154 Policy-Based Usage Tracking Report 56

Table 42: DCD-1.0-int-160 On-Demand Contextual Information Upload 57

Table 43: DCD-1.0-int-161 Contextual Information Upload Policy Establishment....58

Table 44: DCD-1.0-int-162 Contextual Information Upload Policy Replacement....59

Table 45: DCD-1.0-int-163 Contextual Information Upload Policy Removal....60

Table 46: DCD-1.0-int-164 Policy-Based Contextual Information Upload 61

Table 47: DCD-1.0-int-170 Content Repair....62

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Table 48: DCD-1.0-int-201 Client Activation 63

Table 49: DCD-1.0-int-210 Application Registration 64

Table 50: DCD-1.0-int-220 Internal Subscription to CBS based 'Channel' 65

Table 51: DCD-1.0-int-221 Internal Unsubscription from CBS based Channel 66

Table 52: DCD-1.0-int-241 Content Update Push over CBS 66

Table 53: DCD-1.0-int-242 DCD Concatenated Content Update Push over CBS 67

Table 54: DCD-1.0-int-252 Channel Discovery Push over CBS 68

Table 55 DCD-1.0-int-310 Application Registration with BCAST Access Paramete 69

Table 56 DCD-1.0-int-320 Internal Subscription to BCAST Delivered Channel 70

Table 57 DCD-1.0-int-321 Internal Unsubscription from BCAST Delivered Channel 71

Table 58 DCD-1.0-int-341 Content Update Push over BCAST 72

Table 59 DCD-1.0-int-361 Channel Discovery Push over BCAST 73

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

1. Scope

This document describes in detail available test cases for DCD 1.0:

http://www.openmobilealliance.org/Technical/released_enablers.aspx

The test cases are split in two categories, conformance and interoperability test cases.

The conformance test cases are aimed to verify the adherence to normative requirements described in the technical specifications.

The interoperability test cases are aimed to verify that implementations of the specifications work satisfactory.

If either conformance or interoperability tests do not exists at the creation of the test specification this part should be marked not available.

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

2. References

2.1 Normative References

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.8, Open Mobile Alliance™, OMA-ORG-IOP_Process-V1_8, 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

[DCD-AD] "OMA Dynamic Content Delivery Architecture", Version 1.0, Open Mobile Alliance™, OMA-AD-DCD-V1_0, URL:http://www.openmobilealliance.org/

[DCD-TS-Semantics] "Dynamic Content Delivery Technical Specification – Session and Transactions", Version 1.0, Open Mobile Alliance™, OMA-TS-DCD_Semantics-V1_0, URL:http://www.openmobilealliance.org/

[DCD-TS-BCAST] "OMA Dynamic Content Delivery Technical Specification – BCAST Adaptation", Version 1.0, Open Mobile Alliance™, OMA-TS-DCD_Call_Flows-V1_0

[DCD-TS-CBS] "OMA Dynamic Content Delivery Technical Specification – CBS Adaptation", Version 1.0, Open Mobile Alliance™, OMA-TS-DCD_CBS_Adaptation-V1_0, URL:http://www.openmobilealliance.org/

[DCD-TS-Charging] "OMA Dynamic Content Delivery Technical Specification – Charging ", Version 1.0, Open Mobile Alliance™, OMA-TS-DCD_Charging-V1_0, URL:http://www.openmobilealliance.org/

[IOPETR] "Enabler Test Requirements for Dynamic Content Delivery", Version 1.0, Open Mobile Alliance™, OMA-ETR-DCD-ETR-V1_0, URL:http://www.openmobilealliance.org/

[IOPEVP] "IOP Enabler Validation Plan for Dynamic Content Delivery", Version 1.0, Open Mobile Alliance™, OMA-EVP-DCD-V1_0, URL:http://www.openmobilealliance.org/

[DCD-EICS-Client] "Client Enabler Implementation Conformance Statement for Dynamic Content Delivery", Version 1.0, Open Mobile Alliance™, OMA-EICS-DCD-Client-V1_0, URL:http://www.openmobilealliance.org/

[DCD-EICS-Server] "Server Enabler Implementation Conformance Statement for Dynamic Content Delivery", Version 1.0, Open Mobile Alliance™, OMA-EICS-DCD-Server-V1_0, URL:http://www.openmobilealliance.org/

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/

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

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”, are normative, unless they are explicitly indicated to be informative.

The following numbering scheme is used:

xxx-y.z-con-number where:

xxx	Name of enabler, e.g. MMS or Browsing
y.z	Version of enabler release, e.g. 1.2 or 1.2.1
’con’	Indicating this test is a conformance test case
number	Leap number for the test case

Or

xxx-y.z-int-number where:

xxx	Name of enabler, e.g. MMS or Browsing
y.z	Version of enabler release, e.g. 1.2 or 1.2.1
’int’	Indicating this test is a interoperability test case
number	Leap number for the test case

3.2 Definitions

Application Deregistration	The process of terminating the association of a DCD Enabled Client Application with a DCD Server.
Application Profile	See **[DCD-AD]**.
Application Registration	The process of establishing the association of a DCD Enabled Client Application with a DCD Server, and disclosure of its Application Profile, to facilitate DCD Enabled service establishment.
ATOM	A set of standards for web feeds, including The Atom Syndication Format (an XML language used for web feeds) and the Atom Publishing Protocol (a simple HTTP-based protocol for creating and updating web resources).
Authentication	The process of validating the identity of a DCD Client.
Cell Broadcast Service	A one-to-many geographically focused messaging service based upon the GSM/UMTS Short Message Service.
Channel Deregistration	The process of terminating availability of a DCD Channel.
Channel Discovery	The process of delivering Channel Guide information, to enable DCD Enabled Client Application awareness of available services, and to facilitate the Channel Subscription process.
Channel Guide	A subset of Channel Metadata for one or more DCD Channels, provided to facilitate the Channel Discovery process.
Channel Metadata	See **[DCD-AD]**.
Channel Metadata Update	The process of delivering changes to Channel Metadata items for a specific DCD Channel, to applicable DCD Clients and DCD Enabled Client Applications.
Channel Registration	The process of establishing the availability of a new DCD Channel.
Channel Resumption	The process of resuming DCD Enabled services for a specific DCD Channel.
Channel Subscription	The process of establishing a Subscription to a DCD Enabled service, represented as a DCD Channel, for a DCD Enabled Client Application.
Channel Subscription	The process whereby a DCD Enabled Client Application updates its preferences related to a DCD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Update	Channel.
Channel Suspension	The process of suspending DCD Enabled services for a specific DCD Channel.
Channel Unsubscription	The process of terminating a subscription to a DCD Channel.
Client Activation	The process of establishing or re-establishing a DCD Session.
Client Deactivation	The process of terminating a DCD Session.
Content Metadata	See **[DCD-AD]**.
Content Publication	The process whereby DCD Content Providers make content available for ingestion and subsequent delivery by DCD Servers.
Content Submission	The process of sending content from a DCD Enabled Client Application to a DCD Content Provider for arbitrary application purposes.
Content Update	The process of delivering content to DCD Enabled Client Applications.
DCD Channel	See **[DCD-AD]**. Also referred to as "Channel".
DCD Client	See **[DCD-AD]**.
DCD Content Packaging	The enveloping of DCD Content with associated Content Metadata within DCD transactions.
DCD Content Provider	See **[DCD-AD]**. Also referred to as "Content Provider".
DCD Server	See **[DCD-AD]**.
DCD Service	A DCD enabler deployment, via which a DCD Service Provider offers DCD enabled services.
DCD Service Provider	See **[DCD-AD]**. Also referred to as "Service Provider".
DCD XML	The XML document type used to express DCD messages.
DCD-1	A uni-directional point-to-point interface between the DCD Server and the DCD Client, used by the DCD Client to send content requests and submissions to the DCD Server and to receive DCD Content in response.
DCD-2	A uni-directional interface between the DCD Server and the DCD Client, used by the DCD Server to push notifications and / or content to the DCD Client.
DCD-3	A bi-directional interface between the DCD Server and the DCD Client, is used by the DCD Server and the DCD Client to exchange DCD Subscription and Administration information.
DCD-CADE	A bi-directional interface between the DCD Enabled Client Application and the DCD Client, used by the DCD Client to send notifications and / or content to the DCD Enabled Client Application, and enabling the DCD Enabled Client Application to retrieve content from the DCD Client.
DCD-CAR	A bi-directional interface between the DCD Enabled Client Application and the DCD Client, used by the DCD Enabled Client Application to register with the DCD Client when the application is installed on a terminal.
DCD-CPDE	A bi-directional interface between the DCD Content Provider and the DCD Server, used by the Content Provider to publish content at the DCD Server and by the DCD Server to retrieve content from the Content Provider.
DCD-CPR	A bi-directional interface between the DCD Content Provider and the DCD Server, used by the Content Provider to register new content channels with the DCD Server and to notify the DCD Server about subscription events and vice versa.
DCD-Enabled Client Application	See **[DCD-AD]**.
Dynamic Content Delivery	See **[DCD-AD]**.
Enabler Release	Collection of specifications that combined together form an enabler for a service area, e.g. a download enabler, a browsing enabler, a messaging enabler, a location enabler, etc. The specifications that are forming an enabler should combined fulfil a number of related market requirements.
HTTP Digest Authentication	A method of credentials negotiation between an HTTP client and HTTP server, defined in [RFC 2617].

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Minimum Functionality Description	Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.
Pull	A service delivery method in which the client initiates a service transaction.
Push	A service delivery method in which the server initiates a service transaction.
Push-OTA	The over-the-air interface via which OMA Push messages are delivered to terminals.
Receive-Only Client Case	Broadcast-related deployment model for DCD in which a DCD Client has no need or ability to transmit requests or responses to DCD transactions.
RSS	A family of web feed formats, including Really Simple Syndication (RSS 2.0) and RDF Site Summary (RSS 1.0)
Subscription	An arrangement to receive or be given access to content and services delivered via DCD.
Subscription Personalization	The process of adapting DCD Enabled services to a particular user's preferences and context.
Subscription Validation	The process of verifying DCD Enabled Client Application agreement with a DCD Server-initiated Channel Subscription action.
User Agent Profile	A document format defined by the OMA UAProf enabler [OMA-UAPROF], via which a device vendor discloses characteristics of a device and the OMA enablers that it supports.
Wi-Fi	Trade name for a collection of wireless technology specifications for private and public wireless networks operating in unlicensed frequency bands.

3.3 Abbreviations

AP	Application Profile
APN	Access Point Name
BCAST	The OMA BCAST enabler
CBS	Cell Broadcast Service
CP	Content Provider
DC	DCD Client
DCD	Dynamic Content Delivery
DECA	DCD Enabled Client Application
DS	DCD Server
DTLS	Datagram Transport Layer Security
ERDEF	Enabler Requirement Definition
ERELD	Enabler Release Definition
HTTP	Hypertext Transport Protocol
ID	Identifier
IP	Internet Protocol
MIME	Multipurpose Internet Mail Extensions
MNO	Mobile Network Operator
OMA	Open Mobile Alliance
OMNA	Open Mobile Naming Authority
PAP	Push Access Protocol
PLMN	Public Land Mobile Network

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

RADIUS	Remote Authentication Dial-In User Service (RFC 2865)
RFC	Request for Comments
TLS	Transport Layer Security
UAProf	User Agent Profile
UMTS	Universal Mobile Telecommunications System
URI	Universal Resource Identifier
URL	Universal Resource Locator
WAP	Wireless Application Protocol
WBXML	WAP Binary XML
WSP	Wireless Session Protocol
XDMS	XML Document Management Service

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

4. Introduction

The purpose of this document is to provide test cases for DCD Enabler Release 1.0.

The implementation of some features is optional for the Clients and/or the Servers in the DCD Enabler. The tests associated with these optional features are marked as "(Includes Optional Features)" in the test specification.

The following items on an overall level are needed to adequately test the DCD enabler:

- A DCD Server, configured to provide DCD-enabled services to a DCD Client
- A DCD Client, configured to access DCD-enabled services via the DCD Server
- A set of DCD-enabled services that have been established at the DCD Server as DCD Channels with associated Channel Metadata, configured per the requirements of the test cases
- A means to drive the tests from the DCD Client ("client driver") and DCD Server ("server driver") sides, one or more of:
    - External test drivers that execute specific test scenarios using pre-defined DCD external interface messages (or a functionally equivalent abstraction of the interfaces/messages), including channel/content metadata and content.
    - Internal test drivers provided by participating vendors, in compliance with test scenarios based upon specific channel/content metadata and content.
    - Actual applications (content provider applications and/or client applications), that provide/obtain service via the DCD enabler. Note use of test applications does not imply dependency upon the DCD-specified external interfaces; client/server products can be tested using proprietary external interfaces, since the focus in DCD 1.0 testing is on client/server interaction.

Note the term "driver" as used in the test case descriptions may apply to either a test driver or an actual application, as chosen by the client/server product vendor involved in the test.

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

5. DCD Conformance Test Cases

Not available.

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

6. DCD Interoperability Test Cases

Note: not explicitly tested at this time:
DCD-CAR
DCD-CADE
DCD-CPR
DCD-CPDE

Tests not included in ETR, or conformance tests not planned for inclusion in ETS:
Client Activation by DS
Client Deactivation by DS
Internal Subscription to an Unregistered Channel
Network Preferences
Content Availability Notification
Channel Suspension by DS
Channel Resumption by DS
Suspended Channel Handling by DC
Suspended Channel Handling by DS
Resumed Channel Handling by DC
Resumed Channel Handling by DS
Personalization/Contextualization by DS
Personalization/Contextualization by DC
Content Priority
On-Demand Channel Discovery
Channel Registration
Content Publication
Offline Charging (Internal Subscription, External Subscription, Subscription to an Unregistered Channel, Subscription Update, Internal Unsubscription, External Unsubscription, External Unsubscription with Confirmation, Content Pull, Content Pull with Confirmation, Content Push, Content Push with Confirmation, Content Submission, Error Handling, Usage Tracking)
Online Charging (Internal Subscription, External Subscription, Subscription to an Unregistered Channel, Internal Unsubscription, External Unsubscription, Content Pull, Content Pull with Confirmation, Content Push, Content Push with Confirmation, Content Submission, Usage Tracking)

6.1 DCD-1.0-int-001 Client Activation

Test Case Id	DCD-1.0-int-001
Test Object	DCD Client and DCD Server
Test Case Description	Client Activation
Specification Reference	[DCD-TS-Semantics] [7.1.3.1]
SCR Reference	DCD-C-001 DCD-S-001
ETR Reference	ACT-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver, for registration-triggered client activation State: - server configured to serve client - client configured with server details in DCD-3 connection profile Continuation of / Can be tested at the same time as: - Prerequisite for this test: -
Test Procedure	(1) Client activation is triggered, either by design (e.g. automatic upon startup) or by client driver (registration request) (2) The client sends ClientActivationRequest to the server (3) The server sends ClientActivationResponse to the client
Pass-Criteria	(1) ClientActivationResponse is received and processed by the client without error

Table 1: DCD-1.0-int-001 Client Activation

Note: not explicitly tested at this time:
ClientActivationRequest.Version
ClientActivationRequest.Session-ID
ClientActivationRequest.Broadcast-Service-ID
ClientActivationRequest.Session-TTL

6.2 DCD-1.0-int-002 Client Deactivation

Test Case Id	DCD-1.0-int-002
Test Object	DCD Client and DCD Server
Test Case Description	Client Deactivation
Specification Reference	[DCD-TS-Semantics] [7.1.3.2]
SCR Reference	DCD-C-001 DCD-S-001
ETR Reference	ACT-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver, for deregistration-triggered client deactivation State: - client activated Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001
Test Procedure	(1) Client deactivation is triggered, either by UI (if client allows user to manually deactivate) or by client driver (e.g. by deregistration of the last registered client app) (2) The client sends ClientDeactivationRequest to the server (3) The server sends ClientDeactivationResponse to the client
Pass-Criteria	(1) ClientDeactivationResponse is received and processed by the client without error

Table 2: DCD-1.0-int-002 Client Deactivation

Note: not explicitly tested at this time:
ClientDeactivationRequest.Version
ClientDeactivationRequest.Session-ID
ClientDeactivationRequest.Broadcast-Service-ID
ClientDeactivationRequest.Session-TTL
ClientDeactivationNotification
ApplicationDeregistrationNotification
ApplicationDeregistrationConfirmation

6.3 DCD-1.0-int-010 Application Registration

Test Case Id	DCD-1.0-int-010
Test Object	DCD Client and DCD Server
Test Case Description	Application Registration
Specification Reference	[DCD-TS-Semantics] [7.1.3.3]
SCR Reference	DCD-C-002 DCD-S-002
ETR Reference	REG-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve application - client activated Continuation of / Can be tested at the same time as: - DCD-1.0-int-001 Prerequisite for this test: - DCD-1.0-int-001 (unless tested at the same time)
Test Procedure	(1) Registration is triggered, either by design (e.g. automatic by client for some application, upon startup) or by client driver (registration request) (2) The client sends ApplicationRegistrationRequest to the server (3) The server sends ApplicationRegistrationResponse to the client
Pass-Criteria	(1) ApplicationRegistrationResponse is received and processed by the client without error

Table 3: DCD-1.0-int-010 Application Registration

Note: not explicitly tested at this time:
ApplicationRegistrationRequest.Session-ID
ApplicationRegistrationRequest.Message-ID
ApplicationRegistrationRequest.application-profile.channel-discoverynotification
ApplicationRegistrationRequest.application-profile.dcd-3-connectionprofile-name
ApplicationRegistrationRequest.application-profile.dcd-3-connectionprofile
ApplicationRegistrationRequest.application-profile.broadcast-profile
ApplicationRegistrationRequest.application-profile.dcd-channelselection-metadata
ApplicationRegistrationResponse.Session-ID
ApplicationRegistrationResponse.Message-ID
ApplicationRegistrationResponse.Channel-Guide

6.4 DCD-1.0-int-020 Internal Subscription

Test Case Id	DCD-1.0-int-020
Test Object	DCD Client and DCD Server
Test Case Description	Internal Subscription
Specification Reference	[DCD-TS-Semantics] [7.1.3.7]
SCR Reference	DCD-C-003 DCD-S-004
ETR Reference	SUB-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010
Test Procedure	(1) Subscription is triggered, either by design (automatic subscription upon startup) or by client driver (subscription request) (2) The client sends ChannelSubscriptionRequest to the server (3) The server sends ChannelSubscriptionResponse to the client
Pass-Criteria	(1) ChannelSubscriptionResponse is received and processed by the client without error (2) Content delivery begins per the channel metadata

Table 4: DCD-1.0-int-020 Internal Subscription

Note: not explicitly tested at this time:
ChannelSubscriptionRequest.Message-ID
ChannelSubscriptionRequest.Session-ID
ChannelSubscriptionRequest.Channel-Metadata
ChannelSubscriptionRequest.Selected-Purchase-Option
ChannelSubscriptionRequest.Subscription-IDs
ChannelSubscriptionRequest.Content-Address
ChannelSubscriptionResponse.Message-ID
ChannelSubscriptionResponse.Session-ID
ChannelSubscriptionResponse.Channel-Metadata

6.5 DCD-1.0-int-021 Internal Unsubscription

Test Case Id	DCD-1.0-int-021
Test Object	DCD Client and DCD Server
Test Case Description	Internal Unsubscription
Specification Reference	[DCD-TS-Semantics] [7.1.3.8]
SCR Reference	DCD-C-003 DCD-S-004
ETR Reference	SUB-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Unsubscription is triggered by client driver (unsubscription request) (2) The client sends ChannelUnsubscriptionRequest to the server (3) The server sends ChannelUnsubscriptionResponse to the client
Pass-Criteria	(1) ChannelUnsubscriptionResponse is received and processed by the client without error (2) Content delivery ends for the channel

Table 5: DCD-1.0-int-021 Internal Unsubscription

Note: not explicitly tested at this time:
ChannelUnsubscriptionRequest.Message-ID
ChannelUnsubscriptionRequest.Session-ID
ChannelUnsubscriptionRequest.Channel-ID
ChannelUnsubscriptionResponse.Message-ID
ChannelUnsubscriptionResponse.Session-ID

6.6 DCD-1.0-int-030 Scheduled Content Update Request

Test Case Id	DCD-1.0-int-030
Test Object	DCD Client and DCD Server
Test Case Description	Scheduled Content Update Request
Specification Reference	[DCD-TS-Semantics] [7.1.3.8]
SCR Reference	DCD-C-007 DCD-S-011
ETR Reference	CDEL-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel with a defined pull-schedule - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update is triggered per the channel pull-schedule (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client
Pass-Criteria	(1) ContentUpdateResponse is received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 6: DCD-1.0-int-030 Scheduled Content Update Request

Note: not explicitly tested at this time:
ContentUpdateRequest.Message-ID
ContentUpdateRequest.Session-ID
ContentUpdateRequest.Channel-IDs
ContentUpdateRequest.Content-IDs
ContentUpdateRequest.Content-addresses
ContentUpdateResponse.Message-ID
ContentUpdateResponse.Session-ID
ContentUpdateResponse.Channel-ID
ContentUpdateResponse.Content-Package

6.7 DCD-1.0-int-031 On-Demand Content Update Request

Test Case Id	DCD-1.0-int-031
Test Object	DCD Client and DCD Server
Test Case Description	On-Demand Content Update Request
Specification Reference	[DCD-TS-Semantics] [7.1.3.8]
SCR Reference	DCD-C-007 DCD-S-011
ETR Reference	CDEL-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel with on-demand request allowed - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update is triggered by client driver (content update request) (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client
Pass-Criteria	(1) ContentUpdateResponse is received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 7: DCD-1.0-int-031 On-Demand Content Update Request

6.8 DCD-1.0-int-032 Confirmed Content Update Request

Test Case Id	DCD-1.0-int-032
Test Object	DCD Client and DCD Server
Test Case Description	Confirmed Content Update Request
Specification Reference	[DCD-TS-Semantics] [7.1.3.8]
SCR Reference	DCD-C-007 DCD-S-011
ETR Reference	CDEL-001, CDEL-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel with a defined pull-schedule and on-demand request allowed, and content items with content-delivery-notification set to "True" - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-030 or DCD-1.0-int-031
Test Procedure	(1) Content update is triggered per the channel pull-schedule, or on-demand content update is triggered by client driver (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client (4) The client sends ContentDeliveryConfirmation to the server
Pass-Criteria	(1) ContentDeliveryConfirmation is received and processed by the server without error

Table 8: DCD-1.0-int-032 Confirmed Content Update Request

Note: not explicitly tested at this time:
ContentDeliveryConfirmation.Message-ID
ContentDeliveryConfirmation.Session-ID
ContentDeliveryConfirmation.Content-Confirmation

6.9 DCD-1.0-int-033 Content Item Retrieval by Content Id

Test Case Id	DCD-1.0-int-033
Test Object	DCD Client and DCD Server
Test Case Description	Content Item Retrieval by Content Id
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.4]
SCR Reference	DCD-C-010 DCD-S-011
ETR Reference	CDEL-001, CDEL-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel via scheduled and/or on-demand update request, with some contents items being referenced in content update responses via content-id. - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-030 or DCD-1.0-int-031
Test Procedure	(1) Content update is triggered per the channel pull-schedule, or on-demand content update is triggered by client driver (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client, including some content items referenced by content-id only (without the actual content) (4) For content items referenced by content-id only, the client sends ContentUpdateRequest to the server, including the content-id for all the referenced items (5) The server sends ContentUpdateResponse to the client, including the requested content items
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 9: DCD-1.0-int-033 Content Item Retrieval by Content Id

6.10 DCD-1.0-int-034 Content Item Retrieval by Content Address

Test Case Id	DCD-1.0-int-034
Test Object	DCD Client and DCD Server
Test Case Description	Content Item Retrieval by Content Address
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.4, 6.2.6.5]
SCR Reference	DCD-C-010 DCD-S-011
ETR Reference	CDEL-001, CDEL-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel via scheduled and/or on-demand update request, with some contents items being referenced in content update responses via content-address. - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-030 or DCD-1.0-int-031
Test Procedure	(1) Content update is triggered per the channel pull-schedule, or on-demand content update is triggered by client driver (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client, including some content items referenced by content-address only (without the actual content) (4) For each content item referenced by content-address only, the client sends ContentUpdateRequest to the server at the indicated content-address (5) For each ContentUpdateRequest, the server sends ContentUpdateResponse to the client, including the requested content item
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 10: DCD-1.0-int-034 Content Item Retrieval by Content Address

6.11 DCD-1.0-int-035 Aux Content Item Retrieval

Test Case Id	DCD-1.0-int-035
Test Object	DCD Client and DCD Server
Test Case Description	Auc Content Item Retrieval
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.5]
SCR Reference	DCD-C-010 DCD-S-011
ETR Reference	CDEL-001, CDEL-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel via scheduled and/or on-demand update request, with some contents items including auxiliary content referenced in content update responses via aux-content-link. - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-030 or DCD-1.0-int-031
Test Procedure	(1) Content update is triggered per the channel pull-schedule, or on-demand content update is triggered by client driver (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client, including some content items with auxiliary content referenced via aux-content-link (4) For each auxiliary content referenced via aux-content-link, the client sends ContentUpdateRequest to the server at the indicated aux-content-link (5) For each ContentUpdateRequest, the server sends ContentUpdateResponse to the client, including the requested content item
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 11: DCD-1.0-int-035 Aux Content Item Retrieval

6.12 DCD-1.0-int-036 Content Item Replacement

Test Case Id	DCD-1.0-int-036
Test Object	DCD Client and DCD Server
Test Case Description	Content Item Replacement
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.9]
SCR Reference	DCD-C-010 DCD-S-011
ETR Reference	CDEL-001, CDEL-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel via scheduled and/or on-demand update request, with content item replacement. - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-030 or DCD-1.0-int-031
Test Procedure	(1) Content update is triggered per the channel pull-schedule, or on-demand content update is triggered by client driver (2) The client sends ContentUpdateRequest to the server (3) The server sends ContentUpdateResponse to the client, including some content items. The client stores the content items (4) Content udate is again triggered per the channel pull-schedule, or on-demand content update is triggered by client driver (5) The client sends ContentUpdateRequest to the server (6) The server sends ContentUpdateResponse to the client, including replaces-content-id for some content items to be replaced (6) The client replaces the content items and associated metadata indicated by the replaces-content-id
Pass-Criteria	(1) The indicated content items and associated metadata are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 12: DCD-1.0-int-036 Content Item Replacement

6.13 DCD-1.0-int-040 Content Update Notification

Test Case Id	DCD-1.0-int-040
Test Object	DCD Client and DCD Server
Test Case Description	Content Update Notification
Specification Reference	[DCD-TS-Semantics] [6.1.5.5, 6.2.6.8]
SCR Reference	DCD-C-009 DCD-S-013
ETR Reference	CDEL-003
Tool	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel via scheduled and/or on-demand update notifications - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update notification is triggered per the channel push-schedule, or on-demand by server driver (2) The server sends ContentUpdateNotification to the client, including content items referenced by content-id (3) The client sends ContentUpdateRequest to the server, including the content-id for all the referenced items (4) The server sends ContentUpdateResponse to the client, including the requested content items
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 13: DCD-1.0-int-040 Content Update Notification

6.14 DCD-1.0-int-041 Content Update Push

Test Case Id	DCD-1.0-int-041
Test Object	DCD Client and DCD Server
Test Case Description	Content Update Push
Specification Reference	[DCD-TS-Semantics] [6.1.5.4, 6.2.6.7]
SCR Reference	DCD-C-008 DCD-S-012
ETR Reference	CDEL-004
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel via scheduled and/or on-demand update push - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update notification is triggered per the channel push-schedule, or on-demand by server driver (2) The server sends ContentUpdatePush to the client, including content items
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 14: DCD-1.0-int-041 Content Update Push

6.15 DCD-1.0-int-050 Content Submission With Content Response

Test Case Id	DCD-1.0-int-050
Test Object	DCD Client and DCD Server
Test Case Description	Content Submission With Content Response
Specification Reference	[DCD-TS-Semantics] [6.1.6, 6.2.7]
SCR Reference	DCD-C-012 DCD-S-015
ETR Reference	CSUB-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel with content submission feature - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content submission is triggered by client driver (content submit request) (2) The client sends ContentSubmitRequest to the server (3) The server sends ContentUpdateResponse to the client
Pass-Criteria	(1) ContentSubmitRequest is received and processed by the server without error (2) ContentUpdateResponse is received and processed by the client without error (3) The content is delivered to the application per the application-profile

Table 15: DCD-1.0-int-050 Content Submission With Content Response

6.16 DCD-1.0-int-051 Content Submission with Confirmation

Test Case Id	DCD-1.0-int-051
Test Object	DCD Client and DCD Server
Test Case Description	Content Submission With Confirmation
Specification Reference	[DCD-TS-Semantics] [6.1.6, 6.2.7]
SCR Reference	DCD-C-012 DCD-S-015
ETR Reference	CSUB-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel with confirmed content submission feature - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content submission is triggered by client driver (content submit request) (2) The client sends ContentSubmitRequest to the server (3) The server sends ContentSubmitConfirmation to the client
Pass-Criteria	(1) ContentSubmitConfirmation is received and processed by the client without error

Table 16: DCD-1.0-int-051 Content Submission With Confirmation

6.17 DCD-1.0-int-060 Channel Discovery Notification

Test Case Id	DCD-1.0-int-060
Test Object	DCD Client and DCD Server
Test Case Description	Channel Discovery Notification
Specification Reference	[DCD-TS-Semantics] [6.1.8.4, 6.2.9.4]
SCR Reference	DCD-C-017 DCD-S-020
ETR Reference	DISC-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to deliver channel discovery notifications - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010
Test Procedure	(1) Channel discovery notification is triggered by server design (e.g. upon channel registration/update by content provider) or server driver (2) The server sends ChannelDiscoveryNotification to the client (3) The client sends ChannelDiscoveryRequest to the server (4) The server sends ChannelDiscoveryResponse to the client
Pass-Criteria	(1) ChannelDiscoveryNotification is received and processed by the client without error (2) ChannelDiscoveryRequest is received and processed by the server without error (3) ChannelDiscoveryResponse is received and processed by the client without error (4) The channel discovery information is delivered to the application per the application-profile

Table 17: DCD-1.0-int-060 Channel Discovery Notification

6.18 DCD-1.0-int-061 Channel Discovery Push

Test Case Id	DCD-1.0-int-061
Test Object	DCD Client and DCD Server
Test Case Description	Channel Discovery Push
Specification Reference	[DCD-TS-Semantics] [6.1.8.2, 6.2.9.3]
SCR Reference	DCD-C-017 DCD-S-020
ETR Reference	DISC-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010
Test Procedure	(1) Channel discovery info is triggered by server design (e.g. upon channel registration/update by content provider) or server driver (2) The server sends ChannelDiscoveryInfo to the client
Pass-Criteria	(1) ChannelDiscoveryInfo is received and processed by the client without error (2) The channel discovery information is delivered to the application per the application-profile

Table 18: DCD-1.0-int-061 Channel Discovery Push

6.19 DCD-1.0-int-062 Channel Metadata Addition

Test Case Id	DCD-1.0-int-062
Test Object	DCD Client and DCD Server
Test Case Description	Channel Metadata Addition
Specification Reference	[DCD-TS-Semantics] [6.1.8.2, 6.2.9.3]
SCR Reference	DCD-C-017 DCD-S-020
ETR Reference	DISC-001, DISC-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info or deliver channel discovery notifications - client activated - application registered - client has received channel metadata for a channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-060 or DCD-1.0-int-061 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-060 or DCD-1.0-int-061
Test Procedure	(1) Channel Discovery Notification or Channel Discovery Push is triggered by server design (e.g. upon channel registration/update by content provider) or server driver, to add channel metadata to an existing channel and add a new channel (2) Via the Channel Discovery Notification or Channel Discovery Push transaction, the server delivers the new channel metadata
Pass-Criteria	(1) The new channel metadata is received and processed by the client without error (2) Applicable channel discovery information is delivered to the application per the application-profile

Table 19: DCD-1.0-int-062 Channel Metadata Addition

6.20 DCD-1.0-int-063 Channel Metadata Removal

Test Case Id	DCD-1.0-int-063
Test Object	DCD Client and DCD Server
Test Case Description	Channel Metadata Removal
Specification Reference	[DCD-TS-Semantics] [6.1.8.2, 6.2.9.3]
SCR Reference	DCD-C-017 DCD-S-020
ETR Reference	DISC-001, DISC-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info or deliver channel discovery notifications - client activated - application registered - client has received channel metadata for a channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-060 or DCD-1.0-int-061 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-060 or DCD-1.0-int-061
Test Procedure	(1) Channel Discovery Notification or Channel Discovery Push is triggered by server design (e.g. upon channel update/removal by content provider) or server driver, to remove a channel metadata item for an existing channel and to remove a all channel metadata for an existing channel (2) Via the Channel Discovery Notification or Channel Discovery Push transaction, the server indicates the channel metadata item to be removed, and the channel to be removed
Pass-Criteria	(1) The channel metadata removal is received and processed by the client without error (2) Applicable channel discovery information is delivered to the application per the application-profile

Table 20: DCD-1.0-int-063 Channel Metadata Removal

6.21 DCD-1.0-int-064 Channel Guide Replacement

Test Case Id	DCD-1.0-int-064
Test Object	DCD Client and DCD Server
Test Case Description	Channel Guide Replacement
Specification Reference	[DCD-TS-Semantics] [6.1.8.2, 6.2.9.3]
SCR Reference	DCD-C-017 DCD-S-020
ETR Reference	DISC-001, DISC-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info or deliver channel discovery notifications - client activated - application registered - client has received channel metadata for one or more channels Continuation of / Can be tested at the same time as: - DCD-1.0-int-060 or DCD-1.0-int-061 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-060 or DCD-1.0-int-061
Test Procedure	(1) Channel Discovery Notification or Channel Discovery Push is triggered by server design (e.g. upon channel update/removal by content provider) or server driver, to replace the entire channel guide (2) Via the Channel Discovery Notification or Channel Discovery Push transaction, the server delivers the channel guide replacement
Pass-Criteria	(1) The channel guide replacement is received and processed by the client without error (2) Applicable channel discovery information is delivered to the application per the application-profile

Table 21: DCD-1.0-int-064 Channel Guide Replacement

6.22 DCD-1.0-int-065 Channel Metadata Replacement

Test Case Id	DCD-1.0-int-065
Test Object	DCD Client and DCD Server
Test Case Description	Channel Metadata Replacement
Specification Reference	[DCD-TS-Semantics] [6.1.8.2, 6.2.9.3]
SCR Reference	DCD-C-017 DCD-S-020
ETR Reference	DISC-001, DISC-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info or deliver channel discovery notifications - client activated - application registered - client has received channel metadata for a channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-060 or DCD-1.0-int-061 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-060 or DCD-1.0-int-061
Test Procedure	(1) Channel Discovery Notification or Channel Discovery Push is triggered by server design (e.g. upon channel registration/update by content provider) or server driver, to update one or more channel metadata items for an existing channel (2) Via the Channel Discovery Notification or Channel Discovery Push transaction, the server delivers the updated channel metadata
Pass-Criteria	(1) The updated channel metadata is received and processed by the client without error (2) Applicable channel discovery information is delivered to the application per the application-profile

Table 22: DCD-1.0-int-065 Channel Metadata Replacement

6.23 DCD-1.0-int-066 Channel Metadata Update

Test Case Id	DCD-1.0-int-066
Test Object	DCD Client and DCD Server
Test Case Description	Channel Metadata Update
Specification Reference	[DCD-TS-Semantics] [6.1.4, 6.2.5]
SCR Reference	DCD-C-006 DCD-S-009
ETR Reference	SUB-005
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info or deliver channel discovery notifications - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Channel Metadata Update is triggered by server design (e.g. upon channel update by content provider) or server driver, to update one or more channel metadata items for a subscribed channel. (2) The server sends ChannelMetadataUpdate to the client, including the updated channel metadata (3) The client sends ChannelMetadataUpdateConfirmation to the server
Pass-Criteria	(1) The updated channel metadata is received and processed by the client without error (2) Applicable channel discovery information is delivered to the application per the application-profile (3) ChannelMetadataUpdateConfirmation is received and processed by the server without error

Table 23: DCD-1.0-int-066 Channel Metadata Update

6.24 DCD-1.0-int-070 Charging-Related Channel Metadata Handling in Channel Discovery

Test Case Id	DCD-1.0-int-070
Test Object	DCD Client and DCD Server
Test Case Description	Charging-Related Channel Metadata Handling
Specification Reference	[DCD-TS-Semantics] [6.1.11, 6.2.12]
SCR Reference	DCD-C-020 DCD-S-024
ETR Reference	CHG-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to push channel discovery info or deliver channel discovery notifications - client activated - application registered Continuation of / Can be tested at the same time as: - DCD-1.0-int-060 or DCD-1.0-int-061 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010
Test Procedure	(1) Channel Discovery Notification or Channel Discovery Push is triggered by server design (e.g. upon channel registration/update by content provider) or server driver, to add/update channel metadata for a channel with specified purchase options (2) Via the Channel Discovery Notification or Channel Discovery Push transaction, the server delivers the channel metadata
Pass-Criteria	(1) The channel metadata is received and processed by the client without error (2) The applicable channel metadata with purchase options is delivered to the application, per the application-profile

Table 24: DCD-1.0-int-070 Charging-Related Channel Metadata Handling in Channel Discovery

Note: not explicitly tested at this time:
Charging-related channel metadata in DCD-3 ApplicationRegistrationResponse

6.25 DCD-1.0-int-071 Charging-Related Channel Metadata Handling in Internal Subscription

Test Case Id	DCD-1.0-int-071
Test Object	DCD Client and DCD Server
Test Case Description	Charging-Related Channel Metadata Handling in Internal Subscription
Specification Reference	[DCD-TS-Semantics] [6.1.11, 6.2.12]
SCR Reference	DCD-C-020 DCD-S-024
ETR Reference	CHG-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to offer internal subscription to channel with purchase options - client activated - application registered - channel discovery information delivered for channel with purchase options Continuation of / Can be tested at the same time as: - DCD-1.0-int-021 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-060 or DCD-1.0-int-061
Test Procedure	(1) Internal subscription for a channel with purchase options is triggered, either by design (automatic subscription upon reception channel discovery) or by client driver (subscription request) (2) The client sends ChannelSubscriptionRequest to the server, including the selected purchase option (3) The server sends ChannelSubscriptionResponse to the client
Pass-Criteria	(1) ChannelSubscriptionRequest is received and processed by the server without error (2) ChannelSubscriptionResponse is received and processed by the client without error (3) Content delivery begins per the channel metadata

Table 25: DCD-1.0-int-071 Charging-Related Channel Metadata Handling in Internal Subscription

Note: not explicitly tested at this time:
ErrorNotification upon SubscriptionRequest without required Selected-Purchase-Option-Id
ErrorNotification upon SubscriptionValidationResponse without required Selected-Purchase-Option-Id
ErrorNotification upon ChannelSubscriptionRequest with an outdated purchase-option-id

6.26 DCD-1.0-int-072 Charging-Related Channel Metadata Handling in External Subscription

Test Case Id	DCD-1.0-int-072
Test Object	DCD Client and DCD Server
Test Case Description	Charging-Related Channel Metadata Handling in External Subscription
Specification Reference	[DCD-TS-Semantics] [6.1.11, 6.2.12]
SCR Reference	DCD-C-020 DCD-S-024
ETR Reference	CHG-001
Tool	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to support external subscription to channel with purchase options - client activated - application registered Continuation of / Can be tested at the same time as: - DCD-1.0-int-110 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010
Test Procedure	(1) External subscription for a channel with purchase options is triggered, either by design (subscription notification from content provider) or by server driver (2) The server sends ChannelSubscriptionNotification to the client, including the available purchase options (3) The client validates the subscription with the application (4) The client receives a subscription validation response with a selected purchase option, either by application design or by client driver (5) The client sends ChannelSubscriptionNotificationResponse with the selected purchase option to the server
Pass-Criteria	(1) ChannelSubscriptionNotification is received and processed by the client without error (2) ChannelSubscriptionNotificationResponse is received and processed by the server without error (3) Content delivery begins per the channel metadata

Table 26: DCD-1.0-int-072 Charging-Related Channel Metadata Handling in External Subscription

6.27 DCD-1.0-int-073 Charging-Related Content Metadata Handling

Test Case Id	DCD-1.0-int-073
Test Object	DCD Client and DCD Server
Test Case Description	Charging-Related Content Metadata Handling
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.9]
SCR Reference	DCD-C-020 DCD-S-024
ETR Reference	CHG-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to deliver content items with content-price metadata - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-030, DCD-1.0-int-031, DCD-1.0-int-040, DCD-1.0-int-041 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) New/updated content is made available for a subscribed channel, with content-price specified for a content item (2) Channel update is initiated, either via pull or push content delivery transactions, and the content item with purchase-option is delivered to the client (3) The client informs the application of the received content item with content-price
Pass-Criteria	(1) The application successfully receives the content-price information

Table 27: DCD-1.0-int-073 Charging-Related Content Metadata Handling

6.28 DCD-1.0-int-100 Connection Profile Update

Test Case Id	DCD-1.0-int-100
Test Object	DCD Client and DCD Server
Test Case Description	Connection Profile Update
Specification Reference	[DCD-TS-Semantics] [7.1.3.14, 16.2]
SCR Reference	
ETR Reference	ACT-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver and server driver State: - client activated, and assigned a non-zero Session-TTL value - application registered - client is subscribed to channels configured for operation over DCD-1 and DCD-2, and which do not have specific DCD-1 or DCD-2 connection profiles Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) An update of default DCD-1, DCD-2, and DCD-3 connection profiles is triggered at the server, e.g. through server administration (2) The server sends ConnectionProfileUpdate to the client, with the updated connection profiles (3) Content Update Request is triggered either by schedule or on-demand of the application or client driver, and the client uses the new DCD-1 connection profile in sending ContentUpdateRequest (3) Content Update Push or Content Update Notification is triggered at the server, and the client uses the new DCD-2 connection profile in receiving the content push or notification (4) The client uses the new DCD-3 connection profile for the next DCD session, i.e. upon Session-TTL expiration
Pass-Criteria	(1) The Connection Profile Update is received by the client and processed without error (2) The new default connection profiles are applied for each interface

Table 28: DCD-1.0-int-100 Connection Profile Update

Note: not explicitly tested at this time:
Named connection profile update
Immediate application of DCD-3 connection profile changes for sessions with Session-TTL value zero
Immediate application of changes for removed connection profiles

6.29 DCD-1.0-int-110 External Subscription

Test Case Id	DCD-1.0-int-110
Test Object	DCD Client and DCD Server
Test Case Description	External Subscription
Specification Reference	[DCD-TS-Semantics] [6.1.3.2, 6.2.4.2]
SCR Reference	DCD-C-004 DCD-S-005

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

ETR Reference	SUB-003
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to support external subscription to channel - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010
Test Procedure	(1) External subscription for a channel triggered, either by design (subscription notification from content provider) or by server driver (2) The server sends ChannelSubscriptionNotification to the client (3) The client validates the subscription with the application (4) The client receives a subscription validation response, either by application design or by client driver (5) The client sends ChannelSubscriptionNotificationResponse to the server
Pass-Criteria	(1) ChannelSubscriptionNotification is received and processed by the client without error (2) ChannelSubscriptionNotificationResponse is received and processed by the server without error (3) Content delivery begins per the channel metadata

Table 29: DCD-1.0-int-110 External Subscription

Note: not explicitly tested at this time:
ErrorNotification upon unacceptable ChannelSubscriptionNotificationResponse
External subscription declined by application

6.30 DCD-1.0-int-111 External Unsubscription

Test Case Id	DCD-1.0-int-111
Test Object	DCD Client and DCD Server
Test Case Description	External Unsubscription
Specification Reference	[DCD-TS-Semantics] [6.1.3.4, 6.2.4.5]
SCR Reference	DCD-C-004 DCD-S-005
ETR Reference	SUB-004
Tool	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to support external subscription to channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) External unsubscription for a channel triggered, either by design (subscribed channel deregistration by the content provider, or other subscription-terminating event at the server) or by server driver (2) The server sends ChannelUnsubscriptionNotification to the client (3) The client sends ChannelUnsubscriptionConfirmation to the server
Pass-Criteria	(1) ChannelUnsubscriptionNotification is received and processed by the client without error, including notification to the application (2) ChannelUnsubscriptionConfirmation is received and processed by the server without error (3) Content delivery ends for the channel

Table 30: DCD-1.0-int-111 External Unsubscription

6.31 DCD-1.0-int-130 DCD-Provided Storage

Test Case Id	DCD-1.0-int-130
Test Object	DCD Client and DCD Server
Test Case Description	DCD-Provided Storage
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.9]
SCR Reference	DCD-C-010 DCD-S-014
ETR Reference	CDEL-005
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel via pull or push, with DCD-provided storage indicated in channel metadata - content items available with specified values for the content metadata items: content-expiration, parental-rating, content-address, content-price, content-name, content-types, content-length, mime-type, content-updated, content-id, channel-id - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-030, DCD-1.0-int-031, or DCD-1.0-int-041 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update is triggered per design or client/server driver (2) The server delivers content and content metadata to the client per the applicable content update transaction, and stored in the DCD-provided storage (3) The application is notified of the content update (4) The application subsequently requests one of the stored content items, and the client provides the content item and content metadata
Pass-Criteria	(1) The content items and content metadata are stored, and are accurately provided to the application upon notification and/or request

Table 31: DCD-1.0-int-130 DCD-Provided Storage

6.32 DCD-1.0-int-131 Content Decoding

Test Case Id	DCD-1.0-int-131
Test Object	DCD Client and DCD Server
Test Case Description	Content Decoding
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.9]
SCR Reference	DCD-C-010 DCD-S-014
ETR Reference	CDEL-005
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel via pull or push - content items available, with delivery in encoded form per the content-encoding content metadata attribute - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-030, DCD-1.0-int-031, or DCD-1.0-int-041 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update is triggered per design or client/server driver (2) The server delivers content and content metadata to the client per the applicable content update transaction (3) The application is notified of the content update (4) The application subsequently requests one of the encoded content items
Pass-Criteria	(1) For content items with content-encoding specified, the client decodes the content before delivery to the application upon notification and/or request

Table 32: DCD-1.0-int-131 Content Decoding

6.33 DCD-1.0-int-132 Content Expiration

Test Case Id	DCD-1.0-int-132
Test Object	DCD Client and DCD Server
Test Case Description	Content Expiration
Specification Reference	[DCD-TS-Semantics] [6.1.5.6, 6.2.6.9]
SCR Reference	DCD-C-010 DCD-S-014
ETR Reference	CDEL-005
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel via pull or push, with DCD-provided storage indicated in channel metadata - content items available, with specified expiration - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - DCD-1.0-int-030, DCD-1.0-int-031, DCD-1.0-int-041, or DCD-1.0-int-130 Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Content update is triggered per design or client/server driver (2) The server delivers content and content metadata to the client per the applicable content update transaction, including one or more content items with content-expiration specified (3) The expiration time passes for a content item
Pass-Criteria	(1) The expired content items and content metadata are removed from DCD-provided storage

Table 33: DCD-1.0-int-132 Content Expiration

6.34 DCD-1.0-int-140 DC-initiated Suspension

Test Case Id	DCD-1.0-int-140
Test Object	DCD Client and DCD Server
Test Case Description	DC-initiated Suspension
Specification Reference	[DCD-TS-Semantics] [6.1.7.2, 6.2.8.2]
SCR Reference	DCD-C-014 DCD-S-016
ETR Reference	SUSP-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - channel is not suspended Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) The client initiates channel suspendsion, either by design (e.g. per delivery-when-roaming channel metadata attribute, or client user menu option), or client driver (2) The client sends ChannelSuspendRequest to the server (3) The server sends ChannelSuspendResponse to the client (4) The client informs the application or client driver of the suspension result
Pass-Criteria	(1) ChannelSuspendRequest is received and processed by the server without error (2) ChannelSuspendResponse is received and processed by the client without error (3) Content delivery is suspended for the channel

Table 34: DCD-1.0-int-140 DC-initiated Suspension

6.35 DCD-1.0-int-141 DC-initiated Resumption

Test Case Id	DCD-1.0-int-141
Test Object	DCD Client and DCD Server
Test Case Description	DC-initiated Resumption
Specification Reference	[DCD-TS-Semantics] [6.1.7.2, 6.2.8.2]
SCR Reference	DCD-C-014 DCD-S-016
ETR Reference	SUSP-005
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel, on behalf of a single application - channel is suspended by prior DC request Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-140
Test Procedure	(1) The client initiates channel resumption, either by design (e.g. per delivery-when-roaming channel metadata attribute, or client user menu option), or client driver (2) The client sends ChannelResumeRequest to the server (3) The server sends ChannelResumeResponse to the client (4) The client informs the application or client driver of the resumption result
Pass-Criteria	(1) ChannelResumeRequest is received and processed by the server without error (2) ChannelResumeResponse is received and processed by the client without error (3) Content delivery is resumed for the channel

Table 35: DCD-1.0-int-141 DC-initiated Resumption

6.36 DCD-1.0-int-142 DECA-initiated Suspension

Test Case Id	DCD-1.0-int-142
Test Object	DCD Client and DCD Server
Test Case Description	DECA-initiated Suspension
Specification Reference	[DCD-TS-Semantics] [6.1.7.2, 6.2.8.2]
SCR Reference	DCD-C-014 DCD-S-016
ETR Reference	SUSP-004
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel, with suspend-allowed channel metadata attribute set to “true” - client activated - application registered - client subscribed to channel - channel is not suspended Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) The application or client driver initiates channel suspension (2) The client sends ChannelSuspendRequest to the server (3) The server sends ChannelSuspendResponse to the client (4) The client informs the application or client driver of the suspension result
Pass-Criteria	(1) ChannelSuspendRequest is received and processed by the server without error (2) ChannelSuspendResponse is received and processed by the client without error (3) Content delivery is suspended for the channel

Table 36: DCD-1.0-int-142 DECA-initiated Suspension

6.37 DCD-1.0-int-143 DECA-initiated Resumption

Test Case Id	DCD-1.0-int-142
Test Object	DCD Client and DCD Server
Test Case Description	DECA-initiated Resumption
Specification Reference	[DCD-TS-Semantics] [6.1.7.2, 6.2.8.2]
SCR Reference	DCD-C-014 DCD-S-016
ETR Reference	SUSP-005
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel, with suspend-allowed channel metadata attribute set to “true” - client activated - application registered - client subscribed to channel - channel is suspended by prior DECA request Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-142
Test Procedure	(1) The application or client driver initiates channel resumption (2) The client sends ChannelResumeRequest to the server (3) The server sends ChannelResumeResponse to the client (4) The client informs the application or client driver of the resumption result
Pass-Criteria	(1) ChannelResumeRequest is received and processed by the server without error (2) ChannelResumeResponse is received and processed by the client without error (3) Content delivery is resumed for the channel

Table 37: DCD-1.0-int-143 DECA-initiated Resumption

6.38 DCD-1.0-int-150 Usage Tracking Policy Establishment

Test Case Id	DCD-1.0-int-150
Test Object	DCD Client and DCD Server
Test Case Description	Usage Tracking Policy Establishment
Specification Reference	[DCD-TS-Semantics] [6.1.9, 6.2.10]
SCR Reference	DCD-C-018 DCD-S-022
ETR Reference	USG-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Usage tracking policy establishment is triggered, either by design (e.g. as a server feature) or by server driver (2) The server sends RequestForUsageTrackingReport to the client, specifying a tracking policy via the Report-policy structure, which includes one or more filters per the Channel-ID, Content-ID, Content-Type, or Mime-Type options. (3) The client sends UsageTrackingReport to the server, including the baseline usage information for the policy just established.
Pass-Criteria	(1) RequestForUsageTrackingReport is received and processed by the client without error (2) UsageTrackingReport is received and processed by the server without error

Table 38: DCD-1.0-int-150 Usage Tracking Policy Establishment

6.39 DCD-1.0-int-151 Usage Tracking Policy Replacement

Test Case Id	DCD-1.0-int-151
Test Object	DCD Client and DCD Server
Test Case Description	Usage Tracking Policy Replacement
Specification Reference	[DCD-TS-Semantics] [6.1.9, 6.2.10]
SCR Reference	DCD-C-018 DCD-S-022
ETR Reference	USG-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - usage tracking report policy established Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-150
Test Procedure	(1) Usage tracking policy replacement is triggered, either by design (e.g. as a server feature) or by server driver (2) The server sends RequestForUsageTrackingReport to the client, specifying an existing tracking policy via the Report-policy structure, which includes one or more filters per the Channel-ID, Content-ID, Content-Type, or Mime-Type options. (3) The client sends UsageTrackingReport to the server, including the baseline usage information for the policy just established.
Pass-Criteria	(1) RequestForUsageTrackingReport is received and processed by the client without error (2) UsageTrackingReport is received and processed by the server without error

Table 39: DCD-1.0-int-151 Usage Tracking Policy Replacement

6.40 DCD-1.0-int-152 Usage Tracking Policy Removal

Note: the procedure for usage tracking policy removal is under review.

6.41 DCD-1.0-int-153 On-Demand Usage Tracking Report

Test Case Id	DCD-1.0-int-153
Test Object	DCD Client and DCD Server
Test Case Description	On-Demand Usage Tracking Report
Specification Reference	[DCD-TS-Semantics] [6.1.9, 6.2.10]
SCR Reference	DCD-C-018 DCD-S-022
ETR Reference	USG-001

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - usage tracking report policy established Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-150
Test Procedure	(1) Content updates for channels/content covered by an established tracking policy are delivered to the client, and related content is accessed by the application or client driver. (2) The server sends RequestForUsageTrackingReport to the client, omitting the Report-policy structure. (2) The client sends UsageTrackingReport to the server, including the usage information for the active policy.
Pass-Criteria	(1) RequestForUsageTrackingReport is received and processed by the client without error (2) UsageTrackingReport is received and processed by the server without error (3) The usage tracking report is accurate per the active policy.

Table 40: DCD-1.0-int-153 On-Demand Usage Tracking Report

6.42 DCD-1.0-int-154 Policy-Based Usage Tracking Report

Test Case Id	DCD-1.0-int-154
Test Object	DCD Client and DCD Server
Test Case Description	Policy-Based Usage Tracking Report
Specification Reference	[DCD-TS-Semantics] [6.1.9, 6.2.10]
SCR Reference	DCD-C-018 DCD-S-022
ETR Reference	USG-002
Tool	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - usage tracking report policy established Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-150, with inclusion of a reporting schedule as the trigger for the policy-based report
Test Procedure	(1) Content updates for channels/content covered by an established tracking policy are delivered to the client, and related content is accessed by the application or client driver. (2) The report triggering condition (schedule) is reached, and the client sends UsageTrackingReport to the server, including the usage information for the active policy.
Pass-Criteria	(1) RequestForUsageTrackingReport is received and processed by the client without error (2) UsageTrackingReport is received and processed by the server without error (3) The usage tracking report is accurate per the active policy.

Table 41: DCD-1.0-int-154 Policy-Based Usage Tracking Report

6.43 DCD-1.0-int-160 On-Demand Contextual Information Upload

Test Case Id	DCD-1.0-int-160
Test Object	DCD Client and DCD Server
Test Case Description	On-Demand Contextual Information Upload
Specification Reference	[DCD-TS-Semantics] [6.1.10, 6.2.11]
SCR Reference	DCD-C-019 DCD-S-023
ETR Reference	CIUPL-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Contextual information upload is triggered, either by design (e.g. as a server feature) or by server driver (2) The server sends ContextualInformationUploadRequest to the client, omitting the Report-policy structure. (3) The client sends ContextualInformationUpload to the server, including the contextual information required for on-demand reports.
Pass-Criteria	(1) ContextualInformationUploadRequest is received and processed by the client without error (2) ContextualInformationUpload is received and processed by the server without error (3) The contextual information report is accurate per the current device context.

Table 42: DCD-1.0-int-160 On-Demand Contextual Information Upload

6.44 DCD-1.0-int-161 Contextual Information Upload Policy Establishment

Test Case Id	DCD-1.0-int-161
Test Object	DCD Client and DCD Server
Test Case Description	Contextual Information Upload Policy Establishment
Specification Reference	[DCD-TS-Semantics] [6.1.10, 6.2.11]
SCR Reference	DCD-C-019 DCD-S-023
ETR Reference	CIUPL-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Contextual information upload policy establishment is triggered, either by design (e.g. as a server feature) or by server driver (2) The server sends ContextualInformationUploadRequest to the client, including the Report-policy structure with one or more Report-policy options (3) The client sends ContextualInformationUpload to the server, including the contextual information required by the new policy
Pass-Criteria	(1) ContextualInformationUploadRequest is received and processed by the client without error (2) ContextualInformationUpload is received and processed by the server without error (3) The contextual information report is accurate per the current device context.

Table 43: DCD-1.0-int-161 Contextual Information Upload Policy Establishment

6.45 DCD-1.0-int-162 Contextual Information Upload Policy Replacement

Test Case Id	DCD-1.0-int-162
Test Object	DCD Client and DCD Server
Test Case Description	Contextual Information Upload Policy Replacement
Specification Reference	[DCD-TS-Semantics] [6.1.10, 6.2.11]
SCR Reference	DCD-C-019 DCD-S-023
ETR Reference	CIUPL-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - contextual information upload policy established Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-161
Test Procedure	(1) Contextual information upload policy replacement is triggered, either by design (e.g. as a server feature) or by server driver (2) The server sends ContextualInformationUploadRequest to the client, including the Report-policy structure for the existing Policy-ID, and one or more new/updated Report-policy options (3) The client sends ContextualInformationUpload to the server, including the contextual information required by the updated policy
Pass-Criteria	(1) ContextualInformationUploadRequest is received and processed by the client without error (2) ContextualInformationUpload is received and processed by the server without error (3) The contextual information report is accurate per the current device context.

Table 44: DCD-1.0-int-162 Contextual Information Upload Policy Replacement

6.46 DCD-1.0-int-163 Contextual Information Upload Policy Removal

Test Case Id	DCD-1.0-int-163
Test Object	DCD Client and DCD Server
Test Case Description	Contextual Information Upload Policy Removal
Specification Reference	[DCD-TS-Semantics] [6.1.10, 6.2.11]
SCR Reference	DCD-C-019 DCD-S-023
ETR Reference	CIUPL-001
Tool	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - contextual information upload policy established Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-161
Test Procedure	(1) Contextual information upload policy removal is triggered, either by design (e.g. as a server feature) or by server driver (2) The server sends ContextualInformationUploadRequest to the client, including the Report-policy structure for the existing Policy-ID, and exlusing one or all Report-policy options (3) The client sends ContextualInformationUpload to the server, including the contextual information still required by the updated policy (if any)
Pass-Criteria	(1) ContextualInformationUploadRequest is received and processed by the client without error (2) ContextualInformationUpload is received and processed by the server without error (3) The contextual information report does not include information related to removed report policies

Table 45: DCD-1.0-int-163 Contextual Information Upload Policy Removal

6.47 DCD-1.0-int-164 Policy-Based Contextual Information Upload

Test Case Id	DCD-1.0-int-164
Test Object	DCD Client and DCD Server
Test Case Description	Policy-Based Contextual Information Upload
Specification Reference	[DCD-TS-Semantics] [6.1.10, 6.2.11]
SCR Reference	DCD-C-019 DCD-S-023
ETR Reference	CIUPL-002

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel - contextual information upload policy established Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110 - DCD-1.0-int-161
Test Procedure	(1) Contextual information upload is triggered by an established policy (2) The client sends ContextualInformationUpload to the server, including the contextual information as required by the policy
Pass-Criteria	(1) ContextualInformationUpload is received and processed by the server without error (2) The contextual information report is accurate per the current device context.

Table 46: DCD-1.0-int-164 Policy-Based Contextual Information Upload

6.48 DCD-1.0-int-170 Content Repair

Test Case Id	DCD-1.0-int-170
Test Object	DCD Client and DCD Server
Test Case Description	Content Repair
Specification Reference	[DCD-TS-Semantics] [6.1.12, 6.2.13]
SCR Reference	DCD-C-021 DCD-S-025
ETR Reference	CREP-001
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-010 - DCD-1.0-int-020 or DCD-1.0-int-110
Test Procedure	(1) Delivery of a large content item is interrupted (2) The client sends ContentRepairRequest to the server, with the information about the content item needing repair (3) The server sends ContentRepairResponse to the client, with the content necessary to repair the content item
Pass-Criteria	(1) ContentRepairRequest is received and processed by the server without error (2) ContentRepairResponse is received and processed by the server without error, and delivery of the content item is successfully completed

Table 47: DCD-1.0-int-170 Content Repair

6.49 DCD-1.0-int-200 Operation over Cell Broadcast

6.49.1 DCD-1.0-int-201 Client Activation

Test Case Id	DCD-1.0-int-201
Test Object	DCD Client and DCD Server
Test Case Description	Client Activation, with allocation of Broadcast-service-id
Specification Reference	[DCD-TS-Semantics] [7.1.3.1] [DCD-TS-CBS] [8.1.1], [8.4.1]
SCR Reference	DCD-CBS-C-001, DCD-CBS-C-002 DCD-CBS-S-001, DCD-CBS-S-002
ETR Reference	ACT-001 and NET-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver, for registration-triggered client activation State: - Server configured to serve client. - Server configure with Broadcast-Service-ID - client configured with server details in DCD-3 connection profile Continuation of / Can be tested at the same time as: - Prerequisite for this test: -
Test Procedure	(1) Client activation is triggered, either by design (e.g. automatic upon startup) or by client driver (registration request) (2) The client sends ClientActivationRequest to the server (3) The server sends ClientActivationResponse to the client with Broadcast-Service-ID
Pass-Criteria	(1) ClientActivationResponse is received and processed by the client without error

Table 48: DCD-1.0-int-201 Client Activation

6.49.2 DCD-1.0-int-210 Application Registration

Test Case Id	DCD-1.0-int-210
Test Object	DCD Client
Test Case Description	Application Registration with CBS profile as part of the DCD-3 connection profile
Specification Reference	[DCD-TS-Semantics] [7.1.3.3] [DCD-TS-CBS] [8.4.2]
SCR Reference	DCD-C-002, DCD-S-002 DCD-CBS-C-003
ETR Reference	REG-001, NET-002
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and optionally server - client driver State: - client activated - Application Profile to be registered at DCD client with DCD-3 connection-profile that contains CBS profile in addition to PTP connection profile. Continuation of / Can be tested at the same time as: - DCD-1.0-int-201 Prerequisite for this test: - DCD-1.0-int-201 (unless tested at the same time)

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Test Procedure	(1) Registration is triggered, either by design (e.g. automatic by client for some application, upon startup) or by client driver (registration request) with CBS profile (dcd-3-connection-profile containing the cell-broadcast-message-id and optionally the broadcast-service-id) (2) The client sends ApplicationRegistrationRequest to the server with The client sends ApplicationRegistrationRequest to the server with optionally ApplicationRegistrationRequest.application-profile.dcd-3-connectionprofile (3) The server sends ApplicationRegistrationResponse to the client
Pass-Criteria	(1) the specified message identifier (cell-broadcast-message-id) is registered in the CBS stack and ready for reception on this 'channel' (DCD-3 interface) (2) ApplicationRegistrationResponse is received and processed by the client without error (3) Administration message to be received on the defined DCD-3 broadcast profile (Channel Discovery)

Table 49: DCD-1.0-int-210 Application Registration

6.49.3 DCD-1.0-int-220 Internal Subscription to CBS based 'Channel'

Test Case Id	DCD-1.0-int-220
Test Object	DCD Client and DCD Server
Test Case Description	Internal Subscription with DCD-2 connection profile already set in the DCD Client with connection profile containing the CBS profile
Specification Reference	[DCD-TS-Semantics] [7.1.3.7] [DCD-TS-CBS] [8.4.3]
SCR Reference	DCD-C-003, DCD-S-004 DCD-CBS-C-006, DCD-CBS-S-005
ETR Reference	SUB-001, NET-002
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel - client activated - application registered Continuation of / Can be tested at the same time as: - DCD-1.0-int-232 Channel Discovery Push Prerequisite for this test: - DCD-1.0-int-201 - DCD-1.0-int-210 - DCD-1.0-int-252 (optionally)

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Test Procedure	(1) Subscription is triggered, either by design (automatic subscription upon startup) or by client driver (subscription request) (2) The Client registered the DCD-2 connection profile cell-broadcast-message-id parameter in the CB handler of the device (3) The client sends ChannelSubscriptionRequest to the server (4) The server sends ChannelSubscriptionResponse to the client
Pass-Criteria	(1) ChannelSubscriptionResponse is received and procesed by the client without error (2) Content delivery using the Content Update Push per the channel metadata (cell-broadcast-message-id parameter)

Table 50: DCD-1.0-int-220 Internal Subscription to CBS based 'Channel'

6.49.4 DCD-1.0-int-221 Internal Unsubscription from CBS based Channel

Test Case Id	DCD-1.0-int-221
Test Object	DCD Client and DCD Server
Test Case Description	Internal Unsubscription from CBS based Channel
Specification Reference	[DCD-TS-Semantics] [7.1.3.8]
SCR Reference	DCD-C-003, DCD-S-004 DCD-CBS-C-006
ETR Reference	SUB-002
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-201 - DCD-1.0-int-210 - DCD-1.0-int-220
Test Procedure	(1) Unsubscription is triggered by client driver (unsubscription request) (2) The client sends ChannelUnsubscriptionRequest to the server (3) The server sends ChannelUnsubscriptionResponse to the client
Pass-Criteria	(1) ChannelUnsubscriptionResponse is received and procesed by the client without error (2) Content delivery ends for the channel

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Table 51: DCD-1.0-int-221 Internal Unsubscription from CBS based Channel

6.49.5 DCD-1.0-int-241 Content Update Push over CBS

Test Case Id	DCD-1.0-int-241
Test Object	DCD Client and DCD Server
Test Case Description	Content Update Push over CBS
Specification Reference	[DCD-TS-Semantics] [6.1.5.4, 6.2.6.7] [7.1.2.1] [DCD-TS-CBS] [8.4.5], [8.4.5.1]
SCR Reference	DCD-C-008, DCD-S-012 DCD-CBS-C-008, DCD-CBS-S-007
ETR Reference	CDEL-004, NET-002
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver - DCD enabled CBC State: - server configured to serve channel via sheduled and/or on-demand update push - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-201 - DCD-1.0-int-210 - DCD-1.0-int-220
Test Procedure	(1) Content update Push is prepared in the server constructed as one CBS message with no DCD concatenation construction and WBXML encoded. (2) Content update Push is generated by the server towards the CBC (3) The server sends ContentUpdatePush to the client, including content items (WBXML encoded) (4) Content Update Push is received in the client
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 52: DCD-1.0-int-241 Content Update Push over CBS

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

6.49.6 DCD1.0-int-242 DCD Concatenated Content Update Push

Test Case Id	DCD-1.0-int-242
Test Object	DCD Client and DCD Server
Test Case Description	DCD Concatenated Content Update Push over CBS
Specification Reference	[DCD-TS-CBS] [6.4] [8.1] [8.4]
SCR Reference	DCD-CBS-C-009 DCD-CBS-S-007
ETR Reference	CDEL-004, NET-002
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver and server driver - DCD enabled CBC State: - server configured to serve channel via on-demand content update push - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-201 - DCD-1.0-int-210 - DCD-1.0-int-220
Test Procedure	(1) Content update Push is prepared in the server as number of CBS messages with DCD concatenation construction (2) The server sends ContentUpdatePush to the client, including content items (3) Content Update Push is received in the client (4) The Client is reassemble the message to one long message
Pass-Criteria	(1) ContentUpdatePush is received and reassembled by the client without error (2) The content is delivered to the application per the application-profile

Table 53: DCD-1.0-int-242 DCD Concatenated Content Update Push over CBS

6.49.7 DCD-1.0-int-252 Channel Discovery Push over CBS

Test Case Id	DCD-1.0-int-252
Test Object	DCD Client and DCD Server
Test Case Description	Channel Discovery Push over CBS

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Specification Reference	[DCD-TS-Semantics] [6.1.8.2], [6.2.9.3], [7.1.3.10.1] [DCD-TS-CBS] [8.1.8], [8.4.7.1]
SCR Reference	DCD-CBS-C-004 DCD-CBS-S-010
ETR Reference	DISC-001, NET-002
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and server - client driver - DCD enabled CBC State: - server configured to have channel guide - Server configured to serve the relevant application-id - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-201 - DCD-1.0-int-210 - DCD-1.0-int-220
Test Procedure	(1) Channel Guide to be present on the server (2) Channel Discovery message is sent to the client over CBS (3) Channel Discovery Push is to received in the client (3) Client to prepare Channel Guide for the registered DECA
Pass-Criteria	(1) Channel Guide for the registered DECA is to be created in the client

Table 54: DCD-1.0-int-252 Channel Discovery Push over CBS

6.50 DCD-1.0-int-300 Operation over OMA BCAST

6.50.1 DCD-1.0-int-310 Application Registration with BCAST Access Parameters

Test Case Id	DCD-1.0-int-310
Test Object	DCD Client
Test Case Description	Application Registration with BCAST access parameters included as part of the DCD-3 connection profile
Specification Reference	[DCD-TS-Semantics] [7.1.3.3] [DCD-TS-BCAST] [5.3.1]

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

SCR Reference	DCD-C-002, DCD-S-002 DCD-BCAST-C-002
ETR Reference	REG-001, NET-003
Tool	TBD
Test code	TBD
Preconditions	Equipment: - client and optionally server - client driver State: - client activated Continuation of / Can be tested at the same time as: - DCD-1.0-int-001 Prerequisite for this test: - DCD-1.0-int-001 (unless tested at the same time)
Test Procedure	(1) Registration is triggered, either by design (e.g. automatic by client for some application, upon startup) or by client driver (registration request) with dcd-3-connection-profile containing bcast-access-info element (2) The client may optionally send ApplicationRegistrationRequest to the server if an interactive channel is available or may process the registration locally without interacting with the server (3) If the client sends ApplicationRegistrationRequest to the server, the server sends ApplicationRegistrationResponse to the client
Pass-Criteria	(1) Reception of DCD-3 admnistrative messaging over BCAST is initiated by the client based on the connection parameters provided in the bcast-access-info element of the dcd-3-connection-profile (2) If ApplicationRegistrationRequest is sent, ApplicationRegistrationResponse is received and processed by the client without error

Table 55 DCD-1.0-int-310 Application Registration with BCAST Access Paramete

6.50.2 DCD-1.0-int-320 Internal Subscription to BCAST Delivered Channel

Test Case Id	DCD-1.0-int-320
Test Object	DCD Client and DCD Server
Test Case Description	Internal Subscription to a channel delivered over BCAST
Specification Reference	[DCD-TS-Semantics] [7.1.3.7] [DCD-TS-BCAST] [5.5.1.2. 5.5.2.1]
SCR Reference	DCD-C-003, DCD-S-004 DCD-BCAST-C-005, DCD-BCAST-S-007
ETR Reference	SUB-001, NET-003
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-310
Test Procedure	(1) Subscription is triggered, either by design (automatic subscription upon startup) or by client driver (subscription request) (2) The client initiates content reception for the channel on the BCAST file delivery session specified in the DCD-2-connection-profile (3) The client may optionally send ChannelSubscriptionRequest to the server if an interactive channel is available. (4) If the client sends ChannelSubscriptionRequest to the server, the server sends ChannelSubscriptionResponse to the client
Pass-Criteria	(1) If ChannelSubscriptionRequest is sent to the server, ChannelSubscriptionResponse is received and procesed by the client without error (2) Content reception over BCAST is initiated by the client per the connection parameters specified in the bcast-access-info element of the dcd-2-connection-profile

Table 56 DCD-1.0-int-320 Internal Subscription to BCAST Delivered Channel

6.50.3 DCD-1.0-int-321 Internal Unsubscription from BCAST Delivered Channel

Test Case Id	DCD-1.0-int-321
Test Object	DCD Client and DCD Server
Test Case Description	Internal Unsubscription from a channel delivered over BCAST
Specification Reference	[DCD-TS-Semantics] [7.1.3.8] [DCD-TS-BCAST] [5.5.1.4, 5.5.2.3]
SCR Reference	DCD-C-003, DCD-S-004 DCD-BCAST-C-007, DCD-BCAST-S-008
ETR Reference	SUB-002, NET-003
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Preconditions	Equipment: - client and server - client driver State: - server configured to serve channel - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-310 - DCD-1.0-int-320
Test Procedure	(1) Unsubscription is triggered by client driver (unsubscription request) (2) The client may optonally send ChannelUnsubscriptionRequest to the server if an interactive channel is available (3) If the client sends ChannelUnsubscriptionRequest to the server, the server sends ChannelUnsubscriptionResponse to the client
Pass-Criteria	(1) If the client sends ChannelUnsubscriptionRequest to the server, ChannelUnsubscriptionResponse is received and procesed by the client without error (2) Content reception over BCAST is terminated for the channel

Table 57 DCD-1.0-int-321 Internal Unsubscription from BCAST Delivered Channel

6.50.4 DCD-1.0-int-341 Content Update Push over BCAST

Test Case Id	DCD-1.0-int-341
Test Object	DCD Client and DCD Server
Test Case Description	Content Update Push over BCAST
Specification Reference	[DCD-TS-Semantics] [6.1.5.4, 6.2.6.7] [7.1.2.1] [DCD-TS-BCAST] [5.6.1, 5.6.2]
SCR Reference	DCD-C-008, DCD-S-012 DCD-BCAST-C-008, DCD-BCAST-S-009
ETR Reference	CDEL-004, NET-002
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver and server driver State: - server configured to serve channel via sheduled and/or on-demand update push - client activated - application registered - client subscribed to channel Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-310 - DCD-1.0-int-320
Test Procedure	(1) Content update notification is triggered per the channel push-schedule, or on-demand by server driver (2) The server sends ContentUpdatePush to the client over BCAST, including content item, via the BCAST file delivery session associated with the channel
Pass-Criteria	(1) The content items are received and processed by the client without error (2) The content is delivered to the application per the application-profile

Table 58 DCD-1.0-int-341 Content Update Push over BCAST

6.50.5 DCD-1.0-int-361 Channel Discovery Push over BCAST

Test Case Id	DCD-1.0-int-361
Test Object	DCD Client and DCD Server
Test Case Description	Channel Discovery Push over BCAST
Specification Reference	[DCD-TS-Semantics] [6.1.8.2], [6.2.9.3], [7.1.3.10.1] [DCD-TS-BCAST [5.7.1.1], [5.7.1.2]
SCR Reference	DCD-BCAST-C-009 DCD-BCAST-S-010
ETR Reference	DISC-001, NET-003
Tool	TBD
Test code	TBD

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document. [OMA-Template-EnablerTestSpec-20090101-I]

Preconditions	Equipment: - client and server - client driver State: - server configured to push channel discovery info - client activated - application registered Continuation of / Can be tested at the same time as: - Prerequisite for this test: - DCD-1.0-int-001 - DCD-1.0-int-310
Test Procedure	(1) Channel discovery info is triggered by server design (e.g. upon channel registration/update by content provider) or server driver (2) The server sends ChannelDiscoveryInfo to the client over BCAST via the BCAST file delivery session associated with the DCD-3 interface
Pass-Criteria	(1) ChannelDiscoveryInfo is received and processed by the client without error (2) The channel discovery information is delivered to the application per the application-profile

Table 59 DCD-1.0-int-361 Channel Discovery Push over BCAST

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.

Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version –or- No previous version within OMA

A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
OMA-ETS-DCD-V1_0	15 Jan 2009	All	Initial document to address the basic starting point
	10 Feb 2009	6.8-6.50	CR incorporated: OMA-IOP-BRO-2009-0025
	18 Mar 2009	n/a	CR incorporated: OMA-IOP-BRO-2009-0044
	20 Mar 2009	6.52	CR incorporated: OMA-IOP-BRO-2009-0034
	24 Jun 2009	all	CR incorporated: OMA-IOP-BRO-2009-0074
Candidate Version OMA-ETS-DCD-V1_0	14 Jul 2009	n/a	TP approval: OMA-TP-2009-0307-INP_DCD_1.0_ETS_for_Candidate_approval

© 2009 Open Mobile Alliance Ltd. All Rights Reserved.
Used with the permission of the Open Mobile Alliance Ltd. under the terms as stated in this document.